

SOUND ON SOUND

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

SOUND ON SOUND

Emulator IV

EMU REDEFINES THE SAMPLING STANDARD



The Human League

CLASSIC SYNTH-POP RETURNS!

ZIPI

IS THE WRITING ON THE WALL FOR MIDI?



- Yamaha MU80 Tone Generator*
- Creative Effects With Digital Delays*
- Turtle Beach Monte Carlo PC Sound Card*
- Logical Editing With Cubase*
- Spirit PowerStation Mixer*
- Live Recording Techniques*
- MIDI Delays & Your Sampler*
- Inside Stories: BMG Music Publishing*
- Analogue Systems TH48 Analogue Sequencer*
- WIN: Kenton MIDI-to-CV Converters*

232 PAGES
BIGGEST EVER ISSUE!

VOLUME 10 • ISSUE 6

APRIL 95

£ 2.95

ROSS NOISE REDUCTION • ZOOM 9150 GUITAR FX • MIDI QUEST PC EDITOR • OMNIPHONICS FOOTPRINT AMP ANNE DUDLEY • ROLAND SYSTEM 100M RETROSPECTIVE • ATARI, PC, MAC & AMIGA MUSIC NEWS



Are you writing a song or launching the space shuttle?

When it comes to creating music, computers are great because they give you a band at your fingertips. But they can also bog you down with annoying technical distractions.



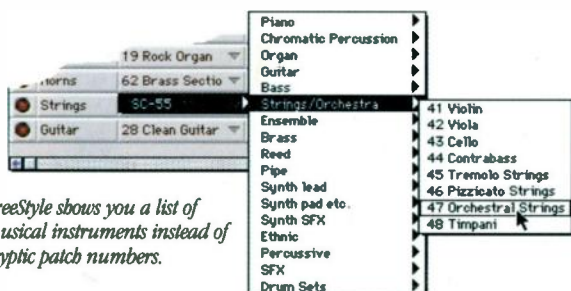
Work with players in an ensemble. FreeStyle remembers all your takes so you can easily choose your favorite parts.

The problem is that until now, nobody's made a sequencer specifically designed for those spontaneous moments when inspiration strikes.

That's why we created FreeStyle.

With its Riff Metronome™, FreeStyle lets you play to an inspiring drum riff instead of the usual boring click—instantly choose among dozens of riffs to find the one that gets you pumped.

After recording your first take, there's no need to mess with loop points. FreeStyle senses when you stop playing and automatically begins looping what you've recorded so you can try another take or add more players.



FreeStyle shows you a list of musical instruments instead of cryptic patch numbers.

With its trackless approach to sequencing, FreeStyle allows you to create an entire song without ever taking your hands off your keyboard or guitar controller. You may even forget your computer is in the room.

FreeStyle works with any MIDI interface such as the one-in three-out FastLane™ or the four-in six-out MIDI Express™, Electronic Musician Magazine's 1994 Editors' Choice Award Winner.



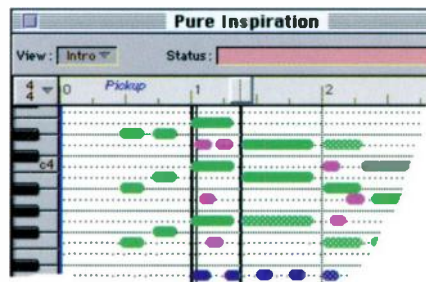
Klemm Music Technology Headquarter:

Waldstieg 2, D-37133 Friedland (Germany)
Tel: (49)-5504-9359-0
Fax: (49)-5504-9359-22

But if you do glance at your computer, you'll see full-color graphic editing and impeccable music notation. And when you're ready to put it all together, FreeStyle's arrangement window lets you easily assemble sections into a song.

Best of all, you're never locked into one way of working—you can switch freely between linear recording over your entire so and loop-recording within each individual section.

FreeStyle is also designed to keep MIDI complications out of your face, so it has built-in support for General MIDI sound modules and other popular devices. Just plug in your instrument, select the players you want, and start recording.



Each section of music can have a pickup bar, so you don't have to copy the pickup notes of your chorus into the last bar of every verse.

So, the next time you sit down at your computer to write a song, do it FreeStyle.

It's as musical as your computer can get.



Exclusiv Distributor of
Mark of the Unicorn for
Great Britain, Germany,
France, Austria
and Switzerland:

KLEMM
MUSIC TECHNOLOGY

Office in Great Britain:
PO Box 4, Arlesey
Bedfordshire SG 15 6AA
TEL: (0462) 73 33 10
FAX: (0462) 73 33 90



PROFESSIONAL SYNTHESIZER RETAILING IN THE NATION'S CAPITAL SINCE 1987

THE SYNTHESIZER CO.

EMU SYSTEMS

EMULATOR IV

128 voice polyphony and quite astonishing audio quality. This is the new Pro standard and a TSC choice machine.

- ▲ 18bit DACs 128x oversampling ADC
 - ▲ Up to 128Mb of sample memory
 - ▲ 32 part multi timbral
 - ▲ 8 balanced polyphonic outs
 - ▲ 128 digital resonant filters
 - ▲ 3 FREE CD-ROMS!
- Call TSC today for an informed demonstration

FROM **£3995**

OBERHEIM

OBMX

Analogue is back! And to prove it Oberheim - makers of such classics as the OB8 bring you a polyphonic analogue synth with 'musician friendly' hands-on control using the 32 knobs and 60 buttons.

- ▲ Unique expandable system from 2 - 12 polyphonic outs
- ▲ Individual outputs
- ▲ 2 oscillators (noise generators) per voice
- ▲ 2 separate filters per voice
- ▲ 4 multi envelopes per voice

FROM **£1275**

STUDIO ELECTRONICS

SE-1

TSC are the London exclusive agents for the incredible SE-1 - The 1st programmable monophonic analogue synthesizer to hit these shores for 10 years! - And what a synth; all the warmth, power and sound of the classic Moog & Obie Rack!

- ▲ 99 easy to edit programs
- ▲ 3 oscillators
- ▲ Switchable 24dB/12dB filter
- ▲ 4 ADSR envelope generators
- ▲ 3 assignable LFOs + more!

ONLY **£1295**

EMU SYSTEMS

EMU ESI 32

The power of the acclaimed Emulator III - for a fraction of the cost.

- ▲ 32 voice polyphony 8 outs
- ▲ 16bit linear sampling
- ▲ Up to 32Mb of memory
- ▲ Optional SPDIF & digital I/O
- ▲ Optional internal Syquest removable hard drive & SCSI
- ▲ 32 4-pole resonant filters
- ▲ 3 FREE CD-ROMs

Also at TSC the superb Proteus family inc. Ultra Proteus & Classic Keys!

FROM **£999**

ROLAND

ROLAND JV1080

With quite unbelievable depth of sound and super-controllability this 2U unit features 32-bit RISC processing for faster & more natural response to performance data, 64 note polyphony, 16 part multi timbral operation and an expandable chassis which can boost the JV to 42Mb!

- ▲ Pick any 4 expansion boards & get a special price + FREE RAM card!

FROM **£899**

KURZWEIL

KURZWEIL K2500

Brand new 76 (K2500) & 88note (K2500x) Keyboard Production Stations with staggering facilities and superb sounds.

- ▲ True 48-note polyphony
- ▲ Up to 192 oscillators
- ▲ 60DSP functions
- ▲ Up to 128Mb sample mem.
- ▲ Flash ROM (updates via floppy or SCSI)
- ▲ 32 track sequencer
- ▲ VAST synthesis with 60 DSP functions

SOON **At TSC**

AKAI SAMPLERS

S3000 S3200

These excellent samplers offer a vast library of sounds and good expansion options. TSC are the capitals leading experts of Akai samplers. Call for a great deal and killer demonstration today.

- AKAI S3000**
- ▲ 32 voice polyphony
- ▲ Expandable RAM to 32Mb
- ▲ Resonant filters
- AKAI S3200**
- ▲ As S3000 + 8 ind.outs
- ▲ Digital I/O + more

AKAI **SPECIAL**

MARION

MARION MSR-32

Designed by Synthesizer Pioneer Tom Oberheim. Expandable modular synthesizer. Includes 8-voice analog synth card featuring "High Resolution Oscillators" which combine analogue sound, digital stability & 2, 4 pole filters.

- More modules planned.
- ▲ TSC is the **only place in London** where you can evaluate the excellent Marion MSR-2. Call today.

FROM **£799**

1995 - THE YEAR OF THE SYNTHESIZER

No other retailer has more experience in supplying synthesizers and samplers to the professional marketplace as TSC. On this page and in our air conditioned demonstration facility you'll find the instruments that are wow-ing session players and professional musicians the world over. Listen, play and program these instruments, particularly the TSC sourced analogue machines, and you'll conclude - like us, that 1995 really is the year of the synthesizer.

PRICES EXCLUDE VAT @17.5%

0171 258 3454

No 9 HATTON STREET, LONDON NW8 8PR FAX: 0171 262 8215

Authorised Apple Reseller

Apple, Mac, Quattro, Classic, and Macintosh are trademarks of Apple Computer. All other trademarks respected.



APPLE MACINTOSH TSC

POWER MAC 7100dL

The Power Macintosh 7100 is the Apple Centre AV Macintosh of choice for professional audio applications. It combines blinding speed, (courtesy of the Motorola Power PC 601 RISC processor), and 3 NuBus slots. This means it's tailor made for Digidesign Pro Tools and other hard disk recording solutions. It handles MIDI smoothly, without glitches and can be specified with a CD-ROM or an internal removable storage device.

In addition it can accommodate up to 136Mb of RAM, has high speed Ethernet networking built-in, can run two monitors and has enhanced SCSI interface for optimal hard drive performance.

- ▲ Power PC 601 processing
- ▲ 8Mb RAM (Expandable to 136Mb)
- ▲ Internal 350Mb Hard Drive
- ▲ Optional CD-ROM Drive
- ▲ 3 NuBus expansion slots
- ▲ Optional dual monitor support
- ▲ 1,000s of colours on 17" monitor (from £449!!)
- ▲ Built-in high speed Ethernet networking
- ▲ Enhanced SCSI for optimal hard drive performance
- ▲ The preferred Mac for Pro Tools

NEW LOW PRICE!

7100/66
8/350
FROM ONLY **£849** £968 THE VAT



▲ 'Rack-a-Mac' 7100RM

Exclusive from Apple Centre AV you can order your 7100 (and most other Macs) in 19" rackmount configuration - a real boon where studio space is at a premium, (isn't it always), or for use on the road.

FROM **£499** £578 THE VAT

MAC 475 + SEQUENCER

The combination of "Quadra speed" and compact dimensions make this Macintosh 475 plus sequencer our most popular package. A real powerhouse of computing music!

- ▲ 25Mhz 68040 Macintosh Macintosh 475
- ▲ Keyboard, Mouse, Monitor
- ▲ FREE Claris Works v1 Integrated package
- ▲ Your Choice of sequencer:
Opcode Vision, Steinberg Cubase or E-Magic Notator Logic

FREE MIDI INTERFACE

475 SYSTEM CHOICE SEQ. **£1099** £1291 THE VAT

SEQUENCING TSC



MIDI & HARD DISK RECORDING SEMINARS CALL FOR DETAILS OF UP-COMING EVENTS 0171 258 3454

Call TSC - the MIDI sequencing specialists for all the latest Mac and Windows sequencing news. STOP PRESS Opcode sequencers for Windows!

▲ OP CODE VISION
Award winning and best selling! New version 2 includes Track Overview, notation and user groove quantise! - The best!
ONLY **£299** £358 THE VAT

▲ STEINBERG CUBASE
New features include imported groove quantize, mixer maps, updated Drum Edit, Notation Editor and now QuickTime™ support.
ONLY **£299** £358 THE VAT

▲ EMAGIC NOTATOR LOGIC
Extraordinarily powerful. For example with Logic you can customise your own MIDI set-ups via the new virtual patchbay!
ONLY **£299** £358 THE VAT

MAC/MIDI INTERFACING TSC

▲ OP CODE STUDIO 5Lx MIDI-SMPTE MAC INTERFACE
15 INs & OUTs for 240 channel compatibility. Reads & Writes all SMPTE formats inc 29.97 non-drop. Full patchbay functions.
ONLY **£995** £1194 THE VAT

▲ OP CODE STUDIO 4 MIDI-SMPTE MAC INTERFACE
8 INs & OUTs plus 2 extra THRU: 128 MIDI channel support. SMPTE read/write inc. 29.97 non-drop. SOON FOR THE PC!!
ONLY **£449** £539 THE VAT

▲ OP CODE STUDIO 3 MIDI-SMPTE MAC INTERFACE
2 IN, 6 OUT Macintosh MIDI interface giving full 32 channel support. Plus SMPTE read/write sync.
ONLY **£249** £299 THE VAT

▲ OP CODE MIDI TRANSLATOR PRO
2 IN, 6 OUT Macintosh MIDI interface giving full 32 channel support.
ONLY **£99.00** £119 THE VAT

▲ OP CODE MIDI TRANSLATOR II
Biggest selling Mac MIDI interface in the world. 1 IN, 3 OUT giving 16 channel support. Use two same time for 32 channel support.
ONLY **£59.99** £71 THE VAT

COMING SOON FROM OP CODE TRANSLATOR PRO SYNC (MAC) STUDIO 4 FOR THE PC! CALL TSC FOR MORE DETAILS

MACINTOSH TSC

POWER MACINTOSH 6100/66
Superb for power sequencing applications - real useable speed.
▲ 8Mb RAM - exp to 72Mb
▲ 1 expansion slot
▲ Optional CD-ROM

FROM **£1249** £1498 THE VAT

POWER MACINTOSH 8100/100
Mega powerful 3 slots and loads of expansion bays.
▲ 100Mhz PowerPC 601
▲ 8Mb RAM - exp to 264Mb
▲ 3 NuBus slots

FROM **£2650** £3160 THE VAT

0171 258 3454

No 9 HATTON STREET. LONDON NW8 8PR FAX: 0171 262 8215

ALL PRICES EXCLUDE VAT @ 17.5%

Authorised Apple Reseller

All products and offers subject to availability. Prices exclude VAT unless otherwise stated. E&OE. Apple, Mac, Quadra, Classic and Macintosh are trademarks of Apple Computer. All other trademarks respected.

APPLE CENTRE AV

AUDIO
VISUAL



HARD DISK RECORDING digidesign

888
I/O

AUDIO INTERFACE

- 888 PRO TOOLS INTERFACE**
- ▲ 8 XLR balanced ins, 8 XLR balanced outs
 - ▲ 8 AES/EBU connectors ▲ LED metering
 - ▲ 16 channel 8 track recording

882
I/O

AUDIO INTERFACE

- 882 PRO TOOLS INTERFACE**
- ▲ 8 track digital recording interface
 - ▲ Balanced jacks
 - ▲ SPDIF digital I/O

442
I/O

AUDIO INTERFACE

- 442 PRO TOOLS INTERFACE**
- ▲ 4 track digital recording interface
 - ▲ 2 Channels of digital I/O (AES/EBU & SPDIF)
 - ▲ Can provide 4 channels of I/O in PTIII system

LOW-COST HD RECORDING

DIGIDESIGN AUDIOMEDIA III/C
Superb quality 2nd generation hard disk recording system which can be used for stereo recording & editing, or as the hardware interface for E-Magic, Studio Vision or OSC's Deck.

OSC DECK II
Hard disk recording on an AV Macintosh with no additional hardware! 6 tracks on 660AV, 8 tracks on 840AV. Features include realtime automation, 16bit non-destructive editing, SMPTE sync & QuickTime.

DECK NOW SWAPS SESSIONS WITH PRO TOOLS WITH OSC'S NEW TRANS-PORT SOFTWARE

TSC PRICE FROM ONLY **£699**

TSC PRICE FROM ONLY **£349**

SESSION 8 8 track system

Session 8 is an integrated digital studio featuring 8-channel direct-to-disk digital recording with multi-channel digital mixing, sequencer style audio editing and computer controlled input patching. It gives you the kind of sophisticated audio production power you need that tape based digital systems can't match; like MIDI sequencer integration and mouth-watering random access editing.

SESSION 8 FROM ONLY **£2295** £2696

PRO TOOLS III 16-48 track Recording

The new Pro Tools III delivers uncompromising power and performance for audio post, broadcast and music production.

- ▲ 16 to 48 tracks of record/playback
- ▲ Multichannel digital mixing with total recall
- ▲ MIDI sequence recording, playback & automation
- ▲ Sequencer-style digital audio editing
- ▲ SMPTE synchronisation (AND more)
- ▲ Balanced +4dBm I/Os ▲ Parametric digital EQ
- ▲ Graphic breakpoint-style automation editing for audio & MIDI events
- ▲ TDM Virtual digital mixing and Plug-in environment
- ▲ Options include PostView™, PostConform™, ADAT™ Link, DINR noise reduction & 3rd party Plug-ins.

P. TOOLS FROM ONLY **£5995** £7044

PRO TOOLS PLUG-INS Enhancements & essential add-ons

ProTools has plug-in architecture which allows for further Digidesign & 3rd party enhancements. AppleCentre AV has the best stocks of plug-ins in the UK!

BROADCAST QUALITY VIDEO EDITING

AVID MEDIA SUITE PRO

For recording, editing and playing back audio and video directly to and from a hard disk, Avid has no peers. Using a broadcast picture quality, VHS to Betacam level, and with perfect lip sync, Media Suite's features include: 16-bit CD quality audio inc. scrub, Plug-in compatibility with PhotoShop filters, true timeline editing with cut/copy/paste, OMFT™ Interchange Compliance support for Open Media Framework, EDL option which includes EDL formats that also support OMFT™, full title and credit generation and output direct to tape.

MEDIA SUITE PRO FROM **£8499** £9986



DIGITAL AUDIO SEQUENCING

EMAGIC NOTATOR LOGIC AUDIO
Innovative MIDI and HD recording software. Features include:

- ▲ Time Machine - compression
- ▲ Groove quantise
- ▲ And more..

£549

STEINBERG CUBASE AUDIO
All the features of Cubase plus:

- ▲ Programmable equalisers
- ▲ Non-destructive cross-fades
- ▲ Groove quantising
- ▲ And more..

£675

OPCODE STUDIO VISION PRO & AV
Pro and AV versions available:

- ▲ Digidesign Session 8 support
- ▲ Compatible with Pro Tools III
- ▲ Full StudioVision sequencing features
- ▲ From Only..

£499

DIGITAL TAPE AT TSC



ALESIS ADAT
No-one knows or understands more about ADAT & the options. Call the specialists.

UK'S **Lowest**

ALL PRICES EXCLUDE VAT @17.5%

Authorised Apple Reseller

0171 258 3454

No 9 HATTON STREET. LONDON NW8 8PR FAX: 0171 262 8215

leader

SOUND ON SOUND

Media House, Burrell Road, St. Ives
Cambridgeshire PE17 4LE.

Telephone

01480 461244

Facsimile

01480 492422

In the good old days, you could take the top off a piece of hardware, have a poke around inside, and after a couple of knowing grunts, make some kind of pronouncement on whether or not it was well put together. Sadly, this is no longer the case, because so much of what we take for granted is controlled by invisible software — even our hardware synths and effects units. Short of disassembling the code and figuring out exactly what's going on, there's no way to know what is really taking place inside those inscrutable bits of plastic.

If *that* thought makes you nervous, consider how much more is hidden from you when you buy a piece of computer software, such as a sequencing package or a hard-disk

equivalent of a jerry-built prefab?

Unfortunately, the answer is that you can't. A package may work fine, and yet still be written in such a way that it can't easily be updated, or it may be brilliantly structured, but still have the odd bug that needs shaking out, in which case you might (wrongly) assume that the whole thing is shaky.

Talking of software bugs brings me back to the age-old gripe about end users (ie. us lot) being used as beta testers for products we've already paid for. I know that it's physically impossible to test every permutation of command sequences in a package, but when you run into a program that either crashes every five minutes or

The Private Life of Software

recording system. It's no good looking at the plastic disk to see if the top is glued on neatly — that won't help a bit.

Properly-written software (so software writers tell me, anyway) is usually built up using neat little blocks of code, which makes updating the product easier. It also enables the blocks to be re-used in spin-off products without the whole program having to be rewritten from scratch. Failure to engineer the program in an orderly manner makes debugging a nightmare, as well as making updates far more difficult. But how can you tell whether the package you decided to buy is basically sound and not the software

refuses to do something basic but essential, you wonder who's having you on. I mean, what would it be like if these fly-by-wire airbus thingies had the same kind of problems? "Sorry you're ever-so-slightly dead, sir, but a few minor crashes are to be expected until we iron out the bugs in version 1.01!" Or how about flying into Heathrow only to find that the landing gear won't come down because somebody flushed the loo just as somebody else changed channel on their in-flight entertainment centre?

OK, so a crashing sequencer or a librarian program that eats your life's work without so much as a digitised burp isn't going to kill you directly, but the stress it induces might have the same effect eventually...

Paul White Editor

Editor	Paul White
Managing Editor	Debbie Poyser
Technical Editor	Dave Lockwood
Assistant Editor	Derek Johnson
Editorial Assistant	Matt Bell
Editorial Director	Ian Gilby
Advertisement Manager	Robert Cottee
Classified Sales	Patrick Shelley
Production Manager	Shaun Barrett
Ad Production	Andy Brookes
Design	Clare Holland Kim Marley
Publishers	Godfrey Davies Ian Gilby
Accounts Manager	Angela Brown
Administration	Lisa Thompson
Mail Order	Sally Thompson
Photography	Ewing-Reeson
DTP Bureau	Sound Design
Colour Scanning	C.L. Enterprises Ltd
Colour Origination	Spectrum Repro Ltd WYSIWIG
Printing	Warners Midlands Plc
Newstrade Distribution	Warners Group Distribution Ltd, The Maltings, Manor Lane, Bourne, Lincolnshire, PE10 9PH

SUBSCRIPTIONS

UK £30.00
Europe £45.00
World £55.00

Payable in Sterling through UK bank.

ISSN 0951 - 6816

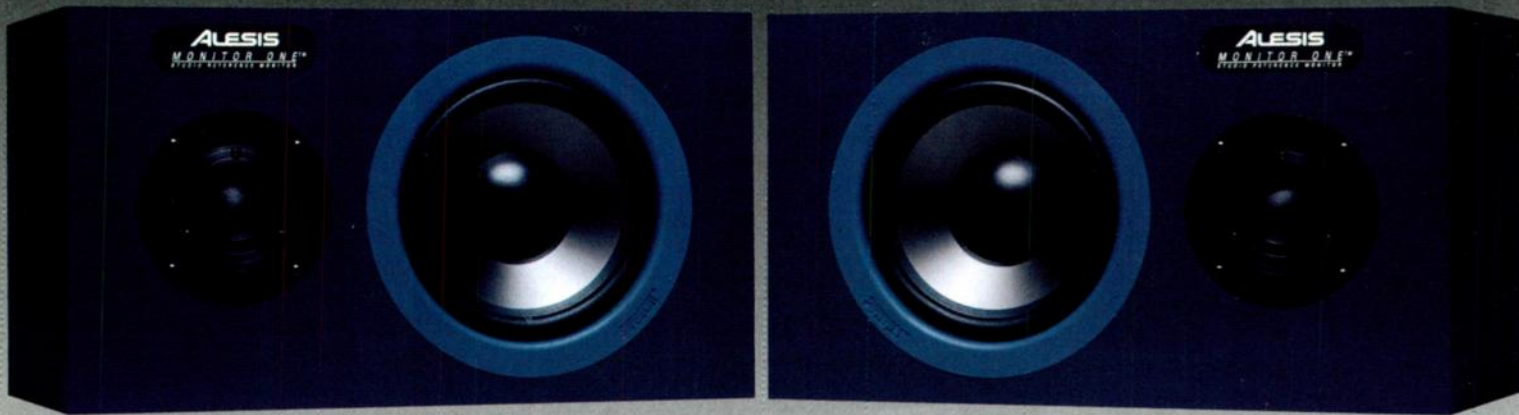


A Member Of the SOS Publications Group

The contents of this publication are subject to worldwide copyright protection and reproduction in whole or part, whether in electronic or electronic, is expressly forbidden without the prior written consent of the publishers. Great care is taken to ensure accuracy in the preparation of this publication but neither SOS Publications 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 1995 SOS Publications Limited. Incorporating Music Software magazine & Recording Musician magazine. All rights reserved.



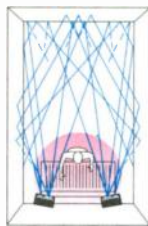


The Truth From Left To Right

The truth...you can't expect to find it everywhere you look, or *listen*. But when mixing music, hearing the truth from your monitors will make the difference between success and failure. You'll get the truth from the Alesis Monitor One™ Studio Reference Monitor.

Room For Improvement

Fact: most real-world mixing rooms have severe acoustical defects, with parallel walls, floors and ceilings that reflect sound in every direction. These reflections can mislead you, making it impossible to create a mix that translates to other playback systems. But in the near field, reverberant sound waves have little impact, as shown in the illustration. The Monitor One takes advantage of this fact and is built from the ground up specifically for near field reference monitoring.



The pink area in the illustration shows where direct sound energy overpowers reflected waves in a typical mixing room. The Monitor One helps eliminate such complex acoustic problems by focusing direct sound energy toward the mixing position.

The Truth From Top To Bottom

The Monitor One's proprietary soft-dome pure silk tweeter design delivers natural, incredibly accurate frequency response while avoiding high frequency stridency and listener fatigue—typical of metal-dome tweeter designs. The Monitor One overcomes wimpy, inaccurate bass response—the sad truth about most small speakers—with our exclusive SuperPort™ speaker venting technology. The design formula of the SuperPort eliminates the choking effect of small diameter ports, typical in other speakers, enabling the Monitor One to deliver incomparable low frequency transient response in spite of its size.



Alesis SuperPort™ technology gives you the one thing that other small monitors can't: incredibly accurate bass transient response. No, the SuperPort doesn't have a blue light, but it makes the picture look cool.

The result? A fully integrated speaker system that has no competition in its class. You'll get mixes that sound punchier and translate better no matter what speakers are used for playback. The Monitor One's top-to-bottom design philosophy is a true breakthrough for the serious recording engineer.

Power To The People

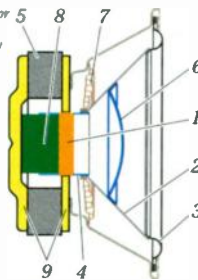
While most near field monitors average around 60 watt capability, the Monitor One handles 120 watts of continuous program and 200 watt peaks...over twice the power. The Monitor One provides higher output, more power handling capability, and sounds cleaner at high sound pressure levels. If you like to mix loud, you can.

The Engine

Our proprietary 6.5" low frequency driver has a special mineral-filled polypropylene cone for stability and a 1.5" voice coil wound on a high-temperature Kapton former, ensuring your woofer's longevity. Our highly durable 1" diameter high frequency driver is ferrofluid cooled. Combined, these two specially formulated drivers deliver an unhypered frequency response from 45 Hz to 18 kHz, ± 3 dB. The five-way binding posts provide solid connection, both electronic and mechanical. We even coated the Monitor One with a rubber textured laminate so when your studio starts rockin', the speakers stay put. Plus, it's fun to touch.

A cross section of the Monitor One's proprietary Alesis-designed 6.5" low frequency driver.

1. 1.5" voice coil.
2. Mineral-filled polypropylene cone.
3. Damped linear rubber surround.
4. Kapton former.
5. Ceramic magnet.
6. Dust cap.
7. Spider.
8. Pole piece.
9. Front and back plates.



The New Alesis Monitor One™

You don't design good speakers by trying hard. It takes years and years of experience and special talents that only a few possess. Our acoustic engineers are the best in the business. With over forty years of combined experience, they've been responsible for some of the biggest breakthroughs in loudspeaker and system design. The Monitor One could be their crowning achievement. They're the only speakers we recommend to sit on top of the Alesis Dream Studio™.

See your Authorized Alesis Dealer and pick up a pair of Monitor Ones. Left to right, top to bottom, they're the only speakers you want in *your* field.



Sound Technology plc
Letchworth Point, Letchworth, Hertfordshire, SG6 1ND England
Tel: 0462 480000 Fax: 0462 480800





Emulator IV Sampler p46
 128 voices, up to 128MB, dual SCSI and a Mac-like operating system are just some of the features which help this flagship Emu digital sampler set a new standard.

WIN Win Kenton
 MIDI-to-CV
 converters
PAGE 194



Spirit PowerStation Mixer p58
 Why cart separate bits of kit around when you can have Spirit mixer quality, built-in Lexicon effects processor and power amp all in one compact unit?

REVIEWS

Turtle Beach Monte Carlo PC Sound Card 22

by Panicos Georghiades

Omniphonics Footprint Amp 24

by Paul White

Ross RX-NR4 Noise Reduction 26

by Derek Johnson

Aphex 107 Tube Mic Preamp 28

by Paul White

Emu Emulator IV Sampler 40

by Paul Wiffen

Spirit PowerStation Mixer 58

by Paul White

Sound Edit 16 for Mac 72

by Mike Collins

Analogue Systems TH48 Sequencer 92

by Gordon Reid

Zoom 9150 Guitar Multi-Effects 98

by Paul White

Yamaha MU80 Module 116

by Kevin Earley

Sound Quest MIDI Quest PC Editor 134

by Paul Nagle

TWANGO Emotive Response Modelling System 160

by Paul White

Widgets 168

- 'All You Need To Know About The Music Business' book.
- SOS Cable Management Kit.



The Human League p78
 Back with a hit single and forthcoming new album, THL frontman Phil Oakey talks about songs, synthesizers, studios and more...

features

Goodbye MIDI? Hello ZIPI 30

by Martin Russ

Mark Russell: Talking Radio 34

by Nick Magnus

Gilad Keren: Waves Plug-Ins 64

by Paul White

The Human League 84

by Nigel Humberstone

Anne Dudley 104

by Richard Buskin

Frank Kelly of Alesis 126

by Paul White

Inside Stories: BMG Music Publishing 148

by David Bibbey

Roland System 100M Retrospective 190

by Chris Carter

computer notes

Atari Notes by Vic Lennard 174

Apple Notes by Martin Russ 178

PC Notes by Brian Heywood 184

Amiga Notes by Paul Overaa 186

SOUND WORKSHOPS

- Live Recording Techniques** 54
by John Harris
- Planning Your First Studio** 94
Part 2: by Paul White
- Logical Editing With Cubase** 120
Part 2 by Simon Millward
- Building A School Studio** 140
by Paul Johnson
- MIDI Delays & Your Sampler** 154
by Wilf Smarties
- Using Digital Delays** 188
by Paul White



Aphex Tube Mic Preamp p28
Add warmth to your mic with this valve-based preamp.

regulars

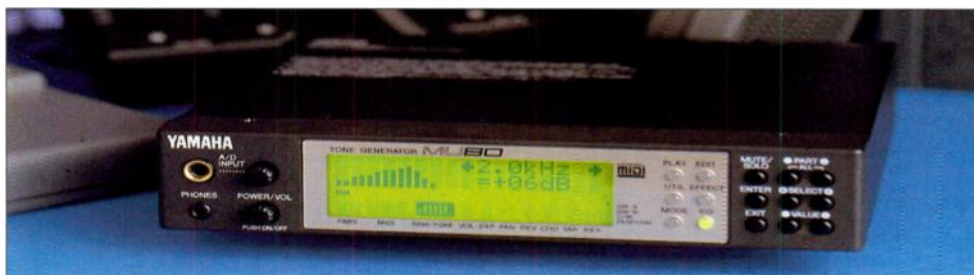
- Crosstalk** 8
More of your problems solved by our experts.
- Shape Of Things To Come** 12
Derek Johnson brings you news from the leading edge of the hi-tech music and recording scenes.
- Demo Doctor** 164
John Harris dissects and diagnoses your demos.
- Sample Shop** 170
Wilf Smarties and Paul Farrer pass judgement on a new batch of sample CDs and CD-ROMs.

- Readers' Classifieds** 198
- Readers' Tape Exchange** 204
Sell your own music to fellow readers.
- SOS Mail Order** 206
- Classified Adverts** 214
- Production Lines** 232
Producer Stuart Epps explains why he prefers the live approach in the studio.



Anne Dudley
p104

Best known as one third of The Art Of Noise, we talk to this top session player/arranger whose credits include ABC, Seal, Frankie Goes To Hollywood and Phil Collins, to name but a few...



Yamaha MU80
Tone Generator p116
Offering 64-note polyphony, 660 sounds, 18 drum kits, and a versatile external audio input section for guitar or vocals, is Yamaha's new baby the best GM module around?

in this issue

Volume 10 Issue 6

April 1995

Crosstalk

Send your letters, tips and comments to:

The Editor, Sound On Sound, Media House, St Ives, Cambridgeshire, PE17 4XQ.

Or email us — from CompuServe on 100517,1113, or from outside CompuServe, on 100517.1113@compuserve.com

NETTING SOME ADVICE

Great news that you're on the net! This is a really good way of getting in touch with you. I have a few questions I hope you can answer for me.

I have a Roland GR1 which I intend to use as the main controller for a small recording and sequencing setup. I would like to be able to access the complete set of drum sounds from the fretboard in the same manner that it is possible to access a complete drum kit from a keyboard. As far as I am aware, it is only possible to assign two drum sounds at any one time with the GR1. Is there a way around this?

The sequencing part of my setup will be based around the PC I already have. However, I have yet to purchase something to record on, or a sound module or keyboard. I would like to have eight tracks to record on, but I'm unsure as to whether I should look at a portastudio or recorder/desk-type setup. Are 8-track cassette machines equivalent in sound quality to recorder/desk systems? What are the relative merits of purchasing second-hand? I would also like to be able to sync the machine with the sequencer. Can you make any recommendations, bearing in mind that I would also

like to purchase a reasonable sound module?

Speaking of which, what sound module would recommend? The GR1 is pretty basic in terms of multitimbrality...



The Kawai K1 (pictured here with the K1m module) — great for sounds when controlled by a MIDI guitar.

Sorry about all the questions! I hope you can help. Thanks in advance — and I hope this gets though OK.

Mike Charters
Email mcharters@lehman.com

Paul White replies: I believe that the dedicated drum section of the GR1 works like any other drum module, with different sounds being assigned to different groups of notes. If you can only get two drum sounds at once, the chances are that you're actually creating a synth patch by selecting two drum

sounds as the two patch elements. A quick read of the manual should put you right here.

To sync a sequencer to an 8-track, you'll find a smart FSK box (such as the JL Cooper PPSII, or the Philip Rees TSI) easiest to use.

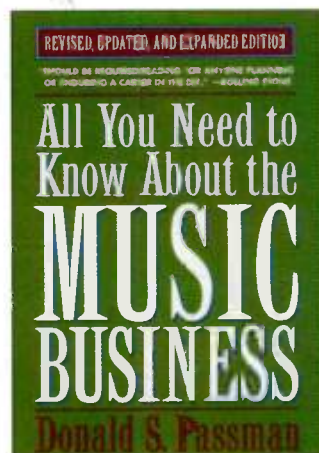
Units such as these will work with any sequencer that has an external sync mode, and that responds to MIDI Song Position Pointers (most modern sequencers do). You end up losing a track on tape (that's where you record your sync code), but the benefits far outweigh the losses. On the choice

of 8-track, I'd opt for a separate recorder and mixer, on the basis that your MIDI system will soon grow to the point where an all-in-one recorder/mixer won't have enough inputs for you. If you can afford it, go for an open-reel 8-track, as the quality is rather better than you get from cassette.

There are loads of suitable sound modules to choose from, the main criteria being that whatever you choose must be at least 6-part multi-inbral (or have a 6-channel mono mode) to work properly with a MIDI guitar. The GR1 has a

BOOK HIM, DONALD

Just a quick query about the book *All You Need To Know About The Music Business*, by Donald Passman, mentioned by Brian



Jackson in the 'Inside Stories' feature on publishing in February 1995's SOS. I wonder whether you could tell me whether this book is available in the UK, and if so, who the publishers are? Finally, what's it going to set me back? Thanks for your help.

Tony Stolk
Wantage, Oxfordshire

Matt Bell replies: Tony's letter is just one of several asking if the book Brian Jackson mentioned was available here in the UK. Happily, Assistant Editor Derek Johnson has tracked it down, and it's reviewed by him in our Widgets section this month — on page 168, in fact. Full details on where you can obtain the book are given at the end of Derek's review.

good selection of stock sounds, so try for something a little different, such as an old Kawai K1 module, or an Oberheim Matrix 1000 analogue synth (which also has a dedicated guitar synth mode).

Finally, on the subject of buying second-hand, there are bargains to be had, but in the case of tape machines, you really need to know what you're looking for, otherwise you could end up buying a worn-out machine with duff heads that might cost more to fix than it is worth. Buying second-hand from a shop usually costs more than buying privately, but at least you usually get some form of limited warranty.



The Oberheim Matrix 1000 has a dedicated mode for use with MIDI guitars.

LM-3204 • 40 INPUTS • 5 RACK SPACES

01 Mackie's proven durability and sound quality in a new, even more compact rack mount mixer: The LM-3204 includes 16 stereo channels, 2 stereo plus 2 mono AUX sends (2 available at a time), extra stereo ALT 3/4 bus & 3-band EQ... for starters.

05 Maximum controls; minimum space. Each channel strip has 4 AUX sends (2 available at any time) with 15dB more gain to the right of Unity, 3-band EQ (12kHz Hi, 2.5kHz Mid, 80Hz Lo), Balance control, ALT 3-4/Mute switch, in-place stereo Solo button and Master gain control.

08 Built-in power supply. No unreliable wall wart or line lump.

09 Stereo inserts on Channels 1 thru 4.

10 Another Mackie exclusive: Expandability. The LM-3204 is the only line mixer that can grow with your customers' needs. Add extra channels in groups of 16 with our LM-3204E Expander. It connects via ribbon cable. Each 5-rack-space LM-3204E has 16 complete stereo channel strips, plus its own ribbon cable outputs and inputs, so you can daisy-chain several units.

12 All the hidden things that set our mixers apart from the competition. Such as extreme resistance to RFI, sealed rotary potentiometers, impact absorbing control surface design with parallel, through-hole-plated fiberglass front circuit board attached with solid brass standoffs, gold-plated internal interconnects, ultra-reliable surface mount main circuit board and electronic protection against impedance mismatches, power surges, static discharges and other inevitable mishaps.

Call for information on the new LM-3204. To receive a complete and regularly updated Mackie Designs Contractor and Architects binder (including information on our other compact mixers and larger 8-Bus consoles), call or fax Key Audio Systems.

02 Line mixer PLUS: The LM-3204 also has two phantom-powered mic preamps! The same low-noise, high-headroom design (-129dBm E.I.N.) found in our CR-1604 and 8-Bus Series, each mono preamp is assignable to any of the 16 channels on the mixer's rear panel via 1/4" TS patchcords.

03 Signal present LEDs on every channel. -20dB "blinkies" on every channel tell the user at a glance whether the channel is in use and (due to the ultra-sensitive circuit design) even what kind of signal is on it. Overload LEDs are also included... but with the LM-3204's headroom and UnityPlus gain structure, they'll probably never light up.

04 Unique master section features: Source Alt 3/4 switch disconnects stereo AUX Return 3 and routes the ALT 3/4 bus into AUX Return 3 instead. This allows you to use ALT 3/4 as a pair of submix buses and then remix them back into the main Left and Right buses. No other line mixer has this handy function. AUX 4 Return to Control Room switch disconnects AUX Return 4 from the main L/R busses and reconnects it to the control room monitor and headphone circuits. Users can monitor voice or music cues without having them go to master outputs or tape.

06 Control Room & Headphone monitoring with separate level controls source

01 Tape it easy. Feed a tape recorder or broadcast line with the LM-3204's electronically-balanced main outputs (connected in parallel to the "RCA"-type Tape Out sockets). TS and "RCA"-type Tape Inputs connect via Tape Monitor switch to Control Room/Headphone buses.

MADE IN WOODINVILLE, WA, USA

12

- 1) Main L/R buses;
- 2) tape output or other sources (when Tape Monitor button is pushed); 3) stereo Solo bus whenever any Solo button is pushed. Control Room outputs are provided for connection to a power amp.

07 Unique master section includes: 45mm L/R Master faders, 45mm stereo Control Room Output fader. Tape Monitor switch, beefy headphone amp with its own volume control, 13-LED peak metering display, Solo level control and huge, rude solo light. 4 stereo AUX returns with special features (see #4 above left).

*Suggested retail inc. VAT.

£899

MACKIE.

KEY AUDIO SYSTEMS, LTD • UNIT D, 37 ROBJOHNS ROAD
CHELMSFORD, ESSEX CM1 3AG • TEL 0245 344 001 • FAX 0245 344 002

Crosstalk

IT'S JUST NOT REAL MUSIC (PART 483)

I've been playing synthesizers for 15 years, and I'm finally convinced that they're not musical instruments.

They're excellent production tools. Listen to any track produced by Eno and Lanois or Trevor Horn, and you'll hear how synths have radically changed the way we listen to conventional 'guitar and drums' rock bands.

Synths are also superb music machines. From Kraftwerk via the Human League and into the latest techno/rave music, you can hear synths creating machine music for the modern age — but they fail to produce truly *emotional* music. It is interesting to note that when synth music does leave the dance floor, it almost always has a 'natural' instrument as the main point of interest (such as the banjo in 'Swamp Thing'), or, most frequently, the human (or sampled human) voice, as on 'Open your mind' or 'Rhythm is a Dancer'.

I think the problem is that musicians have taken the easy route with synths and electronic music generally. Using computers for a quick fix here and a quick quantise there has taken the hassle out of learning to play. Using sampled sound modules, such as the Emu Proteus or Roland Sound Canvas, to serve up quick, easy and familiar sounds has obliterated the art of creating sounds. Mind you, I don't blame the manufacturers — they've produced excellent expressive and programmable instruments, from the Minimoog to the DX7 (and WX7 wind controller); from the Simmons SDSX to the Emax; and from Dr T's *M* software to the Yamaha VL1.

So, do I hate synths? Not at all, I think they are great fun, and I'm sure they have a superb future — there are over 100 million PCs out there waiting for synth-based sound cards, and a plethora of new multimedia packages waiting to exploit them. It is even possible that the dedicated synth will emerge as a bona fide musical

instrument in the same way that the saxophone has — I've even developed a test to prove when this has happened. When you see a good busker playing a guitar, a sax or even a violin, you know you're listening to music. If someone can show me a busker playing a synth that doesn't sound (or look) embarrassing, then I will accept that synths have become musical instruments.

Mike Fieldhouse

Email CompuServe 100044.3654

Paul White replies: *Great, we just love contentious letters — keep 'em coming! While I agree with you that synths are over-used, I can't agree that they aren't musical instruments. There are many recorded examples of virtuoso synth solos from the likes of Jan Hammer and Chick Corea that are just as expressive as those produced on a traditional instrument. Heavily-sequenced, quantised synth music obviously lacks feel, but that doesn't mean the synths themselves are to blame. For example, you could take a pianola or player piano, feed in a roll of quantised music and get a very sterile performance in return — but that wouldn't make the piano itself any less of a musical instrument.*

You say that synth music doesn't work for you unless there's at least one 'real' instrument or voice in the mix somewhere. In general, I'd agree with you, but there are those who prefer the all-synth approach to electronic music.

Personally, I'd feel just as uncomfortable writing a piece of music entirely for synths as I would for just guitars or just flutes, but that's all down to personal preferences. The only thing that really determines whether a synth is a musical instrument is whether or not it's played like one. Even the limited bend, pitch and aftertouch controllers on a typical synth can be used to inject a great deal of expression into playing, and of course we have a new generation of physical modelling synths coming on-line that behave even more like traditional instruments.

The debate over whether or not a synth qualifies as a real instrument can run forever, but to condemn the synth as just a machine would surely be to tar the electric organ and even the piano with the same brush — after all, both these

instruments have fewer expressive controller inputs than a typical synth. In the final analysis, all musical instruments are machines, with the exception of the human voice, and, like any other instrument, the synth is ultimately a man-made device designed and produced using the technology available at the time. Similarly unflattering things were said about the piano when it was first introduced, after all...



An innocent piano, yesterday.

CARD & BOARD CITY

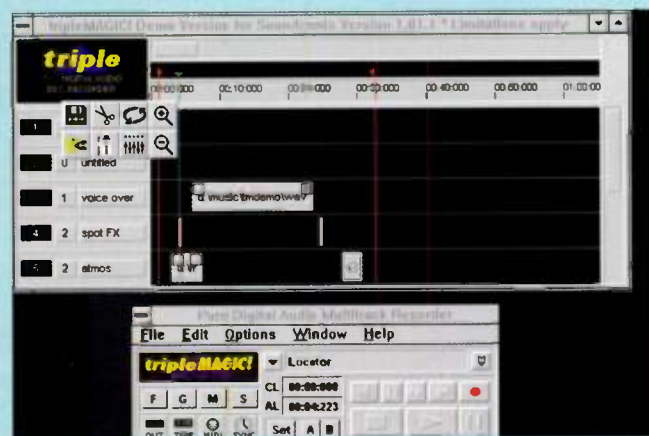
Hi from an SOS reader! In the March issue, in the response to the 'Desperately Syncing Simon' letter in Crosstalk, Brian Heywood mentioned a couple of

soundcards for the PC that allowed direct digital input: I am familiar with the CardD system he talked about, but have not heard of the other one, the

'mysterious TripleDAT'. Could you let me have any information on this card? A contact address in the UK would be helpful...

Chris Friedlander

Email CompuServe 100432,2745



Matt Bell replies: *Your wish is... oh, you know. Brian Heywood takes a quick look at the no-longer mysterious TripleDAT in this month's PC Notes, starting on page 184. As Brian explains, this product had no UK distribution until recently, but Koch Media have now taken it on (contact: 01252 714340). For more information, turn to page 184!*

TripleMAGIC! — this is the Windows digital editing application that comes with the TripleDAT soundcard for the PC.



At last. Affordable, direct-to-disk multi-track recording and playback with no stutters.

This is the direct-to-disk development the sound recording industry has been waiting for.

A hard disk drive that's specifically developed for real-time sound recording and playback, rather than for computer number crunching.

A drive that'll cope with multi-track recording, and never lose even a fraction of a note.

A drive that delivers pure CD sound quality, however long the session. However often you play it back.

With no stutters. No dropouts. No jumps.

It's the Micropolis Microdisk AV mass storage system. The only disk drive technology that's been designed specifically for real-time sound recording and playback.

It's a modular, stackable system. Adding more Gigabytes is as easy as adding extra modules. Each module is removable, so recordings can easily be transported. And you can use Microdisk AV as a network server.

Micropolis Microdisk AV is a quantum leap in mass storage technology for direct-to-disk sound recording.

What's more, it's very affordable.

Hardly surprising, then, that the system is fast becoming a de facto standard. Not only for sound recording, but also for digital video and graphics editing.

Insist on Microdisk AV, and listen to the results for yourself.

For an information pack on this innovative technology, phone today, or use the magazine's reader reply service.

Micropolis Microdisk AV. The logic stacks up.

Micropolis

European headquarters

Tel +44 734 751315

Fax +44 734 868168

MICROPOLIS

Specialists in hard disk drives, audio/video storage and disk array technology.

Shape of THINGS TO COME

By Derek Johnson

SOS can be reached on CompuServe; our address is 100517,1113. Our full Internet address is 100517.1113@compuserve.com.

HNB'S SERVICE INDUSTRY

HHB Communications have unveiled what they believe to be Europe's "best-equipped professional audio service

digital and analogue oscilloscopes, digital format and timecode analysis systems and advanced soldering stations for the removal and replacement of surface-mounting components.

On the new product front, HNB have also announced the availability of the new Sony DTC60ES DAT recorder, priced at £799. The machine features 44.1kHz sampling rate via its analogue inputs, as well as



facility". The new facility, located at HNB's London HQ, represents a £100,000 investment and covers an area of over 2000 square feet. Eight trained engineers are on call, in the air conditioned, 'clean room' static-controlled environment. The facility is equipped with Audio Precision test systems,

optical and coax digital connections and Sony's Super Bit Mapping system. The new recorder is rackable with HNB's own rack kit, which costs £45.

A HNB Communications, 73-75 Scrubs Lane, London NW10 6QU.

T 0181 962 5000.

F 0181 962 5050.

NEW RELEASE FROM LES NEGRESSES VERTS

If you were intrigued by Rupert Hine's tale of recording Les Negresses Verts in the SOS interview in February, then truck on out to your local record store: the new album — *Zigue Zag*, on Virgin — has hit the streets. As you may recall, the album was recorded by Rupert in the Hotel du Parc in the French village of Salies de Bearn. It's the group's first album of new material for three years, and features 14 tracks. It's an entertaining album and for immediate, live-sounding performances, brilliant arrangements and superb production, is hard to beat.



Sony are launching two new products into the music market — a new multi-effects processor, and a DAT recorder designed specially for musical instrument applications. In one unit, the DPX-V77 effects processor combines the capabilities of Sony's DPS-D7 digital delay, DPS-R7 reverb, DPS-F7 filtering effects processor, and DPS-M7 sonic modulator. The processor features digital connections, 198 user memories, full MIDI control, and a new effects morphing function. High-speed effect control processing is provided by two effect blocks, and you can select from a choice of 50 effects for each block.

The DTC-A8 is a compact DAT recorder that offers simple operation plus 44.1kHz or 48kHz sampling rates on analogue or digital inputs. An optional foot

DIS 'N' DAT FROM SONY

control allows you to control record/pause, stop/play, rewind/play or previous/play without having to keep accessing the machine. Sony's Super Bit Mapping technology is employed by the DTC-A8, along with 1-bit delta-sigma AD converters.

A Sony Broadcast & Professional Europe, Jays Close, Viables, Basingstoke, Hampshire RG22 4SB.

T 01256 474011.

F 01256 816397.

In SOS's August 1994 issue, we ran an interview with synth whiz and SOS contributor Paul Ward.

At the time, Paul was just finishing off his latest album for label Surreal to Real. That album is now finished and available. The *Fear of Make Believe (REAL 090)* features 10 tracks in all, allowing you to experience more of the epic synth textures and soaring solos that Paul is known for.

Gerald and Martha, having slipped away from the party, were riding their wooden hobby horses down by the edge of the wood. Gerald was not Martha's favourite playmate by far...



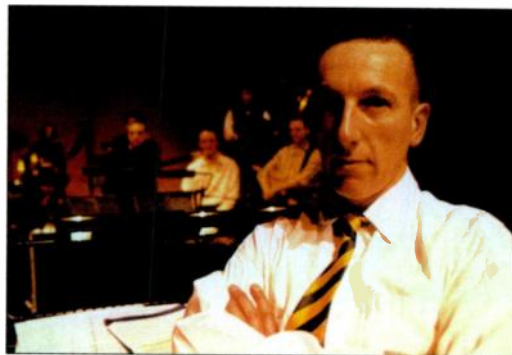
and ward is the first of many to be...

NICK'S TOP OF THE PIPES!

SOS contributor Nick Magnus (with collaborator Rod Edwards) is involved in what is (as of this writing) the Number 2 album in the UK album chart: *Pan Pipe Moods*, by Free the Spirit on PolyGram TV, has gone gold (100,000 copies so far). Well done Nick!

STEVE MARTLAND TEAMS UP WITH SENNHEISER

Sennheiser UK is supporting a series of performances by the Steve Martland Band throughout the UK and Europe (see the SOS interview with Steve in April, 1993). The concert series starts in January and features a varied line-up of percussion, strings and winds, amplified to give a "new compositional perspective". Both Sennheiser and Neumann mics are being used, with Sennheiser MKH40s on piano, marimba, overhead drums and hi-hats; Neumann KM140s were chosen for saxes, while the new Sennheiser MD504 'thumb mic' was selected for trumpet, trombone and snare. Radio mics are also in evidence, allowing some musicians to move around, and Martland himself uses a new



Sennheiser SK50VHF transmitter and MKE2 clip mic to communicate with the audience during concerts.

A Sennheiser UK Ltd, 12 Davies Way, Knaves Beech Business Centre, Loudwater, High Wycombe, Bucks HP10 9QY.

T 01628 850811.

F 01628 850958.

SOFT SELL AT ARBITER

The recent Winter NAMM show in the USA saw a raft of new products from Arbiter's Music Technology Division: we don't have space to list them all, but here are some highlights: first up is the welcome return of Passport Designs' *Alchemy* sample manipulation software for the Mac; the program has been re-released, priced at £599, and is now up to Version 3, with the ability to download samples quickly over SCSI, and support for most major samplers and sample interchange formats.

PC news from MIDI interface specialists Key Electronics includes the launch of their Pro Studio Midaïor (the MP128S), a 2-input, 8-output PC MIDI interface with SMPTE sync, at £299.95. At the other end of the

scale, price-wise, is Music PC's MPC401, apparently the cheapest MPU-compatible card on the market at £64.95. It now has the benefit of a WaveBlaster connector, so that it can be used as a host for daughter boards.

New from Voyetra is *Sound Suite*, a software bundle for "multimedia professionals"; priced at £139.95, *Sound Suite* comprises a variety of sound, MIDI and video utilities (more than a dozen in all), including the *MIDI Orchestrator Plus* sequencer (reviewed in the February issue of SOS), *Videostation* Video for Windows viewer with playlists, the *AudioView* digital audio editor, Voyetra's *Jukebox* CD, MIDI and WAV manager with playlist, and the *Soundscript* Multimedia

presentation utility.

PG Music's popular *Band in a Box* auto-accompaniment program is now at V6 in its Mac version (£89); features such as Notation window, Lead Sheet Style printing, and Automatic Harmonisation are now on offer to Mac users of the program. Arbiter also tell us that the Atari version 6.0 is due later this year.

Arbiter report that *Samplitude Pro*, which provides up to eight tracks of Windows-based hard disk recording (depending on PC speed), has been the subject of lots of enquiries and looks destined to be popular. Features on offer include time-stretch, sync to MIDI, cross-fading, effects such as reverb and delay, filtering and looping, all for £249.95.

A Arbiter Music Technology, Wilberforce Road, London NW9 6AX.

T 0181 202 1199.

F 0181 202 7076.

If you're feeling a bit European, check these out: EuroPop Days 95, a showcase for new bands in Freiburg, Germany; and Intermedia 95 Music & Record Expo, to be held in Wroclaw, Poland. EuroPop Days takes place between May 12 and 14, and all styles and nationalities are welcome to participate, as long as you are a band without a current recording contract. In addition, there

POP GOES EUROPE

will be a demo tape marathon, and loads of opportunities to rub shoulders with A&R managers from many European labels.

Intermedia takes place on October 13 to 16, and will feature exhibitions by leading manufacturers of musical instruments, electronic equipment, lights, amplification systems and special effects. Alongside the music fair, the 'Record Expo' will feature a MIDEM-like record and publishing fair. For details on Intermedia contact BMP Media.

A EuroPop Days 95, Ferdinand-Weiss-Str. 6a, D-79106 Freiburg, Germany.

T +49 761 31428.

A BMP Media GmbH, Bismarckstr. 83, D-28203 Bremen, Germany.

T +49 421 705772.

F +49 421 74066.

CD-ROM DEAL FROM SILICA



Silica have announced a nifty package based around a new quad-speed CD-ROM drive. The Amitek Encarta Quartet pack comprises an NEC quad-speed drive plus four free CD-ROM titles: Microsoft's *Encarta 95* encyclopedia, *AneCDote* (a 'magazine' full of articles, clip art, databases, maps and sound), *Animator*, and *Sneak Peeks*, which provides numerous demos and previews from games company Sierra On Line. The package retails for an amazing £198.58.

A Silica, 1-4 The Mows, Hatherley Road, Sidcup, Kent DA14 4DX.

F 0181 308 0608.

Shape of THINGS TO COME

Roland UK are going on tour as of March 28, under the banner 'Technology for Creativity 1995'. The tour, which will feature live demos of Roland's latest products, including the VG8 guitar system, will visit a variety of venues in the UK and Ireland. You should contact Roland for full details of dates and times, but towns visited will include Cardiff, Bristol, Ealing, Cambridge, Birmingham, Manchester, Leeds, Glasgow, Belfast and Dublin.

T 01792 700139.

F 01792 310248.

Sounds OK have announced the availability of four new collections of sounds for the Yamaha SY85 and TG500. Coming from Sound Source Unlimited, the sets cost £32 each and come on floppy for the SY85 or in a variety of formats for the TG500. The disks are called Super R&B, Country/Acoustic Folk, Hybrid Textures and Radical Film Textures. The first two are self-explanatory, while Hybrid Textures features a selection of highly impressionistic sounds typical of SSU and the film set offers plenty for the budding soundtrack composer.

T 01276 22946.

F 01276 22946.

As of March 8, SCV London became the official UK distributor for LA Audio products. The LA Audio range, which is also manufactured by SCV London, includes products such as the Classic Compressor, the 16-channel Multigate, the 4-series (comprising the 4X4 2-noise gate/2-compressor package, 4G 4-channel noise gate, and the 4C 4-channel compressor), and the recently launched LA Lites series.

A SCV London,
6-24 Southgate Road,
London N1 3JJ.

T 0171 923 1892.

F 0171 241 3644.

MULTIMEDIA THE OLD-FASHIONED WAY

'Transmission Primaries' — George Millward & Brian McClave.

In an age when 'multimedia' is the buzz word on everyone's lips, it's easy to overlook the fact that mixed media has existed for some time within the many forms of performance art. George Millward is both a physicist and an experimental electronic musician, who has combined both his interests to produce a number of atmospheric 'soundtracks' or synthesized soundscapes, which accompany and enhance the large-scale photographic works of Brian McClave. Entitled 'Transmission Primaries', the touring exhibition examines, in disordered detail, the technology which represents the information highways of the modern age. Conceptually, 'Transmission Primaries' are the three basic colour elements (red, green and blue) used in TV broadcasting.

"The theme works in many ways," explains Millward, "with the transmission of TV, radio and sounds in general. Each of the three rooms represents different aspects of technology. Brian and I have a number of common interests, one being radios, and particularly radios that are not working properly. For this project we got an amateur radio receiver and recorded the 'jumble' that you get over them — which is like music to me."

Millward's select arsenal of equipment includes



a Roland W30 Workstation, Lexicon LXP5, and, most importantly, an Emu Morpheus, which was used extensively.

"I bought the Morpheus in order to do this project. It's a really serious instrument whereby you can take the sounds, look at the filters and analyse them. With the function generator, programmable LFO's, filters and random loops, you can make things sound vibrant pretty easily."

The three soundtracks were mixed in three days at Sheffield's FON studios and then mastered onto three 70-minute 'one-off' CDs. Each of the exhibition rooms was fitted out with high-end stereo speaker systems (Mission and Linn — loaned by local hi-fi specialists Moorgate Acoustics), with the CD players programmed to repeat play.

The 'Transmission Primaries' exhibition will be on show at The Montage Gallery, 35/36 Queen Street, Derby DE1 3DS (Tel: 01332 295858) between the 10th March and 23rd April. *Nigel Humberstone*

SWEET 16 GOES PC

Swedish company Roni Music's Sweet 16 MIDI sequencer (reviewed for the Atari ST back in *SOS* February, 1994) is now available for the PC/Windows platform. Offering the same excellent features and low price as the Atari version, this should

be a good bet for newcomers. Sweet 16 is a fully-functioning sequencer, with event and grid editing and independent time signature and tempo tracks. You can access two MIDI ports (for 32 independent MIDI tracks), and tracks of different lengths can be

individually looped. Contact UK distributors, Hands On Music, for details. Sweet Sixteen for the PC costs an entirely reasonable £49.95, plus £1.50 postage (UK).

A Hands On MIDI Software, 11
Warfield Avenue, Waterlooville,
Hants PO7 7JN.

T 01705 783100.

F 01705 783200.

Soundcraft have announced a winner for their recent 'new for old' competition. The oldest, most travelled, and most interesting Soundcraft Series 500 Monitor console has been located.

SOUNDCRAFT: BUILT TO LAST!



It has serial number 003, has been battered by falling lighting and, roadies, suffered rainstorms and beer, and is still working and on the road. The desk, a 32-channel model, belongs to Gemini Sound of Dallas, Texas, and has been used to mix Roy Orbison, James Brown, Stanley Jordan, and Donny Osmond, amongst a host of others. Although the main point of the competition was to swap a new SM12 for the old Series 500, Gemini's Tim Cain pleaded with Soundcraft to let them keep their trusty old Series 500; he notes that "the console is still in great

shape and we still use it regularly."

Coming more up to date, the world's first owner of Soundcraft's brand new k1 four-buss live console is hire company Marquee Audio. The company's MD, Spencer Brooks, comments: "The k1 provides the market with a fully-featured, budget-priced console that gives pro facilities at an entry-level price. We feel this console is ideally suited for AV, installation and small touring requirements."

A Soundcraft Electronics Ltd, Cranborne
House, Cranborne Industrial Estate,
Cranborne Road, Potters Bar, Herts,
EN6 3JN.

T 01707 665000.

F 01707 660482.

MEMS '95 NEWS

You can meet the staff of *Sound On Sound* at this year's MIDI, Electronic Music & Recording Show, which takes place at Olympia 2 from April 21-23. There'll be plenty to do and see, with a chance to look at C-Lab's new Falcon computer, Steinberg's new *Cubasis* entry-level software, Soundcraft's Protracker mixer, and Vestax's HDR4 and HDR6 hard-disk recorders (reviewed in *SOS*, February, 1995). A seminar program will also play a major part

of MEMS; Heavenly Music's Joe Ortiz will demonstrate how to make a great MIDI File, *SOS* contributor Nick Magnus will show off better sampling techniques, and affordable CD mastering will be demonstrated by Yamaha's Jim Corbett and Digidesign's Chas Smith. There will also be question and answer sessions, and the opportunity to pitch tricky questions at manufacturers. And of course, *SOS* will be there — come and have a chat!

A MEMS, PO Box 9, Dunoon, Argyll PA23 8QQ.
T 01369 707888.

FANCY FOOTWORK FROM ZOOM

Zoom's new 4040 Player Pro is a floor-mounted multi-effects pedal board offering 25 features built-in volume and expression pedals, along with a range of large, foot-friendly



separate effects. The unit provides 40 user and 40 preset patch locations, and it's possible to combine up to eight effects at once. There are five groups of effects: pre-amp, EQ, modulation, delay and reverb. The 4040

switches. A chromatic tuner is also on board, as well as an external effects loop.

A MCMXCIX, 9 Hatton Street, London NW8 8PR.
T 0171 723 7221.
F 0171 262 8215.

OSC's *Deck II* hard disk recording software has seemingly done the impossible: at the recent NAMM show in the States, the company demonstrated 24-track playback on a Power Mac with no sound card required. OSC claim that *Deck II* is the only Power Mac-native sound recording software, and by running the software on a Power Mac 8100/80, played back 24 tracks of audio with full automation, plus synchronous MIDI File and QuickTime video playback. Using a 'speed-bumped' 8100/100 and 110, plus fast enough disk drives (at least 6Mb a second

DECK II - IT'S GOT THE POWER (MAC)

throughput), even more tracks are possible. Ordinary SCSI drives (3Mb a second throughput or more) will give you 12- to 16-track playback. Current versions of *Deck II* V2.2 allow up to 16 tracks of playback; the new 24+ track capacity, plus new in-line effects, will be included in the next upgrade, scheduled for Spring.

A TSC, 9 Hatton Street, London NW8 8PR.
T 0171 258 3454.
F 0171 262 8215.

MORE MUSIC IN STORE FOR CAMBRIDGE

Ipswich-based music retailer Mark's Music are opening their first branch outside Ipswich. The new branch, their third, will be based in King Street, Cambridge, and is due to open shortly. Former Ipswich High Street manager Dean Mitchell will be in charge, and the shop will offer a wide range of new products from major manufacturers plus a healthy selection of second hand gear. No phone details as yet — watch this space for developments.

A Marks Music, 27 King Street, Cambridge.

MIX IT & MIC IT WITH SPIRIT!

Spirit's new ProTracker 8-channel in-line multitrack recording mixer is designed to make high-quality recordings of live performances (see our feature on live multitrack recording in this issue for background in this area). This compact rackmount console features a simple signal path and facilities that make it a good partner for affordable digital multitracks. Several ProTrackers can be chained to allow simultaneous recording on more than eight tracks, with an integrated monitor path. ProTracker also provides simple but effective

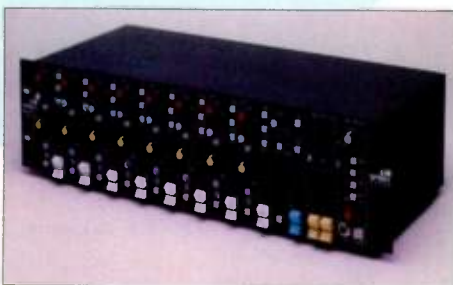
live mixing facilities for small bands, allowing FOH mixing and simultaneous recording. For recording applications, simple tracking and overdubbing are also straightforward with ProTracker. The main features of the Spirit Protracker include:

- Mic pre-amp with phantom power on every input.
- Balanced line inputs with built-in DI capability.
- Switchable high-pass filter on every channel.
- Built-in limiter, selectable on every channel.
 - Insert and aux switchable between channel and monitor paths.
 - PFL on each channel.
 - Balanced tape send/return, switchable between +4dBu and -10dBV.
 - Separate pre-fade insert and return sockets.
 - Stereo effects return with fader and PFL.
 - Mix routable to tape sends 7/8 for simultaneous 2-track recording,

without affecting individual feeds from channels 1-6.

And if you want a couple of inexpensive, rugged mics to go with your new Protracker, Spirit have extended their range to include the VM01 and VM01S vocal mics and IM01 instrument mic, all built to withstand on-stage use while providing good audio quality. The VM01 offers a hypercardioid pickup pattern, with a frequency response of 80Hz-20kHz and the ability to handle SPLs of up to 141dB. The VM01S adds a switch, and the IM01 offers the same spec with a cardioid polar pattern. As for price, how does £50 each (including VAT) grab you?

A Spirit by Soundcraft, Cranborne House, Cranborne Industrial Estate, Cranborne Road, Potters Bar, Herts, EN6 3JN.
T 01707 665000.
F 01707 660482.



Shape of THINGS TO COME

Looking for a vocal training video? Check out the *Sam West Vocal Workout*, which covers breathing, tone, range, vibrato and more, for £19.95. In addition, West has produced the *Voice Building* audio cassette for £6.95 that contains extra vocal exercises, listening tests and more. Or buy both for £25.90, postage inclusive. For full details, contact Sam West Productions.

A Sam West Productions, 143 Bathurst Gardens, London NW10 5JJ.

T 0181 964 0097.

Mixer and distribution amp manufacturers Chilton Ltd have moved premises. The new location will allow the company to develop custom-made units alongside the manufacture of their core range of products.

A Chilton Ltd, Platts Eyot, Lower Sunbury Road, Hampton, Middx TW12 2HF.

T 0181 941 5214.

F 0181 941 1465.

Ensoniq have announced the release of the KT88, an 88-note weighted action keyboard. The new instrument offers all the sound and performance features of the KT76, reviewed in *SOS* November 1994, but with a longer keyboard. Also notable is 64-note polyphony, over 300 sounds, including two sampled pianos in ROM, and a 16-track sequencer. The KT88 costs £2149 including VAT.

T 01462 480000.

F 01462 480800.

If you find labelling your patchbays a fiddly and messy business, check out the new *PatchLabel* software from audio and video patchbay specialists Re an. The software is available for Mac or PC-compatible computers, and is designed to make labelling patchbays less of a hit-and-miss affair.

A Re an, Springhead Enterprise Park, Northfleet, Kent DA11 8HB

T 01474 328807.

F 01474 320285.

MIXING MOVES



Mixer manufacturers Soundtracs have relocated their head office. The new site will incorporate sales, marketing, customer service, accounts, purchasing and R&D departments; manufacturing remains

at Glenrothies, in Scotland. The new location more than doubles the space available to the company at their old Surbiton address.

A Soundtracs plc, Unit 21D, Blenheim Road, Longmead Industrial Estate, Epsom, Surrey KT19 9XN.

T 0181 388 5000.

F 0181 388 5050.

JARRE JAM AT BIRMINGHAM

The Rendezvous 95 Jean-Michel Jarre convention will be held on Sunday April 23 at the Cock Moors Woods Leisure Centre in Birmingham. Events JMJ fans can expect during the day include an exhibition of JMJ merchandise, a number of exhibitors selling merchandise, a rare video show, an auction of rare records and memorabilia,

and a free draw for an exclusive prize. If you arrive dressed as JMJ(!), you could win an additional prize. It's also an ideal place to meet

other fans. Tickets to the event, which are limited in number, cost £5, plus an SSAFE for the return of the tickets. Full details from Dave Freeman at the address below.

A Dave Freeman, 64 Oulton Crescent, Barking, Essex IG11 9HF.

T 0181 594 4126.

MIKE MICS SOUNDFIELD

Mike Stock has added a SoundField mic to his new multi-million pound London studio complex. Stock says: "Over the years, I've tried all types of mics, and time and time again I find the only mic I can constantly rely upon is the SoundField."



I used these mics for nine years at PWL, and now that I have my own studio, the first mic I purchased was a SoundField."

A SoundField Research Ltd, 18-42 Charlotte Street, Wakefield, West Yorkshire, WF1 1UH.

T 01924 201089.

F 01924 201617.



NEW SAMPLE GENERATION!

Two new sample CD releases from Time & Space were launched at this year's NAMM show by East-West Soundwarehouse. *Funky Ass Loops* is 71 minutes of live grooves from Michael Bland and Sonny Thompson (the rhythm section of the New Power Generation, the backing for the artist formerly known as Prince!). With no drum programming or sequencing, most of the grooves were recorded to multitrack tape; both the complete groove and its individual components are provided. First you get the full mix for four bars, followed by the individual tracks of drums, bass, guitar and percussion for the duration of the loop — the resulting product, according to Time & Space is "just like having a Prince multitrack tape to create new songs from!" The audio CD is available now, priced £59.95.

The second East-West product currently on the Time & Space shelves is *Tekno/Industrial*, the follow-up from

Greg Hawkes and Perry Geyer, who were responsible for the five star-rated *Technophobia* sample CD, and featuring powerful dance floor rhythms. It's available now for £59.95. New CD-ROMs of favourite titles from East-West include *Bob Clearmountain Drums 2* in Kurzweil format for £149, *Denny Jaeger Master Violin Library* in Kurzweil format for £329, and *Steve Stevens Guitar* in Roland format for £149.

New from Time & Space's own label is *Zero-G Phantom Horns*, a horn sample library featuring acclaimed UK horn section, The Phantom Horns, and priced at £54.95. All orders over £49.95 qualify for a free copy of *Samplemania 2* which has been re-pressed by Time & Space to include new demos.

A Time & Space, PO Box 306, Berkhamsted, Herts HP4 3EP.

T 01442 870681.

Millennium

• MAIL ORDER • FAST DELIVERY • LOTS OF SOFTWARE ALWAYS ON DEMO IN STORE! • EXPORT WELCOME
 • PACKAGE DEALS A SPECIALITY • ACADEMIC ORDERS WELCOME • AUTHORISED MACINTOSH DEALERS

TEL: 0115 955 2200 FAX: 0115 952 0876

1 HURTS YARD, NOTTINGHAM NG1 6JD



PC MIDI MUSIC SPECIALISTS. HERE ARE JUST SOME OF THE PRODUCTS WE STOCK:

SOFTWARE

CAKEWALK PRO V3.0

With a simpler user interface and features to better sequencers costing twice as much, this is the choice of professionals time and time again.

WE WILL BEAT ANY GENUINE QUOTE ON CAKEWALK!!
 CAKEWALK HOME STUDIO£119.00
 JAMMER PRO FOR WINDOWS ONLY ..£119.00

DIGITAL AUDIO

Cubase **AUDIO PC** ★
+ YAMAHA CBX-D5
 Digital Recording Module
 ONLY £1595.00

VOYETRA MIDI ORCHESTRATOR PLUS
 EXCEPTIONAL VALUE
 EPOA

ensoniq

ASR10 16 Bit Sampler

- 2Mb RAM exp to 16Mb
- 24 bit effects with 248 presets
- 16 track sequencer
- Optional SCSI • Exp to 8 outputs
- Optional Digital I/O
- 2 track direct to disc recording

P.O.A. V.3 Now reads Akai and Roland CD's

Steinberg
Cubase **COMPACT**

The definitive MIDI sequencer now available, while stocks last at just **£169.00 inc VAT.**
 Call now to avoid disappointment

Professional Quality Digital Recording.
 On Board Wavetable Synthesis
 Samplestore
 RAM Upgradeable to 12MB
 Only £249.00 inc VAT

TS10 Synth

- Over 300 programs
- 24 Track sequencer
- 73 effects presets • 4 outputs
- 2Mb sample memory (compatible with EPS/ASR sample library)
- Hyper-Wave™ (Program driven loops on just one note)

P.O.A.

Musicator V3
 Professional Intergrated Sequencing & Scoring
 Now with Digital Recording

TURTLE BEACH TAHITIP.O.A.
MITSUMI FX300
TRIPLE SPEED CD ROM.....ONLY £149.00
SAW Multitrack Hard Disk Recording System
 for PC V4 now with major new enhancementsP.O.A.
Samplitude£235

GOLDSTAR

GMK-49 4 octave Midi Controller
ONLY £159.00
 (Comes with free MIDI sequencer worth £49.95!!!)

YAMAHA MU5

Yamaha's latest baby for those who need MIDI on the move. Full GM spec with PC MIDI interface built in. EPOA
 (Comes with free MIDI sequencer worth £49.95!!!)

Personal Composer
 FOR WINDOWS
 The ultimate notation software with full MIDI spec.
 From **£99.00 inc VAT**

EMAGIC

Logic Audio for Macintosh Digidesign
 Audiomedia II
 Complete Package £1,399
CUBASE AUDIO and AUDIOMEDIA II
 Complete Digital Recording Bundle for MacintoshP.O.A.

ALESIS
MIDI
VERB
4
IN STOCK

NOVATION
BASS STATION

Dual oscillator analogue bass synth with full MIDI control **E.P.O.A**
 Rack version available soon call for details!

- FINALEP.O.A.
- MUSIC PROSEP.O.A.
- FREESTYLE - New Musician's Sequencer for Mac.....£149.95
- SOLO QUEST SYNTH EDITORS£89.00
- PIANOWORKS FOR WINDOWS TUITION COURSES 1-2-3...£89.00ea
- PASSPORT MUSIC TIME, now with 16 stave output for PC, MacP.O.A.
- THE JAZZ PIANIST£49.95
- VOYETRA MIDI ORCHESTRATOR PLUS£99.00

Digital AUDIO

Digital Only Card
 • SP/DIF In Out for PC £519.00
DIGITRACKS
 Digital audio editing software for mac giving 6 16 bit tracks, Quick time support, SMPTE sync, and realtime digital parametric EQ.
Only £249.00

ALESIS
Alesis Monitor 1's
Only £299



PASSPORT ENCORE V4.0
NOW ONLY £399.00

QUICK SCORE PROFESSIONAL
 integrated MIDI sequencing and score printing.....£99.00

Steinberg
Digital Studio Kit
 Pack includes:
 Music Station Software
 X-DMC Digital Sound Board (Ensoniq GM Compat.)
 MIDI Xplained
 Wave Player
£259.00
 Limited Price while stocks last

YAMAHA TG300
 New Low Price

FATAR

YAMAHA
W5 In Stock POA!



YAMAHA
YAMAHA SY85
 Now Only £995.00

CMS 61 MIDI controller keyboard / Workstation. Perfect for the PC Musician
Only £229.00 while stocks last

LOGIC
 All versions available at the best prices!

Call us for the best deals on complete computer based sequencing or Hard Disk Recording packages for both Apple Mac and PC.

CALL NOW FOR THE BEST QUOTE!! E&OE
 FAST DELIVERY INTO EUROPE

Nottingham (0115) 955 2200

Shape of THINGS TO COME

Dr Barry Eaglestone of the University of Bradford's Department of Computing is using "the power of information technology to help manage the messy, non-artistic elements of composing..." Working with the Sound Information Technology Research Group, Dr Eaglestone has developed a prototype system for musical composition; he notes that: "Many of the problems that composers have to deal with, such as keeping track of different versions of their music, are identical to those facing engineers who have tackled them using computer science for many years now. By adapting the kind of database technology normally used by engineers, we can facilitate the process of musical composition." Part of the group's research was supported by Apple Computer Inc and involved experimenting with a 'virtual reality' power glove to manipulate sound while composing.

A University of Bradford, Bradford, West Yorkshire BD7 1DP.
T 01274 383088.
F 01274 305460.

Nottingham's Arnold & Carlton College have added to their range of engineering, guitar and 'rock clinic' courses with the introduction of a BTEC First Diploma and National Diploma in Popular Music and Studio Engineering. The course provides a foundation for a range of music industry careers, and tutors are all pro musicians and engineers. The courses take advantage of the college's recording studios, rehearsal rooms, MIDI studio and microelectronics labs — hardware includes 24 tracks of Alesis ADAT, automated mixing and Akai S3000 sampler.

A Pop Music Department, Arnold & Carlton College, Digby Avenue, Nottingham NG3 6DR.
T 0115 952 0052.

The Music Technology Roadshow is the umbrella name for a range

of courses being run at arts centres in the Thames Valley area, including Bracknell, Reading and Windsor. The Roadshow would be happy to hear from any other centre who would like to have a visit. The courses aim to give people a solid grounding in the use of their own equipment. Four courses are available (Elementary/Advanced MIDI and Elementary/Advanced Multitrack), and they can be run as a one-day seminar or four two-hour evening sessions, although Advanced Multitrack is only available as a one-day seminar. The Music Technology Road Show is sponsored by Spirit by Soundcraft and Fostex/SCV; they would also like to thank Roland for their support.

A Music Technology Roadshow, 2 Beulah Place, North Street, Winkfield, Berks SL4 4SZ.
T 01344 883326.

The University of Westminster at Harrow is offering a three-year, full-time BA Honours Degree in Commercial Music, to be run by Norton York. Entry requirements are standard, plus evidence of musical ability in composition and performance, and by audition. Topics covered including arranging, performance and production, original composition and songwriting, recording, music business, marketing and management and music business and entertainment law.

A Harrow School of Design & Media, University of Westminster, Watford Road, Northwick Park, Harrow HA1 3TP.
T 0171 911 5000.



One of SAE's Pro Tools workstations.

In association with Digidesign, the School of Audio Engineering has introduced Pro School, a project offering a range of hands-on courses based on Digidesign's Pro Tools hard disk recording systems. SAE colleges will be offering courses based around an Apple Mac

EDUCATION CORNER

Quadra, Pro Tools, Sample Cell and Sound Designer software. Students will receive a Pro Tools Operator Certificate on successful completion of the course. Pro School will be available at SAE London from March, with Core Program prices starting at £300 and individual units from just £60.

We also hear that the SAE are to make TC Electronic's M5000 Digital Audio Mainframe a standard piece of equipment at their 18 colleges. All students on audio engineering courses will be trained on the M5000.

A School of Audio Engineering, United House, North Road, London N7 9DP.
T 0171 609 2653.
F 0171 609 6944.

Starting from September, The Bournemouth and Poole College of Further Education is offering a two-year full-time BTEC in Popular Music. The college is opening a new music facility, supplied by The Music Corporation, and consisting of a 16-track digital recording studio, computer suite, private study area, four rehearsal rooms, six practice rooms and a lecture theatre. Also from September, the college is offering a one-year full-time music course, which is ideal for students with some musical ability who want to progress to the higher level pop and jazz or classical music diplomas.

A Bournemouth & Poole College of Further Education, North Road, Parkstone, Poole, Dorset BH14 0LS.
T 01202 205902.
F 01202 205719.

This year the Gateway organisation celebrates 20 years in business. As part of the celebrations, Gateway have announced a new series of modular and short courses to be held in the summer that will reflect Gateway's continuing partnership with Kingston University. Gateway will be celebrating their birthday at the APRS exhibition Audio Technology 95 in June, where Gateway founder Dave Ward will co-ordinate the Seminar programme. Dave has recently been in Finland helping the Sibelius Academy structure their new sound engineering courses; he has also worked with the Academy of

Industrial Arts and the Theatre Academy in Helsinki on courses in stress management.

A Gateway, The School of Music, Kingston Hill Centre, Surrey KT2 7LB.
T 0181 549 01014.

Yamaha and the Times Educational Supplement have announced the third annual National Youth Rock and Pop Awards. The awards are designed to uncover talent from within Britain's schools and colleges, and to give musicians a chance to



James Whymark, a 1994 Yamaha prize winner.

get their material in front of some top names from the music industry. Shortlisted entries will be judged by Phil Collins, Harvey Goldsmith, Richard Skinner and Jeremy Silver (Virgin director of press and publicity). Prizes of Yamaha instruments are available for both winning composers and their schools. Closing date for entries is June 24.

A Yamaha Kemble Music (UK), Sherbourne Drive, Tilbrook, Milton Keynes MK7 8BL.
T Rock and Pop Hot Line 01908 369219.

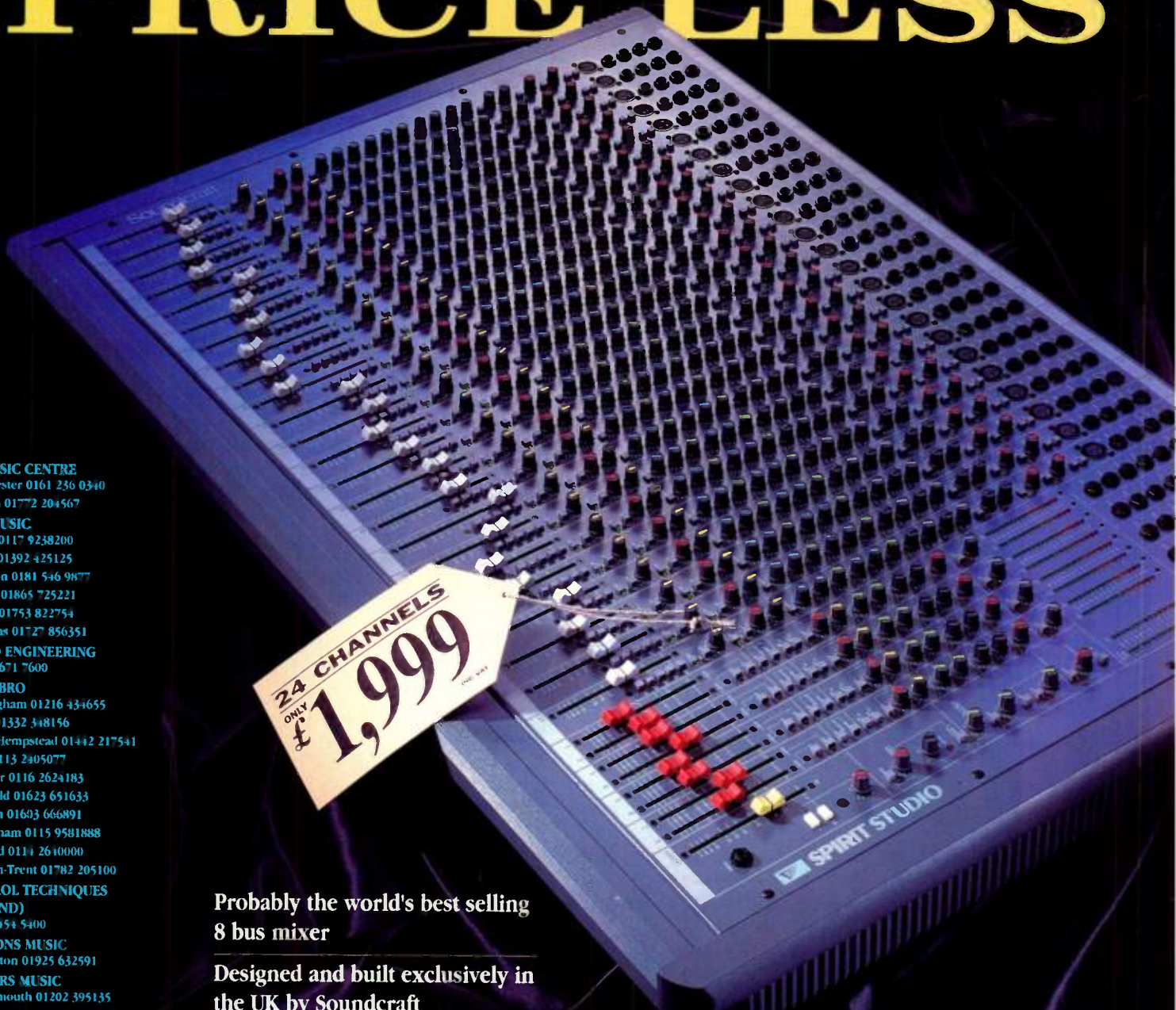
Steinberg are continuing to make moves into the education market with the announcement of the world-wide introduction of education multi-packs (otherwise known as site licenses) for Cubase Score V2.0 for Mac, PC and Atari. Two multi-packs have been introduced; schools and colleges can now buy packs containing either five programs, manual and educational tutorial, or 10 programs, two manuals and two tutorials, enabling a further saving of 10% or 20% respectively. The programs are licensed for use by a single educational establishment only.

A Harman Audio, Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood WD6 5PZ.
T 0181 207 5050.
F 0181 207 4572.



SEE YOUR SPIRIT
DEALER FOR DETAILS

PRICE LESS



- A1 MUSIC CENTRE**
Manchester 0161 236 0340
Preston 01772 204567
- ABC MUSIC**
Bristol 0117 9238200
Exeter 01392 425125
Kingston 0181 546 9877
Oxford 01865 725221
Slough 01753 822754
St Albans 01727 856351
- AUDIO ENGINEERING**
Dublin 671 7600
- CARLSBRO**
Birmingham 01216 434655
Derby 01332 348156
Hemel Hempstead 01442 217541
Leeds 0113 2405077
Leicester 0116 2624183
Mansfield 01623 651633
Norwich 01603 666891
Nottingham 0115 9581888
Sheffield 0114 2640000
Stoke-on-Trent 01782 205100
- CONTROL TECHNIQUES (IRELAND)**
Dublin 454 5400
- DAWSONS MUSIC**
Warrington 01925 632591
- E MOORS MUSIC**
Bournemouth 01202 395135
- KGM STUDIO SPECIALISTS**
Wakefield 01924 371766
- MUSIC LAB**
London 0171 388 5392
- MUSICAL EXCHANGES**
Birmingham 021 236 7544
- RAPER & WAYMAN**
London 0181 800 8288
- SOUND CONTROL**
Dundee 01382 225619
Dunfermline 01383 732273
Edinburgh 01315 573986
Glasgow 0141 204 0322
Kirkcaldy 01592 260293
Manchester 0161 877 6262
Newcastle-Upon-Tyne 01912 324175
- THE MUSIC CORP**
Ringwood, Hants 01425 470007
- TURNKEY**
London 0171 379 5148

24 CHANNELS
ONLY
£1,999

Probably the world's best selling
8 bus mixer

Designed and built exclusively in
the UK by Soundcraft

Superb Audio and Build Quality

Up to 72 inputs at mixdown

SPIRIT STUDIO

16 CHANNELS
ONLY
£1,499

Treat yourself to the mixer
you always promised yourself,
at a price that normally only
buys you a *cheap imitation*.

32 CHANNELS
ONLY
£2,699



SPIRIT
By Soundcraft

A Harman International Company

Shape of THINGS TO COME

The preliminary programme of Briefings and workshops for Audio Technology 95, The APRS Show, due to take place at Olympia, London on June 21-23, has been announced. The schedule, organised by Gateway's Dave Ward, includes multimedia developments, ISDN, working with radio mics, theatre automation systems, and a presentation by the Pressers and Distributors Group. For full details, contact the APRS at the address below.

BRIEFINGS ENCOUNTER AT AUDIO TECHNOLOGY 95

A APRS, 2 Windsor Square, Silver Street, Reading Berkshire RG1 2TH.
T 01734 756218.
F 01734 756216.

LEGAL AID



Richard Bagehot's *Music Business Agreements* is more of a legal textbook for the UK music industry than a self-help guide. If you fast forward to the Widgets section of *SOS* (page 168), you can check out a review of Donald Passman's *All You Need to Know About the Music Business*; *Music Business Agreements* could be seen as a British counterpart to this book. The author is an experienced music business solicitor who has spent time on Deep Purple's management team, and his book is aimed at legal professionals, with a tone

which is correspondingly formal, though this doesn't make it any less useful.

If you're in the market for interesting facts to impress your friends with, check out Appendix 3, which is a list of 13 notable court cases, presented in a non-partisan fashion, involving points of law relevant to the music industry. Particularly interesting are the cases involving Gilbert O'Sullivan v Management Agency and Music Ltd, Joan Armatrading v Stone, and ZTT/Perfect Songs v Holly Johnson. These cases are all legendary, and you won't find the facts presented in a more clear form than here. Other appendices include a question and answer section and a collection of example agreements.

It has to be said that at £58, *Music Business Agreements* is rather expensive, but authoritative information aimed this squarely at the UK music business is hard to get at any price. The book would be a worthy investment for anyone looking for some serious ammunition to help keep the sharks at bay during their career. The book is available from *SOS* Bookshop, order code B303 (postage extra).

A SOS Publications Ltd,
 Media House, 3 Burrell Road,
 St Ives, Cambs PE17 4LE.
T 01480 461786 (24 hours).
F 01480 492422.

PASSPORT

Alchemy³

The World's Only Sound Design & Analysis Tool



The Premier sample editor is back...Alchemy has been hailed as the most powerful Macintosh 16-bit stereo sample editor ever. Alchemy 3.0 is the fastest and most elegant way to retrieve, record, playback, edit, and store sampled sounds, period. Alchemy 3.0 enables you to set up a Distributed Audio Network (DAN) so that you can archive the sounds for several different sampling devices and digital audio boards in a single, convenient sound library. Features such as universal sampler compatibility, FFT analysis and resynthesis, true stereo editing, automated fades and crossfades, digital EQ, time compression, pitch shifting, stereo multi-tap digital delays, Digidesign and Sound Manager 3.0 support, and high-resolution sample rate conversion, make Alchemy 3.0 the most indispensable tool for any sound designer.

speck electronics
MODEL 316



Studio 16 + Model 316
 £1949
 Studio 32 + 2 x Model 316
 £3499

Soundcraft
SPIRIT STUDIO

Virtually all in-line desks have one setback - you have to split the EQ between the channel and monitor paths. The Speck Model 216 provides 16 independent channels of 3-band semi-parametric EQ in a 3U high rack, meaning full EQ is always on hand. Exceptionally clean audio performance and a very wide input range, with a continuous frequency selection from 50Hz to 15kHz. The 'Q' is optimised to produce shelf-like characteristics in the lowest and highest frequency ranges and a stunning 2Hz to 200kHz bandwidth. This is a Turnkey Studio Systems exclusive offer. The Model 316 is available separately for £749.

Emulator IV Professional Digital Sampling System



Redefining digital sampling standards, the Emulator IV features 128 voice polyphony and up to 128Mbyte of sample memory, giving up to 24 minutes of sampling time. A new icon based graphic interface makes it easy to use and powerful audio processing features include distortionless pitch transposition over a 10 octave range. Additional options include Flash RAM sample memory, 32 MIDI channel capability.

the right pieces to fit the picture...

Samples mean constraint, and virtually all new synthesizers use samples. You're tied to its timbre or shape. With the Wave the constraint just isn't there. You have the freedom to create a sound, then shape it, whether it's creating your own wavetable by harmonically editing its 128 spectra, resynthesising a sound sample to then use as a wavetable or to shape timbre with true analogue dual stage filters, plus so much more. With its unique front panel creating a sound does not need to take time - the Wave does not have a labyrinthine operating system. What's important though is that with a Wave you don't have to use the same sound that a 1,000 other musicians might be using at this very moment.

the wave



Ultimate Wave CD Vol 1

Trying to describe a pair of monitors can be difficult: 2 way bass reflex, D'Appolito design, nearfield monitor, with a 52Hz - 20kHz +/- 2.5dB frequency response at 200w RMS. But would specifications on their own help you to decide which monitors to buy? Of course not. If you've heard Dynaudio, Genelec, ATC try out the Waldorf Blues too, and you may be pleasantly surprised. The White TV is probably the smallest coaxial monitor in the world, and with reverse bias magnets can be placed directly next to your computer screen. Each pair of speakers are individually matched, one of many features normally found in significantly more expensive monitors. If you need more power the Black TVs will suit and both can come active for added portability.

the blue



Black & White Monitors

The Microwave has been around for 10 years having achieved cult status in many areas of music making, and if you have already have one you'll know the reason why. Waldorf's version 2 update is now fitted as standard to new Microwaves but can also bring 32 new wavetables to existing users for only £79. There are now over 15 ROM sound cards ranging from the Classic PPG Wave sound sets, The Bass Card, Techo Card and the programmers Signature Series range from Claudius Brüse to Wolfram Franke. If you're still not convinced or are unable to get to the shop for a demo, call or send an SAE for a MicroWave demo cassette

the microwave



MicroWave V2 Update

 waldorf

turnkey
studio
Systems

London WC2H 0DT Tel: 071 240 4036 Fax: 071 497 0690 E-Mail: CompuS 100322,1563 or CIX

Turtle Beach Monte Carlo

PC Sound Card

PANICOS GEORGHIADES
checks out Turtle Beach's most cost-effective PC sound card yet.

If you have a PC and want to start using it to make music, buying a sound card is a logical first step. Sound cards provide you with three facilities useful for music making:

- A MIDI interface to connect external synths.
- An internal (usually GM) synthesizer.
- Digital audio recording.

Almost all sound cards provide these three facilities, and you may also get an interface to connect a CD-ROM drive, a selection of games and music software, and perhaps some other goodies besides.

But with over 50 different 'models' to choose from, each offering slightly different features, selection can be far from easy. Two well-tried techniques are to go for a known manufacturer name, and to look for a good price, though you can't always rely on combining these criteria successfully.

The good news is that Monte Carlo, from Turtle Beach, seems to satisfy both conditions, offering quality and a good range of extras, at a competitive price.

ON THE BEACH

Turtle Beach is a US company known for its very high-quality sound cards and innovative approach to their design, their most famous product being the Multisound, which was the first card to feature 16-bit, 44kHz stereo digital audio

and a real synth chip (the Proteus 1). And a year or so ago, they released Maui, the first-16 bit stereo sampling card for the PC, at only £169. The Monte Carlo weighs in at a mere £145. But there are other cards at around this price, so what makes the Monte Carlo stand out from the crowd?

Well, besides wearing the Turtle Beach badge, which must be worth something, the card offers an MPU-401-compatible MIDI interface which you can operate both under MS-DOS and Windows. (To access this facility you need a standard SoundBlaster-compatible D-to-MIDI connector, which isn't supplied and costs about £20. The manual prints a diagram of the connections, if you're into DIY.)

On the digital audio side, the card can record and play back stereo or mono 8- or 16-bit sound at a selectable sampling rate between 4kHz and 48kHz, with 64X oversampling A/D conversion. You can record from a mono microphone input, a stereo line-in, an internal CD audio input (if you're using a CD-ROM drive), and the internal synthesizer. There's a stereo audio line out, and an amplified headphone/speakers output. All signal routings and levels are managed by a software sound mixer, which forms part of the controlling software, called *Sierra Audio Rack*.

Other sound-quality specifications for the digital audio side of the card are a frequency response with not much bass (starting at a high 75Hz), but managing very well at the other end of the spectrum at 22kHz. The enharmonic distortion is low at .02%, so in general, if you exclude the lack of bass, the sound specs are acceptable.

On the music side, there's the now ageing 20-voice four-operator FM OPL3 chip (to stay compatible with the SoundBlaster and games). Only some synth-type sounds on this are usable, but there's

TURTLE BEACH MONTE CARLO £145

PROS

- Cheap.
- Lots of games and music software.
- Good for those starting out.
- Good documentation.

CONS

- Sound quality only good for demo material.
- You may get problems with installation.

SUMMARY

Affordable PC sound card from a well known manufacturer, providing external MIDI, internal synth and digital audio facilities.

also a virtual synthesizer on board. This software emulation wavetable synthesiser (called *V-Synth*) uses your PC's memory to store 16-bit sounds. There are two modes, one using 0.5Mb, and another using 2Mb; polyphony is between 24 and 32 notes, depending on the size of your RAM.

You need a 486/33MHz machine with a minimum of four 4Mb of RAM for the maximum specs to work, but the synth is GM compatible. And there's a socket on the card for an additional third-party wavetable synthesis daughter board, to provide very high-quality synthesizer sounds.

On the software front, you get an iconic representation of a hi-fi rack unit which includes a CD-player, a MIDI player and a digital audio player, as well as a sound mixer for all three. There's also a version of Turtle Beach's Wave editor that can edit four files at the same time, a mouse player (an on-screen keyboard you can play using the mouse, with a lovely and ingenious pitch bend facility), and *Stratos*, a notation-based sequencer program for composing your own songs. Although pretty basic, it's adequate if you're starting out, and it does offer the ability to save as a MIDI file and sync to external clock. Finally, you also get a free CD with 50 demos of games software (15 of the games are full versions).

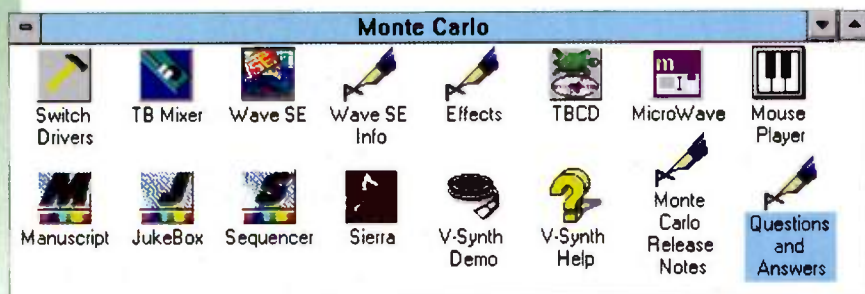
CONCLUSION

Overall, this is a good system if you're starting out, are on a limited budget and are also into games. We should say, however, that for about £60 more, Turtle Beach and other manufacturers have products (such as the Tropez card), that are more likely to keep you satisfied if you're a bit more ambitious and/or demanding.

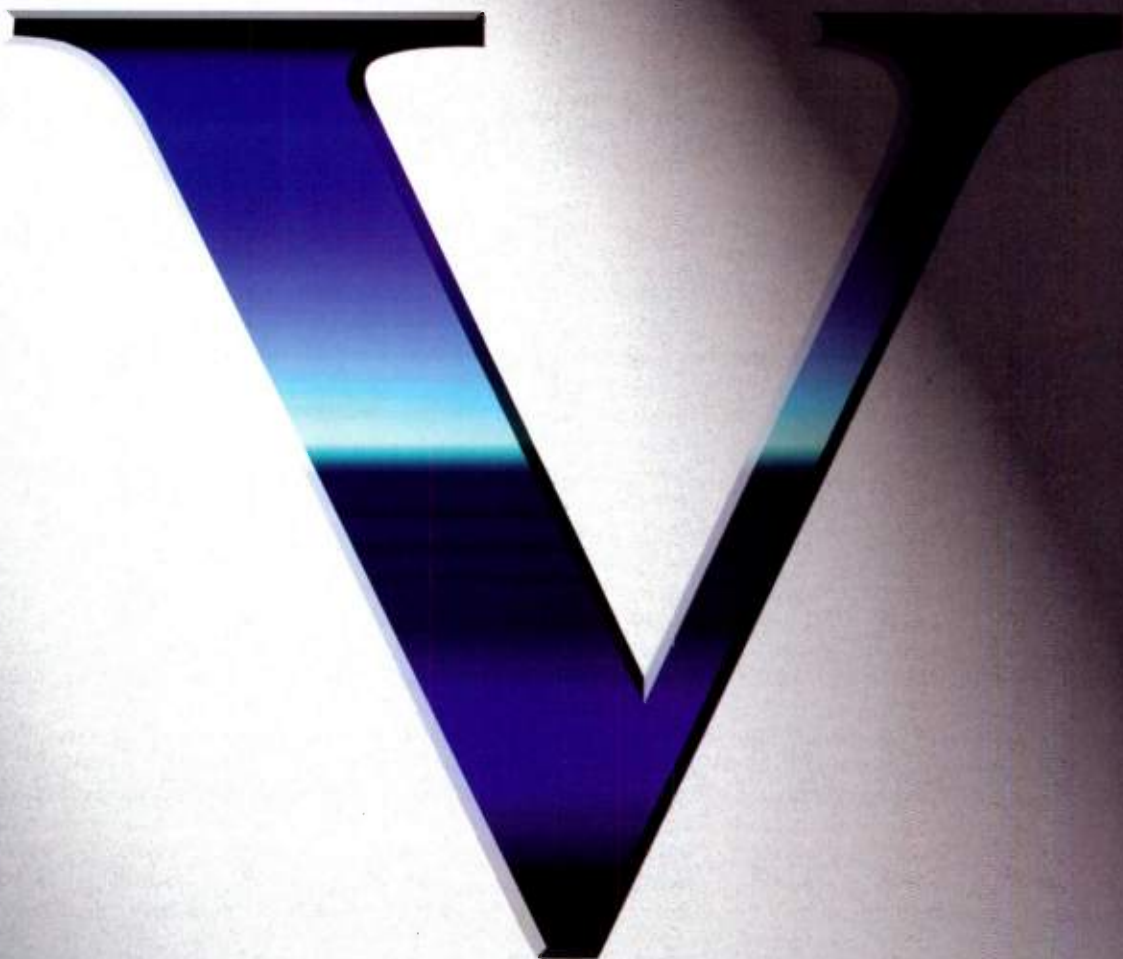
SOS

FURTHER INFORMATION

- £ Turtle Beach Monte Carlo £145 inc VAT.
- A EtCetera Distribution, Unit 17, Hardman's Business Centre, Rawtenstall, Rossendale, Lancs BB4 6HH.
- T 01706 228039.
- F 01706 222989.



V-Guitar System VG-8



A UNIQUE SOUND CREATION AND MODELLING
SYSTEM FOR THE GUITARIST

 Roland

Omniphonics Footprint

Series 75 Power Amplifier

*Just the thing to send
PAUL WHITE for Christmas
— an Omni Present!*

Power amps have never been the stuff of which romances are made, but if you've ever been let down by one, you'll know just how much you can come to rely on them. As a general rule, more money buys you a more powerful, more reliable and better-performing power amp — but at the same time, an amplifier designed for stadium PA work is probably over-engineered and over-powered for use in a project studio monitoring system. What's needed in the smaller studio is a sensible, medium-power design combining hi-fi audio quality with pragmatic engineering. It's also important that the amplifier is capable of staying cool without the need for fans (variable-speed fan systems excepted), as fan noise can be very intrusive in smaller studios.

Omniphonics is a British manufacturer with a track record for building realistically-priced amplifiers to meet the needs of the project studio market, though that isn't to say that their amplifiers in any way fall short of professional specifications — their higher powered models are equally suitable for live sound and installation work. The new Omniphonics Footprint series of amplifiers currently comprises two models, the Series 75 and the Series 150, the main difference being the power rating. Under review is the Series 75, a 1U, two-channel power amp capable of delivering up to 50 Watts per channel into 8Ω, or 75 Watts per channel into 4Ω.

OVERVIEW

Conventional in appearance, the Footprint Series 75 incorporates extruded aluminium end cheeks, which are finned to assist in dissipating the heat from the two bi-polar output devices (cooling is entirely by convection). The power switch is on the front panel, along with a green Power LED and a red Protect LED. However, there's no clip LED — something I rather miss. Loudspeaker connection is via standard terminals, which accept either bare wires or standard banana plugs. The two channels may be bridged for mono operation, providing up to 135 Watts into a minimum load of 8Ω.

To protect the loudspeakers from potential damage, and eliminate thumps at power-up, the speaker outputs are relay-muted for around five seconds after the amplifier has been switched on, allowing the power supplies time to settle before the speakers are energised. The relay also forms part of the protection circuit, and decouples the speakers from the amplifier in the event of a serious problem. The relay also operates if the amplifier operating temperature becomes excessively high, or in the event of a short circuit at the output terminals.

Both channels are fitted with conventionally-wired, balanced XLR input connectors, but there are no parallel stereo/mono jacks, which could have been useful for making quick and cheerful connections from semi-pro equipment. A recessed ground lift switch is fitted, which is always useful in situations where ground loops might occur (for more information on ground loops and ground lift, see the feature explaining them in August 1994's

OMNIPHONICS FOOTPRINT £382

PROS

- Sensible price.
- Good sound quality.

CONS

- No Clip LED.

SUMMARY

A good power amp, well-suited to driving nearfield monitors.

SOS). Finally, the recessed level controls may be removed and replaced by rubber caps, to prevent tampering in permanent installations.

The mains transformer is tapped, enabling the operating voltage to be switched between 100 - 120V and 220 - 240V. Hum and noise are specified at 95dBa relative to the maximum output level (inaudible under normal circumstances), and the frequency response extends from 20Hz up to 40kHz within very fine tolerances, rolling off very gently to in excess of 80kHz.

TESTING, TESTING...

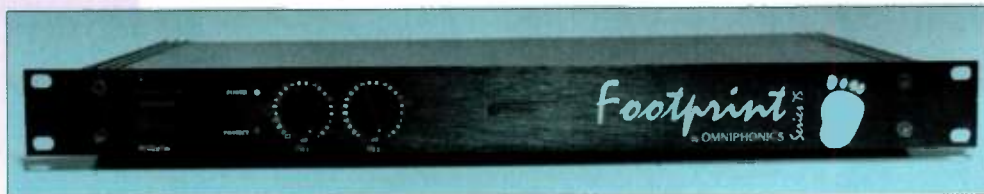
In use, the Omniphonics Footprint Series is very quiet, and delivers a confident, transparent sound, with no obvious rough edges. For powering nearfield and other small monitoring systems in home and project studios, the 75-Watt version delivers adequate power, and runs reasonably cool at typical monitoring levels. Relay protection is a nice feature on an amplifier of this price, and the 1U packaging means you don't have to lose too much rack space in finding it a home.

It's probably true to say that the power amp market is not an easy one to be in — there's so little obvious distinction between one model and another, which leads to buying decisions being made on price, rather than quality. In spite of this, Omniphonics have hung in there, and consistently designed decent amplifiers at a price people are prepared to pay. The Footprint Series seems set to continue in that tradition. Apart from the lack of a dedicated Clip LED, I can't fault this amplifier.

SOS

FURTHER INFORMATION

- £ Footprint £381.88.
- A Beyerdynamic (GB) Ltd, Unit 14, Cliffe Industrial Estate, Lewes, Sussex, BN8 6JL.
- T 01273 479411.
- F 01273 471825.



WAY OUT WEST MUSIC COMPANY

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

Professional Service

We buy used gear & P/X

FREE Parking

1 Minute from Twickenham station

Express Nationwide & overseas Delivery

W.O.W. Mobile nationwide installation service

Educational Discount - £

FREE Faxpax

£ Best price challenge

analogue

WAY OUT £BEST PRICES

TASCAM



Porta 03, Porta 07
424, 464, 488 II,
238S, TSR8
644 Midistudio
688 Midistudio

£
W
O
W
£

WAY OUT £BEST PRICES

FOSTEX



X18H, X28H,
NEW XR.5
280, 380S, R8,
G16S, G24S

£
W
O
W
£

WAY OUT £BEST PRICES

YAMAHA



MT 50
MT 120s
MT 8X

£
W
O
W
£

BARGAIN BASEMENT

- Tascam MSR 24 1" analogue multitrack (boxed A1) ..£3595
- Tascam M 1508 mixer (boxed A1)£575
- TEAC S300 monitors (boxed A1)£99
- Yamaha SY77 Synth/Sequencer.....£950
- Bell 16 channel noise reduction unit.....£145
- AKG Blue Line CK97cs capsule miniature with cardloid pattern tie clip.....£89
- AKG Blue Line CK97o capsule miniature omni tie clip£89
- AKG Blue Line CK98 capsule shotgun hypercardloid.....£159
- Mackle 1604.....£599
- Lexicon Alex.....£275
- Fostex R8£950
- Spirit Folio Rac Pac£699
- Phillips colour monitor£125
- Tascam M30 mixer (boxed A1)£450
- Tascam 424£375
- Tascam Porta 07£275
- Studiomaster P7 16:8:16:2.....£1500
- Fostex X28h.....£250
- Tascam 238 8 track rack mount (boxed A1).....£699
- Yamaha CP30 piano.....£299
- EMU Proteus FX£449
- Alwa ADF270 cassette mastering machine (boxed A1)£75
- Steinberg timelock£99
- Roland Rhodes MKS60 weighted mother Keyboard£699
- Casio mG210 Guitar synth£299
- Tascam ATR60-16 + AQ65C + C56 + Pro 1" 16 track including remote and extras.....£5500
- Alesis Microverb+MicroLimiter + Microenhancer.....£195
- Tascam 488£895
- Fostex 812 mixing desk.....£750
- Marshall 9000 series power amp.....£295
- Soundcraft spirit folio 12:2.....£275
- Atari 1040 computers.....£225
- Studiomaster 8:2 Diamond mixer.....£225
- Studiomaster Diamond Pro 12:3.....£375
- AKG C1000s condenser mike.....£175
- MXR digital delay£225
- Audio Logic RDS 1900 digital delay.....£195
- Rockman rock module and smart gate.....£95
- Yamaha SY35£450
- Tascam TSR8 (boxed A1).....£1395
- Studiomaster Proline 16:8:16:2.....£775
- Multi Moog£call
- Yamaha CX 5 computer and extras£call
- Tascam MM1 20:2 mixer (boxed A1)£750
- Rocktron Intelliflex£825
- Fostex 3070 compressor£125
- Roland SDE 1000£275
- T.S. Power Soak£125
- ART X15.....£99
- GBS Reverb£80
- Yamaha R100 reverb£145
- Fostex XR-5 multitrack (boxed A1)£325
- Fostex G series 16+24 Dolby S analogue multitrackers£call
- Shure Beta 58 microphone (boxed A1)£195
- Akai GX 2100 reel to reel mastering machine£150
- Sony U-Matic Video player.....£450
- Yamaha QY20 (boxed A1).....£199
- Fender Rhodes.....£350
- SAW 8 Track digital recorder (PC) with utilities + MQ X32 SMPTE Card£799
- Tascam 238 s/h.....£550
- Casio CZ-300 synth£329

digital

The Big Three!

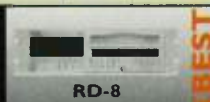
ALESIS



A-DAT

£
B
E
S
T

FOSTEX



RD-8

£
B
E
S
T

TASCAM



DA-88

£
B
E
S
T

W.O.W. Best Advice ✓

mixing desks

- ALESIS ✓
- BEHRINGER ✓
- FOSTEX ✓
- SAMSON ✓
- SOUNDCRAFT ✓
- SOUNDTRACS ✓
- STUDIOMASTER ✓
- TASCAM ✓
- YAMAHA ✓



outboard

OTHERS **YAMAHA** **LEXICON** **DIGITECH** **BEHRINGER** **ALESIS**

- D4 Digital Dam module
- Microverb III
- Quadroverb 4
- Quadroverb GT
- Q2, Meq 230
- 3630 Compressor
- Monitor one

£
W
O
W

- Dialflex II
- Ultraflex
- Autocom
- Compressor
- Multicom
- Intelligate
- Autoquad
- Parametriz

£
B
E
S
T

- TSR 24
- TSR 12
- UHM5 Vocalist
- Vocalist II
- Studio Vocalist

£
W
O
W

- Vortex (new)
- Jamman (new)
- Alex
- Reflex
- LXP-1,5+15
- Nuverb

£
B
E
S
T

- Rev 100 (new)
- EMP 100, EMP 700
- SPX 990, SPX 1000
- DS000 (new), REV 5
- MU5 new tone module
- MU 80 new tone module
- TG500 tone module

£
W
O
W

- Boss SE 70
- Aphex C2 Exciter
- Symetnx SX 208
- Compressor
- Symetrix digital processor
- Zoom 9120

£
B
E
S
T

midi & h/d recording

AKAI & YESTAR HARD DISK SYSTEMS

YAMAHA SY & W RANGES ENSONIQ + KURZWEIL

E-mu SYSTEMS

ATARI ✓ COMPAD ✓ MAC ✓ STEIBERS ✓ EMAGIC ✓ J. J. JOHNSON ✓ P REES ✓

Way Out West = Way Out £Best

packages

ALESIS



A-DAT + MIXDOWN CLASSIC

STUDIOMASTER

£
3,999

TASCAM



DA-88 + TOPAZ

SOUNDTRACS

£
6275

TASCAM



238 + MPL2242

SAMSON

£
1349

dat

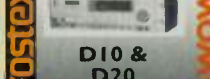
TASCAM



DA30 II & DA60

£
W
O
W

FOSTEX



D10 & D20

£
W
O
W

FREE FAX PAX

- 1 PERSONAL MULTITRACKING ★
 - 2 STARTING A STUDIO ★
 - 3 ANALOGUE V DIGITAL ★
 - 4 W.O.W. NATIONWIDE INSTALLATION ★
 - 5 W.O.W. NEWSLETTER ★
- ★ JUST RING, WRITE OR FAX US

MICROPHONES

- AKG ACOUSTICS ✓
- AUDIO TECHNICA ✓
- BEYERDYNAMIC ✓
- NEUMANN ✓
- SENNHEISER ✓
- SHURE ✓

0181 744 1040 MAIL ORDER HOTLINES 0181 744 1050

ROSS RX-NR4

Four-Channel Noise Reduction

DEREK JOHNSON looks at a cost-effective way of cutting down the noise in your studio.

Ordinarily, one would have to make a distinction between a noise reduction unit and a noise gate. They both deal with noise in different ways: a (single-ended) noise reduction system filters out the overall noise content of a signal, while a noise gate listens to a given signal and shuts it down when it falls below a pre-determined level (the threshold), eliminating any undesirable noise that might be present. Gates are particularly useful for cutting out unwanted noise present on a tape track or generated by an electronic instrument, such as synth hiss or digital noise, guitar amp noise, lip smacks and so on, when the wanted musical signal isn't active.

Essentially, Ross' RX-NR4 falls into the latter category, in that it provides four channels of noise gating that feature all the basic facilities for doing the job. It comes in a traditional 1U rack package, and is thankfully provided with a built-in power supply. Each channel offers a threshold knob (-50dB to -10dB), a ratio control (1:1 to 1:8), and a decay control. These controls allow you to set up each gate to respond in an

each channel also features a switchable low-pass filter with a range of 200Hz to 5kHz, which allows each circuit to behave more like a noise reduction unit. Given that most of the noise that we want to get rid of (hiss and so on) tends to be above the 3kHz mark, this feature is strikingly effective. When the filter is switched in, it allows the gate itself to work only on the frequencies above the frequency selected, and behaves in a similar way to a side chain filter on a more sophisticated gate.

IN USE

Using Ross' noise gate is simply a matter of plugging it in and adjusting the controls by ear. Typically, each channel will be plugged into the insert points on mixer input channels or master stereo outputs, or in line with tape track or instrument outputs, if your mixer lacks these features. Adjust the threshold, ratio and decay knobs by ear, and switch in the filter to cut out any annoying hiss if needed. During the review, I tended to assign two channels to my main mix output, with the other two channels used for problem synths or effects. I have an old reverb that is very noisy, and an extra two channels of gating/filtering allowed me to use it without adding bags of hiss and strange digital bumbles to my mix. Keep in mind that if you set up the decay to close too fast and the Threshold to open too slow, you may get chattering — you'll know it when you hear it.

ROSS RX-NR4 £219

PROS

- Four gates with noise reduction for little more than £200.
- Easy to use.

CONS

- Pairs of gates not linkable, for stereo use.
- No side chain access.
- Controls a bit fiddly.

CONCLUSION

An unpretentious device that delivers what it promises at an attractive price.

the layout is a little unintuitive: when working quickly, and perhaps in less than ideal lighting conditions, it's quite easy to tweak the wrong control. But I would take into account the unit's low price and judge accordingly. The same goes for those of you that may bemoan the lack of side-chain access (and I miss the ability to link channels for true stereo operation).

CONCLUSION

At a little over £50 a channel, it's hard not to approve of the Ross RX-NR4. I can think of few more affordable ways of adding extra noise gate/reduction channels to your system. If you need side chain access and more comprehensive facilities, then look elsewhere, and be prepared to spend more money. But if



accurate and musical fashion: for most applications, you don't want to lose the main attack of the signal, nor do you want the tail end to be cut short. All four channels also feature an in/out switch and a noise reduction indicator LED. Rear connections for all four channels are on jack sockets.

As a noise gate, the RX-NR4 lacks one or two sophisticated features, such as side-chain access or side-chain filtering, offered by other units. However,

Having said that, with the decay set to 'minimum', and with a reverb patched through two channels, a highly convincing and aggressive gated reverb effect is possible.

Sonically, I have few complaints: when noise is being shut down, nothing leaks out — with no music playing and with all my levels turned up, nothing, not even the old reverb I mentioned earlier, breaks through. I found the controls to be a little fiddly, and for me

you want four channels of affordable and easy to use noise gating, the NR4 deserves consideration. SOS

FURTHER INFORMATION

- £ £219 inc VAT.
- ▲ John Hornby Skewes, Salem House, Parkinson Approach, Garforth, Leeds LS25 2HR.
- T 0532 865381.
- F 0532 868515.

729

amazing voices

one

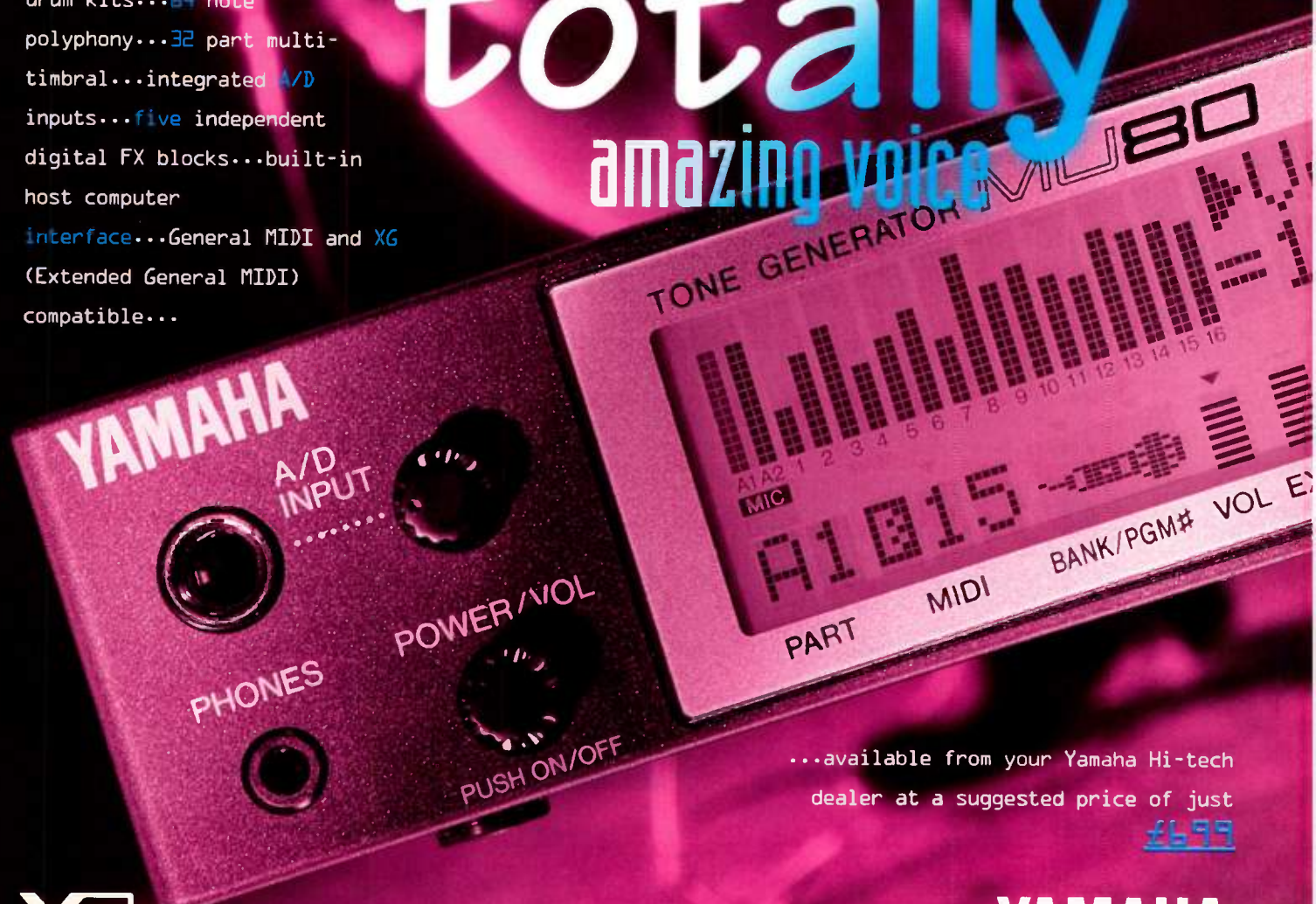
Call Now for Free Information pack

01908 369269

729 brilliant voices plus 23 drum kits...64 note polyphony...32 part multi-timbral...integrated A/D inputs...five independent digital FX blocks...built-in host computer interface...General MIDI and XG (Extended General MIDI) compatible...

totally

amazing voice



...available from your Yamaha Hi-tech dealer at a suggested price of just

£697

XG

Yamaha-Kemble Music (UK) Ltd. Pro Music Division

YAMAHA

WDR

Aphex 107

Dual-Channel Thermionic Mic Preamp

PAUL WHITE compares his console mic amps to the new Aphex Model 107 Tube Mic preamp and finds some interesting differences.

In some ways, it seems ironic that a company like Aphex, the originators of the Aural Exciter, should have introduced a tube-based product. After all, when you look back at the Aural Exciter, what Aphex really did was to recreate some of the more audible side-effects of an overdriven tube amplifier using solid state-circuitry. And now they've gone full circle and returned to the old tube circuitry — or have they?

One of the problems associated with traditional tube equipment is that the tubes themselves require very high operating voltages, which in turn means expensive power supplies, limited tube life, and of course a serious threat to health if you take the lid off without unplugging the unit first! It has long been common knowledge that tubes, or valves, can be run at much lower voltages than they were designed to do, but this changes the performance of the tube quite significantly. Even so, there are many successful and good-sounding products on the market that use under-

run tubes, including many top-name tube compressors, equalisers and guitar preamps.

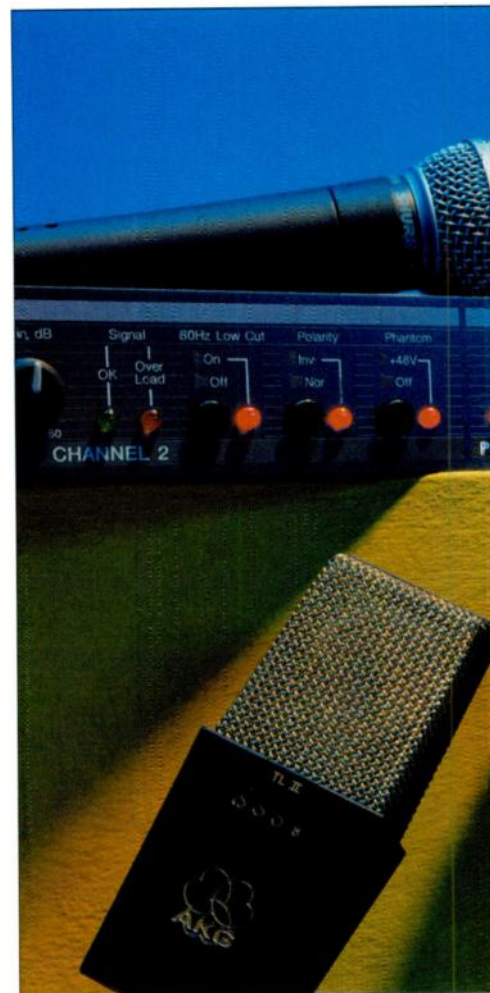
Aphex have a reputation for always trying to bring something fresh to an old idea, and in the case of the Model 107, they've taken the under-run tube idea and then applied solid state feedback circuitry around the tube to offset the increase in plate resistance that normally occurs when a tube is run at a very low voltage. Of course, every American technical innovation has to be given a trademarked name, and in the case of the 107, the power under the hood is 'Tubessence'! Because the tube is run at a low voltage, an external wall-wart power supply can be used in place of the large transformer and banks of capacitors necessary to supply conventional tube HT, and this in turn helps keep the cost down. A further benefit is that the tube life is greatly extended.

Unlike early tube mic amps, the 107 is a hybrid design utilising a solid-state front end followed by a tube gain stage, the idea being to offer the best of both worlds; the solid-state circuitry provides low noise with a good transient response, while the tube provides the 'flavouring'.

THE PACKAGE

Housed in a surprisingly light 1U case, the Model 107 comprises two independent mic channels, each with independently-switchable 48V phantom power, Phase invert, 80Hz Low Cut (12dB/octave), 20dB pad and Gain control. All the switches have status LEDs and there are two further LEDs — green for signal OK and red for Overload.

The mic inputs are conventional XLRs, thoughtfully mounted on the front panel for convenience, but the outputs (which are 'quasi-balanced', presumably a ground-compensated, pseudo balancing circuit) are on stereo jacks, which may displease the professional fraternity. However, for the rest of us, jacks provide a universal, cheap and generally reliable means of connection, and the Aphex output stage allows an unbalanced jack to be inserted with no loss of signal level (unbalancing some balanced outputs incurs a 6dB signal loss). Slide switches are used to select either -10dBV or +4dBu operating levels, further evidence



that the unit is aimed at both pros and project studio owners, and additional jacks are provided so that a remote switch, such as a footswitch, can be used to mute the channel.

Constructionally, the vulnerable gain mic stage is built in close proximity to the input socket which minimises the chance of electronic 'pollution', and the overall standard of construction is up to Aphex's usual high standard with no skimping on component quality. By way of facilities, I thought that a separate line input jack would have been useful for 'tubulizing' mixes, submixes and so on, but as it is, if you want to process line-level signals, you really need to go via a DI box.

THE ACID TEST

On paper, this product looks well specified, and there's no doubt that the facilities are spot-on (bar the comment about the lack of line input jacks), but even though the Model 107 is miles cheaper than most vintage valve gear, it still costs around twice the price of a decent solid-state mic preamp, which means that there has to be an audible improvement over a typical desk front-end if the cost is to be justified.

As it happened, the 107 was thrown right in at the deep end during a location

APHEX MODEL 107 £546

PROS

- Real tube tone.
- Quiet circuitry with very long tube life.
- Full complement of pad, phantom power, high-pass filter and phase switches.

CONS

- Line input jacks would have added to the flexibility of the unit.

SUMMARY

A good example of how a combination of new and old technologies can offer the best of both worlds.



recording session, where it was asked not only to handle the vocal mics, but also to accommodate active DI boxes which required phantom power. It's always difficult to put your finger on what sounds different about valve gear, but the 107 definitely warms up the sound, albeit in a subtle way, while adding a kind of sonic 'glitter' to transient detail and high frequencies. It's not as obvious as, say, an exciter, but the overall effect is similar in that it makes sounds seem closer and bigger without making them any louder.

Given that the 107 comes at the affordable end of the tube processor market, it represents a very cost-efficient way to, effectively, convert any good quality mic into a tube mic. Viewed purely as a mic preamp, and leaving aside for a moment the tube coloration, the 107 is extremely quiet, and because it has two discrete channels, it's well suited to direct-to-DAT location recording or to feeding mic/DI box signals direct to tape without having to pass through a mixer first. Admittedly, you could buy a well-specified solid-state mic amp for rather less than the 107, but I feel that it's worth paying the extra for the 107's tube tone.

Once more, Aphex have added a new twist to an old idea, and in this case, it's to make a piece of tube equipment as quiet and as reliable as its solid-state equivalent without losing any of the tonal magic. A very nice product indeed that will, no doubt, find its way into both project and professional studios around the world.

SOS

FURTHER INFORMATION

- E** Model 107 £546.38 inc VAT.
- A** Stirling Audio, Kimberley Road, London NW6 7SF.
- T** 0171 624 6000.
- F** 0171 372 6370.

YOU CAREFULLY SELECTED YOUR KEYBOARD... WHY LEAVE ACCESSORIES TO CHANCE ?



Look for the BCK seal of quality. You'll find it on a wide range of our British made products



CARE FOR YOUR KEYBOARD



Keyclean aerosol & wipes to restore/maintain your keyboards appearance. Keycovers antistatic dustcovers in 8 sizes, Keybags - padded Keybags in 8 sizes to 7 $\frac{1}{2}$ octave, attachable matching module bags in 4 sizes



SOFTWARE FOR YOUR KEYBOARD

A huge range of MIDI songfile compilation albums in GM format programmed by the legendary Heavenly Music. Style disks for Roland, Technics, Yamaha & Korg.



MIDI BOXES FOR YOUR KEYBOARD/SYSTEM



The Forefront Technology range of MIDI utilities solve most MIDI problems, merge, switch, thru, filter, program change etc.

MIDI LIGHTING

The Lite Show MIDI Lighting Controller is an absolute must for performers working with sequences. Simple to use MIDI input - lighting output, program from your keyboard.



CONNECTIONS FOR YOUR KEYBOARD



Keyleads hand soldered and individually tested MIDI and audio cables. All combinations including MIDI male to female, 2 jacks to 1 stereo jack, etc



ASK FOR BCK PRODUCTS BY NAME AT YOUR LOCAL MUSIC STORE...

Products

Tel: 01992 524442
Fax: 01992 524004

BCK Products, Stationbridge House, Blake Hall Road, Nr Ongar, Essex CM5 9LN England
Trade & International Enquiries Welcome

Goodbye MIDI?

Hello ZIPI...

Is MIDI about to be superseded? MARTIN RUSS investigates proposals for a new standard for interfacing and controlling electronic musical instruments.

In a text file posted to the MIT Press ftp server on September 8, 1994, the Editor of Computer Music Journal (CMJ), Steven Travis Pope, mentioned a folder containing six articles which were to be included in the Winter 1994 issue (18:4) of CMJ. Text and Postscript versions of the articles were provided, with the text files occupying about 170 kilobytes, and the Postscript versions containing diagrams too. Eager Internet-surfing musicians, myself included, downloaded the six articles and proceeded to wade through the 27,000 words of text and diagrams, which amounted to almost 80 A4 pages on my printer. Something major was occurring here!

So what is all this about? You may already have heard rumours about ZIPI being the replacement for MIDI, or that it finally makes guitar synthesizers usable, or that it has something to do with resynthesis and physical modelling. Whilst I would recommend that you read the Winter 1994 issue of the CMJ, not everyone is going to be able to, so this article aims to provide an overview on information which was current in September 1994, and which may be superseded by any revisions in the published CMJ articles.

ZIPI

Nowhere in the CMJ documentation does it state what ZIPI stands for, only that it has resulted from a collaboration between Zeta Music Systems (makers of MIDI violins, guitar synths etc) and the Centre for New Music and Audio Technology (CNMAT), based at the University of California, Berkeley. The 'Z' probably refers to Zeta — the rest is unknown.

Perhaps it is being played down because of the strong connection with one manufacturer's name?

TECH SPEC

Physically, ZIPI uses either a 7-pin DIN plug or an 8-pin mini-DIN (for use with laptop computers or perhaps PC plug-in cards). It employs current loop interfaces, but information travels in both directions within the same cable; thus only one ZIPI socket is needed on a piece of equipment. The minimum transmission rate is 250 kBaud, although it can run faster than that. ZIPI is designed around the OSI layered model, and so can be described in a series



of layers: the lower layers deal with the nitty-gritty of hardware and bit transport, whilst the middle layers describe various application-level protocols; one of these is the Music Parameter Description Language (MPDL) — the rough equivalent of the MIDI messages format. MPDL describes how musical information is packaged up for sending around the ZIPI network. Unlike MIDI, ZIPI instruments are connected in a ring, although in practice this will be implemented as a central 'hub' with the cables to the instruments radiating out from it.

MPDL provides a rich source of control for musical purposes. For example, it allows you to directly 'address' individual notes, within 'instruments', within families, and it breaks the link between a note and its pitch. Whereas in MIDI it can be awkward

to deal with individual notes which change pitch with time, ZIPI's MPDL allows you to have two different 'note numbers' — the note number identifies the note, not its pitch. ZIPI's roots lie in the frustration that many 'alternative controller' manufacturers have with MIDI's keyboard-centric design. Guitar and wind controllers can generate huge amounts of information, and MIDI is really not well suited to coping with it. ZIPI is designed with small overheads for controller information (in fact, for almost everything) and so can have large numbers of parameters devoted to providing real-time control.

When MIDI was first proposed over 12 years ago, it was at the limits of available technology in terms of UART speed and processor capability; ZIPI is designed with future proofing in terms of the speed (only a minimum speed is defined), and it can be expanded to suit advances in networking technology. For example, it should be possible to carry ZIPI MPDL data packets over networks using FireWire (1394 serial bus), Ethernet, ATM, Iso-Ethernet and many others. The complexity of the MPDL and the other application-layer protocols is greater than MIDI, but should not present too many problems to today's fast and sophisticated processors. With the benefit of hindsight learned from MIDI's example, ZIPI has a strong base which should provide a firm footing for future enhancement.

REPLACING MIDI?

So with a simplified socket, similar connector, and at least 10 times faster transmission speed, is ZIPI a replacement for MIDI? In my opinion, this seems to be true for some applications but not for others. The obvious use is with guitar synthesizers, where the individual pitch and volume parameters from the six strings can generate large amounts of controller information. For monophonic instruments, ZIPI provides extra control over the triggering of notes so you can change pitch without starting a new envelope (to give legato phrasing, for example), something which is almost impossible to achieve easily with MIDI. For physical modelling instruments, like Yamaha's VL1/VL7, ZIPI would provide even more control over the sound, and this is probably how the G-WIZ

THE SOUTH'S HI-TEC SPECIALISTS

ANDERTONS

ANDERTONS
Services

THE NEW BEHRINGER MX8000 MIXER

- 48 channels on mixdown.
- 8 Buss
- 6 Aux sends.
- Monitor channel EQ.
- 5 year warranty.

Arriving Shortly!

InfoPack
Available

HOT OFF
THE BENCH

ALL THIS FOR UNDER
£2,000

IFC deals available with the latest in digital recording



ALESIS
adat

Deposit £359 - 18
monthly payments of £130



Soundscape
Hard Disc
Recorder

Deposit £339 - 18
monthly payments of £120



AKAI DR8

Deposit £419 - 18
payments of £160



YAMAHA
CBX D5

Deposit £245 - 18
monthly payments of £75

E-MU ESI-32 Sampler

Deposit £120
18 months @ £60
Delivery inc.



- 32 voice polyphony.
- Four polyphonic outputs.
- Digital effects.

- 32 4-pole digital resonant filters.
- Compatibility with Emu and Akai Libraries.

**in stock Now
and on demo**

E MU Emulator 4

Deposit £700

18 monthly payments
of £200

New!



YAMAHA PROMIX 1

Deposit £199
18 months @ £94



- Full MIDI automation.
- Motorised 60mm faders.
- Internal memory recall of EQ, levels and settings.

- 24 bit internal processing.
- Four fader groups.

0%
FINANCE

INTEREST FREE CREDIT

YAMAHA W7



IFC Deal
Deposit £157

18 monthly payments of £69

• Yamaha IFC Deals •

W5	dep = 173 + 18 x £82
P300	dep = 275 + 18 x £137.50
SY 85	dep = 130 + 18 x £50
MT8X	dep = 239 + 12 x £80
TG 500	dep = 80 + 12 x £59
QY 300	dep = 99 + 12 x £66
MV80	dep = 699 + 12 x £50

Roland 1080

IFC Deal Deposit £125

12 monthly payments
of £80

• Roland IFC Deals •

RD500	dep = 195 + 18 x £100
SC88	dep = 149 + 12 x £30
• Other IFC Deals •	
Alesis Quadrasynth	dep = 105 + 18 x £53
Akai S2800	dep = 165 + 18 x £43
Akai S3000	dep = 247 + 18 x £114
Fatar Studio 1100	dep = 99 + 12 x £66
Fatar Studio 900	dep = 99 + 12 x £40

KORG X5



IFC Deal Deposit
£90

12 monthly payments of £55

• Korg IFC Deals •

I3	dep = 220 + 18 x £80
X3	dep = 147 + 18 x £64
X2	dep = 199 + 18 x £65
X5	dep = 90 + 12 x £59
12	dep = 299 + 18 x £138
MS	dep = 199 + 18 x £80
WSSR	dep = 115 + 12 x £82
OSRW	dep = 55 + 12 x £37

IFC AVAILABLE ON OTHER ITEMS

PLEASE CALL FOR DETAILS

ART FXR
£149
ART FXR
Elite £219

Roland JV90
EX
£995

GEM S3 = £1299
GEM S2 = £1175
Both Turbo Versions

Peavey Mixer
Vestamix 16/2 RM
£549

PG MUSIC SOFTWARE

Passport Musictime for PC

Only £129.00
inc. delivery

Band in a Box PC/ST/Mac

Now Only
£79.00

Stockists of:
Steinberg Cubase - four levels
E-Magic Notator Logic
Cakewalk Professional + Home Studio
Passport Encore
Musicator
PG Music - The Pianist
MPU 401 interface

INTEREST

Voyetra V22/V24/VP11

Yamaha Hello Music
in stock and on demo



Fatar Special Offer CMS61 Master Keyboard

- * Five octaves
- * Touch sensitive keyboard
- * Pitch bend and mod wheel
- * Space for CPU keyboard

Price only **£199.00**

Fatar 610 also £199.00

Fatar Studio 900



Deposit £99 12 payments of £40

Steinberg Compact for Windows

with MPU 401 £229.00
with Voyetra V22 £269.00

SECOND HAND

Alesis MM18	£129
Akai 4000 Reel To Reel	£199
ART Proverb reverb	£120
Fostex 812 Desk	£699
Fostex 128	£799
Fostex G165	£3000
Hohner HS-1	£599
Kawai R50	£99
Korg M1	£749
Roland MT200	£499
Roland MKS10	CALL
Roland CM300	£269
Tascam TSR 18	£1200
Yamaha SY22	£349
Yamaha YS200	£249
Yamaha RX21	£39
Zoom 9001	£119
Roland MX10	£99

NOVATION Bass Station



CALL
NOW

IN STOCK

ANNIVERSARY
30
YEARS
OF
ROCK
'N'
ROLL
1964-1994

ANDERTONS

58 & 59 WOODBRIDGE ROAD
GUILDFORD · SURREY GU1 4RF



0483
38212



0483
38211

PRICE
MATCH

EXPERT
STAFF

EDUCATIONAL
DISCOUNT

AFTER
SALES
SERVICE

0%
FINANCE

MONEY BACK
DAY
GUARANTEE

PART
EXCHANGE
WELCOME

USED
GEAR
WANTED

6
MONTHS
WARRANTY

MAIL
ORDER

EXPRESS
DELIVERY

AMEX
VISA

ZIPI

► resynthesis work described in SOS January 1995 will be controlled.

For non-keyboard applications, ZIPI seems to offer exactly what MIDI has never really delivered: enough bandwidth for expressive and effective control of the sound. For keyboard applications, there is more of an uphill struggle. Whereas guitar controllers have never really been popular (because of the problems of control via MIDI), keyboard controllers have become the major source of control for

work. The people who are dissatisfied with MIDI may well turn out to be the serious academic researchers and professional musicians, and their relatively small numbers (compared to the General MIDI, 'fun' keyboard and computer musicians) may mean that ZIPI for keyboard use becomes a niche market.

The scenario therefore might go something like this: ZIPI becomes a runaway success for 'alternative controller' applications like guitar and wind controllers, perhaps even drums — and deservedly so. It is also adopted by the leading edge academic musical researchers for producing music without the limitations resulting from MIDI. But for mainstream interfacing between electronic musical instruments and computers, MIDI may well retain a strong hold for a long time to come, meaning that ZIPI and MIDI will have to co-exist.

Overcoming the limitations of MIDI may well become the battle cry of equipment designers — especially if

synthesizers — something which many synthesists consider has reduced synthesizers to a role of replacing conventional keyboard instruments, rather than opening up their true sonic potential.

ZIPI is thus faced with the prospect of being successful in finally providing guitarists, wind players, and other non-keyboard instrumentalists with an excellent way of interfacing to a synthesizer module. But at the same time, ZIPI may have to overcome the preconceptions of a large established user base who are probably well satisfied with what MIDI offers for the majority of their

physical modelling and resynthesis techniques become more prevalent. Luckily the transition from MIDI to ZIPI is relatively straightforward, since ZIPI offers more bandwidth and facilities than MIDI, although converting from ZIPI back to MIDI may be accompanied by a loss of information due to the mismatch of bandwidth and control. Even so, I do not see MIDI losing its dominance very quickly, since it is perfectly adequate for most musicians and dabblers, and as the recent resurgence of interest in classic 'analogue' instruments has shown, for some purposes lack of precision and unsophisticated

“ZIPI’s roots lie in the frustration that many ‘alternative controller’ manufacturers have with MIDI’s keyboard-centric design.”

USEFUL ADDRESSES

ZIPI Group
G-WIZ (Gibson Western Innovation Zone)
2560 9th Street, Suite 212
Berkeley, CA 94710, USA
e-mail: zipi@cnmat.berkeley.edu

ZIPI software: <ftp://mitpress.mit.edu/pub/Computer-Music-Journal/Code/ZIPI>

Computer Music Journal
MIT Press Journals
55 Hayward Street
Cambridge
Massachusetts 02142, USA
e-mail: journals-orders@mit.edu

The MIT Press
Fitzroy House
11 Chenies Street
London WC1E 7ET

control are still useful. So the next few years should see a gradual mixing together of MIDI and ZIPI-equipped instruments, with the problems of inter-working slowly being resolved.

ADOPTION

For ZIPI to succeed at all, of course, it needs to be implemented by manufacturers and adopted by musicians. So far, only G-WIZ's FAR resynthesis system [see SOS January 1995, p.22] and some computer-based sample playback systems are offering ZIPI interfaces. Since one of the major influences on manufacturers is their customers, if you and lots of other people ask for a ZIPI interface, then it may well eventually materialise. Certainly ZIPI seems like a well thought out solution to the guitar and wind instrument control problem, and is appearing at just the right time — with several new guitar and instrument synthesis approaches in the pipeline.

The ZIPI Development Group have already presented their proposals at the 1993 and 1994 NAMM shows. The articles in Computer Music Journal represent a well thought out and powerful set of ideas for a far-reaching new electronic musical instrument interface. Expect a flurry of developments in the next year or so — the key indicators will be the response of the Japanese companies to ZIPI. Personally, I wish the ZIPI group every success; I just wonder why they never contacted me for advice on what's wrong with MIDI.

THE ZIPI ARTICLES

Here are the six articles from *Computer Music Journal* which form a comprehensive overview of ZIPI.

- *ZIPI: Origins and Motivations*, by Keith McMillen. This article describes the background, design and current commercial status of ZIPI.
- *A Comparison of MIDI and ZIPI*, by Matthew Wright. This article compares MIDI and ZIPI, and concentrates on showing how problems in MIDI have influenced the design of ZIPI.
- *The ZIPI Music Parameter Description Language*, by Keith McMillen, David Wessel, and Matthew Wright. Serious technical descriptions of the high level protocol that is used to carry the musical information.

• *A Summary of the ZIPI Network*, by Keith McMillen, David Simon, and Matthew Wright. Networking information: from Cables to OSI models, with hardware and software details.

• *Examples of ZIPI Applications*, by Matthew Wright. How to use ZIPI in some real-world situations: guitars, vocoders, samples and more.

• *Answers to Frequently Asked Questions about ZIPI*, by Matthew Wright. FAQ documents are an Internet/BBS TLA (three letter acronym) which help to avoid having lots of repeated question and answer e-mails. This is definitely the first thing you should read *after* all the above, and *before* you start asking questions.

**DIGITAL
MIND.
ANALOG
HEART.
DAMN
GOOD
PRICE.**

**CLASSIC
KEYS**
Analog Keyboards

**Classic Keys—
Analog keyboard
sounds that fit your
style and your budget.**

Got your eye on a Vintage Keys, but your hand over your wallet? Then the Classic Keys MIDI sound module is made for you. Classic Keys features all the great samples of our popular Vintage Keys—but at an unbelievably low price. Get all of the most popular analog synthesizer and keyboard instrument sounds from the 60's, 70's and 80's, including dozens of electric pianos, organs and analog synthesizers, at your fingertips.

No similarly priced module holds up to Classic Keys. There are 512 presets, 32-voice polyphony, 16-part multi-timbral capabilities, and the industry's most straightforward, easy-to-use interface, plus 2 built-in programmable effects. And like all E-mu® products, you can count on the CD-quality, 16-bit sound that professional musicians around the world depend on.

What's more—you can build your own sounds using the more than 250 sampled instruments as raw material! Classic Keys is so quick and easy to program you may scare yourself with the great new sounds you invent. Or lay your hands on collections of new, fully-cooked preset sounds for Classic Keys. They're just a downloadable floppy disk away.

So what are you waiting for? See your E-mu dealer for a Classic Keys demo today. Classic Keys—all the vintage analog keyboard sounds you need to expand your mind, without the price tag to deflate your wallet.

**CLASSIC
KEYS**
Analog Keyboards

E-mu Systems, Inc.
P.O. Box 660015, Scotts Valley, California 95067-0015 • 408 438-1921
U.K. E-mu Systems, Ltd., Suite 6, Adam Ferguson House, Eskmills Industrial Park
Musselburgh, EH21 7PQ • 44-031-653-6556

© 1994 E-mu Systems, Inc. E-mu and E-mu Systems are registered trademarks, and the E-mu logo is a trademark of E-mu Systems, Inc. All other trade and product names are property of their respective owners.



Regular listeners to Radio One may well be acquainted with the recent series of DC Comic inspired, dramatised episodes of *Superman*, *Batman* and, currently, *Spiderman*, broadcast each day as part of the Mark Goodier Show. These three-minute 'audio films' are accompanied by extremely sophisticated, lavish-sounding music scores reminiscent of big-budget Hollywood movies. The man behind this music is Mark Russell, a composer and musician whose list of past achievements indicates versatility, variety, and the fact that he is in popular demand by TV, radio and video producers alike. Mark's musical history also includes live work: namely Tanita Tikaram's 1988 world tour, a recent European tour for Julia

CONVINCING ORCHESTRATIONS

The large-scale orchestral scores featured in the *Superman*, *Batman* and *Spiderman* radio dramatisations are superbly crafted and realised. How are they accomplished, and what led you down that path?

"I've spent a long time working on this, due to the demand from TV and commercial producers for orchestral scores. The budget is rarely available for the real thing, so the need was there to at least demo it up accurately. It all started when I got my first Roland S750, but straight away the things I wanted to do were limited by the polyphony of just the one instrument. I subsequently got an SP700 and, later on, an S760, to overcome this problem. It took three



Fordham, and musical arrangements, concert tours and a recent album for the acclaimed Chinese flautist, Guo Yue. Not being prone to inactivity, Mark also co-presents Radio 3's broad-spectrum music show *Mixing It*, now in its fourth year. Classically trained, he was a chorister at St Paul's Cathedral until the age of 13, and gained a BA (Hons) in Music & Film and Composition at York University. I set off on a splendidly sunny January morning to interview Mark in his home-based, South London studio to find out how he achieves these impressive sounding productions.

years or so to collect my sound library from various sources, and I now have a system where, by utilising the full memory capacity of each sampler, I can spread the entire orchestra between all three. Using *Cubase* on the Mac, I have the screen set up like a piece of orchestral score paper, with all the instruments listed vertically. All I have to do is click on the instrument I want, and it's ready to go. In the case of these Radio 1 audio film series, they wanted it to sound like a Hollywood film score, but they didn't have the budget, so that's what really prompted me to develop the orchestral simulations, using the samplers."

So the samplers have a ready-made orchestral setup that loads up in the same way every time?

"Yes, but it took a long time to develop and refine, and I still modify it now and again. Previously I was using the S750 (with 18Mb) and the SP700 (with 32Mb), but I was still limited to shortish samples to get everything in. When I got the S760, with its additional 32Mb, the difference in terms of realism was astounding — it gave the extra edge. I could now have, say, flute or clarinet patches that were 25 or 30 seconds long, as opposed to only four or eight seconds before. Timpani, for instance, need multisamples at various velocities crossfading each other, as well as real, sampled rolls which have been well looped. That's very important. It may seem an obvious thing to say, but memory is the key."

Presumably you make extensive use of sample libraries.

"I would say that the Roland sample library provides the mainstay of the whole setup. Because the orchestral side of things is my main work, I've spent quite a bit on library CDs. I have the Roland Orchestral Percussion and Winds, and the Denny Jaeger

Though Mark Russell's work includes writing for film, TV and commercials, as well as big-name tour arranging and musical backup, he's probably best known currently for his lavish music for the Radio One super-hero series, Batman, Superman, and Spiderman. NICK MAGNUS was invited to Mark's home studio to talk about his gear and working methods.

"Oh, yes, in every case. If somebody gives me the budget, I could either use a real player or keep the money for myself. But I go for the player every time. Samples are only a simulation, a snapshot of one moment in time. In virtually every case the real instrument will be better. For example, I used a cello on a commercial I did for Danone yoghurt. To reproduce all those articulations and nuances with the sampler would take up so much memory and take so long to do, and ultimately it would sound much worse than a good cellist's performance. This particular guy was the principle cellist of the LSO... you just show him the music, he plays it perfectly straight off and you think, wow! I love real



Mark Russell

and Pro Sonus Strings CDs, amongst others, but I find myself returning to the Roland library much of the time. I've also collected a fair amount of specially created material which is otherwise unavailable and therefore unique."

Having assembled the desired orchestra, are there any sound treatments you employ to add to the sense of realism?

"You do need a really good reverb to create the impression of a concert hall, and for that I use a Lexicon PCM70, which is excellent for providing the right space. I've spent a lot of time learning to get a real sense of spatial depth, so the timpani sound further back than the violins, just as you would hear them in a real life situation. Some people try it using different reverbs, but I think I'm getting there... it can be quite tricky. I'll probably get a PCM80, but I think I'll keep the PCM70... I love it too much!"

Given the opportunity, do you use real musicians?

musicians! Working with other musicians means that, even if they play exactly what you've written, they can transform it in ways you could never have come up with. In many ways you're limited by your own playing style and your own frames of reference."

When the budget forces you to go it alone, are there any other aspects you feel to be important to the successful simulation of an orchestra?

"Without any doubt, MIDI controllers are essential. I use so much MIDI volume... I just couldn't do without it. If you think about it, an orchestral instrument never plays at the same amplitude throughout the course of a note. It has phrasing and dynamics, which are so important to breathe life into it. The problem with a lot of so-called orchestral modules, which I dislike on the whole, is that they just don't sound realistic even with the use of MIDI volume messages. The Roland samples, on the other hand, together with careful use of LFOs, respond beautifully. Beyond the technical aspects, I rarely quantise any of the orchestral instruments. Orchestras seldom play in time, so it's all played in by hand with only occasional note shifting as a correctional measure. ▶

TALKING RADIO

Mark Russell

► You also have to consider if the instrument in question is being asked to perform something that is actually possible, like playing within its true range, for example. Getting the right combination of instruments is also important. It's strange but sometimes there's an instrument patch which sounds marvellous on its own, but it doesn't sit well when added to the orchestra. It's sometimes a case of the less impressive sounding patch being the one that actually works best. I listen to and study a lot of Hollywood film scores to hear how the orchestrations work and to make sure I'm on the right track. My time in the St Paul's Choir School when I was young also provided some really good training. Having said that, I don't think that a classical training is actually necessary; you just need a good pair of ears. There

are friends of mine who can put together very good orchestrations without any sort of classical training. If you print out your score from the sequencer, you can always get someone to look it over and check for mistakes or inconsistencies."

In theory, if the score sounds good with the samples, it will sound even better with the real thing...

"That's the theory... although, curiously, I did a score for LWT, which was played by a chamber

orchestra. It sounded OK, but the strings just didn't have enough bite. We ended up adding the sampled strings together with some of the sampled percussion to beef it up, and it sounded great. You wouldn't know, listening to it, that there were samples playing, but it's just got more edge to it. Sometimes the two work really well together. You do have to be careful, though, because you can sometimes cancel out all the good things about the real instrument by adding the sampled one. The good thing about synths is that you can try something out, and if it doesn't work, fine — you don't use it. It's never written in stone."

Do you use other controllers aside from MIDI volume?

"Occasionally, yes. The Yamaha SY99, which is also my master keyboard, is useful in that it has three wheels which can be assigned to do whatever you want. This is great for organ sounds, switching between slow and fast Leslie, for instance. I sometimes control filter cutoff frequencies this way, especially with some of the orchestral percussion sounds, and on the samplers you can crossfade between samples using a wheel. Generally, I stick to MIDI volume mostly, as I have to work quickly, and setting up anything else can be quite time consuming. Velocity is the other essential means of control; most of the timbral changes I do are dealt with using velocity switching or crossfading."

Are there any sounds that present a problem to simulate realistically?

"With these simulated Hollywood film scores, the brass is probably the most important thing. My S760 is almost totally given over to brass samples. For example, it's loaded with several types of french horn; solo, velocity switched, muted, sforzando, swoops, swells... and it all takes a lot of memory. Difficult sounds to imitate on a keyboard, like string section trills, glissandos and tremolando, need lots of multisamples of the real thing in order to work across the entire range, and I use all these effects, often velocity switched in combination with normal performances, to enhance the sense of realism."

RADIO TIMES

When you write the music for an episode of *Spiderman*, how do you go about synchronising the music to the action? Being an audio-only production, there is no picture — is there some sort of timecode involved?

"No, there is no timecode as such. I receive a DAT with about 20 episodes on it, and these have all the dialogue and sound effects, mixed in Surround Sound. I digitally copy the relevant episode into Pro Tools, including a sync 'plop' at the start of the episode, indicating a known start point. Then, running *Cubase Audio*, the dialogue and effects are locked to the sequencer, and I can record the music in perfect sync. I then mix the music onto DAT, including the sync 'plop', so the director can lay it into the original soundtrack as he sees fit. Since there are no measurable speed fluctuations, it all matches up perfectly."

Are there any special points to take into ►



MARK RUSSELL STUDIO EQUIPMENT

INSTRUMENTS

- Alesis D4 Drum module
- Emu Proformance Piano module
- Korg Wavestation A/D
- Oberheim Matrix 1000
- Roland S750 (18Mb)
- Roland S760 (32Mb)
- Roland SP700 (32Mb)
- Yamaha SY99

AUDIO

- Alesis RA100 Power Amp
- Denon DR-M24HX Cassette
- Mackie 32/8/2 Console with meter bridge
- Marantz CD65 MkII CD player
- Panasonic SV3700 DAT ("I love the scrub play on this.")

MONITORING

- Dynaudio Acoustics PPM1 ("The depth is stunning, loads of bass end for their size.")

PROCESSING

- Alesis 3630 Compressor
- Alesis MIDverb ("I still like the grainy quality — comes in very useful.")
- Alesis Quadraverb
- Lexicon Alex
- Lexicon PCM70 ("The best!")
- SPL Vitalizer ("For me, the best of its type. The stereo enhancer is excellent.")

COMPUTING

- Macintosh Quadra 650 (20Mb RAM, 160Mb internal drive)
- Macintosh Powerbook 145B (8Mb RAM, 80Mb internal drive)
- Ostermat DAT drive ("I use this to back up the hard drives.")
- Philips 21-inch monitor
- Seagate 1Gb hard drive

SOFTWARE

- Digidesign Pro Tools, 4-track version
- Opcode *Galaxy Plus* synth editor
- Steinberg *Cubase Audio* ("I'm looking forward to the new version of that.")

VIDEO

- Sony Trinitron Monitor
- Sony VP5040 Umatic

ACCESSORIES

- Accessit Patchbay
- Apple CD300 CD-ROM (for sample libraries)
- DAC RW6000 DMS Optical drive (for sample storage)
- Mark Of The Unicorn MIDI Timepiece 1
- Microtech Gefell Microphone
- Syco Mouse/monitor switcher
- Tascam PB32P Patchbay x 2



ERIC LINDSEY

20-22 Rushey Green, Catford SE6 4AS
Tel: 0181 690 8621 Fax: 0181 690 7064

YAMAHA



RY20 Rhythm Processor

- 258 preset voices, 8 note polyphony DSP chip £329
- MU80 New 32 part module with an analogue effects input £649
- MU5 16 part, 28 voice module £199
- Rev 100 Multi programmable effects processor £249
- TG500 Yamaha's top of the range mega module at a new unbelievable price. 64 note polyphony, 16 part, 384 preset 90 programmable effects & at £699 nothing can compete.
- MT8X 8 channel multi track recorder, 3 band EQ, 2 Aux sends + dbx noise reduction £1049

W7 Yamaha's Great New 16 Channel Music Workstation £1299



Session Mixer

Session Mix Live application Mixers

- 24.2, 12.2 rackmount, 8.2. From £465
- Diamond & Diamond Pro** 8.2, 12.2, 16.2, 12.3, 16.3 (ideal for schools, clubs, submixing & churches) From £299
- Power House Mixers/Amps** are available all with digital effects processors, 7 band dual Eq, aux sends, 250 watts per channel output & balanced mike inputs. 8.2, 12.2, 16.2 vision
- Prices From £850

Star 36 inputs, 3 aux sends, parametric eq & 4 stereo inputs makes this a serious mixer for the 90's £1350

KMX Speaker Systems 12" & 15" rugged PA speakers with quality you would expect from speakers twice the price. Tuff cabinets, mesh grills & stylish grey vinyl make these hard to beat 4 & 8 ohm From £389 pr

KMX Near-Field Monitors See these before? **FULL RANGE AVAILABLE**

Take away flash names and it leaves quality at a price you won't want to miss. 100W handling, 8ohm, 8" speaker & magnesium alloy chassis £235pr

Roland

The new JV Synths are all expandable to 56 note Polyphony & include unique features of their own.

- JV1080 Super Module, 64 note, 16 part, 32 bit RISC chip & 4 board expansion port (coming soon)
- JV1000 40,000 note Sequencer, 76 note
- JV90 76 note Keyboard
- JV50 Midi file Player, 16 part, & inbuilt sound brush

JV35 16 part, 18 bit, expandable keyboard

S760 Sampler 24 voice, 2 meg Ram expandable to 32 meg optional digital 1/0 board with monitor output & with Roland's sampler reputation

- It's a winner £Phone
- SC88 £Phone
- RD500 The Great 'RD' has returned £Phone

ROLAND PERCUSSION

- SBDII Total Percussion Pad, 8 touch sensitive pads, 255 voices, sound effects processor (great for DJs) delay, flanger, reverb, & the ability to trigger samples live £599
- TD5K compact drum system incorporates module, kick trigger pad, 5 pads, 210 voices, sound effects processor, metronome, & headphone socket £999
- TD7 percussion module 512 voices built in sequencer, 2 serial or parallel effects processors, 4 pads, bass drum trigger, 4 part multi-timbrality makes this the Roland electronic rhythm flagship £1199

Specials

SYNTHS & MODULES

- Gem S2 Turbo EX Demo 2 ONLY £1399.00
- EMU Morpheus £969.00
- EMU Vintage Keys + £869.00
- Yamaha SY85 (NEW) £949.00
- Yamaha SY35 (NEW) £499.00
- Yamaha PFP 100 £1599.00
- Roland D-10 S/H 8 part Synth £399.00
- D110 S/H Synth Module £219.00
- Roland JV35EX (NEW) £999.00
- Roland SC88 £699.00
- Analogue Beastie S/H £695.00
- Novation Bass Station In Stock. £349

EFFECTS PROCESSORS

- Digitech TSR 24 (NEW) £629.00
- Digitech TSR12 (NEW) £389.00
- LA Audio CX 2 Compressor £229.00
- LA Audio GX2 GATE £229.00
- dbx Project 266 Compressor - Gate £329.00
- Mirco FX Booster £40.00
- Micro FX Gate £30.00
- Yamaha GSP 100 S/H £79.00
- Art Alpha SE £299.00
- Art FXR (NEW) £179.00
- Korg DRV 3000 R/C Pro Reverb S/H £299.00
- Ross Dual 15 Band Graphic Eq £139.00
- Ross Mono 31 Band Graphic Eq £129.00
- Alesis Quadverb £339.00
- Alesis Microverb £195.00

SEQUENCERS

- Roland MC50 MKII (NEW) £579.00
- Yamaha QXZ1 S/H £99.00
- Notator SL NEW (ST) £180.00
- Alesis MMT8 S/H as new £125.00

MAIL ORDER POST FREE MAIL ORDER

Philip Rees

MIDI ACCESSORIES

- 2M Merge Unit £69.95
- 5 x 5 Midi Switch £99.00
- MCV Midi to CV Converter £189.95
- W5 Dual Input Thru £55.95
- V10 Midi Thru £39.95
- V3 Midi Thru £14.95
- 2S Selector £14.95
- 3B Selector £29.95
- 5S Selector £29.95

POST FREE MAIL ORDER POST FREE

YAMAHA

£1849

Yamaha's Awesome New 16 Channel Fully Automated Digital Mixer

- 2 digital effects processors with 31 effects to choose from
- 50 scene memory including EQ & effects
- Full Parametric EQ with LCD display of parameters
- Motorized flying faders



£1895

P7 Mixing Desk 16.8.16.2 expandable to 40.8.40.2. with a maximum of 88 equalised inputs, 6 aux sends & midi muting as standard. Quality British Engineering at Affordable Prices



MAKE YOUR GEM A TURBO £299 Phone for details

£1499

GEM S2 Turbo Workstation 500 sounds, 250,000 note sequencer, the ability to playback samples direct from disk (AKAI) etc, 32 note polyphony, 100 performances & 1600 Ram patches.



E-MU

£1199

EMU ES1-32 32-voice, 16 part, 4 pole resonant filters, 4 outputs, large display and a new price breakthrough in sampling



AKG

- C3000S Studio microphone for all recording applications
- C1000S Superb condenser microphone ideal for live vocals and instrument amplification
- D3700 microphone AKG quality vocal mic
- D112 Proving to be the best drum mic around

FULL RANGE IN STOCK

ALESIS

- New Midiverb 4 £399
- Quadverb 2 True stereo effects processor £899
- Quadverb 'GT' £399
- Quadverb Plus £339
- 3630 Compressor/Gate £279
- Midiverb III £289
- SR16 16 bit Drum Machine, 233 sounds £219
- MEQ230 £220
- Microverb III £195
- RA100 £349

FOSTEX

- X18H Multitrack (Hi Speed) £Phone
- X28H (Hi Speed) Multitrack, logic controls, 8 channel line mixer £Phone
- 380s Multitrack (Hi Speed) 3 Band Eq, 12 input mixer, 2 aux sends, logic control & Dolby S noise reduction £Phone
- R8 8 channel reel to reel 1/4" Multitrack, Dolby C noise reduction, sync port & midi compatibility £Phone
- DCM100 + mix tab 8.2 stereo midi mixing £399

E-MU

- Morpheus Z-Plane There's no 'F' in Morpheus! Buy now 'F' stocks last!
- Proteus FX Has to be the best value multi-timbral 16 part, 32 voice, 512 preset fully programmable module ever.
- Vintage Keys Plus 512 vintage analogue & digital classic samples in one 16 part, 32 voice, 15 bit 16MB awesome module
- Classic Keys all the sounds of the vintage keys for only £649.00
- World Samples from around the world in glorious stereo sound.
- Precision 1062 drum samples for all types of music makes this popular for studios & live applications
- MPS+ 500 presets, 32 voice, 16 part & 4 MB of orchestral sounds

KORG

- 13 Interactive workstation £Phone
- 12 76 note version of above £Phone
- 05/RW An X3 in half rack from £499
- Wavestation SR The best selling module £799
- OIW/FD Workstation, 16 track, 3.5" drive, 48MB Waveform memory & huge performance patches. £Phone
- X3 Workstation, 16 track, 3.5" drive, 340 voices, 164 drum sounds £Phone
- X3/R Rackmount version of above £Phone
- X2 76 note version X3 £1399
- X5 16 part X3 without sequencer £699
- Wavedrum £POA

TASCAM

- Tascam Porta 7 4 tracks, Eq, Hi speed
 - 424 8 input, 4 tracks, 3 speed
 - 464 12 input, 8 track, 2 band Eq & Hi speed
 - 688 20 input, 8 track, 2 band Eq, Hi speed & midi muting
 - Tascam 488 Mk II 8 track porta studio balanced inputs, 12 channels, dbx noise reduction
- £Phone (for the best Tascam deals)

Mark Russell

► consideration when writing music for these shows?

"Well, you have to pay careful attention to the frequencies of what's going on because it's so busy, there are so many sound effects and voices. You have to do the instrumentation in such a way as not to obscure frequencies that are already used up. I give each character a motif, something that doesn't

top of that. With *Spiderman*, I tend to work it out as I go along. That way you can come up with some interesting spontaneous orchestrations that you might not have considered if you were scoring it out on manuscript paper first. To speed things along, I keep a stock of ideas, and by the first 20 episodes I've probably accumulated most of the material I'm going to use, which is necessary anyway to maintain continuity."

The scores sound very complex — how long does each episode take to complete?

"I may have to do as many as five *Spiderman* episodes in a day, so I have to work quickly — it's quite a rigorous schedule, when you consider there are 50 episodes for each series. And it's pretty much wall-to-wall music. That's getting on for 150 minutes of music, most of which is completely original. I save files of every episode, so if there is a recurring theme I can load up an episode which used it before and cut and paste it in. The timings do vary, though, so some themes may have five or six versions saved, of differing lengths, that I can call on to reshape and re-orchestrate as necessary. Often it's easier to write new things anyway."

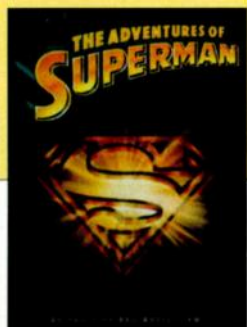
The Spiderman theme has some rather familiar sounding guitar on it...

"Yes, in actual fact, the theme was written by Brian May of Queen. I spent some time in his studio adding orchestral sounds to it, and the engineer gave me MIDI files together with guitar stings, stabs and solos, wild on DAT. I've loaded them into Pro Tools, so I can spin them in whenever the occasion demands."

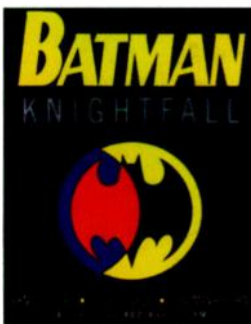
ESSENTIAL GEAR

Your choice of instruments seems to cover all bases, yet it's enviably compact. Is there a philosophy behind this?

RADIO ONE COMIC STRIP PROGRAMMES



Title	Episodes	Transmitted
Batman — Knightfall	65	17/5/94 - 8/7/94
The Adventures of Superman	50	11/7/94 - 16/9/94
The Adventures of Superman (Doomsday and Beyond)	50	19/9/94 - 25/11/94
The Amazing Spiderman	50	16/1/95 - 24/3/95



conflict with the sound of their voice. A deep voice wouldn't have a bass trombone, for example; instead you find a sound that complements it."

When composing, do you start out with a basic guide track which you arrange later, or do the arrangements evolve along with the music?

"I use both methods. In order to keep yourself fresh and interested, you have to do things different ways all the time. With commercials, which are normally 30 seconds, you may have to put across as many as six different moods in that time, whilst still managing to hit all the frame-accurate points that occur. The composition has to be incredibly tight, so a bar and tempo map with all the appropriate tempo changes has to be constructed from the start. In those cases, given that known themes have to be incorporated, I'd then lay down a guide piano and orchestrate on the

SAMPLING & SAMPLERS

What drew you towards the Roland samplers in general?

"My first sampler was an Emax, which I loved. It's very rugged, and never gave me a moment's trouble in one and a half years of touring. The thing I liked about it was that the sample rate was so poor, which gave it bags of real character. Before I sold it, I made a DAT of all my favourite Emax sounds, and I still use them. I think the ear does like certain amounts of distortion and muck, elements which are missing from the high-quality samplers we use now. Ultimately, the Emax's 18-second memory was the main drawback. When I came to look for a bigger sampler, I was discouraged by the number of people I had seen in studios spending hours and hours peering into little LCD screens, twiddling knobs, unable to work the things. I thought, that's not for me. Then the S750 came out, and the thing that interested me straight away was the built-in, on-screen editing, and the sheer speed of working with a mouse. When you're sample editing, you want to be able to see the waveforms very clearly, and to see where your loop points are. The 18Mb memory was a big plus too, so the 750 was just perfect. The only problem was, I wanted more! Then the SP700 came along, with its 32Mb memory.

Although it has no on-screen editing, it's still very easy to use, as you're normally only loading samples for playback which you've already edited on the S750. Finally I got the S760, which addressed the need for more memory and more polyphony. At present, I can use the one screen and one mouse for both the S750 and S760 with a switching box, but Syco are making me another box which will enable me to operate up to four samplers from one mouse and one screen. That will be very useful as I'd like to get another S760 at some point. It also made sense sticking with the one brand of sampler. If you've learned one machine, you don't want to put in extra time learning another with potential incompatibilities into the bargain. Besides, the SP700 and S760 give you access to a large amount of Akai library too. So the amount of available sounds was a great incentive."

Do the S760's digital inputs allow you to integrate it into the rest of your system in other ways?

"I run four tracks of Pro Tools hard disk recording in conjunction with Cubase Audio, and the S760 is brilliant for manipulating things recorded on that. You can port stuff across, filter it, manipulate it and generally treat it in ways which would be quite difficult

or impossible in Pro Tools, and port it back again. This technique was amazingly useful when I worked recently on a film where the sound effects had to be heard from two perspectives; firstly, the natural sounds, and then the same sounds as heard from the point of view of the main character who is partially deaf. Using the filters and pitch warping effects, you could give those sounds a real other-worldly quality. So I find the two systems work really well together."

Some of the newest samplers have appreciably larger memories and greater polyphony than the S760. Would you still choose your system in preference to one of these, and why?

"I can see the benefits of both systems, but I would still stick with what I'm currently using. The Roland library is ultimately the deciding factor. Plus the ease and speed of operation, which I've already mentioned. I have been tempted by the idea of the Emu EIV, and in a gigging situation, I think that the EIV would be an ideal choice, because everything you need is in one box. But from a studio point of view, it has to be the Rolands for me, simply because of the screen access. However, I hear that you'll soon be able to hook the EIV up to a Mac for on-screen editing."

"I don't like equipment hanging around that I don't use, so as soon as I stop using it I tend to sell it. Everything in the studio is something I use all the time."

Of the gear you use, what could you simply not live without?

"Well, the samplers, obviously. And I love the Korg Wavestation — I've been getting into programming it, and it's great. For setting up atmospheres, particularly in soundtrack work, the Wavestation is fabulous. The SY99 is also a favourite. Because I made a point of learning how to program the DX7 when it first came out, I find the SY99 incredibly easy to use as a result."

What other instruments do you use?

"There's the Emu Proformance piano module, which, for the money, is stunning, and the Oberheim Matrix 1000, which is very good for dancy things and synth pads. And the Alesis D4 is a wonderful drum module. I got it originally just to provide a click, but I found that the bass drums were remarkably good. Until recently I used to use samples all the time, then out of necessity I started using the D4 and found it sounded very natural, very acoustic."

Judging by the quality and depth of your recordings, a good mixing desk would seem to be an important ingredient. What are you currently using?

"I use a Mackie 32-channel in-line desk. It's extremely compact, and very well spec'd. That's what attracted me to it — it's got a really nice warm sound, and the EQ is really brilliant."

Do you enjoy engineering your own work?

"Being first and foremost a musician, I'd rather have someone to do the engineering for me! By virtue of having to, I learned about mixers and effects units, although I'd prefer to concentrate solely on the music. But that's the way things turn out. Mind you, even though I had a classical background, I've always been fascinated by the sound of pop records. When I first heard Trevor Horn's productions, I was intrigued as to how he got those sounds. So to say I'm not interested in the technical side would be untrue. It's important to understand your equipment and to read the manuals, because that understanding enables you to experiment in otherwise untried areas. Many off-the-wall, fortuitous accidents can happen that way, and it's one aspect of working alone that I appreciate. On the other hand, at the end of a long day, having been immersed in tiny details, you can lose perspective. That's when being able to take a break while the engineer sets things up can be so beneficial. You come back with fresh ears and another person's unbiased input. There are pros and cons to both situations, but at the end of the day there's a lot to be said for working with other people."

SOS

Mixing It, co-presented by Mark Russell, is an entertaining and eclectic show covering all types of music but focusing on the obscure and less-heard. You can catch Mixing It on Radio 3, Monday nights.

Neodymium Dynamic
Cardioid Microphones
to make the competition **GREEN** WITH ENVY!

Midnight Blues™

WITH **MagnaLock™**
SILENT SWITCH

MB3000L
Professional vocal

MB2000L
All round instrument

MB1000L/MB1000H
General vocal
(low/high impedance)

audio-technica.
□ INNOVATION □ PRECISION □ INTEGRITY

SINCE 1962

Technica House, Royal London Industrial Estate,
Old Lane, Leeds LS11 8AG
TEL: 0532 771441 FAX: 0532 704836

distributed in Eire by:
SOUND PRODUCTIONS LTD. Tel. Dublin 922351 Fax. 922676

ATM-010

Once upon a time an Emulator was all eights: 8-bit, 8-voice, 8-outs, but that was a decade ago. Ten years on and the latest Emulator has more of the 128 about it: 128 voices, up to 128Mb of RAM. PAUL WIFFEN finds out if everything else about the EIV is 16 times as good.

It is almost 10 years to the day since I became acquainted with the Emulator II (EII) on a regular day-to-day basis. Sure I had seen and heard the prototype at the Frankfurt show in 1984, but it was only after recommending the machine to Geoff Downes of Asia, who then had the good grace to hire me to create a library for it, that I really came to know and love the machine. The EII was very good to me. My knowledge of it, acquired at Geoff's expense, opened all sorts of doors and enabled me to make the transition from analogue synth programmer (a career which was dying fast thanks to factory presets and RAM cards) to the rare status of 'sampling expert'.

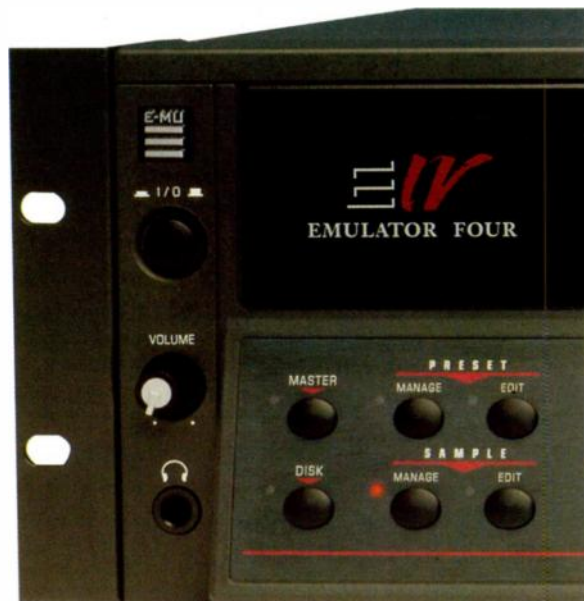
The big problem in learning about sampling back then was cost. The EII was the cheapest machine on the market at over 10 grand, and that was *cheap* compared to the Fairlight and Synclavier (the only other options at the time). Two years later, the Ensoniq Mirage was to appear at less than two grand and revolutionise everything (except perhaps sound fidelity), but sampling was still the preserve of the rich and famous (or those who managed to get a job programming for them).

Today the sampling market has changed beyond recognition (something which Emu have played a massive part in) and machines which deliver far more than the dear old EII are available for under £1500; indeed Emu's own ESI-32 is currently making all the running as the cheapest

standard for sampler polyphony, four times the maximum memory capacity, and twice the standard maximum multi-timbrality. A serious big gun to get the job done. But a sampler is more than just polyphony and memory! We need to look at speed and ease of use, sound quality and flexibility amongst other things, before we hand over the laurel wreath to the victor.

FLASH OPERATING SYSTEM

From the moment you power up the EIV with a system disk in the floppy drive, you notice a break from traditional samplers; they would normally



Raising the STANDARD

EMU SYSTEMS EMULATOR IV DIGITAL SAMPLER

32-voice, 16-bit stereo sampler.

You only need to look at the way some studio musicians and film composers have been stacking up machines like the Akai S1000/3000 range in serious numbers (Hans Zimmer, celebrated composer of Oscar-winning film soundtracks, had more than 10 when I last saw his working setup five years ago) to know that a 16-part multi-timbral, 32-voice sampler that can be expanded to 32Mb is just not enough for pro applications. As Hans was always saying, the first thing you run out of is polyphony and the second is memory. Modules like Proteus have established a previously undreamed of sound quality for the ordinary user, forcing the guys at the top of the profession to go one better. Everyone's ears are now accustomed to increased fidelity and it takes huge amounts of memory and polyphony to create something out of the ordinary.

Enter the EIV, delivering four times the current

ignore the system on the hard drive or in internal ROM and boot from the floppy. The first thing you see in the large LCD screen of the EIV is the option to load the system software into the Flash RAM. At last, the perfect compromise between the safer option of operating systems (which are after all the brain of the sampler, without which it is just a very expensive doorstop) burnt into ROM and the more flexible disk-based systems, which make upgrading easy as long as your floppy disk never gets separated from your sampler and/or your hard drive never crashes. Personally, I always preferred the ROM-based option.

Until now, Akai's method of having the operating system on ROM (but with higher levels of software operatable from floppy or hard drive) has always seemed the most sensible route, for you are never left with a brain-dead sampler, but you can always use a higher level system as soon

as it is released (rather than whenever you can get around to swapping EPROMs).

Now with Flash RAM (which retains its memory on power-down; think of it as ROM that can be overwritten), you can keep your operating system safely inside the machine rather than on vulnerable floppy or hard drives, and upgrade it whenever something better comes along by overwriting the system held internally with one button push (much neater than opening the machine up and switching ROMs). Flash RAM is appearing more and more in musical instruments, mainly for waveform storage where there is not the option of reloading quickly

you want. Three function key pushes is the most it ever takes, and no need to press Enter to confirm you've got the parameter number right! This approach is reminiscent of the hierarchical folders system used on a Mac or Atari. Once you are on the screen you want, you navigate around the individual parameters with the cursor keys.

Within the Disk module, the similarity to a computer desktop is even more striking, with icons representing the connected disk drives, their folders and files. Alternatively, you can View As Names or even Show Inf. on each item. This tells you the size and location of the file, the sample



on power-up from floppy disk (eg. Yamaha TG500 and the new Roland MS1 and JS30), but this is the first time I have seen it used to hold the operating system of a musical instrument.

HIERARCHICAL MENUS

Once the EIV has checked for memory installed, connected QWERTY keyboard (see the 'E IV Ins & Outs' sidebar) and SCSI drives (more like a computer boot-up than a traditional sampler), the changes within the operating system become clear. Selecting main areas of operation like Master, Disk, Preset Manage or Edit, Sample Manage or Edit, is still done with dedicated buttons (happily without the delay that used to result in the appropriate software being loaded from floppy or hard disk), but within these modules, parameters are now accessed with function keys (F1-F6), just like on a computer, rather than you having to remember or look up corresponding parameter numbers and enter them on the 10-key pad. I had become increasingly frustrated with this Emu way of working over the years and it is good to see them finally dropping it in favour of function keys. These are located directly below the display, allowing the current function to be shown immediately above each key (just like on the Akai S1000/3000 series).

Now you can quickly find your way from main operating screen, down through the various logical groupings of parameters, to the actual function

rate and duration, and even identifies the source sampler (EIII, S1000, etc) in the same way as a Mac might identify a file as a Quark Xpress or Word document (the source sampler is also shown as part of the icon, along with the filename).

This hierarchical structure allows you to create folders to contain similar sounds (Strings in one, say, Bass sounds in another, etc) and you can keep folders within folders (within the Strings folder you might create sub-folders for Violins, Violas, Cello, ContraBass, Ensembles, Synth, etc) This allows for a very flexible file system.

Of course, however organised you are, you will still find yourself losing track of where you put sounds. This being the case, it is very reassuring to see that Emu have borrowed another idea from computer desktops and provided a Find command that automatically locates a folder, bank, preset or sample for you (provided you can remember what you called it!). This includes search strings (to find all items with, say, 'Bass' in the file name) in case you never got around to filing similar sounds together. This is another great time-saving facility for those high pressure studio sessions. And if money really is no object, the EIV will search for a file across all the drives you have connected, so you could search on six CD-ROMs simultaneously for that elusive sound!

AUDITION FROM DISK

The best new feature for the busy studio, where time is money, is the dedicated Audition button.

EMULATOR IV £4800

PROS

- More voices, more RAM space, more DSP tools than any other sampler on the market.
- Excellent Modulation Routing and great sounding Analogue-style Filters.
- Option for second MIDI Input.
- System Software in Flash RAM.
- Hierarchical menus for fast operation and sound location.
- SCSI connection extremely flexible and Mac-tolerant.

CONS

- Only 8 outputs (more to come on optional card?).
- No Send/Return Loops on Submix outputs.
- Roland SCSI format not yet supported.

SUMMARY

A truly top class performer that sets a new standard in the sampler market.

Emulator IV

► This allows you to hear a sample played directly from the hard disk without the entire file having to be loaded into memory (in a similar way to a hard disk recorder). Loading complete files into memory only to find that they are completely wrong for the application is the biggest single

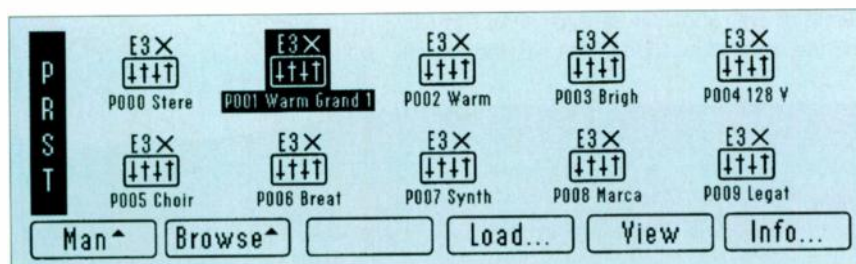
standard trigger for the sounds currently loaded in memory. This means you can check any sounds loaded as well as any on connected drives.

The ability to listen to a sound on both floppy and SCSI drive before you load it is particularly useful. The EIV has a high density floppy drive (twice the capacity of the EIII's drive) and it takes over a minute and a half to load a typical sound, so it is very useful to know it's the one you want before you start.

AUTOMATIC SAMPLING

It comes as no great surprise that the sound quality of the EIV is the equal of any other sampler on the market. Indeed, it is difficult to fault the sound quality of any current sampler. Gone are the days when the conscientious reviewer was able to find problems in the fidelity of the machines delivered for his perusal. The stereo recordings I made to check the quality of the EIV passed with flying colours, particularly in the solidity and warmth of the bottom end (perhaps the only area where you can distinguish between rival professional samplers these days). I would have no hesitation in recommending the EIV for sampling analogue waveforms that you wanted to process through its filters (something I still don't feel to be terribly satisfactory on Akai machines).

The speed and ease with which one can sample under time pressure is another story, as there are vast differences between competing machines in terms of how long it takes to get a good multi-sample together. Perhaps the biggest hindrances are the need to check that all samples are recorded



EIV Preset screen display.

waste of time in using a sampler as part of your production, and the main reason why many people make do with the lower fidelity of a sound module. Now you can check a sound's suitability before you waste precious time loading it. As a result, with the EIV I found that I was able to locate the right sound from a CD-ROM in a fraction of the usual time.

If there is no disk sample icon highlighted in the display, then the Audition button works as a

EIV INS & OUTS

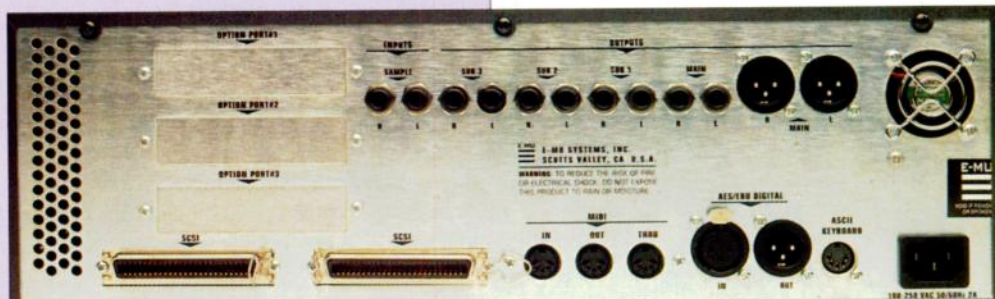
The two sample input jacks (not XLRs, I was relieved to see) accept any level input from the most insensitive mic up to line level, with an input impedance of 10kOhm. As the input gain is fully variable between these extremes and controlled in software, there are no clumsy little switches on the back panel to negotiate.

The main stereo output of the EIV is available on both XLR and 1/4" jack sockets at +4dB, in balanced form to allow the highest possible output sound quality. In the case of the 1/4" jacks, this is done by using a stereo socket, into which you plug a stereo jack if you want the balanced output, or a mono jack if you are a mere mortal like myself.

The six Submix outputs (Emu-speak for separate outputs) are grouped as three stereo pairs on stereo jacks, again with the choice of balanced or unbalanced operation. However, this means that the stereo connectors aren't available for the normal Emu speciality of providing an effects send/return loop on the tip and ring of a stereo jack, for those who don't have enough aux sends on their mixer (I guess they assume that if you can afford an EIV, you already have a pretty good mixer). I was sorry to see this facility sacrificed, but then I assume the balanced output aficionados make up a greater proportion of the target market.

Digital I/O is via XLRs according to the full spec of the AES/EBU protocol. However, those of us with mainly SPDIF-equipped devices need not fear as the two are more compatible than most people realise. AES/EBU and SPDIF send the same basic data format but there are more bells and whistles in the AES/EBU format in the form of sub-codes, which SPDIF blithely ignores. To be on the safe side though, the EIV

actually allows you to switch in software between the two protocols. At the electrical level, AES/EBU transmits a stronger signal, so to physically connect to an SPDIF device you not only need a cable which



has XLR on one end and RCA phone on the other, but some way of lowering the signal level. Normally this is done by sticking a resistor in the cable, but the EIV allows you to switch this in software using a parameter called 'AES Boost On/Off'.

There are two 50-pin Centronics type SCSI connectors on the EIV. In addition, MIDI In, Out and Thru can be supplemented with an optional MIDI board (see 'Expanding The EIV' sidebar) for those who need more than 16 control channels.

The final connector on the back panel allows for an IBM PC-style ASCII keyboard to be connected (although this must be done before powering up, as the system needs to find it during the bootup process). All the front panel controls can be accessed from such a keyboard (making an excellent remote control if the front panel is out of reach in a rack), but a QWERTY keyboard really comes into its own when naming samples, presets etc.

at a decent level, to top-and-tail them, and to map them across the keyboard into a coherent multi-sample. Since the original Emax, Emu Systems have made something of a speciality of automating the process of recording and mapping samples as quickly as possible. As a result, the EIV lets you set up Auto Placement, Auto Truncate and Auto Normalize parameters to streamline the process of getting multi-samples happening as quickly as possible (just in case there's any sampler user left out there still recording their own sound banks).

The Placement parameter lets you set how big each keygroup will be. '24 keys', for example, means that each new sample will be transposed up and down by an octave from its original pitch in the middle of the range and subsequent

rave new world



Huge sound pallet - 8 MEG digitally sampled sounds including a large range of classic synth, as well as real instrument waveforms • 16-part multi-timbral and 24 voice polyphony • PCM subtractive, FM and additive synthesis • Analogue sounding filters (6db/12db/24db) with controllable frequency and resonance capable of self-oscillation • More than 1000 single sounds in ROM • 200 Performance Layer-Sounds in ROM, 100 Performance Layer-Sounds in RAM [editable] • 2 independent digital highspeed signal processors with more than 50 effects including Vocoder, Ringmodulation and Rotary effect • More than 15 drumsets including Vocal-Percussion, TR808* & TR909* • Built-in Portamento • Built-in Arpeggiator that can be synchronised by MIDI-Clock • Compatible with General-Midi • 2 MIDI in (merged) • Stereo output and 4 single outputs • Any editable parameter recordable in real-time with a sequencer • Optional 512KB Sample RAM, Standard MIDI Sample Dump (£245) • Optional 'Techno Rave Electronic' (TRE) expansion board, 1 MEG of samples - Analogue synth samples, Drum Sounds CR78* & 606*, Techno Sounds, 256 Single sounds and 100 Performances (£195) • **Price: £995**

QUASAR



Very useable sound pallet - 6 Meg digitally sampled waveforms specialising in dance and techno (no harpsichords or tubas here!) • 16-part multi-timbral and 21 voice polyphony • PCM subtractive, FM and additive synthesis • Analogue sounding filters (6db/12db/24db) with controllable frequency and resonance capable of self-oscillation • 512 single sounds in ROM • 50 ROM-Performances, 50 RAM-Performances [editable] • 24 ROM drumsets with all the most popular drum machine sounds like TR909*, TR808*, CR78*, TR606*... • 8 User drum sets • 2 digital effects processors, each with 21 effects • Built-in Arpeggiator with portamento that can be synchronized by MIDI-Clock • Plus much more all in a 1U rack • **Price: £749**

TECHNOX

be part of the new sonic culture

ONLY AVAILABLE THROUGH THESE SPECIALIST OUTLETS

BELFAST	MARCUS MUSIC	0232 322871
BIRMINGHAM	MUSIC CONNECTIONS	021 2124777
BRISTOL	EMIS	0272 561855
CHELMSFORD	MUSIC CONNECTIONS	0245 354777
CHESTER	DAWSONS MUSIC	0244 348606
EDINBURGH	SOUND CONTROL	031 5573986
GLASGOW	SOUND CONTROL	041 2040322
LEICESTER	INTASOUND	0533 545456
LONDON	MUSIC CONNECTIONS	071 7315993
MANCHESTER	SOUND CONTROL	061 8776262
NEWCASTLE	SOUND CONTROL	091 2324175
NOTTINGHAM	THE MUSIC INN	01159 784403
SOUTHAMPTON	MUSIC CONNECTIONS	0703 233444
STOCKPORT	DAWSONS MUSIC	061 4771210
WARRINGTON	DAWSONS MUSIC	0925 245422

THE SONGS ON THIS DEMO CD ARE COMPOSED TO GIVE AN IMPRESSION OF THE QUASAR'S TECHNO, AMBIENT, DANCE AND ELECTRONIC MUSIC CAPABILITIES. THE PRICE OF £3.99 IS REFUNDABLE ON PURCHASE OF UNIT. CALL YOUR DEALER FOR A COPY TODAY.



KEY
Audio Systems

Distributed in the U.K. by
Key Audio Systems Ltd.
Unit D, Chelford Court,
Robjohns Road,
Chelmsford,
Essex CM1 3AG
Tel: 0245 344001
Fax: 0245 344002

QUASIMIDI

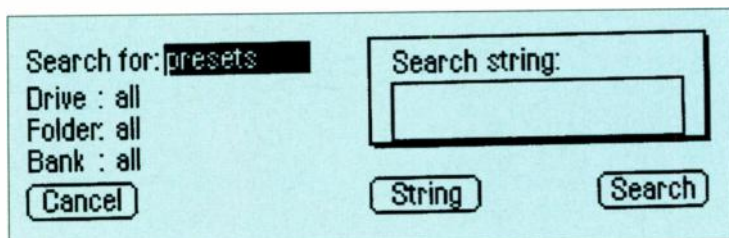
WRB

Synthesizers made in Germany

*TR808, TR909, CR78 & 606 are trademarks of Roland Corporation.

Emulator IV

► samples will be placed two octaves higher up. There is only one setting higher than this: 'all'. This places the sample in the middle of the MIDI keyboard span and lets you take advantage of Emu's unrivalled transposition range, playing



Using the Find function to search for a Preset.

samples back octaves higher or lower than the original pitch without the normally irritating and omni-present aliasing. As a result, you can create great 'other-wordly' sound effects by transposing everyday sounds down several octaves.

The minimum value for Placement is '1 keys' (sic), meaning that each new sample is placed on its own key. For those who can't handle those tricky black notes, there is the option of 'white keys'; a feature I assume is aimed at sound effects specialists who haven't studied the keyboard as an instrument.

So now you can just play in the notes to be sampled at the correct intervals across the keyboard and let the mapping take care of itself. But what about obtaining the right record level? Auto Normalize can be set to either 'Relative' or 'Absolute'. Relative is designed to ensure that stereo samples remain faithful by increasing left/right sides relatively until one is at the full dynamic level allowed for by 16 bits. Absolute simply boosts both samples by whatever it takes to achieve full level on both sides. For mono sampling there is no difference between the two!

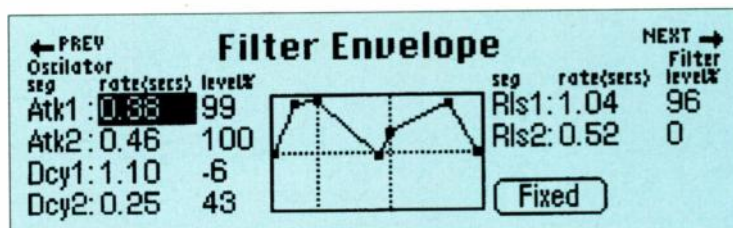
The last of the automated features deals with chopping off unwanted material at the beginning or end of the sample (or both). This will remove any unwanted silence if the sample record is triggered early or you stopped playing early, saving another minute or two per sample.

SOURCE OPTIONS

You can choose to record from either the left or right input (or both, if working in stereo), there's no need to ensure all your mono material is coming in on the left channel like on early stereo samplers. The source can be the analogue inputs (at 22.05, 24, 44.1 or 48kHz), the digital inputs (at all three industry standards: 32, 44.1 or 48kHz) or main outputs of the EIV (known as resampling). This latter option allows you to make layered sounds with loads of polyphony playable on a single voice (good luck trying to loop them though!), and can be done in 16 or 18-bit modes. The latter takes advantage of the full dynamic range of the EIV's digital-to-analogue converters (DACs) and gives you more headroom when playing multiple notes.

The standard 8Mb of memory gives you 94 seconds of mono sampling time (47.5 secs in stereo), but you can multiply this by 16 by inserting

"The stereo recordings I made to check the sound quality of the EIV passed with flying colours, particularly in the solidity and warmth of the bottom end (perhaps the only area where you can distinguish between rival professional samplers these days)."



Filter Envelope display.

a full complement of 16Mb SIMMs. For those without a calculator handy, this equals a healthy 1506 seconds (over 25 minutes of mono). No doubt there will be someone out there claiming this is still not enough (there's always one!).

The input gain is fully variable between -10 and +50dB (from line level right down to the most insensitive microphone). The Threshold at which sampling triggers is variable between -3dB and -60dB. There is a fixed presampling time proportional to the sample rate (12ms at 44.1kHz), which ensures you catch the entire transient.

TOOLS GALORE!

The EIV has more digital sample processing algorithms available than you can shake a stick at! Sadly, it would take something more like a book than the space available to cover all these in depth, so what follows is more like a 'greatest hits' compilation.

Utilities include Cut, Copy, Paste, a DC Filter (vital for removing the bias in a sample which may cause clicking or poor looping), and a Sample Calculator (lets you work out the exact length for a single cycle loop at any pitch). Loop Type turns

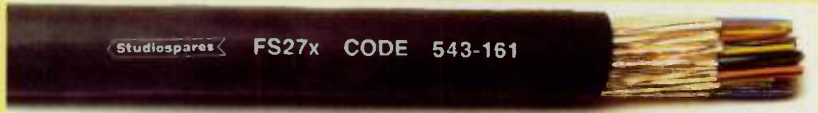
EXPANDING THE EIV

For years Emu have taken a good deal of flak because of the high cost of their memory upgrades. Thankfully, they are now following the lead of Roland and Ensoniq in using SIMMs (Single In-line Memory Modules). The cost of expanding the EIV (and ESI-32) is now solely dependant on the price of plug-in SIMMs in your local market. The EIV has slots for eight SIMMs, so if you buy 16Mb SIMMs you can install a massive 128Mb in the machine, enough for the most memory-intensive applications.

Of course, it is no use having the memory to hold loads of different sounds and 128 voices to play them with, if you still have only 16 MIDI channels to control them. There are now several

synth modules which boast two MIDI inputs, allowing a multi-timbrality of 32 MIDI channels. So far this has not been available on a professional sampler... until now. Emu offers a MIDI Option card for the EIV which gives a second input for an additional set of 16 MIDI channels. This will really allow the voice and memory capabilities to be fully exploited.

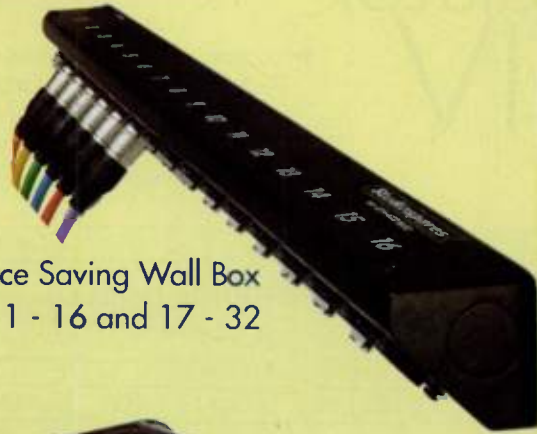
With three expansion slots available, an additional MIDI In is surely not the only expansion that Emu are planning. High on the list of priorities must be additional audio outputs — 128 voices and 128Mb of memory being controlled by 32 MIDI channels tend to require more than the standard eight polyphonic outputs of the EIV.



Studiospares Multicore

27 types of cable

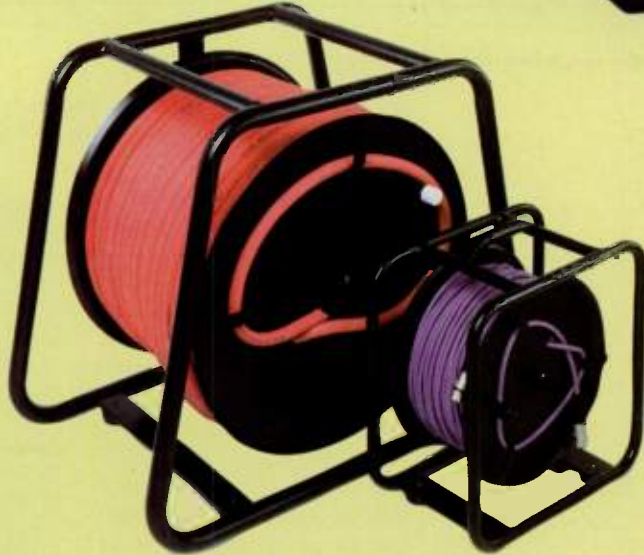
- + 100 types of audio plugs
- + harnessing
- + heatshrink
- + looms
- + snakes
- + five cable marker systems
- + six models of cable drum
- + floor cable protectors
- + ten wall box systems



Studiospares Space Saving Wall Box
1 - 16 and 17 - 32



Studiospares Wall Boxes



Studiospares Cable Drums



Multiways and Looms



Cable Glands

TOTAL CABLE MANAGEMENT

STUDIOSPARES PROVE QUALITY IS NOT EXPENSIVE

Studiospares

61-63 Rochester Place,
London NW1 9JU
tel 0171 482 1692
fax 0171 485 4168

Ansaphone
+44 (0)71 482 1692
Open 24 hours a day

Please send me a free copy of the Studiospares 100 page catalogue

Name

Company (If relevant)

Address

.....

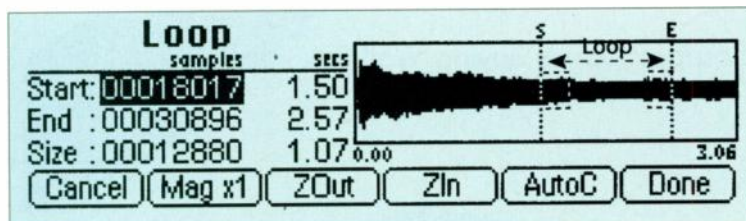
Post Code

Sound on Sound

Emulator IV

► Looping and Loop In Release on or off.

Tools 1 includes the Loop display (complete with Zoom In and Out, Auto Correlate — to match loop start and end points), Compression (to even out level changes in the loop) and Crossfade



Adjusting sample loop start and end points within the Loop window.

(equal power or linear) together with Truncation, Tapering, Gain Change, Stereo To Mono, and Swap Left and Right.

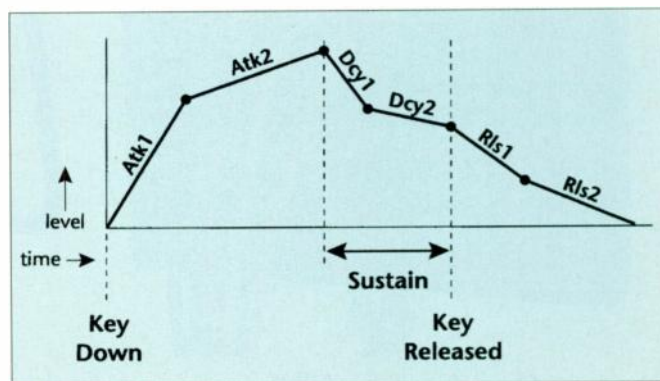
Tools 2 are the DSP lifesavers like Sample Rate Convert, Digital Tuning, Compression, EQ. And just when you thought it was safe to go back into sample edit, Tools 3 gives you hip capabilities like Time Compression, Pitch Change, Doppler Shift, Exciter and (my personal favourite) Transform Multiplication. With such powerful functions at your disposal you can make a sample shorter or longer, higher or lower, coming or going, duller or brighter, or create an entirely new sample from a combination of two others by boosting all the common frequencies and dropping all those not present in both. Using speech as one of the samples produces Vocoder-like effects, or two musical sounds at different pitches. Transform

Multiplication is unique to Emu, though it can take a while to process. The end results are usually well worth the wait.

REAL-TIME MODULATION

If you ever finish trying all the possibilities of the Digital Processing module, then you have the Preset Edit module ready to further shape the sound as you play. Here, two LFOs and three 6-stage envelopes, Wheels and Pressure (to name but a few) let you control the Filter Cutoff, Volume, Pitch, Pan and numerous other modulation destinations. The routing 'cords' (the software switches which let you hook modulation sources to destinations) are justifiably compared in the manual to the flexibility of analogue patch cords.

The sound of the EIV's filters is of particular note: Emu's digital emulation of analogue filtering



The EIV has three Envelope Generators, each of the rate/level type.

is second to none. I fed some MiniMoog waveforms I had sampled through these filters and the results were very impressive indeed; plenty of bottom end, excellent resonance, and very smooth sweeping when used in conjunction with

MAKING THE MOST OF SCSI

No professional sampler can afford to be without SCSI these days, but the EIV's implementation of it goes further than any other I have seen. Not only does it have two 50-pin SCSI connectors as standard, so that the machine can sit in the middle of a chain of SCSI devices (rather than at one end like any single SCSI connector sampler), but the termination (only required if the EIV is at one end or other of the chain) can be switched in and out in software instead of requiring an internal jumper or external plug-in terminator (which I am forever losing!). This means that multiple EIVs can easily be connected together with multiple SCSI drives to form a coherent system.

But Emu have taken things one stage further by actually making allowances for the selfish, domineering attitude of the Macintosh computer when on a SCSI bus. In the Master module (next to the SCSI termination switch), there is a special parameter called 'Mac On SCSI Bus'. This makes the EIV subservient enough to allow the Mac the 'King-of-the-Castle' status, without which it refuses to co-operate. So Mac programs like Steinberg's *ReCycle* and any front panel emulation

software (like Emu produced for the EIII) will work without any configuration nightmares!

Even so, not everything was a breeze as far as SCSI was concerned. When I first received the EIV I connected an Apple CD150 CD-ROM drive and was instantly able to read EIII, Emax II and Akai S1000 CD-ROMs. However, I was less successful in making it work with my Apple Power CD or the MediaVision ReNo portable CD-ROM, both of which work fine with the Akai, Roland and Kurzweil samplers I use.

I tried switching termination on and off but this didn't seem to help. After the EIV had spent a long time trying to access the drive, during the bootstrap stage or when going into the Disk page, I eventually got an icon in the display identifying each drive, but the Info function kept telling me there was no data on the disks! The actual CD-ROMs were in Akai format (that's all I had at home), so presumably the EIV prefers to see an Emu format when first accessing a CD-ROM? However, I suspect it is more to do with differences between SCSI drives (if MIDI were like SCSI, it would have disappeared without trace because of its lack of

standardisation!). I would therefore advise that you see your chosen CD-ROM drive working with the EIV before buying it.

As far as readable sample library formats are concerned, Emu are doing well to be able to read the Akai format, but are lagging behind Kurzweil in terms of breadth of compatibility. I have never understood this craze to be able to read Akai format, for Emu's own library is excellent both in terms of comprehensiveness and sound quality, though third party support is not so widely available outside the US. For me, the Roland library is the best one for a rival manufacturer to support, because of the time and effort that has been invested to make it complete. My spies tell me that work is underway on decoding this format, but so far there is no date on a software release to support this. If you do not have a great deal of RAM available, then the Ensoniq sample library is perhaps the best, as their sounds are edited to occupy the minimum space available. They work really well on the Kurzweil K2000 because of this and I think Emu would do well to cover this format also (even if EIV owners are less likely to run out of RAM).

TONY LARKING PROFESSIONAL SALES

ENGLAND'S LARGEST STOCK OF USED PROFESSIONAL EQUIPMENT

ALL PRICES ARE EX VAT

WORLDWIDE DELIVERY SERVICE

A SELECTION OF NEW EQUIPMENT

A SMALL SELECTION FROM OUR LARGE STOCK OF USED EQUIPMENT

PLEASE USE OUR DIAL-A-FAX SERVICE OR CONTACT OUR SALES OFFICE FOR A COMPLETE NEW & USED LIST



KRK
MONITORING SYSTEMS



NEW K-Rok Close Field Monitors

KRK K-Rok.....£399

Featuring a powerful 7" long stroke woofer, a 1" silk-composite dome tweeter and fanatical KRK engineering, the affordable K-Roks deliver the smooth response and high power handling capability that have made KRK monitors legendary. Perfect for the commercial or home studio, K-Roks provide world class performance without blowing your budget. Why settle for anything less than an authentic KRK reference monitor at only £399!

KRK users include: Billy Joel, Sting, The Plant Recording Studios, Paul Fishman, Bob Clearmountain, Konk Studios, MCA, Bruce Hornsby Trevor Home, Phil Manzanera, Abbey Road, Real World, Metropolis and many more. Call TL Audio NOW to place your order!

TLAudio

Quality Audio for Professionals

TL Audio produce top quality audio products that demand your attention. Value for money + no-compromise design. - Call for FREE brochure.

DISTRIBUTORS REQUIRED FOR SOME MARKETS



TL Audio 8:2 Valve Mixer....£2,500

4 Band valve equalisation, balanced busses, valve mix amps, balanced outputs. Link facility providing 16, 24, 32 etc. channels.

NEW



Dual Valve Mic Pre-amp/DI£325

Mic & instrument inputs, peak LED, +48v phantom power, switchable sensitivity, variable gain control, 19" rack mounting.

NEW



Dual Pentode Valve Pre-amp.£699

Transformer coupled mic input, +48v phantom power, input/output gain controls, front panel instrument input, Phase reverse switch, Filters.



TL Audio Valve EQ.....£750

2 channels x 4 band valve EQ, balanced mic & lines, +48v phantom power, front panel AUX input, bypass switch.



TL Audio Valve Compressor...£875

Pre-amp valve compressor, balanced mic & line inputs, +48v phantom power, 2 AUX inputs, variable 'soft knee' compression.

ALESIS

Alesis ADAT digital

Part Exchange your existing multitrack recorder for a NEW LOW PRICE ADAT digital

Want to go digital? What will you do with your current multitrack? Don't wait any longer.

You won't believe the super part exchange deals we've got waiting for you. Just call 0462 490600 and speak to our ADAT expert.

NEW ADAT AT NEW LOW PRICE



USED STUDIO EQUIPMENT WANTED

CONSOLES, MULTITRACKS, OUTBOARD, COMPLETE STUDIO CLEARANCES UNDERTAKEN.

FOR A COMPLETE USED LIST BY POST

CALL 0462 490600 AND QUOTE YOUR ADDRESS - We'll get a complete updated used list out to you within 48 hours!

CONSOLES (USED)

Allen & Heath

Allen & Heath Sabre MK2
28/16/24 immaculate £4,995

DDA

DDA AMR24 36/24/24 & double p/bay, 60 inputs with full EQ in remix.
Refurbished, excellent condition £22,000
DDA S Series 32/4/2 NEW £3,995

HELIOS - Classic Consoles

Helios 40/32 40 channels,
32 monitors, 72 inputs in remix,
eq based on API 550 refurbished by
Tony Arnold. Immaculate £25,000

Helios 32 channel, passive eq circuit,
discrete electronics, refurbished
by Tony Arnold £14,995

Helios 24/8 passive EQ circuit,
discrete electronics,
manufactured 1974. Immaculate £9,995

MACKIE

32/8 - 8 bus console £2,995

NEVE

VR60 with recall, flying faders £150,000
V3 48 channels, p/bay, flying faders £125,000
8066 20 ch frame fitted 16 channels,
16 monitors & patchbay Coming Soon

SOUNDCRAFT

Soundcraft 2400 28/24/24 p/bay,
P&G faders, vu meters vgc £7,995
Soundcraft 6000 24/16/16 + p/bay £3,995
Soundcraft 800 16/8/16 £1,995
Soundcraft 600 32/8/16 patchbay £3,995
S/craft Spirit Auto 24/8 £2,995

SOUNDTRACS

Soundtracs Jade 48ch (96 inputs)
Automation, private use, immaculate. £33,995
Jade 32 channels, patchbay,
automation £24,995
S/tracs IL3632 with patchbay £14,995
Soundtracs Quartz 48 channel,
with patchbay £19,995
Soundtracs CP680040/24, p/bay £7,995
Soundtracs Megas 32/24/24
private use. Immaculate £6,995
Soundtracs CM4400 28/24 p/bay £3,995
Soundtracs MRX 32/8/16 £2,995
Soundtracs MR 24/8/16 £1,995
Soundtracs 16/8/16 34 inputs in remix £995
S/tracs FMB/4 £995

SSL

SSL 4048E 48 channels, total recall £95,000
SSL 4000E 56 frame fitted 48 channels,
total recall + G computer £100,000
SSL 4078G fitted 56 channels £POA
4048G Total recall, plasma meters £135,000

TAC

Tac Scorpion 24/16/16 £2,995

TRIDENT

Trident TSM 40/24/24 vgc £19,995
Trident TSM 32/24/24 p/bay,
one private owner from new £14,995
Trident Series 70 28/16/16
p/bay, immaculate £5,995
Trident Trimix 16/4 £995

TWEED

Tweed 20/8 classic console £4,995
Tweed 24 channels, p/bay £4,995

RECORDERS (USED)

ALESIS

A-DAT private use - 3 available £1,595ea

AMPEX

Ampex ATR102 2 track 1/4" £1,995

Ampex Machines Refurbished by Tony Arnold (UK Service Centre for Ampex)

Ampex MM1100 24 track
reconditioned by Tony Arnold £5,995

Ampex MM1200 16 track
reconditioned by Tony Arnold £2,995

Ampex MM1200 24 track
reconditioned by Tony Arnold £7,995

FOSTEX

G245 only 3 weeks old, immaculate £4,495

Fostex M20 2 track with centre
track for time code £495

OTARI

MTR90 MK2 24 tr rem, autolocate vgc £12,500

Otari MTR90MK1 24 track + remote
& autolocate £4,995

Otari MTR12 1/2" private use. £2,995

Otari MTR12 1/4" £1,495

Otari MTR10 4 track 1/2" & 2 track 1/4"
headblocks £2,495

REVOX

Revox B77 7 1/2 - 15 ips £595

SOUNDCRAFT

Soundcraft 760 MK3 24track, remote. £4,995

STUDER

A80 Mk2 16 track. Only 1,350 hours £4,995

Studer A80 Mk4 8 track. Low hours £1,995

TEAC/TASCAM

ATR60 1/2" 2 track in console. vgc £1,500

Tascam DA30 DAT recorder £795

VARIOUS

AMS RMX16 Digital Reverb £1,800

Dolby XP24 SR £8,495

Eventide H3000 POA

Klark Teknik DN780 Digital Reverb £1,250

Lexicon Super Prime Time £1,950

MXR Pitch Shift Doubler £295

MXR Phaser module £395

MXR Flanger module £395

Manley large capsule cardioid valve mic,
ex demo unit £1,850

The Old Rolling Stones Mobile Recording Studio.

A once in a lifetime chance to purchase this piece of rock & roll history.

For more information please contact
Tony Larking. tel. 0462 490600

... SPECIAL OFFER ... Timeline Lynx Synchronisers 2 for less than price of 1

2 used, serviced Lynx 1 time code modules (supplied with full 1 year warranty) for less than the price of 1 new Lynx module.

£2,750 pair or £1,495 each
While stocks last. Call for details.

TELEPHONE OR FAX

FOR THE BEST NEW & USED EQUIPMENT

TEL: 01462 490600 FAX: 01462 490700

DIAL A FAX

FOR A COMPLETE UP TO DATE EQUIPMENT LIST ON YOUR FAX
Dial 0336 413 733 on your fax machine & press start when instructed. Some machines may need to be switched to polling mode to use this service. Calls @ 39p per minute cheap rate & 49p per minute all other times.



Emulator IV

► the envelopes. I particularly liked the ability to switch between 2, 4 and 6-pole filtering, to obtain sharper or slower cutoff slopes.

CONCLUSION

The best recommendation I can make for the Emulator IV is that this lengthy review simply does not do it justice! Even as I write I remember additional neat features I found which I haven't got space to mention: error correction on MIDI

The EIV's sound quality is everything you would expect from the guys who started it all, the balanced outputs should keep the fussiest audiophile from whining, and the filters are good enough to let you use the EIV as a traditional analogue synth if you sample in the appropriate waveforms first. Running out of voices, space for sample RAM, or MIDI channels (provided you purchase the MIDI expansion option) seems highly unlikely even for the

← PREV		Cords C00 to C07				NEXT →	
Filter/Amplifier	source	dest	amount	source	dest	amount	
00: Vel		AmpVol	+51%	04: Lfo1~	AmpPan	+55%	
01: ModWl		OscPtch	+14%	05: MidiA	C06Arnt	+35%	
02: Key+		YEnvRls	-26%	06: Pink	OscPtch	+5%	
03: Press		OscChrs	+16%	07: UpVel	YEnvRls	-25%	

Modulation Routing window offers a comprehensive choice of modulation sources and destinations with variable amounts.

Sample Dump; Scrubbing using the Pitch Wheel; Memory Defragmentation; a Digital Audio Overload indicator (having 128 voices means you need to allow extra headroom in your system or clipping distortion results); a display showing the volume level of all 128 voices... the list seems endless.

The overall impression I have is of a machine which has concentrated on filling all the needs of the most professional user, rather than being designed to hit a particular price point. With so many other machines on the market targeting the sub £2000 price point these days, the EIV will come as a pleasant surprise to those users for whom price is not such a critical issue as having the absolute best machine for the job! Features like the Flash RAM-based hierarchical

← PREV		Miscellaneous		NEXT →	
Output				MIDI Mode	
F1	Contrast	:	8	F4	Audition sample : on
F2	E4 SCSI ID	:	0	F5	Zero X threshold : -54dB
F3	SCSI termination	:	on	F6	Undo/Redo enabled: yes
	Mac on SCSI bus	:	no		Completion beep : off

Various handy parameters like SCSI ID number are to be found in the Miscellaneous window.

operating system, with its folders and Find routines, really make for a very speedy system when under pressure from an impatient producer or the ever-ticking clock in an expensive studio. Accessing parameters is easy, as they are all where you would logically expect to find them, and a seasoned pro would probably never need to look at the owner's manual. A more inexperienced user would find the manual not just a good guide to the system but an excellent primer in digital sampling, and not too heavy going (flashes of humour and a spacious layout help a lot here!).

“Running out of voices, space for sample RAM, or MIDI channels (provided you purchase the MIDI expansion option) seems highly unlikely even for the most demanding user; exhausting the DSP possibilities alone could take a lifetime.”

most demanding user; exhausting the DSP possibilities alone could take a lifetime. The only potential shortfall would appear to be in the output department, which could easily be circumvented by an optional card expander (let's face it, Emu must have put those other two slots there for some reason).

When you add the functionality and sheer sound quality of the EIV to its impressive hardware capabilities, it starts to look positively cheap, and not

the expensive option some less experienced commentators have suggested. If it falls within your budget, the Emulator IV is your best option by far!

SOS

FURTHER INFORMATION

£ £8Mb EIV (expandable) £4800 inc VAT.
MIDI Expansion Option £200 inc VAT.

A Emu Systems Ltd, Suite 6, Adam Ferguson House,
Eskmills Industrial Park, Musselburgh, EH21 7PQ.

T 0131 653 6556.

F 0131 665 0473.

TODAY'S K2000.

"Workstation" is too small a word for it.

THESE DAYS, EVERYONE likes to call their electronic instrument a "workstation." Truth is, most of them are only scratchpads.

Today's Kurzweil K2000 Series combines multi-platform synthesis and sampling for complete sound design; then adds a powerful 32-track sequencer, Advanced File Management System, SCSI, and up to 24 MB of on-board ROM sounds. In fact, the K2000S is the only sampler which offers ROM sounds on-board. Those who demand more can install up to 64 MB of sample RAM, an internal hard drive and digital I/O. Now that's a true workstation!

Kurzweil's innovations in sound processing (V.A.S.T.®), connectivity and upgradability have earned the K2000 many awards around the world, including the prestigious *TEC Award*. But we didn't stop there. Today's K2000 has two new, groundbreaking upgrades: **Version 3 Software** and **Contemporary ROM**.

Version 3 Software introduces AFMS (*Advanced File Management System*) which allows you to load and save selected objects and create powerful file-management macros. There are also helpful backup and copy utilities, and more. Version 3 Software's 32-track sequencer performs functions usually found only in advanced computer software sequencers, like automated mixdown, input quantization, and triggering sequences from the keyboard.

The new **Contemporary ROM SoundBlock** adds 8 MB of dynamic contemporary sounds to the K2000's permanent memory - from *Distorted Lead Guitar* and *Analog Synths* to *Tabla* and *Hip-Hop/Rock Drums*. Combine it with the **Orchestral ROM SoundBlock** and internal ROM banks for a stunning 24 MB, available at the touch of a button, with no disks to load. Thousands more additional samples are available on disk and CD ROM - and because the 2000 Series also reads current sampler formats from Roland®, Akai® and Ensoniq®, the K2000 gives you access to the world's largest sound library.

Today's K2000.

It's what the word "workstation" really means.



Rack-mount module or keyboard instrument: the choice is yours.

KURZWEIL®

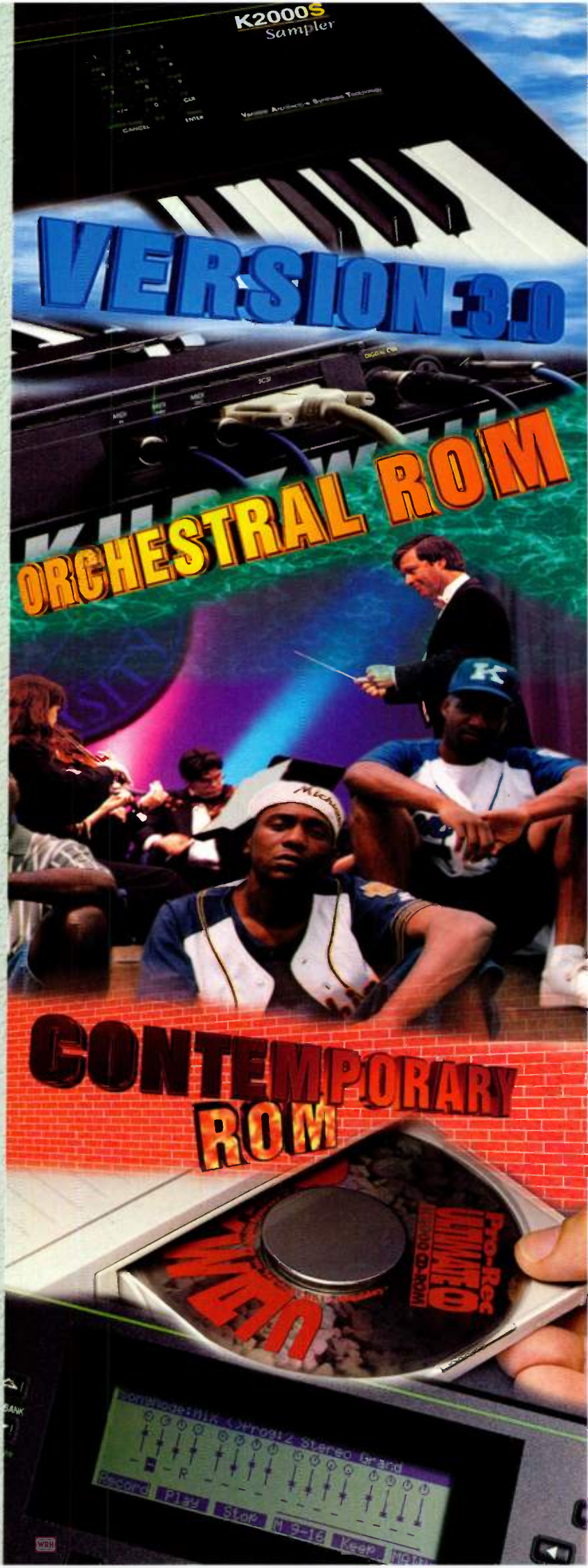
Musique Systems

Kurzweil is a product line of Young Chang Akki Europe, GmbH

Pure Inspiration

Industriering 45 D-41751 Viernsen Tel: 0 21 62/44 91 Fax: 0 21 62/4 17 44

The Washburn (UK) Limited Group of Companies
Amor Way, Letchworth, Herts, England SG6 1UG
Telephone: 01462 - 482466. Fax: 01462 - 482997



MUSIC CONNECTIONS

THE UK'S ULTIMATE RECORDING & MIDI SPECIALISTS



STORAGE



Need a disk drive for your sampler? You know that when you arrive at your dealer he will bring out a cream coloured box. "Here's one I made earlier!" Yes a lot of retailers actually make these drives in their back rooms!! **WE DO NOT.**

Dynatek are the World's largest manufacturer of drives for the music industry, in America virtually every manufacturer and distributor endorses them. They are specifically designed to work with music equipment. Each drive is built to a very high standard and comes complete with quality cables, terminator block, software and a cartridge where applicable. We are the only company in the U.K. allowed to sell Dynatek drives therefore we can keep the prices nice and low. Buying a quality disk-drive is not as expensive as you might think - take a look at our amazing prices which are all including VAT.



LOOK AT THESE INCREDIBLE DEALS



- | | | | |
|-------------------------------------|------|--------------------------------------|-------|
| ▲ 340 Meg desk-top | £349 | ▲ Dual 270 Meg with CD ROM | £395 |
| ▲ 530 Meg desk-top | £399 | ▲ CD ROM desk-top | £299 |
| ▲ 1 Gig desk-top | £795 | ▲ Dual 105MB & CD ROM Rack mnt | £795 |
| ▲ 105 Meg desk-top removeable | £449 | ▲ S30MB Rack mount | £595 |
| ▲ 270 Meg desk-top removeable | £599 | ▲ 2 GIG Rack mount | £1495 |

SAMPLERS

Don't buy a sampler until you have spoken to the experts. We have all the leading products from the major manufacturers, and because we bulk buy our prices are the most competitive.

E-MU EMULATOR IV NOW IN STOCK CALL FOR A DEMO TODAY



ESI-32 The new 32-voice digital sampler
Call for further details

- 32 voice polyphony
- 32MB sample memory
- Fully compatible with E11ix, Emax II & Akai S1000/1100 sound libraries
- 32 4-pole digital resonant filters & a variety of DSP functions

KEYBOARDS & RACKS

QUASAR 8MB of digitally sampled sounds, 16 part multitimbral, 24 voice poly, over 1000 single sounds in ROM, 200 performance layer sounds in ROM... the spec is incredible, optional TRE expansion board with 1mb of techno/dance samples. **Call in for a demo**

THE NEW 'TECHNOX' FROM QUASIMIDI

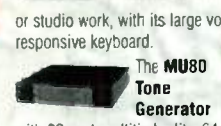
This stunning unit is packed with outstanding new sounds for techno/dance music. 21 notes poly, 16 part multi-timbrality, 6 meg sample memory, 512 rom patches, 50 rom performances, 50 rom performances, 14 sequencer-multi-setsups, 24 rom-drum-sets, 2 digital effects processors, arpeggiator with portamento!!



YAMAHA VL7 The new VL7 Virtual Acoustic Synth - uses the same technology as the VL1. Ideally suited for stage or studio work, with its large voice capacity, built-in effects & quality responsive keyboard.



The full power of the VL1 in an affordable 3U rack-mount module



WE HAVE SUPERB SAMPLE LIBRARIES

Roland S-760
DIGITAL SAMPLER

The **MU80** Tone Generator with 32-part multitimbrality, 64 note poly, 660 voices...!

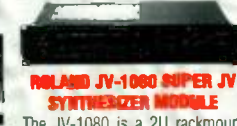


New **W7 & W5** workstations have arrived come along and check them out!

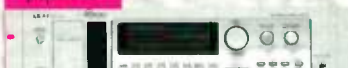
The **MU5** Tone Generator features 128 voices plus 8 drum kits, full General MIDI compatibility & flexible computer interfacing.



KORG X3 / X3R



ROLAND JV-1080 SUPER JV SYNTHESIZER MODULE
The JV-1080 is a 2U rackmount sound module with 16-part multitimbral capability and 64-voice poly. Call for further details.



CHELSEA ♦ 071 731 5993

CHELMSFORD ♦ 0245 354 777

Chelsea

202 NEW KINGS ROAD
CHELSEA
LONDON SW6 4NF
TEL: 071 731 5993
FAX: 071 731 2600

Chelmsford

ROB JOHNS ROAD
CHELMSFORD
ESSEX CM13AG
TEL: 0245 354 777
FAX: 0245 355 007

Southampton

HINGS GATE
ST MARYS STREET
SOUTHAMPTON SO1 1NF
TEL: 0703 233 444
FAX: 0703 233 266

Birmingham

CROSBY COURT
GEORGE ST
BIRMINGHAM B3 1QG
TEL: 021 212 4777
FAX: 021 212 4877

MIXING CONSOLES

TASCAM M-2600

The excellent M-2600 available in 16/24/32 channels

YAMAHA Pro Mix 01 NOW IN STOCK

Mackie mixing consoles are the perfect partners for your digital recording system. Whether you choose Tascam DA88, Alesis adat, Otari Radar, Akai or Digidesign, Mackie will provide you with the highest spec console for your money. The great headroom, low noise and warm sound of Mackie will help you get the very best from your digital system right through to master quality.

MACKIE.

- 32 ch 8.Bus / 24 ch 8.Bus and SideCar Combination

Mackie 1604

Mackie 1202

The Mackie 1604 and 1202 offer the same digital quality mixing as the 8.Bus but in a compact unit

Mackie LM-3204

32 input line/mic mixer

CALL FOR THE BEST PRICES

HARD DISK RECORDING & MULTITRACK

AKAI DIGITAL DR8



8 track hard disk recorder

TASCAM DA-88

8 Track Digital Audio Recorder
Hi-8 Digital Multitrack at an affordable price



YAMAHA Digital Recording Processor
CBX-D5

ALESIS

MONITORS

THE BEST DEALS ON STUDIO MONITOR SPEAKERS FROM THE LEADING MANUFACTURERS.

ALESIS

JBL

TANNOY MONITOR SERIES

PART-EX DEALS

CHELSEA
Casio FZ10M 2Meg 16 bit ...£600
Honer HS1E (FZ10M Clone) ...£600
Yamaha RY30 ...£299
Yamaha TG55 ...£249

CHELMSFORD
Akai MG14D Pro 12 Track + Autolocator ...£1350
JL Cooper Sync Link ...£99
Kawai K1M ...£199
Roland D10 ...£225
TOA 8 Track Cassette ...£499
Yamaha RX5 Drum Machine ...£199
Roland D50 Keyboard ...£475
Studiomaster P7 24 IN Desk ...£2200
Datasync For ADAT ...£250
Digitech DSP 256 FX ...£350
Tascam M216 16:4:2 ...£550
EMU EMAX 2 (as new) ...£999
Akai MX73 ...£399
Roland A30 ...£300
GEM S2 Turbo/Case/Stand ...£1200
ART SGX2000 FX+X15 Ultrafoot ...£599
Yamaha PF80 Piano ...£275
Boss FC50 Foot Controller ...£65
Fostex G10 Dolby S 5-track ...£475
Roland JV880 sound module ...£499
E-MU Morphous ...£899
Studiomaster Proline 32.8 ...£899
Roland Juno 60 with case ...£349
SOUTHAMPTON
Akai MPC60 MkII (expanded) £1299
Yamaha TX802 module ...£449
Kawai K1 ...£call
Roland D10 ...£330
Akai S3000 ...£1899
Atari 1040ste + software ...£299
Akai S01 + EXM01 ...£550
Studiomaster mixdown gold 16.8.16 ...£1000
Seck 12.8.2 ...£450
BIRMINGHAM
Yamaha OX21 ...£49
Ensoniq VFX SD ...£595
Roland Jupiter 4 ...£400
Yamaha CS50 ...£300
Roland TR606 ...£95
Kawai Q80 EX Seq with drive ...£249
Behringer EX2200 Multiband exciter ...£149
Yamaha QY20 ...£299
Session Mix 8-2 ...£300

DAT MACHINES

DIGITAL DIGITAL DIGITAL

Riwa XDS-1100 DAT machine

Also available Sony DTC07 and DTC60

STUNNING NEW DA30 MH2 NOW IN STOCK

EFFECTS

ALESIS Midiverba

YAMAHA FX-770

YAMAHA REV-100

LA LITES ensoniq BEHRINGER

ART SPL Symetrix

Drawmer APHEX ALESIS

ACCESSORIES

ALL STUDIO AND MIDI ACCESSORIES IN STOCK



ZIMMER RACK

R2-D2 RACK

HOSA TILTING 12U RACK TROLLEY

£65

SOUTHAMPTON ♦ 0703 233 444

BIRMINGHAM ♦ 021 212 4777

MUSIC CONNECTIONS

SPECIAL DEALS

SPECIAL DEALS

SPECIAL DEALS

THE UK'S ULTIMATE RECORDING & MIDI SPECIALISTS

AKAI professional CD3000



This fantastic sampler just got better! The CD3000 now comes with analog input board & SCSI interface, built-in cd rom complete with 7 cd's - that's over 3gigs of library, and a free 8 way loom for the 8 outputs.

The price is so amazing it can't be printed!!

TASCAM MM-1

£449

RRP £799



With 12 mono and 4 stereo inputs that handle signals from mic to line, the MM-1 provides plenty of capacity for the largest of keyboard systems as well as sound reinforcement, recording and production applications. The MM-1 also provides MIDI mute functions.

JV-1000 MUSIC WORKSTATION



£1495

We have a limited number of the super JV-1000 workstations available at the amazing price of only...

£1495 (RRP £2199)

THIS PRICE INCLUDES THE VE-GS1 VOICE EXPANSION BOARD (RRP £299)



EMULATOR TECHNOLOGY

ESI-32

Don't miss this incredible package deal!

We can offer the impressive new ESI-32 sampler from E-MU, bundled with the Dynatek CDS 601 CD-ROM and 5 CD's for the stunning price of...

SPECIAL PACKAGE PRICE

£1695

SPECIAL PACKAGE PRICE



- ▲ CD-ROM
- ▲ 4 E-MU CD'S (RRP £400)
- ▲ EXCLUSIVE CD FROM GREAT SOUNDS (RRP £299)

'Great Sounds' CD ROM disk exclusively available in the U.K. through Music Connections - free with the above package or purchase separately for only £149 (rrp £299)



238S

£895

RRP £1699

238 dbx

£695

RRP £1549

The Tascam 238S Syncaset is a rack mountable 8-Channel, 8-Track Multi-Track Recorder for pro studio applications.

FABULOUS TEAC MONITOR SYSTEM



£199

TEAC
COAXIAL 2-WAY BASS REFLEX SPEAKER SYSTEM INCLUDING SUB WOOFER
NORMAL RETAIL PRICE £299

KORG WAVESTATION SR

£799



The WAVESTATION SR is a single rack space synth featuring 3 RAM banks and 8 ROM banks with instant access to an incredible 550 performances (600 with an optional program card). Designed for multitimbral use, the WAVESTATION SR's 32 multisets can play a separate complex, split and layered performance on each of 16 MIDI channels. The WAVESTATION SR's PCM ROM includes 484 sampled or synthesized waveforms to use as raw sound material, including everything from digital timbres to acoustic piano and drums.

CHELSEA ♦ 0171 731 5993

CHELMSFORD ♦ 01245 354 777

Chelsea

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

Chelmsford

ROB JOHNS ROAD
CHELMSFORD
ESSEX CM13AG
TEL: 01245 354 777
FAX: 01245 355 007

Southampton

KINGS GATE
ST MARYS STREET
SOUTHAMPTON SO1 1NF
TEL: 01703 233 444
FAX: 01703 233 266

Birmingham

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

AKAI DIGITAL

THE AMAZING NEW AKAI DR8
WITH 1 GIG AV DRIVE
(NORMAL RETAIL PRICE £4495)



DR8 HARD DISK RECORDER

£3495

- ▲ Recording Media: Hard or MO
- ▲ Sampling Freq: 32khz, 44.1khz, 48khz
- ▲ 8 tracks
- ▲ Quantisation: 16 bit linear
- ▲ Analogue in: jacks x 8
- ▲ Analogue out: jacks x 8, aux x 2, 1/r mix
- ▲ Digital In & Out: XLR & RCA x 1
- ▲ Wordclock/Video: BNC x 1
- ▲ SCSI A x 1
- ▲ Optional SCSI B x 2
- ▲ Optional SMPTE & MIDI boards
- ▲ Optional EQ x 16

▼ FEATURES ▼



MSR-24S

1" 24-track Recorder/Reproducer

MSR-16S

1/2" 16-track Recorder/Reproducer

COMPACT MULTITRACK WITH STATE-OF-THE-ART DOLBY S NR

The finest 1-inch 24-track and 1/2-inch 16-track machines in the multitrack field now offer the most up-to-date noise-reduction technology available: Dolby S-type noise reduction. In addition to precision transport performance, professional quality sound, and versatile control; these two compact, economical multitrack machines offer noise reduction performance that gives them a competitive edge over many larger recorders. The original DBX-equipped MSR-24 and MSR-16 are still going strong - both the DBX and Dolby S systems have their advantages. The noise reduction system you choose will depend on your particular application, compatibility requirements, and personal preferences. It's up to you: 24 or 16 tracks with DBX or Dolby S noise reduction. Whichever way you go you know you're getting the all-round performance and extensive creative capability that has made Tascam the first name in multitrack.

TASCAM

Roland DM-800 DIGITAL AUDIO WORKSTATION

MUSIC CONNECTIONS CAN OFFER A LIMITED SPECIAL PACKAGE PRICE NUMBER OF THE FABULOUS DM-800'S BUNDLED WITH A 1 GIG AV DRIVE FOR ONLY... **£3995**



The Roland DM-800 Multi-Track Disk Recorder is a compact, stand alone unit - a completely dedicated Digital Audio Workstation. The DM-800 provides an amazing array of features and functions:

- 300 Virtual Tracks
- MIDI Machine Control
- Time Compression
- Scrub Preview
- Pitch Correction
- Backup to Audio DAT or SCSI DAT
- Music Editing by Bars and Beats
- Full Dynamic Automation of Levels, EQ, Pan

MSR-16 RRP £6995. OUR PRICE... £2995!
MSR-24 RRP £9995. OUR PRICE... £4995!
LAST FEW AVAILABLE - SO HURRY!

MSR 24 DBX
ONLY £3795 inc

MACKIE 1604 + TASCAM 238S LIMITED OFFER PACKAGE DEAL



SPECIAL PACKAGE PRICE
£1695 inc VAT

- MACKIE 1604 RRP £949
- TASCAM 238S RRP £1699
- THAT'S A SAVING OF £953!



TASCAM 238S

TASCAM

We can offer the quality Tascam midistudio 688 and 644 at these unbelievable prices. But hurry the stocks are limited. Advanced high performance Tascam Transport Design, Multifunction Dual Mix system effectively doubles Input capacity. Unique 'Scene Display' with memory & MIDI control, MIDI-controlled realtime channel mute automation.



10-Channel (20-input) 8-group mixer & 8-Track Recorder.

RRP £2600 **£1795**



8-Channel (16-input) 4-group mixer & 4-Track Recorder.

RRP £999 **£695**

MIDISTUDIO

TAKE A LOOK AT THESE INCREDIBLE DEALS

- | | | | |
|--------------------------------|------------------------------|-----------------------------|--------------------------------|
| ▲ Yamaha OY8 £175 | ▲ Roland PSS Piano £349 | ▲ Fostex R08 £2495 | ▲ Yamaha FX770 £299 |
| ▲ Yamaha RY30 £249 | ▲ Fostex 280 £499 | ▲ Akai S01 £599 | ▲ Fostex 24.12 desk £1495 |
| ▲ Audio Gallery Mac/PC .. £199 | ▲ Fostex 380S £549 | ▲ Boss CL50 Comp. £139 | |

SOUTHAMPTON ♦ 01703 233 444

BIRMINGHAM ♦ 0121 212 4777



Wired

LIVE MULTITRACK RECORDING

FOR Sound!

Nothing beats the feel of a superb live performance captured on tape... but exactly how do you go about it? SOS's Demo Doctor and live recording veteran JOHN HARRIS considers what you need to get that classic gig onto a multitrack tape.

Multitrack recording live is a bit like gigging — a lot of organisation beforehand, a lot of gear to carry and set up, a lot of hanging around, and then a lot of frantic activity for 40 minutes or so while the gig's on! There's no doubt that certain types of music, particularly those with a lot of energy in the live performance, can benefit from a pseudo-live studio performance, but this still lacks the atmosphere of a real gig. With a portable setup at the concert, you can capture that moment...

You *can* make excellent live recordings using just two mics and the natural acoustics of a building, but that will have to wait until another time. Another method of live recording involves taking a feed from the front-of-house (or FOH) desk direct to cassette or DAT, but this will only work in large venues where everything is running through the PA system. Even then, a loud backline will mean that less guitar and bass is put through the main PA system, which means you won't end up with a properly-balanced mix.

A multitrack recording has distinct advantages — it gives you more control after the event, because you have the chance to get the balance right on the mix, and to patch up any glaring errors without losing the excitement of the live performance. However, it *does* require a lot more pre-gig planning (of which more in a moment) — and a lot more equipment.

GET EQUIPPED!

You will need:

- A microphone splitter.
- Multicores.
- A mixer.
- A tape machine.
- Outboard equipment.
- Two microphones for recording the audience.
- An amp and speakers, or some headphones, or both.

Figure 1, on page 56, shows how you would wire up the system, but it's also worth going into some detail on the choice of gear.

• THE MICROPHONE SPLITTER

A mic splitter is a special kind of mic transformer designed to provide two or more isolated outputs from one microphone, so that one of the output signals can be sent to the FOH for PA mixing, while you take the other for recording purposes. The isolation is necessary to prevent possible ground loop problems.

• MULTICORE

The multicore should be high-quality balanced cable with independent screens for each balanced pair. It is essential that the cable is designed to withstand constant flexing. Foil screen cables (as used in studio installations) are unsuitable, as they cannot withstand such bending.

Mic Splitter to PA Stage box

I said multicore, but that should really be multicores. Dependent on the size of the venue, and what other bands are playing, you could need up to 20 or more balanced connections to run between your mic splitter and the main PA stage box. In theory, you only need to plug the signals to be recorded into the splitter, and the rest can go direct to the main PA stage box — but in practice, it makes life less complicated to simply plug everything through your splitter and send it on to the stage box from there. The necessary wiring loom does not have to be very long, as the boxes are often positioned together at the side of the stage.

Splitter to Desk

This is *your* feed for recording, and it may need to stretch a considerable distance if you're set up away from the stage for isolation purposes (see 'Positioning your Equipment' below). The size of multicore is entirely dependent on the number of channels you are likely to use, which you should have worked out in advance. All the signals will arrive at your desk on male XLR connectors, because any line inputs from keyboards, DAT machines and other instruments on stage should have been plugged into DI boxes by the PA engineer and converted to balanced signals.

Desk to Multitrack

This can also be a short loom, as your desk and

MAX HEADROOM!

Signals to tape have a tendency to fluctuate a lot, particularly on vocals in live situations, so during the soundcheck, keep a few dBs below the peak operating level. Once the adrenalin of live performance takes over, you will find those extra dBs are soon used up!

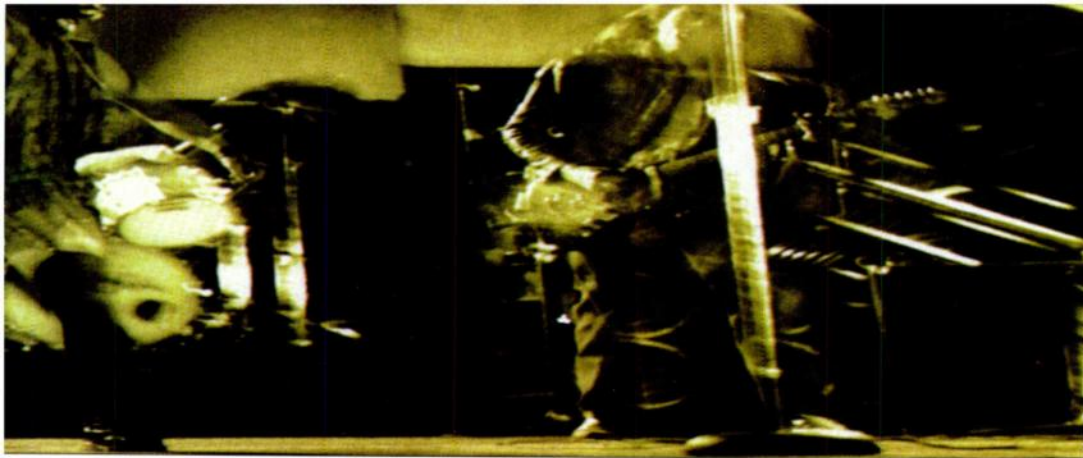


Photo: Courtesy AKG

tape machine will be close together. Whether the loom is unbalanced or not will be dictated by your setup. Obviously, it's important to keep all your multicores away from any mains or power supplies — these could add noise to your system.

• MIXER AND TAPE MACHINE

As in a studio situation, the number of inputs the band requires will determine the size of desk, multitrack and loom between the mic splitter and desk, but always remember to allow two tracks for the audience microphones. A typical band will rarely need more than 16 tracks, but you may need to hire in a bigger machine, and obviously you will have to arrange this in advance. Your desk should have a monitor section (or some other means of playing back the soundcheck) so that you can test the signal integrity. If you have a desk oscillator, you can check the connections to the recorder before the soundcheck, by routing the oscillator tone to the tape machine. Insert points on the channels are useful for compression where necessary, and a sub-mix section may be needed for drums, but most signals can be run to tape using direct outputs. EQ is not really important — you may need to use it very slightly, but I personally don't touch it until the mixdown stage.

• EFFECTS

These need only be minimal. I often use some light compression (for vocals and occasionally bass guitar), with a low ratio of between 2 and 4:1, just to keep levels to tape in check. A multi-effects unit can be useful for monitoring playback with some reverb, but although I do take one to most gigs, it rarely gets used.

• ROOM MICROPHONES

Two decent condenser mics (or, as a cheaper alternative, a pair of Tandy PZMs) will suffice in most cases. You also need good-quality stands that don't wobble when they're extended, and some long microphone leads to get the signal to the desk. I usually bypass the splitter, or disconnect the feed from splitter to PA stage box for these microphones, in case an unsuspecting FOH engineer accidentally turns them up on the FOH desk.

Good mic positions include: at the FOH desk, hanging from the ceiling (difficult in most venues), or on the stage pointing towards the audience.

• MONITORING

If you want to monitor the gig over speakers, you'll need to work in an isolated area, and this is rarely possible in small venues. In practice, most work ends up being done on headphones, although it's nice to give the band a quick taste of the recording after the gig over speakers — unless it went badly, of course! On the other hand, headphones save space in the

car, and you can always take a headphone splitter if you want to run more than one pair. Obviously, in a professional outside broadcast situation, you would be able to work in isolation, but for the one-man operation, the less you have to carry to the venue the better! This brings us neatly to:

PRE-GIG ORGANISATION

• THE VENUE

If possible, it's a good idea to check out the venue before you do the recording, for loading access, parking, power points and a place to set up the recording equipment. For smaller venues like pubs and clubs, space will be limited, especially if there's more than one band on the bill. I usually feel that the best gig to record is the one where the band you're recording is either the only band playing, or the band headlining.

• THE BAND

Length of set should be another consideration, because it dictates your tape requirements. Try to arrange with the band a point in the set where a longer song introduction allows you to change the tape. Failing that, work out the priority songs for the recording, and change the tape during one of the others — a set list will be essential on the night.

• FRONT OF HOUSE PA

You will need to liaise with the FOH engineer in a big venue where the band are not using their own PA system. This means tracking down the PA company and the engineer who's going to be doing the job, and telling that person exactly what you want to do, and the equipment you're going to be using. Most engineers are happy enough, provided it doesn't mean extra work for them in the invariably rushed situation of a gig. If you try to make the FOH engineer's job harder by putting in a low-quality, or, heaven forbid, *home-made* mic splitter (which will worsen the quality of the signals the engineer has to deal with), you are unlikely to be in his good books, and he may even refuse to let you record. It's therefore important to emphasise the quality of your microphone splitter — ensure that it's transformer-isolated, as this guarantees that the signals sent to the FOH (as well as your recording setup) will be of the best possible quality. The magic words 'transformer-isolated' usually set any FOH engineer's mind at rest. Stress also that you can supply the multicore between the splitter and the PA stage box as well — *don't* rely on the FOH engineer for your connections and cable. He probably won't have any spares, and even if he does, he almost certainly won't lend them to you!

YOU TAKE THE HIRE ROAD...

Depending on the size of the group you are recording, you may need to hire in some equipment, and obviously, this will have to be negotiated with the band.

Remember that if you use a bigger desk and multitrack, you will have to re-hire for the mixing session. This usually takes the recording over budget for unsigned acts, so some compromises may have to be made — for example by using only one audience microphone, and sub-mixing the kit toms.

Live Multitrack Recording

AT THE VENUE

Getting to the venue just after the PA has arrived is a good idea, because once people start putting up microphones, you will need to connect your mic splitter. It also gives you a good chance to talk to the engineer, and suss out the venue if you haven't already done so.

• POSITIONING YOUR EQUIPMENT

With a compact setup and long multicores, the chances of keeping out of the way are quite good. However, there are more things than mere sound isolation to consider. One is communication. Unless you know the PA people well, you will not be included in the talkback system between the FOH and on-stage desks, which makes checking difficult

FOH via the monitor engineer if there are any problems. Likewise, you will be able to help sort out any on-stage wiring difficulties, for which you will undoubtedly be blamed...

If you're not working on your own, you can take a more professional approach, by setting up the equipment backstage while your partner in crime liaises with the PA crew (or vice versa).

• SMALLER VENUES

All the above advice becomes academic in smaller venues. Here, you will have to set up wherever you can — usually amongst the audience. In this instance, you will still have to mic everything up, possibly using your own equipment if the band are only using a small PA. However, I have found that most bands prefer the credibility of playing at a larger venue for recording, where the audience is bigger and there is more of a buzz to the performance. In such cases, you are relieved of the task of finding a full complement of microphones, stands and leads.

• THE SOUNDCHECK

You're fortunate indeed if there's an extensive soundcheck — if there is, you should have very few problems to deal with once the signal is routed to tape. However, I must say that I can't remember one instance where there's been a thorough check — so be warned. Also, the bigger the gig, the less time you have for any kind of soundcheck, so be prepared to work fast after all the hanging round between setting up the PA and waiting for the band to turn up! If the band get a chance to play through one or more songs (unlikely at festivals), you at least have a chance to set up the peak levels. For line checks only, err on the side of caution, and make sure that all the signals are getting to the recorder. A quick playback after the soundcheck (if you get the chance) will put your mind at ease. In situations like this, it's also a good idea for the band to start with a song they're not so keen to record, in case some level adjustments are necessary while they're playing.

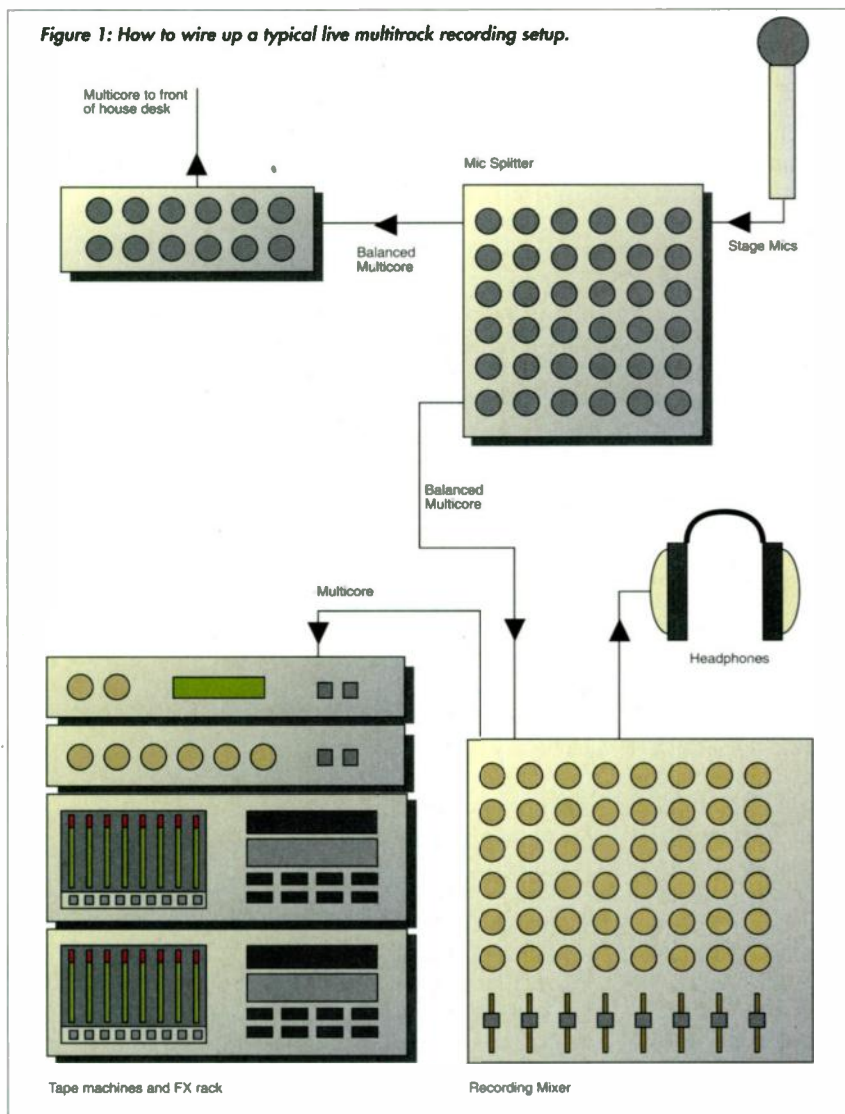
MIXING

Mixing techniques for a live gig differ from a studio session in one important aspect. You must keep that sense of excitement which has (hopefully) been captured on tape. This is where the audience microphones really come into play.

• AUDIENCE MICS

I always try and position these so they get a good dose of the out-front sound off the main PA as well as the audience, because this creates the atmosphere of the gig — the 'being there' aspect. When mixing, the mic signals are faded in at the start of the gig, and then brought down to a workable level once the music starts. If you take the audience mic signals out of the mix completely, you are left with the dry, on-stage sound, which is not that exciting on its own. Leaving a little of the audience mic signal in the mix gives you the characteristic PA sound, plus some of the natural reverberation of the room — a much more exciting result. If you're worried about phase problems,

Figure 1: How to wire up a typical live multitrack recording setup.



if there are any problems with the sound. Secondly, you will not be able to keep an eye on your audience microphones, and these are likely to go missing, unless they're suspended from the ceiling or positioned near the FOH desk! My advice is to set the recording equipment up near the stage monitor desk if you're on your own, as long as you don't get in the way. You can then communicate with the

don't be — the audience mics are usually too far from the stage ones to cause trouble.

• **REVERB**

Naturally, you can recreate a gig reverb to some extent at mixdown, by using a hall-style preset, and editing the decay time and pre-delay parameters for apparent room size. EQ and diffusion parameters can then be adjusted to recreate a room acoustic.

For a general instrument reverb, you would apply the same sort of techniques as in a studio session. However, bear in mind that you may be mixing in some live reverb from the audience microphones, and also that you may have spill to deal with.

• **SPILL**

Inevitably, there will be some spill from the backline amps and drum monitors through the drum kit mics, but you may be surprised at how little you get. Even on a small stage, as long as the amps are not positioned immediately behind the drums, and the drummer plays hard enough, you can usually get away without too much spill. In extreme cases, some gating may be necessary, as long as the drum note sustain is not over-damped by the action of the gates.

• **VOCALS**

Lead vocalists tend to sing right up to the mic in live situations, so the signal level-to-monitor-spill ratio and potential phasing is minimised. Nevertheless, there can be more problems with

microphone popping, grunting and wheezing! If any vocal replacement is necessary, it's really important to use the same microphone as the one at the gig (invariably a Shure SM58). Although this is most often necessary for out-of-tune parts, there may also be excessive popping which a momentary bass EQ cut can't deal with.

• **REPLACING INSTRUMENTS**

The most important and difficult thing when replacing any instrument after the gig is to try and recreate the feel of the gig — the performer needs to try and remember what it was like at the time, and preserve this feeling on the take. Also excessive spill can be a problem, particularly when an instrument was played in isolation — for example, as a song introduction.

THE MASTER

As you assemble the tracks onto the master tape, you have to make a decision whether to just run the tape from start to finish, or do some editing if the gaps between numbers are long. Rambling introductions, retuning, and technical problems usually make the gaps between songs too lengthy, and I always find that some cuts are necessary. If you have no way of editing right up to the start of a song, then a smooth fade-in to catch the introduction or audience just prior to the start of the music sounds acceptable.



FURTHER READING

If you'd like more information on live sound recording the following books may be of interest to you:

- *Sound Reinforcement Handbook* by Gary Davis and Ralph Jones.
 - *Live Sound Mixing* by Duncan Fry.
- Both of these books are available from the SOS Bookshop, codes B105 and B256, and priced at £27.95 and £19.95 respectively (postage not included; see the Mail Order pages in this issue for current postage rates). Cheques should be made payable to SOS Publications Ltd, and sent to Media House, Burrell Road, St Ives, Cambs, PE17 4LE.

If you have more than a couple of vintage synths or drum machines, THEN YOU CAN'T AFFORD TO BE WITHOUT A PRO-4



Take two of Kenton's successful PRO-2 dual channel MIDI-CV converters and you can control four monosynths - but the new PRO-4 is more than just two PRO-2s. Not only can you still control four monosynths, but also a Wasp, Juno 60 (or any DCB polysynth), and the sounds of a TR606/TR808 (with a small modification to the drum machine). It also has many other features, such as portamento & four internal LFO's. Add Kenton's wealth of experience, and reputation for quality and you'll see, 2 plus 2 doesn't always equal 4.

THE NEW PRO-4 MULTI CHANNEL MIDI-CV CONVERTOR

PRO-4 FEATURES:

£446.50 inc VAT
 4 COMPLETELY INDEPENDENT SYNTH CHANNELS EACH OFFERING:
 CV Gate, Trigger (7 types including S-TRIG), Optional 4 channel plug-in Hz/V card, Portamento, Integrated pitch bend with adjustable range, Modulation from internal LFO's, 3 note priorities, Transpose, Assignable MIDI channel.
THE PRO-4 ALSO GIVES YOU:-
 Four programmable LFO's, MIDI syncable, with 9 wave shapes. These can modulate the CV and auxiliary outputs, with variable depth by MIDI controllers. Sync 24, clock pulse output (arpeggio clock), MIDI channel filter/re-channelizer, 8 setup memories, SYSEX dump & load facilities, MIDI In, out & Thru, 8 assignable auxiliary outputs to control filter etc., A port for controlling the EDP Wasp synth, A DCB port for controlling early Roland polysynths, Polyphonic mode for controlling up to 4 synths, e.g. OB-4, SH101's etc. PLUS:- Built in power supply, Backlit Liquid Crystal Display, Rotary data entry control, status LEDs, Rugged steel 1U rack construction, and much more.

Now Available: the GS-8 and GS-2 MIDI Guitar Effects Switchers, for those who wish to control their guitar effects pedals and amplifier foot-switch controls from MIDI. Call for full details of these two new products.

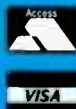
THE ORIGINAL PRO-2 FEATURES:-

£189.99 inc VAT
 2 COMPLETELY INDEPENDENT SYNTH CHANNELS EACH OFFERING:
 CV, Gate, S Trig, Hz/V (optional on 1 channel), 3 note priorities, Assignable MIDI channel, 2 auxiliaries for controlling filter etc., Integrated pitchbend with adjustable range.
THE PRO-2 ALSO HAS:- Sync 24, Clock pulse output (arpeggio clock), MIDI Thru, Optional port to control EDP Wasp synth, Optional port to control TR-606/808 notes, (TR-606/808 will need a small modification), Built-in power supply, Dual 7-segment LED display, Setups stored when power is off, Rugged steel case. Plus new MIDI Analyser mode (also available as an EPROM upgrade with new manual, £145.00 inc P+P+VAT).

MIDI RETRO-FITS: For polysynths, a retrofit is usually the only answer. For monosynths, internal retrofits sometimes provide a more convenient solution than external MIDI-CV boxes. We can provide comprehensive MIDI retrofits for most synths, for example Prophet 5 (all revs), Juno 60 or 6, Jupiter 8/6/4, OB-X/Na/RPF-15, Memorymoog, Vocoder VP-330, CS-70/80, Korg Polystev/61, Minimoog, Pro One, SH-101, SH-09, Arp Odyssey, LinnDrum, TR-808, CR-78, SDS-5, DMX, etc, plus MIDI for many ORGANS.

MANY OTHER TYPES CAN ALSO BE RETROFITTED - PLEASE PHONE IF YOURS ISN'T LISTED. MANY RETROFITS ARE ALSO AVAILABLE AS SELF-INSTALL KITS.

SOCKET KITS: Are available for some synths to enhance their control from the PRO-2/4 converters such as the TB303, SH101, early Odysseys & Prodigys. We also sell MIDI, CV, & SYNC leads, Thru boxes, Merge boxes, Patch senders, MIDI channelizers, etc. etc.



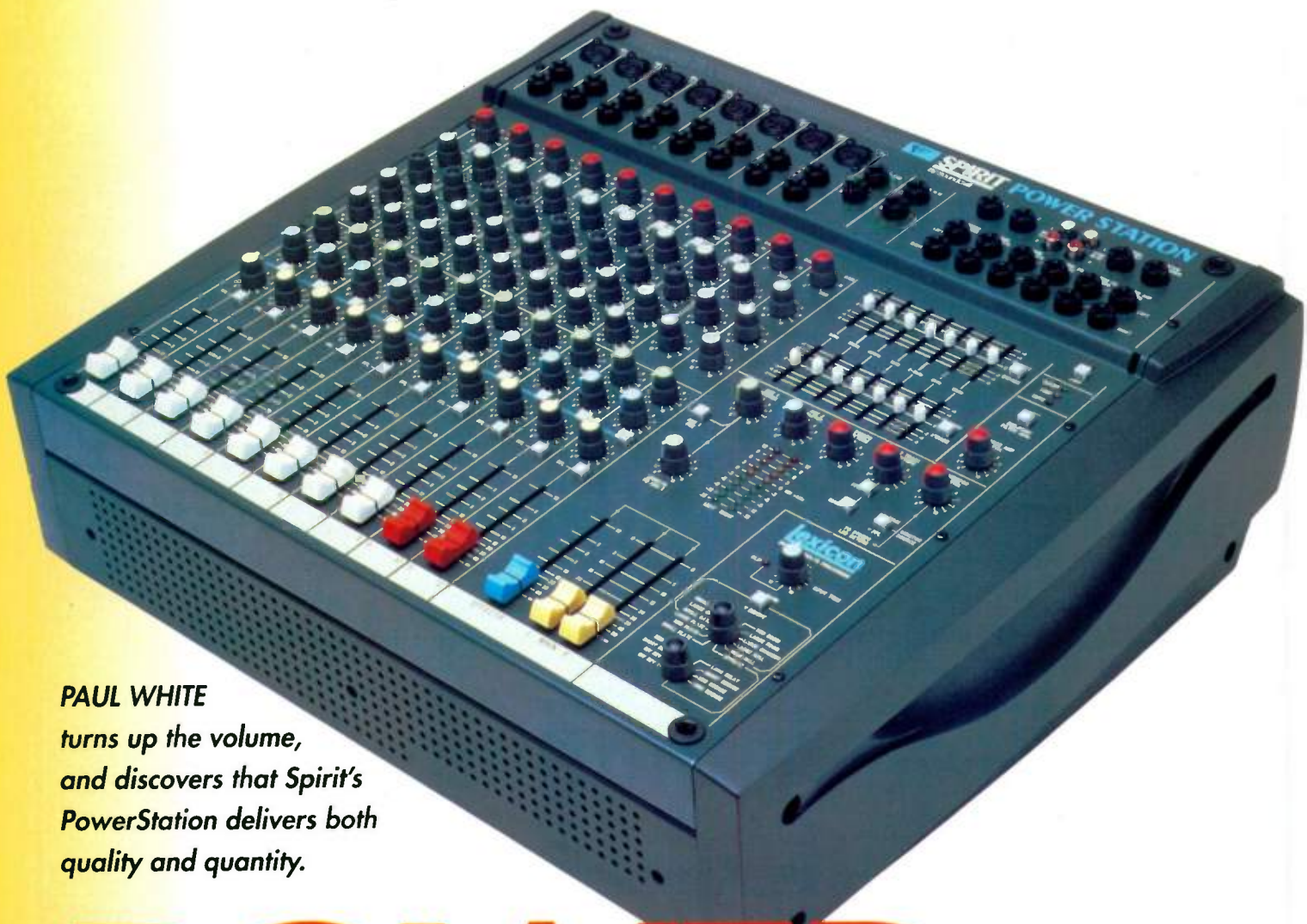
KENTON electronics

FULL DETAILS AVAILABLE ON REQUEST. TRADE AND EXPORT ENQUIRIES WELCOME

Kenton Electronics has moved! our new address & numbers.....
 12 Tolworth Rise South, Surbiton, Surrey KT5 9NN, UK.

Tel: 081 337 0333 Fax: 081 330 1060





PAUL WHITE
 turns up the volume,
 and discovers that Spirit's
 PowerStation delivers both
 quality and quantity.

POWER TO THE PEOPLE!

Spirit PowerStation Powered Mixer

SPRIT POWERSTATION £1328

PROS

- Very clean, powerful sound.
- Good EQs and filters.
- On-board Lexicon reverb.
- Ruggedly engineered.
- Flexible patching system.
- Clear, comprehensible manual.

CONS

- Hefty price, but what you see is what you pay for, I suppose.

SUMMARY

Not the cheapest powered mixer around, but still excellent value, and almost certainly the best in its price range.

Spirit's rackmountable PowerStation powered mixer is unambiguously targeted at the live sound market, and will particularly appeal to those users needing a one-box solution to mixing, sound processing and amplification. Even so, musicians who split their time between live performance and home recording will also find the PowerStation clean and versatile enough to mix to tape, and with the added bonus of an on-board Lexicon reverb unit (of which more in a minute), it's possible to do a very respectable mix with little or even no additional sound processing equipment.

The PowerStation's mixer section features eight mono mic/line channels, plus two stereo, line-only channels, a stereo return, and a dual 7-band graphic equaliser. This is normalised into the signal path between the mixer outputs and the on-board stereo power amp. The equalisers may also be

accessed directly (via front panel jacks), so they can be patched wherever the user wants, even into external equipment.

FROM THE TOP

The mixer section is very conventional, with 3-band EQ on all channels. The mic/line channels have a sweep mid control, and the stereo channels have a fixed mid operating at 1kHz. The high and low equaliser sections are conventional shelving filters, and the mono channels have the additional benefit of a switchable, third-order, 100Hz high-pass filter, for attenuating unwanted low bass. A global, switchable, 40Hz subsonic filter is also provided in the master section, and used in combination, these filters offer a useful degree of driver protection at low frequencies, as well as optimising the available system headroom.

Each channel has two Aux sends, the first of which may be switched pre or post by means of

WHEN LESS MEANS MORE!

Introducing THE PEAVEY DPM® C8p

A SMALLER, MORE PORTABLE VERSION OF THE
ACCLAIMED DPM® C8 MIDI CONTROLLER ~ FOR LESS.



For years the Peavey DPM C8 has been the industry standard for MIDI controllers. And its beautiful craftsmanship and superior software have kept it at the top of the list.

Now Peavey introduces a stream-lined version of our acclaimed C8... the DPM C8p. Like the C8, the C8p has the same Peavey reputation for top quality performance. The BIG difference is that the C8p has a more compact design, AND A LOWER PRICE TAG.

The C8p was designed for situations where room and carrying space are a concern. It would be great to have that beautiful C8 on stage every where you play, but we are aware of some of the obstacles musicians find on the road.

On the C8p, we've taken off the bulk of the wood, removed non-essential hardware,* rearranged some of the features (like placing the control wheels on top of the unit), and simply made it more sleek and compact in the process.

The C8 architecture has become so popular that we want to make it more available to everyone, by not only chopping the chassis down a bit, but also the price.

So drop by your local Peavey dealer now and ask to see the new C8p. Another Peavey family member with more bang for the buck.

* Disk drive not included.

PEAVEY®

For complete Peavey keyboard information and software upgrades, pick up the latest edition of **KEY ISSUES** at your local Peavey dealer.

PEAVEY ELECTRONICS (U.K.) LTD. HATTON HOUSE HUNTERS ROAD WELDON IND. EST.
CORBY NORTHANTS NN17 5JE UNITED KINGDOM TEL: 0536 205520 FAX: 0536 269029

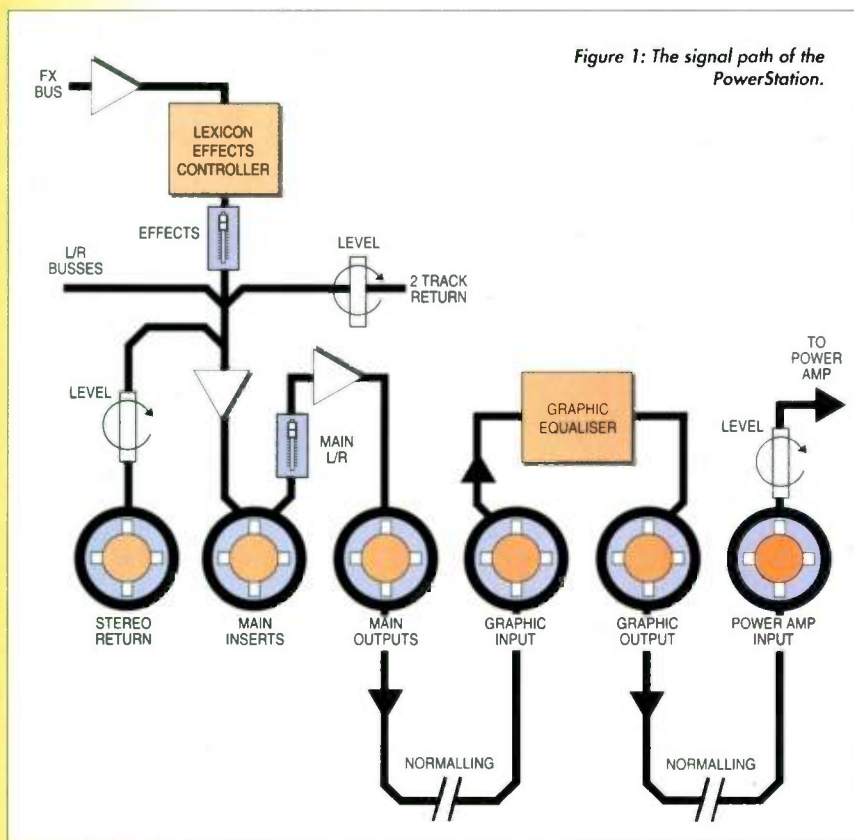
WDR

SPiRiT

POWERSTATION

- ▶ a global switch in the master section. Aux 2 is post-fade, and the adjacent Lexicon button is used to route the Aux 2 signal either to the internal effects or to the Aux 2 send output. It's a nice touch that you can individually select which channels use the internal reverb unit.

Figure 1: The signal path of the PowerStation.



be re-routed to the outside world rather than to the graphic equaliser. The graphic itself may be isolated at either or both ends (simply by plugging a jack into the graphic input or output), or you could even be patched into the side-chain of an external compressor. Even the power amp inputs can be accessed directly, so you could use a bigger mixer with them, or even use one power amp for the foldback and another for the main PA (in mono). You have almost as much flexibility as you'd have with a 'separates' system, as Figure 1 illustrates.

The rest of the master section controls are pretty standard and very straightforward to understand; stereo meters are used to show the mixer output level, separate controls are used for the two aux send master levels, and a rotary control is used for the stereo effects return level. Monitor Level affects only the headphone output, and Monitor Source is used to select the headphone and meter source from either the main output or the PFL signal.

A tape output is available, taken from before the mix fader but after the master insert points, which means you can record live gigs without worrying about adjustments to the overall mix level affecting what's going to tape. However, this means that when you're doing mixes to tape at home, any fadeouts will have to be done using the input level control on your tape machine.

The stereo tape return can be fed either into the main stereo mix or into the PFL mix, and again this has both pros and cons. On the one hand, it means you can mix your off-tape signals with whatever else is going through the mixer, but on the other, you have to be careful not to have the tape return routed to Main when you're recording, otherwise you'll create a feedback loop. You'll soon realise if you do this!

FX ON TAP

One advantage of Spirit by Soundcraft's position within the Harman group is that they have access to other Harman companies, one of which is Lexicon. The built-in Lexicon reverb in the PowerStation's mixer section is a real plus point of the console. One great advantage of the built-in reverb processor is that you don't have to patch in an external unit, you don't have to find a mains socket for it, and you don't have to try to stop the punters from standing beer on it. Though the Lexicon's effects are mainly reverbs (selected by means of a 12-way rotary switch), an Effects setting is included, and this has a further eight variations courtesy of another rotary switch. These variations include delays of different lengths, two Inverse Reverb settings and three Resonators, which could be fun if you're creating dance music. The regular reverbs range from Small Room and Small Plate to Huge Hall, and include a couple of convincing gated settings (see the separate panel elsewhere in this article for the full rundown on the effects settings).

A single rotary control sets the effect input level, and there's a Clip LED to warn of impending overload. The only other control is a Bright/Dark

THAT BUILT-IN LEXICON IN FULL

EFFECTS PRESETS

- Small Room.
- Medium Room.
- Large Room.
- Large Chamber.
- Large Hall.
- Huge Hall.
- Small Plate.
- Medium Plate.
- Large Plate.
- Small Gate.
- Large Gate.

EFFECTS VARIATIONS

- Short Delay.
- Medium Delay.
- Long Delay.
- Short Resonance.
- Medium Resonance.
- Long Resonance.
- Inverse Reverb 1.
- Inverse Reverb 2.

All channels, both Left and Right outputs, and the Lexicon effects level are controlled with short faders, and all input channels have PFL (Pre Fade Listen) buttons directly below the pan pot, allowing individual channels to be solo'd in the headphone output. If the Monitor Source button is set to PFL, the PFL level also comes up on the meters, but because this is essentially a live desk, the power amp feed is not interrupted. Insert points are fitted to all the mono channels, and all the inputs (both mic and line) are balanced. Globally switchable 48V phantom power is available to all mic inputs.

The mixer and graphic EQ outputs are impedance balanced — in other words, they use a pseudo-balancing system effective in minimising hum and noise pickup. All the connections, including headphones, are available at the top edge of the front panel. All the mic inputs are balanced XLRs, the line ins and outs and inserts are on stereo jacks, and the tape ins and outs are on phonos.

The PowerStation's signal path is normalised at several places to provide the user with maximum flexibility. For example, the mixer main outputs can

Sounds Live

• MAIL ORDER A SPECIALITY •
• GREAT PRICES • FAST DELIVERY •

UNBEATABLE PRICES

0191 230 3422

SECONDHAND EX DEMO AND SOME NEW BARGAINS

Alesis Quadrasynth	£899	Roland DBS Drums	£299
Alesis D4 Drum Module	£289	Studiomaster Power House 8/2 400w Mixer	£759
Alesis Monitor 1	£239	Studiomaster Diamond 8/2 Mixr	£239
Crown 800CSA 800 watts slight marks	£699	Studiomaster Diamond 16/2 Mixr	£339
Crown PZ 850 watts slight marks	£849	Studiomaster Vision 10/2	£979
Carbide CDB 1/2 Powered Mixer	£889	Studiomaster 300w Stereo Amp	£299
Celestion SR1 Amazing PA Cab	£CALL	Yamaha ST85	£449
Digitech Vocals II	£479	Yamaha TG100	£229
Electro Voice S1200	£CALL	Yamaha ST85	£839
Emu Vintage Keys	£459	Yamaha TG500	£599
Emu ProteusFX	£459	Yamaha TG300	£379
Emu Morphous	£399	Yamaha PR5	£659
Emu EX22 + SCSI	£CALL	Yamaha PF100	£1359
Ensoniq TS12	£1499	Yamaha PF300	One Only price
Ensoniq ASR10 + SCSI V3.0 + Access to huge Library	£1899	Yamaha M510M Monitors	£229
Ensoniq ES01	£359	Yamaha RY20	£269
Ensoniq AT76	£1599	Yamaha FX550 + Gig Bag + Rack Mount	£269
Fatar Studio 900	£499	Yamaha MTX	£899
Hammond GM1000 Organ Module + GM Sounds	£459	Yamaha MT50	£799
Kawai K11	£359	Yamaha MT120s	£359
Kawai KC20	£399	Yamaha PSK1200	£659
Kawai G Major III	£199	Yamaha PSK2700	£899
Korg X3	£899	Yamaha V11	Free marks low to go
Korg I3	£1350	Yamaha O18	£179
Korg X5	£589	Yamaha OY300	£699
Korg G4	£239	Yamaha FX770	£269
Korg OSR/W	£379	Yamaha PDP100	£399
Korg X5	£1249	Yamaha PSR8000	£1499
Kurzweil RG100 Great Stage Piano	£899	Yamaha W5	£CALL
Kurzweil KMP1	£429	Yamaha W7	£CALL
Kurzweil PC88	£1599	Yamaha M180	£CALL

KEYBOARDS AND MODULES

Alesis Quadrasynth	£899
Emu Ultra Proteus Now in Stock	£CALL
Emu Proteus FX	£499
Emu Performance II Plus	£745
Emu Performance II Plus	£745
Emu Vintage Keys Plus	£835
Emu Morphous In Stock Great Price	£949
Emu Classic Keys	£599
Emu ES32 3rd	UK LOWEST
Emu ES32 SCSI	UK LOWEST
Emu Emulator IV Check Out The Huge Spec For Small Price!!	UK LOWEST
Ensoniq TS10	£1599
Ensoniq TS12 Weighted Version	£1259
Ensoniq AT76 Brilliant Piano Workstation	£CALL
Ensoniq ASR10 Keyboard + Huge Free Library	£CALL
Ensoniq ASR10 Rack	Super Low Price
Fatar Studio 900 Mother Keys	£599
Fatar Studio 900 Mother Keys	£499
Fatar Studio 610 Mother Keys	£CALL
Gem S2 Turbo Workstation	£CALL
Goldstar Mother Keys	£159
Kawai K11	£CALL
Kawai KC20	£CALL
Kawai Gemini LX Great Low Priced Module	£CALL
Kawai Datasart 49 Keys Mother Keyboard Great Spec	£59
Korg O1W/7D	NEW LOW PRICE
Korg X3 Plus Free Sounds	NEW LOW PRICE
Korg X3 & Above 76 Keys	GREAT PRICE
Korg X5 Amazing Low Priced Keyboard	£CALL
Korg I3 Plus Free Sounds	NEW LOW PRICE
Korg X5	NEW LOW PRICE
Korg WaveStation SR	£CALL
Korg OSR/W	NEW LOW PRICE
Korg X5R/W Plus Free Sounds	NEW LOW PRICE
Kurzweil RG100 Stage Piano	£999
Kurzweil KMP1 Piano Module Now In Stock	£449
Kurzweil PC88 Mother Keys + Sounds	£CALL
Navatan Bass Station	£CALL
Rakon/Boss DS330 Dr. Synth	£299
Yamaha V11 Virtual Acoustic Synth	Call
Yamaha V11 Virtual Acoustic Synth New Model	Call
Yamaha V11-M Virtual Acoustic Tone Generator	UK LOWEST
Yamaha W/5 Brilliant New Powerful Workstation	UK LOWEST
Yamaha W776 Note Version of Above	UK LOWEST
Yamaha SY81 Leads Off Free Extra Sounds!!	NEW LOW PRICE
Yamaha SY35 Inc Free Gig Bag	NEW LOW PRICE
Yamaha M180 Amazing New Tone Generator	Call
Yamaha M185 Amazing New Low Priced Tone Generator	Call
Yamaha TG500	NEW LOW PRICE
Yamaha TG100	NEW EVEN LOWER PRICE
Yamaha TG300	NOW LESS THAN £400
Yamaha PS80 The Ultimate Piano/Mother	Call
Yamaha P300 New Lower Priced P500	Call
Yamaha PP100 Piano	NEW LOW PRICE
Yamaha PR5 Piano	£679
Yamaha PSR1200 Plus Free Sounds	£699
Yamaha PSR2700 With Human Voices Plus Free Sounds	£899
Yamaha P07-100 AWM Piano Plus Accompaniments	£299
Yamaha PSR510	£459
Yamaha PSR410	£335
Yamaha PSR310	£299
Yamaha PSR8000	BEST DEAL
Yamaha SR100 The Entertainer	BEST DEAL
Yamaha YPP-55 Piano Inc Stand	£799

• AMAZING DEALS ON ALL STANDS, CASES & ACCESSORIES •

• MIXES & RADIO SYSTEMS

AKG D3400	£95
AKG D3500	£99
AKG D3600	£155
AKG D3800	£159
AKG D3900	£159
Beyer TG340	£137
Beyer TG360	£165
Beyer TGX180	£179
Beyer M300	£79
Beyer S150G Guitar System	£165
Beyer S150H Mic System	£229
Beyer S250H Mic System	£399
Beyer S350G Guitar System	£449
Beyer Boom Mike Stands Complete Crazy Price	£35
Quicksilver Boom Mike Stands Crazy Price	£25
Senheiser MD511 Hand Special Deal	£59

Samwise MD504 Amazing New Bass Drum Mike	£79
Senheiser S18	£109
Senheiser 1051 Div Mlx System	£599
Shure SM58	£99
Shure ECTV/SB5	£399
Shure ECT/Belo 58	BEST DEAL
Shure 5576	BEST DEAL

* HUGE STOCKS OF SHURE, BEYER, SENHEISER, AKG, ETC, ON GREAT DEALS!

RECORDING AND EFFECTS

ALESIS ADAT

We are now an official Dealer on all ADAT products. Kings, Jared or Darren Now for your best package!

Alesis ADAT. King Now for the Best Packages in the UK	£199
Alesis Midverb II	JUST ARRIVED
Alesis 3630 Compressor	£219
Ari Multiverb EXR New Model	£149
Air SX2000 Express	£529
Barco Berry BR 462 Maximiser	£269
Behringer Compressor	£109
Behringer Dualizer	£109
Behringer Ultratec	£109
Boss SE70 Multi Effects	£429
Digitech Vocals VHM11	NEW LOW PRICE
Digitech RPI	£CALL
Digitech Vocals VHM5	£499
Digitech FS824 Superb High Spec Processor	£499
Digitech FS812	£299
Digitech RP10 Great New Board	£CALL
Digitech RPS The Latest And The Greatest	£CALL
Digitech GS77101 Fantasic	£CALL
Lectron Alex	GREAT DEAL
Mackie 1604 Mixer	£799
Mackie 1202 Mixer	£299
Maranz PMS740 6 Channel 4 Track	£639
Maranz PMS720 6 Channel 4 Track	£639
Phonic PEQ 3400 Graphic	£CALL
Phonic PEQ 3600 Graphic	£CALL
Phonic PL3200 Compressor	£CALL
Somason MP12742 Mixer Great Spec	£CALL
Soundtrax TOP2 Amazing Value	£CALL
Studiomaster 18/8/16 Mic/Line Gold	£1499
Studiomaster 16/4/8 Proline Gold	£1019
Studiomaster P7	£109
Session Award Gr. Pre-amp	£179
Yamaha M150 Amazing New 4 Track Great Features	UK LOWEST
Yamaha MT8X New 8 Track In Stock	UK LOWEST
Yamaha M14X The Best Around In All The Four Trades	£CALL
Yamaha M1120S	UK LOWEST
Yamaha Phantix Latest Digital Mixer	IN STOCK
Yamaha Helix Mixer Plug TG100 and Labose Life for only	£269
Yamaha M510M Monitors Pair	£229
Yamaha M510M Stud. Monitors	£249
Yamaha PR550 Multi Effects Great Package Deal	£299
Yamaha REV100 Digital Reverbator	£CALL
Yamaha R100 Multi Effects	£199
Yamaha FX770 Multi Effects	£299
Yamaha GW10 Brilliant New Processor	£219
Yamaha DW53 Multi Effects	£269
Yamaha G2215 2x15 band EQ	£CALL
Yamaha YST M10 Amazing Powered Monitors	Pair £49
Zoom 2020 The Latest Hit Foot Board	£225
Zoom 9150	The Best Deal
Zoom 1202	The Best Deal

• SOFTWARE •

CUBASE, TRAX, BAND IN A BOX, MUSICATOR, ETC, ETC, ALL AT UK LOWEST PRICES CHECK US OUT FOR YOUR BEST PACKAGE.

DRUMS AND SEQUENCERS

Alesis SR16	£219
Alesis D4	£289
Roland DBS Amazing	£299
Yamaha MD72	£269
Yamaha RY20	£319
Yamaha OY20	£345
Yamaha OY300 Sounds, Sequence, Data Filter + GM	£CALL
Yamaha O18 New Low Price	£135
Yamaha OR10	£249
Yamaha DOU-10 New Data Filter Sequencer	£229

Turn This Page...

STOP

or

Dial This Freephone Number, it Could Change the Rest of Your Life...

0800 52-52-60

SPIRIT POWERSTATION

- ▶ switch, which switches the effects tone from bright to warm. Aside from the Huge Hall preset, the majority of the other settings are suitable for general mix treatment, and the overall quality of the reverbs is excellent. My only negative comment here is that the marker line on the rotary switch caps is too dark to be clearly visible in gig lighting conditions, so you might not end up with the reverb preset you thought you'd chosen.

POWER AMPS

Contained within the mixer are two well-protected power amplifiers, continuously rated at 265W into 4Ω, or 300W tone burst into 4Ω. As music isn't (or isn't supposed to be) a continuous sine wave, this means that you can run the amps at 300 Watts per channel, as long as they're not driven into hard clipping.

By their very nature, power amps get hot, and in the case of the PowerStation, cooling is aided by a variable-speed fan, which is linked to the output signal level. This ensures that the amplifiers don't overheat before the fan starts up, and that the noise is kept down during quiet passages or pauses in the music.

I particularly like the loudspeaker connection provisions — these allow up to four different types of connection to be made. There are standard terminals which accept banana plugs or side-entry bare wires, and there are also Speakon/jack connectors, which can accept either standard jacks or the now-popular Speakon plugs.

PERFORMANCE

Before starting on the sound quality of this unit, it's worth mentioning the very high quality of design and construction. If you don't intend to mount the mixer in your rack, you should consider fitting the optional end cheeks, otherwise you'll almost certainly have a painful accident involving your shins and one of the sharp corners of the rackmount flanges, but apart from that, the design

offers exactly the right combination of strength, style and sensible layout.

As you might expect, the mixer behaves very much like any Spirit mixer, though the inclusion of two stages of high-pass filtering is probably more valuable than you may realise when it comes to protecting your drivers and making the most of the available amplifier headroom. The signal path is very quiet throughout, and that includes the excellent on-board reverb, which sounds to me as though it may be based on the same technology as the Lexicon Alex unit [reviewed in May '93's *Sound On Sound*]. Furthermore, I found the EQ to be both positive and well-focused, and that also applies to the graphic section, which has been sensibly restricted to a cut/boost range of 6dB.

"The built-in Lexicon reverb in the PowerStation's mixer section is a real plus point of the console."

There is no significant hum or noise from the power amplifier, and only the slightest hint of sound from within when the signal level is low. At higher levels — well, who knows, all you can hear is the music!

SUMMARY

I always feel a little guilty when I can't find anything much to criticise about a product, but in the case of the PowerStation, I guess I'll just have to live with it. It's by no means the only powered mixer with on-board effects and graphic EQs, and neither is it the cheapest, but it's the best implementation I've yet seen. It's certainly up to doing the odd mix onto tape between gigs, and it's also well set out for live recording. There's plenty of power in hand for small- and medium-sized club or pub gigs, and about the only trick that's been missed is the provision to slot in a crossover card for feeding a sub-bass output, something that Studiomaster's Powerhouse includes.

Most significantly, I think that the PowerStation has finally got the message across that powered mixers can be respectable, so if you want something suitable for gigging that can also be used for basic recording, and you don't wish to be troubled by separate monitor amps and effects, you need look no further than your bank balance!

SOS

FURTHER INFORMATION

- £ Spirit PowerStation £1327.75 inc VAT.
- A Soundcraft Electronics Ltd, Cranborne House, Cranborne Industrial Estate, Cranborne Road, Potters Bar, Herts EN6 3JN.
- T 01707 665000.
- F 01707 660482.

SPECIFICATIONS

Total Harmonic Distortion (THD)	Better than 0.009% at main outputs (+20dB)
Crosstalk	Fader attenuation 100dB at 1kHz, Stereo Separation 70dB at 1kHz
Noise	Better than 80dBu at Main Outputs, 20Hz to 22kHz
Equivalent Input Noise	Mic inputs, maximum gain with 150Ω termination, -129dBu
Max Mic Gain to Outputs	74dB
Max Line Gain to Outputs	54dB
Max Stereo Input to Outputs	32dB
Max Output Levels	+22dB
Metering	10-segment LED meter
Overall Dimensions	437.4mm x 442.5mm x 172mm

POWER AMP SECTION

Power Output for 1% Distortion	175W into 8Ω, 265W + 265W into 4Ω, 300W into 4Ω tone burst
THD at just below clipping	Better than 0.025% into 4Ω or better than 0.015% into 8Ω

SOUND CONTROL MAIL ORDER

Tascam



M-3700

PRO AUDIO EXCLUSIVE...
Automated
Consoles...

24 Channel now£4,500
32 Channel now£6,500



DA-88

FREE Next Day Delivery on all DA-88's and Accessories.
Call Us NOW!

Tascam Porta-3



£199

Free Mic. & Free Delivery

Tascam Porta-7



PACKAGE

£339

DEAL-(1)

PACKAGE -(1) Includes:-

- TASCAM PORTA-07
- FREE MICROPHONE
- FREE CABLE
- FREE UK DELIVERY



PACKAGE

£399

DEAL (2)

Teac V375 Pictured Above...

PACKAGE -(2) Includes:-

- TASCAM PORTA-07
- TEAC V375 CASSETTE
- FREE MICROPHONE
- FREE CABLE
- FREE UK DELIVERY

WHY NOT BUY YOUR TDK TAPES FROM US...
ASK FOR PRICE DETAILS...

Roland

MC50mk2 SCOOP



BUILT IN FLOPPY DRIVE...
READ/WRITE G.M FILES!

£599

FREE DELIVERY



S-760

DEALS... DEALS...
CALL US FOR S760 PACKAGE DEALS
on 0800-52-52-60

Boss

DR550mk2 SCOOP



HURRY

£199

HURRY



DR-5

FREE P.S.U
FREE Delivery
CHEAP PRICE
HURRY..HURRY..

Sondercraft



FULL RANGE OF SPIRITS & FOLIOS IN STOCK RIGHT NOW FOR FREE DELIVERY...
CALL US NOW!

Microphones



MASSIVE STOCKS of most leading brands...

- Shure SM58/Lead- £99
- Shure SM57 -----£99
- EV Ndym257 ----- £99
- EV Ndym757 ----- £99
- AKG C1000s ----- £199

Korg

05R/W SCOOP



ONLY

£399

ONLY

Yamaha



TG300

LOW

Zoom



9001

ONLY

£149

Free P.S.U



9120

ONLY

£279

DELIVERY FREE!

Akai



WE STOCK THE FULL RANGE OF SAMPLERS, MEMORY & ACCESSORIES.

Emu



FULL RANGE OF SAMPLERS, & MODULES IN STOCK INC. EMULATOR-4!!!

Digital



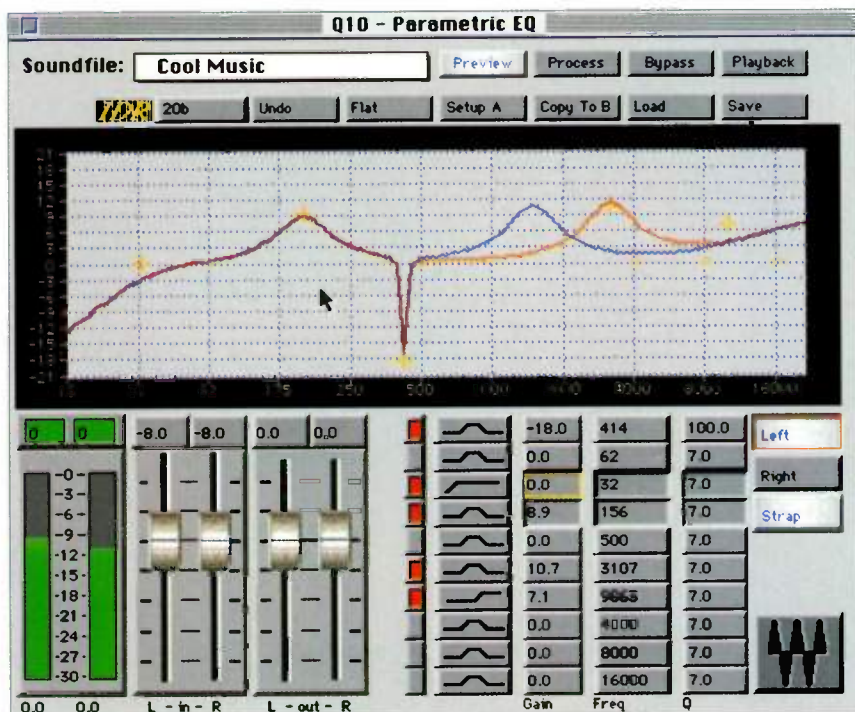
D2D RECORDING, SOUND CARDS, SIMMS, DATS AND MUCH MORE FOR YOUR DIGITAL REQUIREMENTS...

Freefone - 0800-52-52-60

MAKING WAVES

PAUL WHITE discusses the role of the software 'plug-in' with Gilad Keren, co-founder of Waves.

Plugging into Gilad Keren



Waves Q10 Parametric EQ plug-in.

Digidesign's open approach to software design permits their core systems (such as ProTools) to run third-party software enhancements, commonly known as 'plug-ins'. One of the rising stars of the plug-in field is an Israeli company called Waves, creators of the Q10 Parametric Equaliser, the L1 Ultramaximizer (a limiter/level optimiser), and the C1 Compressor/Gate. At the recent AES show, Gilad Keren was able to outline his company's origins and future plans.

"Waves was founded by Meir Shashua and myself; we met about 10 years ago when I was a recording engineer and Meir was in the military. We shared a common love of pro audio and were both fascinated by vocoders and the new possibilities opened up by DSP [digital signal processing] technology — which was very new at that time. It took us a few years to get off the ground and to acquire some basic theoretical and practical experience, but we finally did it.

"We realised that we first needed good digital filters to build this vocoder, so we focused on digital filter implementation and ways to design them to work in real time. That was around the time the Motorola 56000 DSP chip was launched, so we

started work and came up with a product that was the basis of the Q10 Equaliser we produce today.

"The original version worked under Microsoft Windows version 2.0 on the PC, using a Motorola ADS board and Ariel A/D and D/A. We showed this at one of the AES conventions five years ago, but the established manufacturers didn't want anything to do with a GUI [graphical user interface] controlled EQ and many expressed the opinion that computers would never make it in the recording studio.

"Lack of financial resources and the market attitude at the time toward this technology forced us to work as 'grunts' for other companies in the pro audio industry. One company we worked with was very successful in raising money, but were never able to commercialise any technology. We realised three years ago that we must be independent in order to deliver our products to the marketplace.

"Around that time, Alon Zakai joined us as our general manager and significantly influenced our organisation, turning it into a real corporation. We spoke to Digidesign, who had a really open mind, and they seemed to like the idea of working with third-party software vendors who could make use of their hardware to provide added value for Digidesign system owners."

Gilad Keren cites their working relationship with Michael Gerzon as another very important factor in the development of Waves: "Michael has brought valuable experience and audio discipline to the company. He has been involved in the design of the L1 and IDR, as well as being a major contributor to the design of the newly released C1 Compressor/Gate. He also created an extensive set-up library for the Q10 Parametric [version 1.1]. Michael's subjective optimisation and theoretical abilities are of the highest quality and we look forward to collaborating with him on future projects, both classical and new.

"Michael designed IDR [Increased Digital Resolution], a set of dithering and noise-shaping tools which optimise bit-depth reduction. We believe that the tools within our L1 allow conversion from 20-bit to 16-bit in a way that compares favourably with Sony's Super Bit Mapping or Apogee's UV22 — for a fraction of the cost!"

PLUG-IN ADVANTAGES

Software plug-ins offer the obvious advantage that you can update or rewrite the software without

ALL for £1099.00!

AKAI DR4-d 4-track D2D Recording
Cut/copy/paste for easy comparison
between takes
£1099.00

TASCAM DA 30 Mk II DAT
with Separate Remote, Shuttle Control,
SCMS-Free Recording, Selectable ID Copy
£1099.00

Cubase Audio + Audiomedia II
Steinberg/Digidesign Digital Editing
Bundle
£1099.00

Penny & Giles MM16 MIDI
Management System
£1099.00

PLUS these amazing packages!

Yamaha SPX990 Multi FX Processor
+ Digitech Vocalist II
£1099.00

BSS DPR-402 Processor + Digitech
TSR24 Reverb/Multi FX
£1099.00

NEVE 9098 EQ + Yamaha Rev 100 Digital
Reverb
£1099.00

Call our professional sales team NOW
for these and many more Special Offers,
available while stocks last!

**SYSTEMS
WORKSHOP**

PROFESSIONAL AUDIO TECHNOLOGY

24 Church Street Oswestry Shropshire SY11 2SP
Tel 01691 658550 Fax 01691 658549
CIS Mail: 100330,3222

Told You So...

SOUND CONTROL
MAIL ORDER

Working in conjunction with our various
stores and departments, below, we offer
the definitive Mail Order Service for the
entire of the UK and abroad...

- The Elgin Works • Dunfermline
- Fife • Scotland • KY12 7SD
- Freephone - **0800-52-52-60**
- Facsimile - **01383-725733**
- Email - jmt@soundcontrol.co.uk

SOUND CONTROL
Professional Audio

Dedicated to the Worldwide supply and
service of the Professional Audio and
Broadcast Sectors...

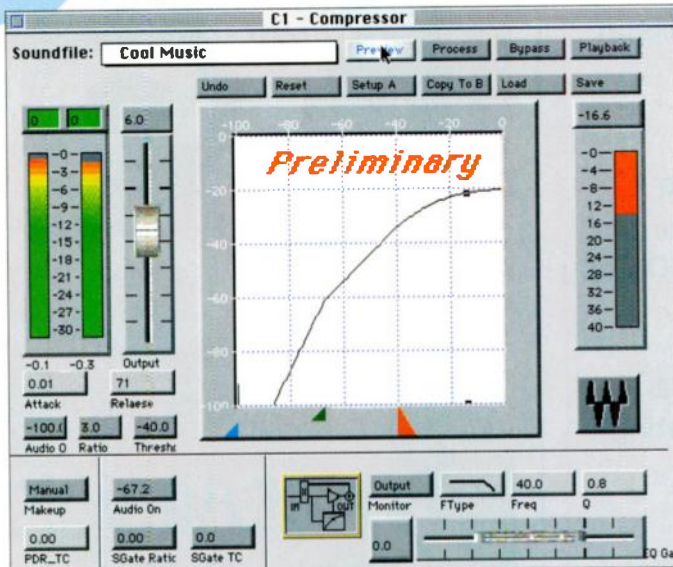
- GLASGOW Pro Audio - 0141-204-2774
- MANCHESTER Pro Audio - 0161-877-6464
- NEWCASTLE Pro Audio - 0191-232-4175

SOUND CONTROL
MODERN MUSIC STORES

Offering an unsurpassed level of choice
to today's musicians from every field of
modern music...

- Dunfermline Music Store - 01383-733353
- Edinburgh Music Store - 0131-557-3986
- Glasgow Music Store - 0141-204-0322
- Dundee Music Store - 01382-225619
- Kirkcaldy Music Store - 01592-260293
- Newcastle Music Store - 0191-232-4175
- Manchester Music Store - 0161-877-6262

**PLEASE NOTE THAT THE ABOVE STORES DO
NOT OFFER A MAIL ORDER SERVICE. PLEASE
CALL 0800-52-52-60 FOR MAIL ORDER...**



Waves C1 Compressor.

▶ having to buy a new hardware box every time, but what other advantages do they offer?

“Q10 is a great example of how powerful a graphical user interface can be.” Gilad explained, “and in many aspects it can be much more powerful than any physical interface. The ability to gang controls is something that is very difficult or impossible to achieve with a regular interface, and with Q10 you can also create complex shapes of your EQ curve by dragging it about on-screen.

“GUI-based processing provides new insight into controlling the dynamics of audio, and I think our new C1 Compressor/Gate is a good example of this. At Waves we believe that it’s no longer enough to have just great-sounding processing, it is also very important to provide the user with appropriate visual feedback.

“Another advantage of plug-ins and digital processing in general is that if latency [a small delay between a sound occurring and being heard] is acceptable, then we can perform new types of processing not previously possible in the analogue domain. For example, by inserting a short delay into the signal path, a dynamics unit can ‘look ahead’ at the audio coming in and have, in some cases, better control over it.”

Michael Gerzon has a known interest in psychoacoustics, so does this mean that we can expect to see a more esoteric Waves product based upon some of those principles?

“We have a new product coming out soon called the S1 Stereo Imager, which is a classic Gerzon piece,” explained Gilad. “It comprises four tools: a rotation control that will allow you to rotate the position of the centre of a stereo mix without affecting the sides; an asymmetry control that allows you to modify the level of the sides without affecting the centre; a width control that allows you to modify the balance of mono and out-of-phase information; and a shuffler control, which is an effect that, on

certain programme material, can add spaciousness.

“There is so much hype going around about ‘3D’ sound that we decided to focus on serious stereo first. The reality is that fundamental stereo tools, based on known and published information, are simply not widely available, yet they can be very useful if executed properly.”

DIGIDESIGN TDM

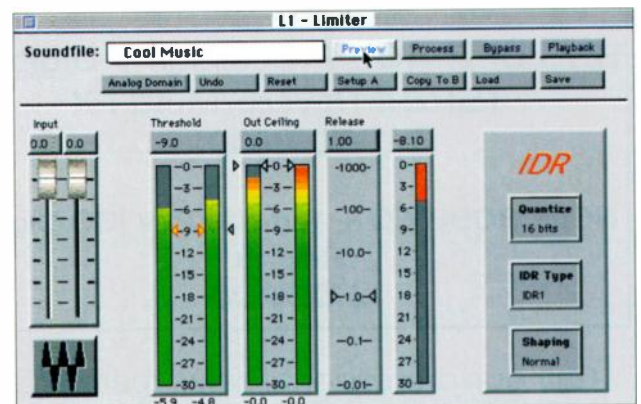
I asked Gilad to explain how the Waves plug-ins work under Digidesign’s TDM, in terms of available processing power. It’s great being able to have one DSP give you ‘x’ channels of EQ, but there are still some users concerned with stereo editing, who would like to apply several DSP functions simultaneously.

“Under TDM you can run several plug-ins on one DSP,” he revealed, “provided that there is enough DSP processing capacity. The current L1 and C1 are really big applications and take up almost a full DSP each, but with smaller applications such as the S1 and Q10, and new TDM-specific applications, you can take advantage of these capabilities.

“One of the great benefits of TDM is that you can run multiple plug-ins at the same time; for example, Q10-C1-L1. This is great for many applications and will save a tremendous amount of time.”

A VIRTUAL FUTURE?

Looking ahead, did Gilad believe that a graphical user interface could ever feel as friendly and



Waves L1 Limiter.

immediate as a dedicated hardware controller?

“I feel that with new types of screens and controls, sound engineers will actually come to prefer these to traditional knobs, buttons and faders. As new designs emerge, engineers will discover that they are able to do more, do it faster, have greater control, and have a greater insight into what is happening to their sound.”

FURTHER INFORMATION

A Virtual Audio, 3 The Maltings, Walkern, Herts, SG2 7NP.

T 01438 861110.

F 01438 861112.

“At Waves we believe that it’s no longer enough to have just great-sounding processing, it is also very important to provide the user with appropriate visual feedback.”

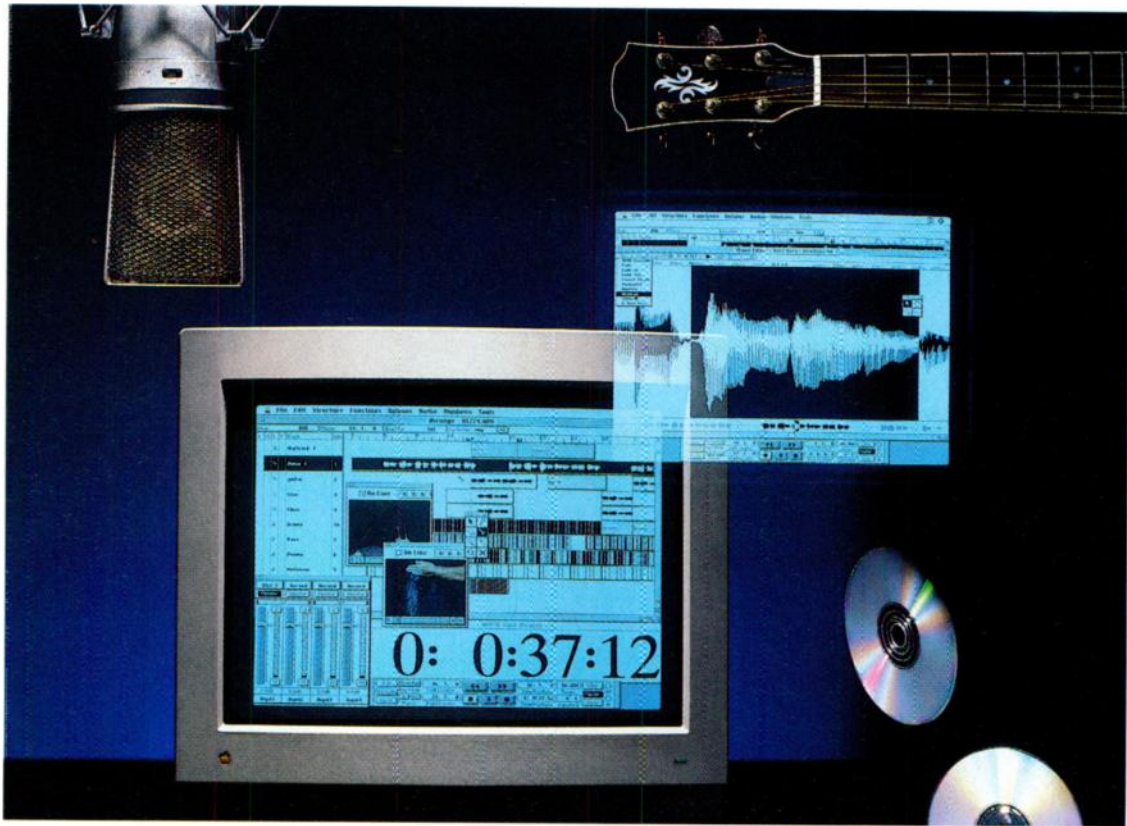
WAVE SHELL-RT

The latest Waves plug-in is called WaveShell-RT, which allows you to perform real-time processing without first having to load your audio onto a hard drive.

It is a low cost utility that can run with Digidesign’s Audiomedia II card, providing full 24-bit processing via the SPDIF port. So, if you have the WaveShell and L1, you can sample your analogue tape with 20-bit resolution, then use L1 to convert the audio to 16-bit.

If you have a Pro Tools II system it will allow you to run two separate processes at once — two stereo ins and two outs, each being processed via a Waves plug-in.

POWER TOOLS !



Steinberg keeps changing the way people make music. The Cubase Arrange Window is the evidence. Pale imitations appear all the time - but they can't match the clarity of Steinberg's original. Cubase Audio is the world's first integrated MIDI Recording, Score Editing and Digital Audio Recording application for the Mac, PC and Atari. Innovation is the future.

Cubase Audio DAE for Mac is yet another groundbreaking achievement. Bringing together the intuitive Cubase interface with the best **integrated score printing**. Now with full Digidesign DAE support: up to **16 channels of audio recording**, equalizers for each channel, and a **Wave Editor** with DSP plug-in modules. Soon to support TDM with up to 48 channels of Audio.

ReCycle! for Mac is a totally new concept. Real **Groove extraction from audio** is now a reality. Load a file, move a fader and listen! The actual feel can

be captured as a MIDI file and the rhythmic elements sent to your sampler as individual samples, including automatic keyboard mapping.

Now recombine these two elements in your sequencer, and you have **groovable audio**: Change the tempo of the groove in real time! Use Cubase's unique Match Quantize and your MIDI

grooves to your audio. Supporting **AKAI S1000, S3000** and **SampleCell 1&2**. An essential audio tool from Steinberg, bringing audio and MIDI closer together.

TimeBandit is the **Time and Pitch correction** program for Mac. Version 1.5 supports SoundDesigner 1&2 and AIFF files, sports a new user interface, and can be accessed directly from Cubase Audio. Accelerated for **Power Mac**. Hear it to believe it. The audio quality is unparalleled at any price!



TimeBandit - The Time&Pitch Correction Tool

AudioSpector replaces expensive Pro-level analysis hardware, turning the Falcon computer into a **Precision Level Meter and Correlator**, a **3rd Octave Analyzer** and **Test Tone Generator**. When used with the Steinberg FDI S/PDIF interface AudioSpector is a **powerful tool** for audio production entirely in the digital domain.



Audio Spector - The Production Tool

Steinberg products are innovative. This is why musicians from Iceland to Australia and Los Angeles to London choose Steinberg music software. So what are you waiting for?

Steinberg
steps ahead

Contact Steinberg on CompuServe:
71333,2447 MIDI Vendor C

ReCycle!
The Audio Groove Tool



H Harman Audio

MUSIC CORPORATION



DAT



44.1, jog & shuttle, balanced I/O, AES & SPDIF



Tascam's flagship, timecode DAT



ONLY £449



SONY E7700
DAT STATION
Dual deck portable DAT
editing system.....£7995

- Tascam DA-30 Mark II jog & shuttleNEW
- Sony TCD D7£449
- Sony DTC 60 ES 44.1, dig I/O.....£729

ALSO AVAILABLE

- HHB Portadat
- Sony PCM7030 Timecode R-DAT



Sony PCM2700A.....4 head balanced I/O



CALL NOW

HARD DISK RECORDING

DIGIDESIGN

We are one of only 8 UK dealers
• We don't just sell
...Digidesign ...we use it!
• Our support is unrivalled

AUDIOMEDIA II + CUBASE AUDIO

Pro Tools III

Pro Tools III • Post View • Sound Tools II • Audiomedia II
• Session 8 (Mac & PC) • TDM bus • Masterlist • DNR
ADAT interface • Samplecell (mac & PC)

YAMAHA

Built in FX, balanced ins & outs, onboard mixing. Includes Cubase Audio.

SOUNDSCAPE

POWERFUL PC BASED HARD DISK RECORDER

- 8 TRACKS UPWARDS
- REAL TIME DIGITAL EQ
- DIGITAL MIXING
- LOCKS TO ANY SEQUENCER USING THE SAME PC

VESTAX

HDR6.....Low price 6 track hard disk recorder

AKAI

We will configure and test either unit to any drive size, and still remain most competitive.

DR4D & DR8D

BOTH IN STOCK

EXTERNAL DRIVES

1GB MICRODISK	£795
2GB MICRODISK	£1249
9GB MICRODISK	£2759
SYQUEST 270MB	£575
SYQUEST 88MB	£435
HITACHI 2GB OPTICAL	£2249
170 MB INTERNAL	£149
20MB INTERNAL	£249

OUTBOARD

KAWAI

RV4

48 KHz processing
4 separate FX in one unit
4 Stereo Ins. 4 Stereo Outs
Internal Effects Linking
Digital I/O

ONLY £499

Alesis QuadraVerb Plus & GT call
Alesis Midiverb IIINEW
Alesis Midiverb IVIN STOCK
Alesis QuadraVerb 2 in stock
ART entire rangelowest prices
ART Multiverb Alpha II£299
Lexiconentire range available
Digitech VHM5 Vocalist£699
Digitech RP1£389

SONY

HR-MPS

Including the new and already much acclaimed HR-MP5

AMEK

9098 NEVE EQ £1049
"The sound of Class A without the cost"

BEHRINGER

We are, without doubt, the cheapest in the U.K.
(EG Behringer Composer, £269)

A complete range of high quality studio processors at incredibly low prices.

KLARK TEKNIK

"World class effects processing"

ROLAND

STEREO DIGITAL EQ

- Pre + post delay
- Hum canceller
- Balanced + unbalanced analogue
- SP DIF + optical I/O
- 28 bit internal processing
- 99 memories
- Full MIDI implementation

ONLY £649

DRAWMER

Full range available

01425 470007

THE MARKET PLACE, RINGWOOD, HANTS. BH24 1AP



FAX 01425 480569



RECORDING SERVICES

Studio Hire

24 Track digital studio hire: Kurzweil & Akai samplers. Cubase Audio.Session 8, a wide range of synths and outboard, from £15 per hour with an engineer.

CD's & PQ Encoding

PQ encoding to CD.....£40 + VAT
1000 CD's - Album length including full colour booklet.....LOW

**RECORDABLE CD
NOW ONLY £27**



SAMPLERS

THE U.K.'S NO.1 K2000 DEALER

KURZWEIL K2000

V3.0 adds a 32 track sequencer, realtime mix automation, disk macro facilities, sample audition over SCSI.

K2000 V 3.0£1949

K2000 V3.0, 8Mb, 290Mb HD.....£2399

K2000 V3.0, 8Mb + sample option£2835

KURZWEIL K2500

The U.K distributor has confirmed that TMC will receive the first K2500's in early April.

Call now for more information



**V3.0
FREE**

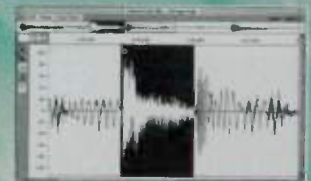
COMPUTERS & SOFTWARE



CUBASE
Lite, Score, & Audio for Mac, PC & Atari

NOTATOR
Logic & Audio
Audiomedia & Logic bundle, £Call

PowerMacs & Performas
486 & Pentium PCs, Atari
Authorised Apple Reseller



EMAGIC

QUICKTIME MOVIES

If you're running any Mac or PC sequencer and would like to know how to run real-time, hard disk, video with frame accurate locking to your sequence, call us now. We are talking hundreds not thousands of pounds!

CD-ROM RECORDERS



We can supply CD ROM drives for all samplers and computer packages. Please call now.



EMU

ESI-32 32 voice polyphony, digital filters, time compression, EIII compatible. Audition sample from hard disk. *Less than £1,200*



E-IV
Increased price

EMU E-IV, 128 note poly, 128 digital filters, up to 128 Mb RAM, 18bit DACs 128 x oversampling ADC, 32 part multi timbral, 8 balanced polyphonic outs.....Call for details.



AKAI

All drive options
All upgrade options
The best service
The best support
The Lowest prices

UK'S LOWEST PRICES



Call us to find out why we are one of the most successful Akai dealers in Europe.

ROLAND



S760

S760 Output Upgrade

Expands your S760 to 8 outputs, digital I/O, SCSI monitor output & mouse controlled editing.

**ONLY
£1,525**

44.1 KHz Stereo sampler with timestretch & 4 outputs

**ONLY
£575**

Roland S770 10Mb, DIGI I/O SCSI £1750 inc

THE MARKET PLACE, RINGWOOD, HANTS. BH24 1AP



FAX 01425 480569



01425 470007

MUSIC CORPORATION



MASTER KEYBOARDS

ORLA C80



C80

88 note hammer action, pitch & mod wheels, 4 programmable data sliders, 4 split points, 16 velocity curves, 32 channel send, general midi, programmable remote keys for start/stop/rew/ff etc sequencer control, 280 patch memory£849

Fatar & Roland ranges also available



£1100

KURZWEIL PC88

£1695



PC88

Kurzweil PC88.....
.88 note, weighted keys,
micro piano sounds internally

Kawai MDK61 MKII

61 velocity sensitive keys, pitch bend / modulation wheels, octave transpose.....£259

NEW & USED

- AKAI S1100 EXPANDER £850
- TASCAM M3700 £8575
- KORG T3 £875
- FOSTEX 160 £125
- LEXICON LXP5 £325
- YAMAHA QY20 £239
- TEAC 34 £500
- ROLAND JV880 £599
- KURZWEIL K2000R £1875
- SOUND TOOLS (MAC) £750
- SOUNDCRAFT FOLIO 4 ... £979
- SOUNDTRACS SOLO MIDI £2350
- HOHNER HS 2/E £149
- YAMAHA FB01 £99

SYNTHESIZERS

YAMAHA SY99



ONLY £1599

FREE software

Yamaha's leading workstation • 76 keys • 3 controllers • FM & LA Synthesis • Sample dump facility • On board sequencer



EMU

Morpheus, Proteus,

NOVATION



NOW AVAILABLE
Novation Bass Station Rack
Classic analogue sounds with full midi specification. 99 memories, analogue filter input

KORG



X3

KORG X3, X5 & I3 IN STOCK



KORG Oasys

NEW IN
Yamaha W5 & W7

YAMAHA



Yamaha W5 & W7: 76 & 61 key workstations:
8 Mb AWM 2 ROM; 16 track sequencer; 32 voice polyphony

W7

W5

ALSO AVAILABLE: VL7, SY99

ALESIS QUADRASYNTH

Multi timbral LA synth with ADAT optical interface.

only £975



MONITORS

TMC EXCLUSIVE



SILVER 5L & BH

Silver 5L & BH closefield monitor system

The most accurately responding, time-aligned monitors in their class. Call to arrange a personal audition Exclusively from The Music Corporation.



ABSOLUTE 2'S

- Silver 5L (pair).....£625
- Silver BW (pair).....£510
- Yamaha NS10ms.....£279
- Alesis Monitor 1s.....£289
- Absolute 2's.....£225

AMPLIFIERS

Samson Servo 150, 240 and 500 studio reference power amplifiers



SAMSON SERVO 150

Chameleon The best sound you've ever heard!

- Chameleon 900SCall
- Chameleon 1100S
350W per channel, pro-studio amp. r.r.p. £909.....only £599
- Chameleon 1400S 500W per channel
- Alesis RA 100.....£275



RA100

Alesis' industry standard studio reference amplifier

01425 470007

THE MARKET PLACE, RINGWOOD, HANTS. BH24 1AP



FAX 01425 480569



£

TMC FINANCE

We are one of the U K's premier studio suppliers offering credit accounts to studios, post production & broadcast facilities, as well as many professional artists and universities. Personal finance can be arranged on equipment from £100 - £100,000 !! Please call or fax us now for more information.

CREDIT ACCOUNT FACILITY • PERSONAL FINANCE • OVERNIGHT DELIVERY • LEASEHIRE

MULTITRACK ◆ DIGITAL

TASCAM DA88



COMING SOON SONY'S DA88 COMPATIBLE



ALESIS ADAT & LRC

The original S-VHS format digital multitrack has fallen in price and so now offers even greater value for money



Fostex's ADAT compatible S-VHS machine with built-in sync facilities

FOSTEX RD8

ANALOGUE

Second hand multi-tracks always available
Call for details

GREAT DEALS ON ALL PACKAGES
EG R8 + 812, £1995
MSR16S, LOW
FOSTEX M80, £649

Second hand Fostex R8 + 812 + MTC1 £1795



DDA



Masterclass consoles for the professionals

STUDIOMASTER

P7 16-8-16 £1949

Digital quality in-line console
Expandable to 40 channels.
New meter bridge option available

Diamond 16-2, 2 aux, 3 band eq, £369



YAMAHA PROMIX 01

Fully automated 18:2 digital mixing console: 24 bit digital mixing; 50 snapshot memories Fully editable 36 bit 3 band parametric EQ.



SYNCHRONISERS



The worlds best selling SMPTE/Midi synchroniser."

XR300
PPS100
JLC Datasync
JLC Datamaster

Our lowest priced auto locator for Adat, DA88, RD8 and Pro Tools



MICROPHONES

Oktava • Neumann • AKG • Beyer • Microtech Geffell
NEW MIC FACILITY

TMC now offers customers a chance to test a range of mics, by recording either vocals or an instrument onto ADAT, and then comparing tracks in one of our digital studios. Customers are requested to make an appointment.

SPECIAL OFFER-AKG C3000 £299
TLM 193 £875



THE MARKET PLACE, RINGWOOD, HANTS. BH24 1AP



FAX 01425 480569



01425 470007

CLOSE TO THE EDIT

Are the 16-bit capabilities of your AV Macintosh languishing unused for want of a decent (and cheap) 16-bit sample editor? *SoundEdit 16* could be your salvation. MIKE COLLINS checks it out...

The AV range of Macintosh and PowerMacintosh computers all feature 16-bit, 44.1kHz sampling rate audio recording and replay capabilities, but Apple don't offer any editing software to take advantage of these features. However, you can

would cost you more than twice the price of *SoundEdit 16*.

NOW FEATURING...

SoundEdit 16 includes many new features, and offers support for full 16-bit audio, as featured on

MACROMEDIA SOUNDEDIT 16 SAMPLE EDITING SOFTWARE FOR MACINTOSH

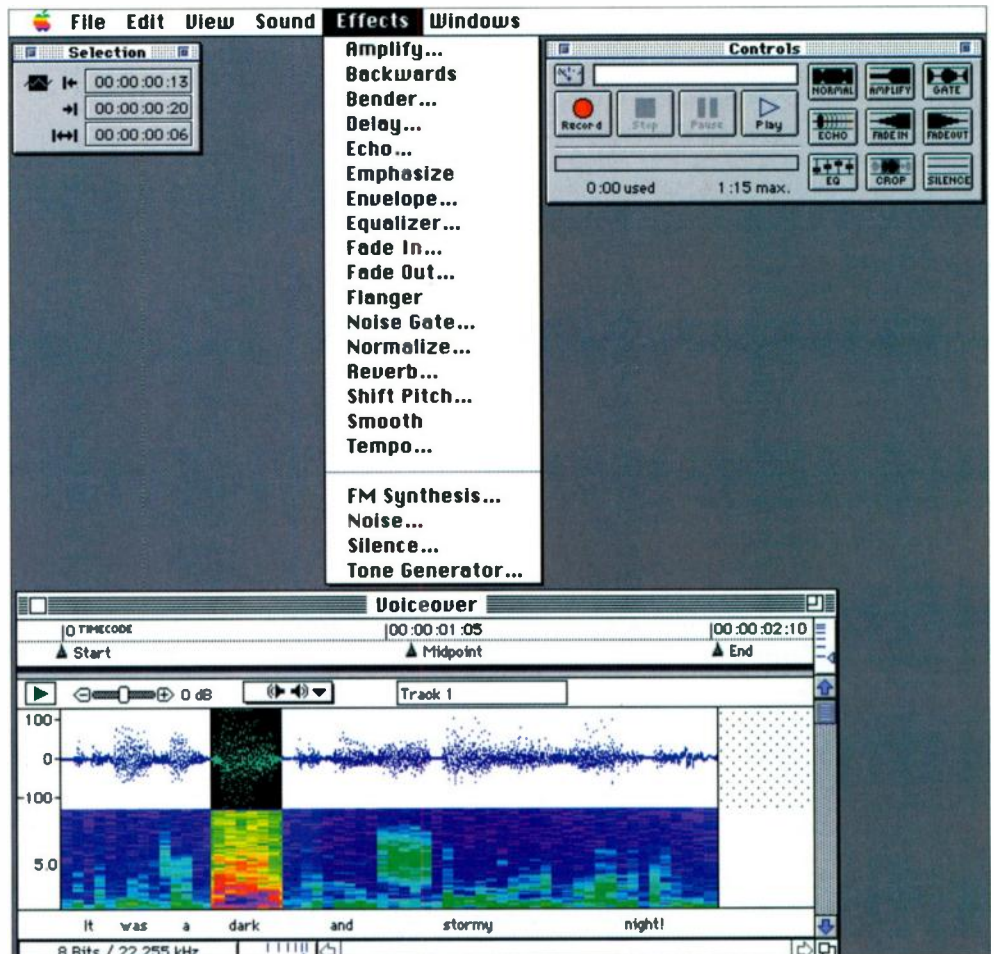
EDIT

now use the recently upgraded version of *SoundEdit*, the original 8-bit audio editing software for the Macintosh — *SoundEdit 16*. The nearest competition to this combination on the Mac is *Sound Designer II* software, running on an AudioMedia II card — a bundle which

the latest AV Quadras and PowerMacs. You can choose from a wide variety of sampling rates and compression ratios to achieve the desired balance between file size and sound quality, and then save your files in a wide variety of popular formats, including *SoundEdit 16*, *SoundEdit*, *Instrument*, *WAVE*, *AIFF*, *SDII*, *Macintosh Sound Resource*, *Macintosh System 7* sound, and *QuickTime* (audio-only) *Movie* (of which more in a minute).

New effects include *Fade In* and *Out*, *Normalise* (amplify sound to its maximum value), and a single-repeat *Delay*. There is also a *Crop* effect, which keeps the current selection and deletes the rest of the sound. This is great for 'topping and tailing' — removing extra stuff at the beginning and end of material which you don't want.

The *Control* palette can now be expanded to reveal nine buttons for frequently-used effects and editing commands, such as *EQ* or *Gate*. When



A typical view of a *SoundEdit* screen shows the open *Effects* Menu, the *controls* and *Selection* palettes, and the *Edit* window. The *Edit* window contains both waveform and colour spectrum displays, with labels inserted for *Start*, *Midpoint* and *End*. *Cue Points* have been inserted to mark each word of the dialogue.

SOUNDEDIT 16 £410

PROS

- Excellent value for a 16-bit sample editor.
- QuickTime support great for multimedia users manipulating audio for interactive projects or computer games.

CONS

- Waveform display doesn't scroll to keep up with the audio playing.
- Sluggish screen redraws.

SUMMARY

SoundEdit has come of age as *SoundEdit 16*. The new 16-bit capabilities and the support for QuickTime and other useful file formats make *SoundEdit 16* an ideal choice for multimedia work. For those with limited funds, the program provides a good budget alternative to *Sound Designer II*.

THE MUSIC CORPORATION



A NEW GENERATION OF ROLAND

SAMPLERS



£760

Roland's flagship studio sampler...

24 note polyphonic, in built SCSI, 2Mb expandable to 32 Mb. Akai compatible over SCSI

NEW



MS1

Portable sampler, fits in your pocket!
Ideal for DJs and one off samples

JS30.....

16 bit, 12 trigger pads, in built 4 track sequencer, in built SCSI reads Roland & Akai CD Roms



JS30

EFFECTS UNITS



RSS FX

RSS FX.....2 channel version of Roland's amazing £20k 3D RSS system.

SRV330, SDE330, SDX330 3D space processors & SN550 single-ended noise reduction also available.

SYNTHESIZERS



JV1080

JV1080 64 voice, polyphony, 32 bit processor

JD990.....JD800 in a box!!.....£999

JV880.....£549

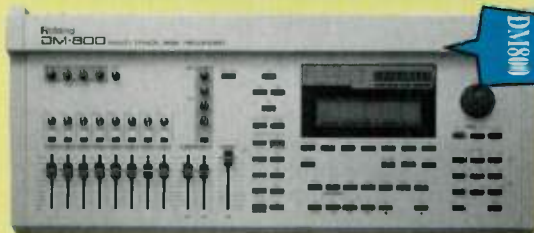
Workstation version of the renowned JV1080



XP50

Also available JV35, JV50, JV 90 . CALL

ROLAND DM800



DM800

Revolutionary integrated 8 track digital hard disk system ADAT/DA88 compatible.

Roland

At The Music Corporation

Thursday May 18th

Experience the entire Roland range including the new MS1 and JS30 samplers, and the remarkable V Guitar synth at TMC on Thursday 18th May. Staff from Roland will be available to demonstrate and advise, as well as TMC's own engineers and sales team. You are invited to attend between 10.30am and 8pm. The day will be informal with refreshments provided.

SAMPLE the atmosphere "Roland has arrived, the Sampling Revolution has begun."

THE MARKET PLACE, RINGWOOD, HANTS. BH24 1AP



FAX 01425 480569



01425 470007

SOUNDEDIT 16

▶ you click on the EQ button, you are presented with a simple 5-band graphic equaliser. You can drag the vertical lines separating the frequency spectrum bands to change the filter frequencies. Each band has a slider control for EQ cut or boost.

PROCESSING AND EDITING

Once you have recorded your audio, or imported an existing audio file into *SoundEdit*, you can use the excellent selection of effects to process your audio. You can adjust the pitch or the tempo, add an echo, or use any of the 16 effects to enhance a single track, a portion of a track, or any combination of tracks. The Tempo command changes the playing speed of a sound without changing its pitch, and works extremely well. It is particularly useful for getting the timing of a voice-over or a piece of music to exactly match a visual sequence.

SoundEdit 16 can now handle as many tracks in a single soundfile as your computer memory and disk space will allow. You can play any or all of the tracks simultaneously, and edit each individually. Once you have finished your editing work, and have adjusted the relative levels of the tracks, you use the Mix command to combine your multiple tracks to a single mono or stereo file for playback (from within *Director*, for example).

QUICK, TIME, QUICK QUICKTIME

You can do all your QuickTime audio recording and editing using *SoundEdit*, and even import a QuickTime movie containing video or animation and synchronise your audio directly to this (for more information on the latest version (2.0) of QuickTime, see this month's specially extended Apple Notes, starting on page 178). When you open a QuickTime movie into *SoundEdit 16*, a new type of window

shows the movie with its associated controls for playback, and a list of any soundfiles contained within the movie. An Edit button is provided, and this opens an edit window with the movie frames displayed at the top and the audio tracks underneath. As with any sound file (not just those associated with QuickTime images), *SoundEdit 16* allows you to insert text labels underneath the audio waveform, to help you find your way around the sound file. Furthermore, the Labels command in the Edit menu brings up a dialogue box which lists your labels, and lets you jump to the section of audio containing any label you pick. This is particularly useful in longer files, where the waveform display is too long to fit completely

on your monitor when zoomed out to a comfortable viewing resolution — instead of scrolling, you just jump to the label, and this section of the audio is automatically selected for you. Another neat new feature is the provision of Cue Points. You use these to mark the beginnings of particular sections of your audio (so you can

precisely align sounds in multiple tracks), or, when working with QuickTime movies, to mark particular QuickTime frames which you wish to synchronise your audio to. A Cue Point applies to all tracks, as it simply identifies a particular point in time. As with Labels, you can jump to any of the cues within your file using the Cue Points dialogue box (accessed from the Edit Menu). Unfortunately, with this dialogue box open, you cannot play back your file from the selected Cue Point — you have to close the dialogue box first! This is something MacroMedia should fix as soon as possible.

You can display any waveform in several ways, either as lines or dots, and as a spectrum showing the relative strengths of the audio frequencies as a colourful display. You can also name tracks, and bring up these names along with other specific track information such as a channel pop-up (for left, right or left/right volume levels), a gain control to adjust the volume of the track, and a play button to play just the selected track. A vertical ruler displays the amplitude for waveforms and the frequency for spectra. A horizontal ruler at the top of the track can display your choice of frames, SMPTE timecode, samples, or time in various formats. Overall, the waveform display is not as good as that of Digidesign's *Sound Designer II*, but then *SoundEdit 16* does cost far less, and has lots more goodies to offer which are not available in *Sound Designer II*.

CONCLUSION

Even if you are already using *Sound Designer II*, there are many features in *SoundEdit 16* that make it worth considering, such as the ability to edit the audio tracks within a QuickTime movie — indispensable for multimedia users! And you can use *SoundEdit 16* with an AudioMedia card, as long as you have *Sound Manager 3.0* and the latest Digidesign Sound Drivers installed. An advantage to *this* combination is that the AudioMedia card lets you bring in audio digitally from DAT or CD, and output your audio digitally to DAT or any other popular digital audio recorder, which is not possible on the AV Macs, or with cheaper audio cards.

Unfortunately, I have to say that *SoundEdit 16* suffers from sluggish screen redraws, and the waveform display does not scroll to automatically keep the audio which is playing back visible on screen. Nevertheless, and despite the common (but much more expensive) professional combination of *Sound Designer II* with an AudioMedia card, for many users, the combination of *SoundEdit 16* with an AV Macintosh may be all you'll ever need. SOS

FURTHER INFORMATION

£ *SoundEdit 16* £410.01; *SoundEdit 8 plus MacRecorder* £386.58. Prices include VAT.

A Computers Unlimited, Technology Park, Colindale Lane, Colindale, London NW9 6DU.

T 0181 200 8282.

F 0181 200 3788.

"The nearest competition to this is Sound Designer II software running on an AudioMedia II card — which would cost you more than twice the price of SoundEdit 16."

8-BIT FROM 16

The original 8-bit *SoundEdit* used to be bundled with Farallon's popular MacRecorder — a small piece of hardware with a microphone, a pair of mini-jack sockets for external microphone or 'line' input, and an 8-bit analogue-to-digital converter, which connects to one of the Mac's serial ports. MacroMedia now market this package, as it is ideal for use in conjunction with their *Director* software. Many multimedia users will opt to use 8-bit audio files with *Director* or *HyperCard*, especially for CD-ROM-based interactive projects, where the audio file sizes need to be kept to a minimum, and where the lowest common denominator Macintosh computers the end products are aimed at are only equipped with 8-bit audio replay capabilities. *SoundEdit 16* still supports all the 8-bit formats, so there's no problem if you wish to use your Mac in this way.

In **TEN** years' time

virtual acoustics
...the future of synthesis



VL-1



VL-7



VL1-m

you'll
Remember

Call Now for a **Free** interactive guide to virtual acoustic
synthesis on CD-ROM* **01908 369269**

(state Mac or PC)

TODAY



Yamaha-Kemble Music (UK) Ltd. Sherbourne Drive, Tilbrook, Milton Keynes MK7 8BL *while stocks last

YAMAHA

FULLY EXPANDED #2000 SERIES
PLUS FREE software to exclusive
ABC Music sample library
CALL ANDY AT BRISTOL
THE WURZWEIL EXPERT!

KURZWEIL K2000
• Powerful 96 oscillator synth
• Reads & edits samples from
Akai, Ensoniq & Roland
• 64 MB • SCSI as standard
• 32 tr seq • + v3.0 software

ABC Call

NEW

TASCAM 488MkII
• 8 channel mixer with 3 band EQ
• Sweep mid frequency of EQ
• abs noise reduction
• Punch in/out facility
• ac'd metering

ABC Call

NEW

**FOSTEX XR-5
NEW MULTITRACK**
• 4 channel input/2 AUX sends
• 2 stereo AUX returns
• High (9.5cm) Speeds rec/Play
• Punch in/out facility

ABC Call

SUPER BARGAIN
FROM ABC MUSIC

SOUNDCRAFT FOLIO
• Folio Lite... Best UK Price
• Folio RAC PAC... Best UK Price
• Folio S... Best UK Price
• Folio 4... Best UK Price

£BEST

PLUS SEQUENCER
CUBASE LITE PC-1

CASIO CTK 650
128 timbres, 10 FX, 128 pro-
grams and a touch responsive key-
board. The great instrument is
offered with Steinberg Cubase Lite
(PC) • + PC1 MIDI interface •

£399.00 CTK-650
CUBASE LITE
PC-1

FOSTEX

The Best In Recording

No-one has a better selection,
better service and sensible
advice than ABC Music. Call in
to any of our six stores today
for the complete
recording picture.
Direct to Disk, 4-8
track etc etc.

Soundcraft

FOSTEX, TASCAM, SOUNDCRAFT, YAMAHA
Great selection of 4-track cassette based recording units from the
world's best. Come see the superb new Fostex XR-5, listen to the
quality of the new Tascam DA-30 MkII, marvel at the excellent
Soundcraft Folio and Spirit consoles and experience the value for
money of Studiomaster desks.

8 TRACK SPECIAL
FOSTEX RB AND 812 DESK
NOW AT THE
LOWEST EVER PRICE
ABC PRICE £1999

QUALITY & VALUE

New Low Akai Prices



AKAI S3000

★ 32 voice polyphony ★ 8 individual outputs
★ 2 Mb RAM (fully expandable to 32 Mb RAM)
★ Options include SCSI, Digital I/O & hard disk recording
★ Resonant filters ★ Super value at ABC Music!

NEW PRICE
£2299



AKAI S2800

★ MIDI stereo digital sampler from Akai
★ 32 voice polyphony ★ 3.5" floppy disk drive
★ Max sample time 22.28secs ★ Optional SCSI interface
★ Built in echo, chorus, pitch shift and delay

NEW PRICE
£1299

BEST UK PRICES
ON ALL STEREO & MUSIC

MUSIC SOFTWARE
ABC Music are specialists in the
field of computer based
sequencing and carry huge stocks
and have in-depth knowledge of
all the Steinberg and E-Magic
products for the Macintosh and
PC platforms. In each of our stores
you can try out the software and
get unbiased information and
advice on which package best
serves your needs and budget.

E-MAGIC
Notator Logic (Macintosh)
The most widely used and
established MIDI
sequencing/notation package.
• Enhanced MIDI machine control
• Support for Quick Time movies
• Environment folders for control
of RD, ADAT etc
• Length and groove quantise in
realtime with lister

STEINBERG
Cubase Lite (Macintosh)
Budget sequencing package
Cubase 2.5 (Macintosh)
Excellent sequencing package
Cubase Score (Macintosh)
Top quality notation
Cubase SIS (PC)
Budget sequencing package
Cubase 2.5 (PC)
Excellent sequencing package
Cubase Score (PC)
Top quality notation

ABC Call

ABC
WITH THE STUDIO LAB!

KORG 05R/W SAVE £170
• 32 voices, 32 oscillators
• 128 programs & 8 drum kits
• 100 editable programs
• Built-in PC MIDI interface
• 2 digital multi FX

£429.00

SUPER BARGAIN
FROM ABC MUSIC

STUDIOMASTER
• Diamond Club 12.2... £269
• Diamond Club 16.2... £379
• Studiomas P7... £1999
• Folio 4... Best UK Price

£269.00

FREE @ ABC
with Sound Engine
Opcode EZ Vision
sequencer worth £99!

EMU SOUND ENGINE
• The ultimate sound module &
MIDI interface
• 384 synth user presets
• 32 voice polyphony
• 2 simultaneous digital FX

£249.00

NEW LOW PRICE

YAMAHA TG300
• 410 high quality voices
• 9 drum kits, 812 sounds
• 195 sound waves
• 6 Megabytes of ROM
• Value for money module!

£499.00

SUPER BARGAIN
FROM ABC MUSIC

MIDI MASTER
MIDI file player/Teaching system
• Constant MIDI file player & a
Midi Teaching system in one
• Plays along at your speed
including mistakes by sound

£199.00

SUPER BARGAIN
FROM ABC MUSIC

ROLAND JV1080
• 2 Unit Track Mount Sound M.
• 16 part multi timbral
• 64 voice polyphony
• Built in super quality waveforms
• Chorus & reverb effects

£1085

ABC MUSIC UNBEATABLE BARGAINS

Fatar Studio 900... £599

Incredible value master keyboard
from Fatar. 88 weighted touch
sensitive keys, excellent MIDI spec

Fatar CM561... £199

61 key touch sensitive mother
keyboard designed for use with
computers

Alesis Quadraverb 2... £799

8 digital effects blocks each with
choosing, timing, rotary
speaker emulation, pitch shifting,
EQ, delay or reverb. LCD graphic
display

Yamaha MU80... £699

New Tone generator offering 32
part multi timbral, 64 note
polyphony, 640 instrument
voices, 18 drum kits, EQ, 4 effects
processors and more!

Yamaha VL-1m... £Call

Rockmount non-keyboard version
of the amazing VL 1

Fatar Studio 61... £199

61-key touch sensitive mother
keyboard

Yamaha MUS... £Call

Compact, portable 44-note
tone generator. 128 high quality
voices, built in MIDI interface, 2
octave keypad

Yamaha REV100... £245

Low cost easy to use stereo
Digital Reverb ideal for musical
instrument, home recording, and
small PA use

Tascam DA32 DAT... £Call

Replacement for the DA30 this
new DAT player is irre-
versible

Ensoniq KT-76... £1999

New from Ensoniq! Superb 76
note weighted keyboard
coupled to an excellent synth
and sequencer! 64 voices, 64
voice polyphony!

Ensoniq TS-12... £1649

Weighted 76 note synthesizer
with a total of 12 velocity
curves and 24 track
sequencing

Tascam Porta 03... £199

Easy to use recording machine
from Tascam features
everything you need to make
quality recordings.

Yamaha VL-1... £Call

Amazing Virtual Acoustic Synth

Ensoniq ASR10... £1699

WANTED USED GEAR

£££'s paid for un-
wanted hi-tech gear



ABC EDUCATION DIVISION
- 01454 310300 -

...at the forefront of music technology
in schools. Professional
Education Installations.
Apple™ Authorised Reseller

UK'S FAVOURITE HI-TECH/SYNTH SUPERSTORES

- ★ Best prices paid for used gear
- ★ Set-up services
- ★ Repairs also undertaken
- ★ Credit facilities available
- ★ The latest gear at BEST prices
- ★ Freephone number
- ★ Fully trained staff
- ★ 7 day Money-back Guarantee*
- ★ Massive stocks of latest gear
- ★ FAST Mail Order Service
- ★ PA and instrument Hire
- ★ Superb Part Exchange Deals

ABC GIVES YOU MORE!

KINGSTON
20 mins by FREE train
from Waterloo - Spend
over £10 & we'll refund
the fare! *CIS FREE
PARKING OUTSIDE

BRISTOL
The South West's best
Hi-Tech & Recording
Store. Great Service &
the worst value in the
business!

SLOUGH
Between A40 and M4
motorways.
10 minutes from
Heathrow airport.
EASY FREE PARKING

EXETER
The South West's other
best Hi-Tech,
Recording and Rock
and Roll store.
EASY FREE PARKING

OXFORD
M40 just mins away. Free
parking or arrive by train
& we'll pick you up from
the station!

ST ALBANS
Hours No. 1 Marshall
experts.
Just off the A1(M)
EASY PARKING

DON'T FORGET FREE PARKING OR IF
ARRIVE BY TRAIN... PICK YOU UP FROM THE STATION



▶ BRISTOL 32 Alma Vale Rd 0117 9238200

▶ EXETER 68 Bartholomew St West 01392 425125

▶ ST ALBANS 130 London Rd 01727 856351

▶ KINGSTON 56 Surbiton Rd 0181 546 9877

▶ OXFORD 44 St Clements 01865 724820

▶ SLOUGH 324 Farnham Road 01753 822754

FREE @ ABC
with Korg i45 Interactive
Stand & Headphones

SAVE £300!!!
£1499

FROM ABC
WHILE STOCKS LAST

YAMAHA

W7/W5 **NEW**

£1399.00 **£1649.00**

WORKSTATION 7

- ★ Newest member of the workstation-lineup
- ★ AWM2 generation with 8Mb RAM
- ★ 384 realistic voices
- ★ 100,000 note memory
- ★ 32 note polyphony
- ★ MIDI compatible
- ★ WORKSTATION 5
- ★ 76-key sister model

I4S Interactive

SAVE £££'S WITH THIS SUPERB WORKSTATION FROM KORG

ABC Music stores are now offering a great new low price on this workstation - it was at £1799 and now you can buy one for only £1499!!

- ★ 61-key velocity & aftertouch sensitive keyboard
- ★ Excellent digital A1² Synthesis
- ★ 32 voice, 32 oscillators - 32 voice polyphony
- ★ 48 ROM styles
- ★ Dual digital multi-effects on-board
- ★ 10 wonderful preset backing sequences
- ★ 384 excellent instrument sounds
- ★ 164 amazing percussion sounds
- ★ 64 great sounding preset arrangements
- ★ Compete with FREE STAND & HEADPHONES
- ★ SAVE £300! - pop into an ABC store today and don't miss this great offer!

KORG

X5/X2

UK BEST **£1399.00**

Superb keyboard!

- ★ 32 voices and 32 oscillators
- ★ Velocity sensitive keyboard with aftertouch
- ★ 2 digital multi fx
- ★ 8Mbytes of waveform memory
- ★ 16 tracts, 16 timbres
- ★ Built-in 3.5" disk

AT ABC MUSIC

ABC MUSIC MISSION STATEMENT

We aim to provide our customers with quality products at competitive prices and to give them efficient, friendly service from the best-trained and most professional sales people in the music retail business.

We are interested in building long term relationships with customers based on honesty and trust.

EMU

CLASSIC KEYS **£599.00**

MIDI SOUND MODULE

- ★ 512 presets/32 voice polyphony
- ★ 16 part multi timbral
- ★ Easy to use interface
- ★ 2 built in programmable effects
- ★ CD quality MIDI sound module

VINTAGE KEYS **Call**

CLASSIC ANALOGUE SAMPLES

- ★ 8 Mb of samples from your favourite analog synth
- ★ 512 spectacular presets
- ★ 32 analog-sounding digital filters
- ★ 16 channel multi timbral

ULTRA PROTEUS **Call**

SUPER QUALITY SUPER PRICE

- ★ 512 on board presets
- ★ 16MB
- ★ 32 voice polyphony
- ★ Dual stereo effects processors
- ★ 16 MIDI channel multi timbral
- ★ Realtime modulation system

PROTEUS FX **£575.00**

AFFORDABLE AND RELIABLE

- ★ 512 on board presets
- ★ Wide range of digital effects
- ★ 32 voice polyphony
- ★ 16 MIDI channel multi timbral
- ★ Realtime modulation control

EMU SYSTEMS

★ These superb EMU 1U units offer quality sound and great value for money! - See also the new ESI-32!

ADAT
New LOW price
CALL ABC NOW!

Oxford Music Show

SUNDAY 19TH MARCH - 11AM TOWN HALL, OXFORD

Admission only £2.00 to a day of top deals & demos.

Exhibitors include Roland, Korg, Alesis, C-Lab, Foxtel, Soundcraft and many more!

★ Demos all-day ★ Local bands playing live ★ Discounts galore ★ See all the latest gear ★ PLUS A SUPER AUCTION OF USED, DEMO AND NEW STOCK (LIST AVAILABLE FROM 10TH)

AUCTION STARTS AT 4.00PM - DON'T MISS IT!!

KORG

Korg 01/W₇₀

EXCLUSIVE **£1299.00**

ONE OF THE BEST WORKSTATIONS

- ★ 61-key velocity sensitive keyboard
- ★ Digital A1² synthesis
- ★ 32 voice, 32 oscillator
- ★ 32 voice polyphony
- ★ Variable Dig Filter/amp
- ★ 16 track sequencer
- ★ 255 presets/200 progs
- ★ 119 drum/perc sounds

E-MU

EMU ESI-32

£1199.00 **NEW**

Top new sampler from EMU systems

- ★ 32 voice polyphony
- ★ 2Mb RAM (exp. to 32Mb)
- ★ 4 polyphonic outputs
- ★ Fully compatible with Akai libraries
- ★ 2 stereo inputs
- ★ SCSI option
- ★ Incredibly low price!

Roland

S-760 + CD-ROM PLAYER

£1599.00

Superb quality sampler with the benefit of a FREE CD-ROM player and 4 Roland sample CD's!

- ★ 16-bit stereo quality
- ★ 24 note polyphony
- ★ Loads Akai S1000 data via SCSI port
- ★ Exp. RAM to 32Mb
- ★ S-760 on own £1399

FREE @ ABC
with Roland S-760
CD-ROM Player
4 Roland Sample CD's

Roland

JV-50 **NEW/LOW PRICE!**

NOW **£899.00**

New low price on this excellent synthesizer!

- ★ 61 velocity & aftertouch sensitive keys
- ★ 226 preset tones, 256 user patches + 18 great drum sets
- ★ 16 part multi-timbral
- ★ 3.5" floppy disk
- ★ 15 top digital FX
- ★ Unbeatable value!!

Attention Logic /Cubase Users!

AUDIOMEDIA

BUNDLE 1£799

Upgrade to 2 Track Digital Audio Recording with Logic Bundle includes Logic Audio Module and Digidesign Audiomedia Card

BUNDLE 2£899

For all Cubase users! Upgrade to 2 track digital audio with Cubase Audio. Includes Cubase Audio Module & Digidesign Audiomedia Card

BUNDLE 3£1999

This complete bundle includes a Macintosh 475 + 8Mb RAM, keyboard, monitor, digital recording 500Mb HD, Notator Logic, Logic Audio, Audiomedia LC + all cables + FREE tuition!! For only £1999! (inc VAT) Or £2099 with Cubase Audiol!

NOTATOR LOGIC

Excellent notation features including lyrics, chord symbols. Easy to use sequencing.

LOGIC AUDIO

Allows Notator logic to control digital audio recording boards

★ Digidesign's Audiomedia LC

AUDIOMEDIA LC

Plug-in card lets you record 2 tracks of CD quality digital audio direct to hard disk.

INCL. VAT
£1999

novation

FROM ABC
WHILE STOCKS LAST

SUPER BARGAIN
FROM ABC MUSIC

BASS STATION

- ★ Superb analogue beta synth
- ★ Multi oscillator - monitor sequencer
- ★ Emulate classic TB303, MC202, SH101 and Mini Moog NDI5ES
- ★ Mini, Transportable keyboard

£349.00

NEW

BASS STATION RACK

- ★ Classic analogue sounds
- ★ 2 Oscillators with 2 wave-shapers
- ★ VCF with resonance
- ★ LFO + 2 envelopes
- ★ Real-time transposition!!

£399.00

NEW STEREO SAMPLING FROM £425

NEW

ROLAND MS-1 16-bit Stereo Sampler

- ★ 32 bit stereo sampling (exp with PCM-A Memory Card)
- ★ 1.8Mb card (€225) with audio CD
- ★ 80 mins of oops & grooves

£425.00

NEW

ROLAND JS-30 16-bit Stereo Sampler

- ★ Expandable to 4Mb @80kcs
- ★ With SCSI reads Akai software
- ★ Stereo in/out
- ★ ROM loops
- ★ Built-in 4 track sequencer

£899.00

7 DAY MONEYBACK GUARANTEE

Buy from ABC Music, and not satisfied return within 7 days for a full refund!

BE THE FIRST TO BUY

USED GEAR

ABC music will buy your used gear including Guitars, Hi-Tops, Recording equipment.

PROMPT DELIVERY

When you purchase products from ABC we guarantee you a prompt delivery service.

QUALITY SERVICE

Our highly trained staff offer expert help and advice on any products in our stores.

IN STORE DEMOS

Watch but for product demonstrations in our six stores throughout the year.

MasterCard VISA

THE ABC music COMPANY

For many, The Human League were the definitive pop band of the '80s. Formed in the late '70s with the line-up of Philip Oakey, Martyn Ware, Ian Craig-Marsh and Adrian Wright, their first album, *Reproduction* (1979) won them critical acclaim, and was followed up by a second, *Travelogue*, in 1980. Soon after this, Marsh and Ware exited to form the British Electric Foundation, and subsequently Heaven 17, while the League, with new band members Susan Sulley and Joanne Catherall, teamed up with producer Martin Rushent and had instant chart success with the singles 'Sound Of The Crowd' and 'Don't You Want Me'. Statistically, The Human League peaked with their number one album *Dare*, but the band continued to

have worldwide hits with singles like 'Fascination', 'The Lebanon' and 'Human'. The release of *Romantic?*, at the start of the '90s, was less well received and heralded the end of their long relationship with Virgin Records. What followed was a period of disillusionment and depression whilst the group attempted to regain their musical career.

Now The Human League are back with a new album, *Octopus*, new producer Ian Stanley, and new record company (East West). Rather than re-inventing themselves, they have resurrected, and returned to, their analogue roots, whilst still exhibiting their unique brand of pop sensibility.

DOWN BUT NOT OUT

For the best part of this decade The Human League have been at work in their Sheffield-based

PHIL OAKEY

• HUMAN LEAGUE •

major league



recording studio. Are they glad that this album is finally finished?

Oakey: "Not really, because the recording got better and better as we went through, and now I wish we were carrying on — we now have to do all the other bits, like press and promotion. It's just that we seem to have found the right producer and I didn't realise that until maybe three to four months into doing the album."

I'd heard it said that the album was initially recorded quite some time ago, and asked if this was true.

"We sent demos of most of the songs to Virgin before they dropped us, including the first single, but they didn't really sound the same. The demos were a bit crap really — because we're not very good producers. We only went off on the analogue thing because of one of our co-writers. When we heard that analogue sounds were coming back, we avoided getting involved with it because it seemed like a trendy thing to do. But finally a guy called Paul Beckett, who was working during the week with Adrian Sherwood and On-U-Sound but at weekends would come up here and do things on a friendly basis with us, was the first one to go to the rack of synths and say 'you should be using



Phil Oakey in HL Studio. To the left is the Roland System 100M, (see pages 190-192 in this issue for a full retrospective on the 100M) with an Oberheim SEM on the floor.

these now'. And I think we'd got pretty stale and were depressed really — we thought we were worthless because of the attitude of the record company. Being stuck up here in Sheffield we thought they were not visiting us enough — our famous claim is that we didn't get an A&R visit for three and a half years."

I commented that it must have been quite traumatic for the band when Virgin rejected the album and dropped them. Oakey concurs: "We just thought our career was over. We thought 'that's it' — we've been years trying our best without any support, we've put records out that we thought were good and no-one bought them... we hadn't been managed for eight years so everything seemed over, but we've got a really good solicitor

Despite a long string of hit singles and albums throughout the 1980s, The Human League entered the '90s having fallen from grace with both record label and record-buying public. Now they're back with a vengeance — and a hit single from a new chart album. NIGEL HUMBERSTONE chats to League main man Phil Oakey.

who sent faxes to all the major record companies, and suddenly we were going out to dinner with heads of the biggest record companies in the world — who didn't just like our back catalogue but also the new stuff that we were doing, which was the start of us thinking that we were actually worth something again.

"We very nearly signed to Sony/CBS, but East West stepped in and wanted us to work with their A&R guy, Ian Stanley, who was also acting as a house producer."

With East West and Ian Stanley on board, the League once again swung into action — with exciting results. Indeed, the success of the first



human league

▶ single from the new album, 'Tell me When', has been even greater than Oakey had hoped: "A top 40 hit would have been enough for us to start with and especially because we've actually gone in the new 'old' direction again, which I thought would take an album for people to get used to the idea.



The studio's Roland System 100M modular synth.

"So it looks good but also slightly frightening. I think we've got an advantage that we're based in Britain. All along the way people like the Bee Gees and Fleetwood Mac have come back with big singles but that's not led to a re-acceptance. So we're still in the middle of quite a big fight — we could easily lose it with the next single and then we'd lose the album, which would mean we're right back where we started — but with a bigger debt!"

TEAM PLAYERS

Dave Dodd is The Human League's resident studio engineer, multi-skilled technician and odd-jobber. With the involvement and presence of Ian Stanley, the recording process really stepped up a gear. Dodd "We started off with 20 tracks — Ian came in and made it a core of six to concentrate on and

fit the others around. Then he brought in his Quadra and cracked the whip!

"The work for this album was constant for six months. Ian had been working constantly for two years before that, doing the Pretenders. We had Andy (Gray) coming up at weekends, and we were working 12 to 14 days on the trot — 14 to 16 hours a day."

At this stage, The Human League commandeered an adjoining commercial recording studio (Axis, now called Manna) where Ian Stanley re-located with his Mitsubishi 32-track and set to work. A strict work schedule was established with constant liaison between the two studios.

"He also made it very untidy", remembers Oakey. "I always want to have this place so that if a film crew knocked at the door we could invite them in and it would look nice. But I think people like Ian and Chris (Hughes), who also worked on the album, work from chaos. They need that kind of jumble around them.

"The recording was more divorced from the writing on this album than it's ever been. I think that's because things have got such a long way from real keyboard playing — although we always pushed the programming and 'synthetic' side of things, we weren't like that and in fact *Dare* had a lot of playing on it. But to compete now you've got to get it right and you can't mess around and put up with people not playing so well.

"With this album it's been a case of once the song's written, really 'caning it' to get it right — Andy programming it, Ian having a real go on the sound and Bob (Kraushaar) making sure the vocals were right."

Dodd: "After hearing the tracks, Ian Stanley's method was to get the original multitracks out and break them down. By that time we'd got *SampleCell*, *Audio Media* and stuff, and we were using them to lift bits that we'd already done from the multitracks. Ian had his 32-track digital along with our 16-track digital and 24-track analogue, so we were bouncing tapes around." Oakey: "We'd bought the 16-track digital machine for the last album, just to do vocals on. People think that with our synths we must be up-to-date, but that's not actually true. Since we bought a Synclavier along the way in about 1983/4 I have never since trusted a spec sheet. Now if any company says 'this is the best machine you've ever heard', I don't believe them. I'd rather go to some old stuff that I know works.

"We've just had our Ampex 8-track (on which

Oakey on Jam & Lewis

"The Jam and Lewis album [*Crash*] was just like being a puppet for four months. It was interesting to pick yourself out of the industrial north of England and dump yourself in Minneapolis. Great experience — but it just wasn't our album.

"I think that having had that experience we sought to make sure that we were doing our kind of albums again, which I think we did with *Romantic*?"



Making Waves

WITH DIGITAL AUDIO

Add Waves software FX to your Digidesign system. Plug in Waves software and add the best digital FX processors to your hard disk recording system.

With digital resolution up to 24 bits, which is 256 times higher than CD quality, these FX add real power to your digital recording system.

Waves Q10 is the most flexible, powerful and easy to use 10 band parametric equalizer you've seen. Click, draw and save your own eq curves in realtime - £349 inc

Waves L1 Ultramaximizer performs look-ahead peak limiting and resolution enhancement. Ideal for mastering, remastering, multimedia... £495 inc

Waves C1 Compressor & Gate with a catalogue of features: sideband, softknee, frequency conscious. Crystal clear performance with pin point accuracy - £529 inc

Waves S1 is a sophisticated stereo image processor with the rarest of features: an intuitive interface - £399 inc

Waves plug-ins are available in Sound Designer II format and Pro Tools TDM format.

Coming soon: Waves plug-ins for Adobe Premiere.

Keep it Digital!



Contact your Digidesign Dealer or Virtual Audio for more information and brochures.

Tel: 01438 861 110
Fax: 01438 861 112



human league

► *Travelogue* was recorded) serviced to make it workable. Ian's at the other extreme — he wants every possibility of new stuff. But Ian could handle the fact that some of the recording was over here on 24-track, some was on digital, some was on a sampler, some was live and some was in ProTools."

SOMETHING OLD, SOMETHING NEW, SOMETHING BORROWED...

Despite a number of additions (*SampleCell/Cubase Audio*) made in order to integrate with Ian Stanley's work methods, equipment purchases have been kept to a minimum. Oakey, a self-confessed hoarder, has actually retained the majority of classic equipment from the band's early days. The return to analogue values also sparked a competitive search amongst the recording team to seek out more classic pieces. Oakey: "We never got rid of gear — though Martyn Ware used to. Things used to 'disappear' via Martyn, who was very much the musical driving force in the first Human League, and we've all been out trying to get hold of the stuff that he got rid of along the way.

"We're now actually buying stuff that we couldn't afford in the first place — like American synths, because before we could only afford Japanese ones. Things like Oberheims especially — a 4-voice, and the Expander, which is a fantastically

WORDS OF WISDOM

Phil Oakey: "One thing that we learnt working along with Ian Stanley is that you have to work really hard, whereas we had got into the habit of watching the TV really hard."

interesting synth and maybe the last great analogue synth.

"What we really got into along the way was band-pass filters. We only had low-pass filters and suddenly we got things like the Jupiter 6 during the course of the album and it's fantastic. It's such an amazing synth — perhaps I shouldn't mention this before we've bought another...

"Ian also got a Jupiter 4 during the course of the recording but he took it away with him. What a fantastic, underrated synth that was. It was like a home organ with its horrible fake wood panels — eight programmable memories and eight presets!

"Ian Stanley bought a System 700 (along with an ARP 2600, the Roland JP4 and an Aston Martin sports car!) whilst he was here and we got some really good sounds on it. Martin Rushent had a system, so I'd got to grips with the basics; I had to

GEAR SPOTLIGHT

• YAMAHA TF1/TX816

Oakey "Each TF1 module is an original DX7 [there are eight in a TX816 rack]. And this came out at the dawn of MIDI, when it represented an astonishingly powerful system, with each unit being 16-note polyphonic. So all can be addressed separately via MIDI, but you're stuck with DX sounds, which went out of favour pretty quickly — although I predict the DX 'clang' will be back." Oakey confesses he made a concerted effort to learn the DX7, which he actually programs. Other Yamaha synths from the period include a rare DX1 keyboard.

• KORG EX800

Oakey: "It gets used a lot. It was the first MIDI expander that I'd seen — that's why we got it. It's very crude, but its great limitation is that it's only got one envelope, so you're playing a chord and there's just one envelope cutting in, turning everything on and off, which gives it a distinct feel of its own.

"I've always liked Korg; they were a 'kinky' instrument manufacturer who did crackers things that they don't do now. They used to just do 'daff' synths — The Human League really got its start because they produced the MiniKorg 700S, a synth that we could afford. It was a bizarre synth — it had a setting called 'tuned noise'. We've been trying to get hold of one since Martyn sold it, but unfortunately every time we come across one, Vince Clarke has just bought it!"

• OBERHEIM SEM MODULE & 8-VOICE

Oakey: "The SEM was, I think, the first Oberheim product, and you sat it next to your MiniMoog and it added the band-pass, low-pass and high-pass filters. You can't make any drum sounds on it because you

can't get the filter to resonate. But I like any white synth — like the cream ARP Odyssey and Oberheim 4-voice!

• SYSTEM 100 MODEL 104 SEQUENCER

Oakey: "This is what Ian Craig-Marsh used to use for our drums on the first two albums. He used to have it addressing the filter for both bass drum and snare sounds, and adjust the timing with the second row of knobs coming out of channel B and going into the CV to clock. And that was how we did our drums — by ear. Ian had to have an amazingly fine touch just to get the intervals right — and usually he did it, although there was one instance where the difference between the bass and the snare was a movement on the slider and he missed one halfway through 'Marianne'.

"A proper System 100 is the amplifier, sequencer, mid bit and the expander, and there are two speakers that go with it, but of course only one person has got those — Vince Clarke! And I'm sure he doesn't love it like I do."

• SYSTEM 100M

Oakey: "There are bits of the system that we've had since it first came out, and as it became more useful during the album I started filling in all the bits. We just bought a couple of pieces a month. Ian (Stanley) also had a system, so we had a really big setup and you could do a lot with it.



Pearl Syncoussion unit ("The sounds are used all over the album") perched atop the ARP Odyssey.

"The sequencers are hard to get hold of, along with the parametric equalisers and the phase shifters, which are fantastic. They've got this horrible choking nasal sound that I've never got out of anything else."

• PEARL SYNCOUSSION

Dodd: "Philip picked this amazing machine up from a local pawn shop for £40. I had it working with the 808, just doing a pattern, and then taking the external outputs from the 808 and using it to trigger this."

Oakey: "The sounds are used all over the album. They're similar to an Oberheim but with a 'twang' and very responsive."

• SYNCLAVIER

Martin Rushent and Oakey were amongst the first to buy Synclaviers. Now water-damaged and hopelessly outdated, the flightcased monster sits redundant in the studio's storage room. Oakey: "It doesn't bear thinking about — it cost £46,000 and would only sample monophonically."



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

COME AND CHECK OUT OUR NEW HI-TECH SHOWROOMS

MAIL ORDER CREDIT CARD HOTLINE
MANCHESTER 0161-236 8900
PRESTON 01772 203233

This Months Mega Deals

ART CSZ Stereo Compressor

RRP £299

Now £169 inc Delivery

Korg O5R/W

RRP £599

Now Only £399 inc Delivery

Tascam Deals

Tascam Porta 07 (4 track Recorder)
(with free mc)RRP £399 PHONE
Tascam 424
(Advanced 4 Track recorder)
(with free mc + CD headphones) ..RRP £549 £455 Cash
Tascam 464
4 track recorder with built in 12 ch desk
.....RRP £799 (ex-demo) £586 cash
Tascam Porta 03 (Basic 4 track recorder
.....RRP £349 £316 Cash
Tascam 488 (8 track recorder)
.....RRP £1499 Now £899 Cash
Tascam DA30 Mk I Professional DAT player with
shuttle searchRRP £1299 £1195 Cash
AIWA XD S1100 DAT 3 motor£799
Marantz 4 Track£599

LOW PRICE DEALS

Akal S01 Sampler Now Only£599
ART DXR Elite Now Only£225
ART RXR Elite Now Only£225
Korg M1 Synthesiser Now Only£815
Korg 01W/Pro Synth Now Only£1549
Yamaha QY8 Now Only£125
Yamaha TG300 Expander Now Only£399
Kawai K11 Keyboard£575
Roland PR-1 Sequencer£149
Proteus Expander 3XR£499
Peavey DPM-SP Expander£699
H/Ware Steinberg Score£59
S/Ware Creator£199

Keyboards

**Yamaha Virtual Acoustic
Synthesis Keyboards**
Now in Stock VL1 - VL7

Yamaha VL1	Roland 1080
Yamaha SY85	Roland JV50
Yamaha SY35	Korg X5
Yamaha TG50	Korg 01W/Pro
Yamaha TG100	Ensoniq ASR10
Yamaha TG300	Ensoniq TS12

FIND OUT MORE ABOUT THESE 3 SUPERB SAMPLERS

ESi-32? S2800?? S760???

AKAI PRICE CRASH
ALL AKAI SAMPLERS DOWN IN PRICE



BIGGEST LIBRARY IN THE NORTH WEST
Akai S2800 Akai S2800 i Akai S3000
Akai S3000 i Akai SD 3000
AKAI SPECIAL MPC 3000 Ex demo/hire Only £1999

SALE SALE SALE SALE

OUR BIGGEST SALE EVER WITH 1000's OF BARGAINS
SALE ENDS SATURDAY 1st APRIL 1995

SALE SALE SALE SALE

Some New, Secondhand & Ex demo Bargains at Preston

Tascam TSR8 8 TrackEx-demo £1999
Allen & Heath CS3 16:8:16:2Ex-demo £1949
Studiomaster P7 16:8:16:2Ex-demo £1750
Studiomaster P7 24:8:16:2New £2425
Tascam 34+4 Channel dbxS/H £449
Tascam 238 8 Track & RemoteS/H £549
Teac A3440 4 Track open reelS/H £299
Tascam M208 8:4:8:2S/H £399
Tascam MS516 16:8:16:2Ex-demo £1395
Tascam DA30 DATEx-demo £949
Emulator 2 + LibraryAs Seen £499
Yamaha TX81Z ModuleS/H £149
Kawai R50 Drum MachineS/H £125
KDR6 SQD 1 SequencerS/H £99
Elka Bass PedalsS/H £175
Emu Proteus 1 ModuleS/H £449
Roland D70 Super LA SynthS/H £649
Yamaha SPX 900 EffectsS/H £299
Korg PO1 V800 Reversed KeysS/H £149
Yamaha MJC8 MIDI PatchbayS/H £179

Novation Bass Station £349 + Free PSU

Deals On Speakers
Alesis Monitor 1's£280 Cash Pair
JBL 4028£315 Cash Pair
JBL 4206£POA

Sony DTC-60 DAT Machine 44.1 KHZ Analogue Recording Also 48KHZ/Digital Fader & Optical In-Out £799 (Ring)

PC Computers for Music 486 PC's with 8 Meg RAM 525 meg H/H/D 14" Colour Monitor

BUILT TO YOUR SPEC
with sound card interface
All up & running & ready to go
YOU WON'T BUY BETTER!

Some New, Secondhand & Ex demo Bargains

Roland PC200 New£169
Kawai G Mega Sound Module£299
Casio FZ-1 2 Meg£599
Novation Bass Station RackCALL
Yamaha SY55 Keyboard£399
Emax II keyboard 8meg RAM 100 meg HDex/hire £1599
Roland JV50 keyboardDeal £999
Roland JV35 keyboardDeal £799
Kawai K11 keyboard£645
Roland JV 1000£1439
Boss DR650 Drum Machine£299
Boss DR550 Drum MachineOnly £199
Yamaha DX11 keyboard£239
Roland TR606 Drum Machine£129
Tascam 644£575
Roland JX8P£425
Yamaha NS10 monitors£289
Control Synthesis Deep Space 9P.O.A.
Yamaha SPX900 ex-hire£365
Yamaha QX7 sequencer£99
Boss DR550 Mk II£169
Tascam 144 Portastudio£179

TIME + SPACE CD JUKEBOX

Now installed at our Manchester branch.
Top 100 CD samples on the Jukebox.
Check them out before you buy.

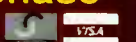


**24 Hour Delivery Service. We buy your secondhand equipment.
We now operate a price match price beater policy.**

Guitar set-ups, refrets, necks, bodies custom built, all repairs carried out on the premises at our Manchester shop by "Ady" our guitar specialist
with over 30 years experience. We have 2 qualified electronics engineers working on the premises at Manchester for rapid diagnosis repairs

Second-Hand • Part Exchange • Sales for Customers • Hire Purchase

All sales and repairs carry the A1 workshop warranty



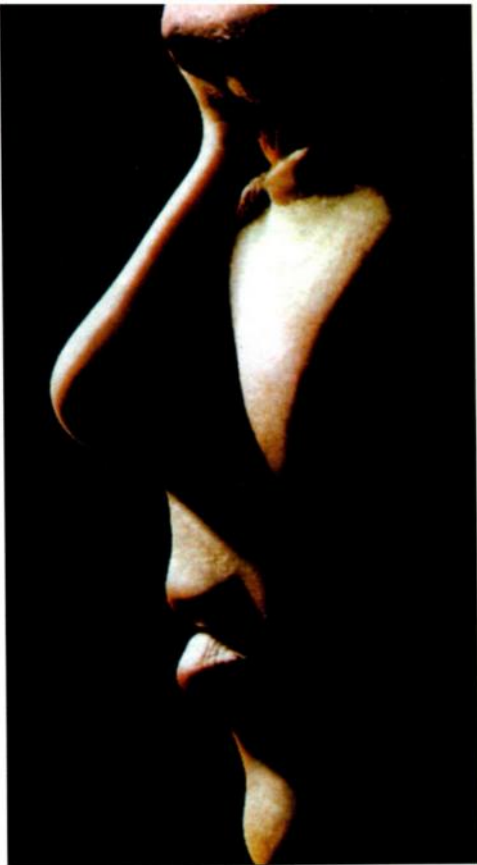
human league

► learn how to do all this stuff with the 'old' League — that was my job. Martyn (Ware) could do chords really well, Ian (Craig-Marsh) was fantastic at percussion and getting really detailed sounds, so I did the big mono things. I made a job of learning it, because I thought otherwise they were going to notice that I wasn't doing anything!"

I asked how the System 700 compares with the System 100. Oakey: "It's very different but they're both good for certain things. I like the System 100 because Roland supply a really good set of patches with it. You can set up a 'bird twittering' patch, which you can leave on and it's like you're in the woods! But the 100 is a bit limited with not enough inputs and so the 100M is miles better. We ended up using the 100M more than anything else and especially for anything where you wanted things to turn on and turn off — like for the bass on 'These Are The Days', when we were trying to emulate a Marvin Gaye bass sound from 'Midnight Love'. A big thing that happened while we were doing the recording was that we borrowed 808 State's ARP 2600 for an afternoon, after which we went on a mad search for one."

I admitted to being surprised that the Human League didn't already own synths like the 2600. Oakey responded: "In a way, we'd been loyal to Japanese synths. We thought that the American synths were for rockers and the likes of ELP, and not for real sequence-programmed pop groups. We did a big comparison and dragged all the synths together in one room, and with the 2600 you can just about get anything you can get on the System 100M, but with the ARP's built-in reverb.

"Before Ian got involved we had started setting



up our own drum sounds. Ian Craig-Marsh used to get fantastic bass drums, which is one of the hardest sounds to make convincingly, but the thing was that all those synths weren't stable at the low end, so that out of four beats you'd have two great ones and two 'alright' ones. What you can do now is get your great beat and bung it in the sampler — and that's allowed under the 'system'...

"The idea is that The Human League shouldn't ever really use recordings of the real world — apart from vocals. The sounds should be sourced entirely within the machines and the first time you hear them

LEAGUE EQUIPMENT

CONTROL ROOM:

- Amek Angela 28-input Console
- Mitsubishi X-400 Digital Multitrack
- Otari MTR 90 2-Inch Multitrack
- Otari MTR 12 Mk2 Half-Inch
- Ampex A100 8-track
- Fostex A80 8-track
- Revox B77 quarter-inch
- Revox PR99 quarter-inch
- Sony TCD-D3 portable DAT
- Tascam DA30 DAT
- Technics SL1200 Mk2 turntables (x2)

Additional desks: Fostex A-series, Studiomaster 16:8:2 and Trident FlexiMix.

COMPUTING & SOFTWARE:

- Apple Macintosh Quadra 650 32/500CD, IICX 25/250, SE30 10/100 and MacPlus
- Miro 19-inch colour monitor, Apple Macintosh 14-inch colour monitor, portrait display and CD300 CD-ROM
- Quantum 1.7Gb HD, Sony 600Mb optical drive, ProDisc 200Mb HD, DMS 40Mb HD, Rodime 40Mb HD
- Blank Software *Alchemy*

- Digidesign *AudioMedia II, Samplecell II* (x2), *Sound Designer II*
- Mark of the Unicorn *Digital Performer*
- Opcode *Galaxy Universal Librarian*
- Opcode *Studio Vision*
- Passport *Mastertracks Pro 5*
- Steinberg *Cubase Audio*

DRUM MACHINES/ELECTRONIC PERCUSSION:

- Boss DRP I Drum Synth Pad (x3)
- Boss DRP II (x2)
- Boss DRP III
- Boss DRP IV (x2)
- Linn 9000 (x2) & LM-1
- Roland TR727
- Roland TR808
- Roland DDR30
- Roland TR606 Drumatrix (x2)
- Roland Pad 5 Handypad
- Roland Pad 8 (x2)
- Roland R8 & R8M
- Simmons Analogue drums
- Yamaha DD10 & MR10
- Pearl SY1 Syncussion

SYNTHESIZERS & EXPANDERS:

- Exclusively Analogue Aviator synth

- Groove Electronics M303+
- Kawai K5M
- Korg EX800
- Oberheim Xpander
- Oberheim SEM module
- Roland System 100, comprising model 101 (x2); model 102 (x2); model 103; model 104 sequencers (x3); keyboard 180 (3-octave); keyboard 181 (4-octave); and keyboard 184 (Polyphonic 4CV)
- Roland System 100M, comprising: 110; 112 VCO (x3); 121 VCF (x3); 130 VCA (x3); 131 output mixer; 132 mixer (x2); 140 Dual Envelope Generator/LFO (x3); 150 ring modulator; 165 portamento (x2); 172 phaser (x2); 173 gate; 174 parametric EQ; 182 sequencer (x2); 190 3-unit powered case (x2); 191 5-unit powered case (x4)
- Roland MC202
- Roland MKS7
- Roland MKS70
- Roland SVC350 Vocoder
- Roland Bass Guitar Synth
- Roland GM70 Guitar Synth
- Roland GR33B Bass Controller

- Roland GR300 and GR700 Guitar Synth Controllers
- Yamaha EMT10
- Yamaha TX7
- Yamaha TX816

KEYBOARDS:

- ARP Axxe
- ARP Odyssey (white)
- Casio CZ1
- Casio CZ101 (x2)
- Casio VZ1
- Korg 770
- Korg Delta
- Korg Micro-Preset
- Korg MS10
- Moog Minimoog
- Oberheim 4-voice
- Roland JD800
- Roland Juno 106 (x2)
- Roland Jupiter 6
- Roland Jupiter 8
- Roland JX3P
- Roland JX8P (x2)
- Roland SH1000
- Roland SH3A
- Roland SH7
- Roland SH101

should be through a speaker. Having said that, you can use any effects — we're really happy banging things through an AC30 or the Leslie cabinet."

MIXING

The production time for *Octopus* was six months including mixing — which was undertaken by a host of specialist mixers, including Dave Bascombe, Mark 'Spike' Stent and Bob Kraushaar. Oakey: "One of Ian's great abilities, and something that we've had a problem with before, is delegating. And it got to the point where Ian said 'Well, I'm not good enough to mix this.' So we went out and got some of the best mixers in the world — and my God, were they good."

"The difference was only in balance — although 'Spike' Stent did add one sequence on 'Cruel Young Lovers' — but there wasn't much editing: it was simply balance, EQ and a bit of effects — maybe a lot of effects, in Spike's case. But as far as I'm concerned, for slightly Europeanised pop, he is the best mixer. Everything is just where it should be."

"For the more acoustic and slower stuff we used Dave Bascombe. Dave really sorted out 'Never Again', which was the hardest one to do by a long way, and at one point I thought we'd lost it. We were recording vocals here in this studio operating under the instructions of Ian (Stanley), who was next door moving everything around in ProTools and we couldn't see where it was all going. But we took it to Dave Bascombe and suddenly there was a really good song at the other end."

Bob Kraushaar, who also recorded a lot of the vocals, was employed to mix a couple of tracks, including 'Words'. Oakey: "We had this bizarre

situation where the tracks were being mixed in London and I was going down, staying at a hotel and popping in. And one night, I remember, we had three studios on the go with Dave (Bascombe) in one, Spike (Stent) in one and Bob (Kraushaar)



Various synths, including ARP Odyssey (on floor), ARP Axxe, Korg MS10, Roland SH7, SH1000 and SH3A, and Roland TR808 drum machine.

in another — and I was just going in, sitting down, listening and thinking 'well it's right'. I couldn't correct them, I couldn't improve on it — they'd just got it so good."

VOCALS

Oakey: "Bob Kraushaar is fantastic at recording vocals; he'd worked on and produced a number of

- Yamaha CS15
- Yamaha CS30
- Yamaha DX1
- Yamaha DX5 (x2)
- Yamaha DX7
- Yamaha PF10

MICROPHONES:

- AKG 414 (x2)
- AKG D12E
- AKG D20
- B&K 4011
- Neumann KM84i (x2)
- Neumann U87
- Shure SM57
- Shure SM58
- Tandy PZM

OUTBOARD:

- Akai ME10D MIDI Delay
- Akai ME15F Dynamics Controller
- Akai ME20A MIDI Sequencer/Arpeggiator
- Alesis Enhancer
- Alesis Micro-EQ (x2)
- Alesis Microverb Reverb (x2)
- Alesis S31Q Graphic (x2)
- Aphex Aural Exciter

- Behringer Studio Parametric (x2)
- BSS DPR-402 Comp/De-esser.
- dbx 120X Boom Box
- dbx X160 Comp/Limiter (x2)
- Drawmer DL241 Compressor
- Eventide H910 Harmonizer (x2)
- Fostex 4030 Controller & Synchroniser
- Great British Spring Reverb
- Kenton Pro 2 Dual Channel MIDI-CV Converters (x3)
- Kepex 2 TR804 8 Gates
- Korg KMS30 Synchroniser
- Lexicon LXP1 Multi-Effects
- Lynx MicroLynx Synchroniser
- MXR Delay System 2 (x2)
- Opcode studio 5 LX
- Quantec Room Simulator
- Roland A110 MIDI Displays (x2)
- SMS Jambox 4+
- Sycologic M14 & M16 MIDI Patching Matrix
- Urei 1176LN compressor
- Valley 610 compressor
- Yamaha MEP4 MIDI Event Processor
- Yamaha M551 Synchroniser
- Yamaha Q2031A Graphic EQ
- Yamaha R1000 Reverb

- Yamaha REV7 Effects
- Yamaha SPX90 Effects (x2)

SAMPLERS:

- Akai S1000
- Akai S900 (x2)
- Ensoniq Mirage

SEQUENCERS:

- ARP 1613 sequencer
- Doepfer MAQ 16/3 MIDI sequencer
- Roland MC4B (x2)
- Roland TB303
- Yamaha QX1
- Exclusively Analogue 16-step sequencers (x2)

MISCELLANEOUS:

- Boss HM2 and Rocker Wah Footpedals
- Morley Pedal
- Overlord Tube Distortion
- Lexicon MRC Programmer
- Roland PG200 & PG800 Synth Programmer (x2)
- Sansui PC-X1 PCM Audio Processor
- Sony F1 PCM Digital Audio Encoder

human league

► tracks on the album before (*Romantic?*), one of which I thought should have been a really big hit and wasn't. I think it's all down to his ears. It's as simple as that; it doesn't matter what equipment you've got, when you've got a guy sitting there



listening so hard. He works quietly and the standard of the vocals is breathtaking.

"Joanne and Susan were singing better than they've ever sung and he was recording it better than it's ever been recorded, and it meant that I got left off half the choruses because it sounded worse when I joined in.

"Susan's got really good tuning whereas myself and Joanne aren't particularly strong on tuning. I

tend to write all of the vocal lines — I've ended up doing that, which I never really wanted to do. But I do a rough version and it's only when Susan starts doing it that we really see what it's going to be like."

For recording vocals on *Octopus*, The Human League used a Bruel & Kjaer 4011 — a strange choice of vocal microphone.

Dodd: "We thought that as well. When we sat down with Ian (Stanley) he said 'I want all the old valve mics', and we put them on but they

didn't sound good at all. So we did a bit of a blind test with 12 tracks using various mics, hiring in a B&K, and that was how it happened.

"The vocals then went into Ian's Neve rack [compressors, gates and parametric EQs], into the Urei compressor, and from there straight to tape. Bob was doing subtle things like taking the vocals through the EQ, adding a little bit of light compression off the Neve and then putting another bit of light compression off the Urei." Oakey: "When Dave built a vocal booth out in the live room, Ian insisted on having the back open so the voice had a bit of genuine room with it. We thought it was crazy at the time, but in retrospect I think it was really clever.

"Since we bought a Synclavier in about 1983/4 I have never since trusted a spec sheet."

"Andy Gray had an interesting setup — a Macintosh 950 with *AudioMedia* and two *SampleCell* cards in it, along with *Cubase Audio*, which we also had to get into. People talk about the 'paperless office' but Andy was doing complete remixes within the 950, which was amazing."

Dodd: "For me it's the tapeless aspect that's a bit worrying. The digital side is fine, but get a problem and you lose the whole lot. We had some frightening times where we'd play a tape and there'd be a drop-out over all 32 tracks, including the code track. So we'd clean the heads, rewind it and it would play fine." Oakey: "Yeah, and we'd

get into bizarre technical arguments, which were really quite heated, about how you stripe tape! In my day you used to just throw it down — I mean, we made the *Travelogue* album on just the Ampex 8-track, so it's such an amazing change."

OCTOPUS: TRACKS

■ 'Tell Me When'

Oakey: "It's got some really exciting bits like the little bit at the beginning after the four-on-the-floor chorus intro, which was all done by me and Andy one day on the System 100M. We'd spent ages and the sound was chords being played into separate mono sections that

THE HUMAN LEAGUE STUDIO

In 1988, The Human League set up their private HL Studio within a shell unit of Sheffield's AVEC building. The basic design is copied from Martin Rushent's Genetic studio, where the band always felt comfortable recording. The control room is fitted out with an early Amek Angela console and custom JBL main monitors made by Audionics. Tape machines include a Mitsubishi X400 digital multitrack and Otari MTR90 2-inch. I asked whether the band feel they've benefited from having their own studio.

Oakey: "It's got as many disadvantages as it's got advantages. Sometimes it's great to get on an airplane and go to Minneapolis for four months, or, like Depeche Mode, say 'let's go and record one in Berlin'. The only real advantage of this is that it saves you a great deal of money — we thought that it would certainly pay for itself in two albums."

HL Studio Control Room.



MIX TO DIGITAL MULTITRACK ANYWHERE

SPiRiT



It's so easy to take a digital multitrack recorder out on the road. But teaming it up with a compact, affordable mixer that's up to the job of making studio quality live digital recordings direct to tape is not so easy. So Spirit have created ProTracker.

We've packed a high quality 8 channel in-line mixer into a 3U case. ProTracker has an ultra clean signal path, and everything you need to make professional digital quality recordings – yet ProTracker will also excel when you want to overdub, it'll even mix, your front-of-house sound while you're recording. ProTracker's key to digital quality recording lies in its unique integration of superior components into the straightest possible signal path between its input and its balanced tape output, effectively giving you a pure direct-to-tape mix. To keep a tight rein on levels going to tape – and to prevent accidental digital overload distortion when a band member decides to crank up the volume – there's a fast limiter with switchable threshold: you just set and forget it. Take a good look at the impressive feature list...

MAIN FEATURES

- In-line monitoring signal format – 2 discrete inputs per channel
- 8 channels with 60mm linear faders (>90dB cut off)
- Expansion sockets for daisy-chaining ProTrackers
- New high quality, high gain mic pre-amp (-129dBu EIN) with switchable 48V phantom power on every input
- Balanced Line inputs with built-in DI capability for instruments
- Switchable High Pass Filter on every channel!
- Built-in Limiter (300µSec attack time/ 3 Sec release), selectable on every channel
- Insert and Aux switchable between channel and monitor paths
- Aux globally switchable pre/post fader
- PFL on each channel
- Overload and Limiter indicators on each channel
- Monitor fader and Pan control
- Balanced Tape Send/Return, switchable between +4dBu and -10dBV
- Separate pre-fade Insert and Return sockets, eliminating Y-cables
- Stereo Effects Return with fader and PFL
- Inputs switchable to Mix to allow simultaneous front-of-house mixing and recording
- Mix routable to Tape Sends 7/8 for simultaneous 2-track recording, without affecting multitrack feeds from channels 1 to 6
- Headphone monitoring of 2-track return, Aux, 7/8 or Mix
- Solo indicator
- Monitor Outputs follow headphone output
- Mix Output and 2-Track Return accept +4dBu XLRs or -10dBV RCA phonos
- 100 – 240 VAC operation with internal universal switching power supply
- Road quality construction

Superb Live Recordings

ProTracker is the perfect live recording partner for affordable digital multitracks such as ADAT* and DA-88**; and, like digital multitracks, you can link several ProTrackers together for additional tracks. Each channel is equipped with our best-ever mic preamp and a balanced line input with direct instrument capability, so you don't have to use any noisy DI boxes. A High Pass Filter on each input cuts mic popping and stage rumble. With ProTracker, you can not only record to multitrack but you can also make and monitor a 2-track DAT master at the same time.

Overdub or Record Anytime, Anywhere

ProTracker is designed for the road. That's why we have incorporated a power supply that works all around the world, so you can make the best location recordings wherever you go. And with its compact rack design, ProTracker will fit into any outside broadcast or location recording system.



LIVE RECORDING AND MIXING



RECORDING ANYWHERE

pro TRACKER

Please send me a brochure on: Spirit ProTracker the complete Spirit Range
 I am interested in using ProTracker for:
 Live Recording Recording/Monitoring Small PA Location/OB
 Other application: _____
 Name: _____
 Address: _____

 _____ Post Code: _____
 Company/Band (if applicable): _____
 What magazines do you read? _____
 Tick here if you do not want to be kept on Spirit's mailing list

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 660482

* ADAT is a registered trademark of Alex Corporation
 ** DA-88 is a registered trademark of Tascam



SPiRiT

By Soundcraft

H A Harman International Company

human league

► weren't programmed all that much together, so the sounds don't quite fit together. And Ian just said 'OK, you've done it'. And there it is, on the record — number 6 in the charts."

Dodd: "For most synth-generated sounds we'd put them into *Cubase* and play them live with MIDI-to-CV boxes, until Ian decided it was ready to go to tape. Ian had a really good way of getting Philip to work. He'd sit with the System 100 in the corner, with a pair of headphones on, working on sounds." Oakey: "There was a really good thing going on with the headphones; because I've been knocked back in the last 10 years, I didn't want four people looking at me, and as Ian's working so intensely he doesn't notice that I'm over in the corner with headphones. And if it takes me an hour and a half to work something out — that's cool, at the end of it I'll say 'I've got something that you might like to hear Ian', and then they'll push the faders up and I feel confident enough to present it,



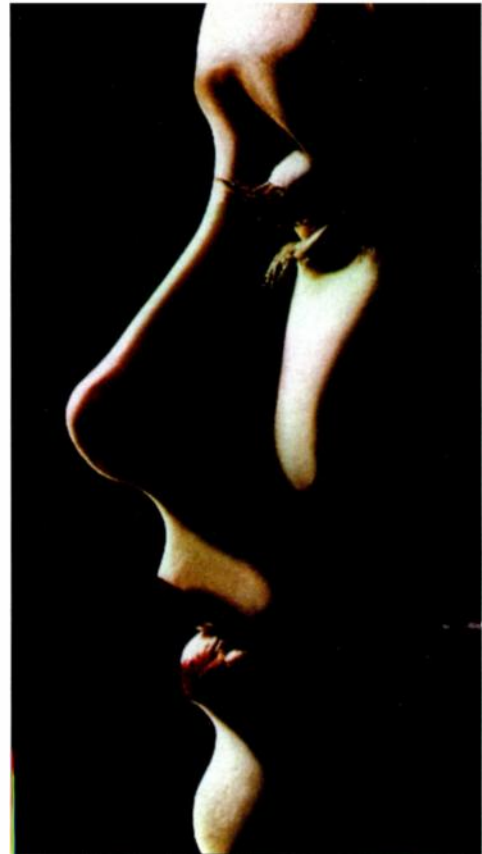
Producer Ian Stanley's Roland System 700, set up in HL Studio.

which was a really nice way of doing things.

"It's odd to think that we've been a synth group all this time and it's not since Martin Rushent that we've had anyone who really likes what we do. Until Ian came along, we'd not had anyone who would say 'that's a great sound and a great tune — I want to record it.' Mainly we've lived through the sampler era, where people couldn't understand why I wanted to make a sound like that. I love those sounds and I'm always going to love those sounds, even on an ELP record where the rest of the record is *so* bad that you have to love the sounds to wade through it."

■ 'John Cleese; Is He Funny?

Oakey: "I got quite entranced when the Italian disco thing started to happen, and we threw three tracks together in that vein at that stage. Then



when we were making the album, we found we needed an instrumental...

"It was a bit of a laugh — Andy Gray brought it more up-to-date, because we're not up-to-date with how you get your rhythms right now. There were some really good sounds where Andy had chopped up a bit of what we'd done before. We had the original multitrack and we'd been using a bit of portamento on a Juno 106, and he chopped out the big sweep sounds that I'd done three years before and never noticed. I think that was the only track that I wrote myself on the album; it was called 'Franco Italian' for ages, but we thought that was a bit of a giveaway. Everyone says it sounds like the Yello Magic Orchestra, which is a coincidence because we did some singing on a couple of YMO tracks — that was one of the things that kept us going after getting the sack from Virgin.

"At about the same time as that, the Utah Saints released 'I Believe In You' [the track incorporated a sample from The Human League's 'Love Action'], which was really nice and very encouraging — I think we would have given up at that time if it wasn't for those two things."

■ 'Cruel Young Lover'

Oakey: "There's all sorts going on during 'Cruel Young Lover', including feedback reverb with LFOs at the beginning. One time we set up the Leslie, feeding it with basic system noise from the System 700. Then we started rotating the horns and Ian Stanley looked at me and said 'Bloody hell — what's that?' And that's the big noise we used at the start of 'Cruel Young Lover'. We thought that we had to go on the 'mash-it-up' path because Vince Clarke has done analogue synths cleanly recorded so well, for so long, that there's no point trying to compete with that. So we're into 'mashing' and 'mashing' again as often as possible."

THE WORST THING THAT EVER HAPPENED TO SYNTHESIZERS...

Phil Oakey: "One of Ian Craig-Marsh's comments (our detailed soundman between 1977-80), was that the worst thing that ever happened to

synthesizers was that people put keyboards on them. That was a really clever point, because then people stopped trying to do something different."

Digital audio comes down to earth



When you wish to produce a result by means of an instrument do not allow yourself to complicate it by introducing many subsidiary parts, but follow the briefest way possible.

Leonardo Da Vinci 1452-1519

Natural
audio

Your complete Digital Recording System supplied and tailored to your personal requirements. With highly experienced staff who have already installed hundreds of systems, we really are the people to call. Private on-site demonstrations available or by appointment at our regional offices.

Tel: 0438 861800 Fax: 0438 861944

Natural Audio Ltd. 3 The Maltings, Walkern, Hertfordshire SG2 7NP

digl design • apple macintosh • yamaha • tascam • fostex • akai • mackie • steinberg • alesis • e-magic • motu • opcode • micropolis • dynatek ...



SYNTHESIZERS

SAMPLERS

BEST U.K. DEALS ON KORG X2, X3, X3R, 01/W, 05/R AND WAVESTATION SR... CALL

NEW LOW PRICES ON AKAI PRO SAMPLING

AKAI S01000	£699
AKAI S2800	£1299
AKAI S2800i	£1799
AKAI S3000	£2299
AKAI S3000i	£2799
AKAI S3200	£3499

ROLAND MS1 PHRASE & GROOVE SAMPLER
• UPTO 49 SEC STEREO SAMPLING • 16 SAMPLE MEMORY • FREE 75 MIN SAMPLE CD
ONLY £420

SYNTH EXPANDERS

E-MU PROTEUS FX ... NEW £599
E-MU MORPHEUS 'Z PLANE' SYNTH MODULE £1179
E-MU PROTEUS ULTRA £ CALL
KORG 05/R MODULE SPECIAL PRICE £4XX
YAMAHA TG300 £599
ROLAND JD990 £1249
ROLAND JV880 £499
ENSONIQ SQR £799
ROLAND SC88 SUPER SOUND CANVAS (64 NOTE) £ CALL
...PLUS MANY MORE NEW AND SECONDHAND UNITS IN STOCK.

Roland JV1080

4X EXPANSION SYNTH MODULE
BREATHTAKING EXPANDABLE SYNTH MODULE WITH 64 NOTE POLYPHONY, 32 BIT RISC CHIP TECHNOLOGY, A MASSIVE 640 INTERNAL PATCHES, 16 PART MULTI TIMBRALITY, 40 EFFECTS, GENERAL MIDI AND CAN TAKE UPTO 4 JV SERIES 8MB EXPANSION BOARDS OFFERING UPTO 1660 INTERNAL PATCHES

ONLY £1079

ROLAND JS90

PHRASE SAMPLING WORKSTATION
• BPM ADJUST • 1MB MEMORY
EXPANDABLE TO 4MB • 8 NOTE POLY
• X2 FUNCTION GIVES UPTO 90 SEC SAMPLING • ONLY £849

ROLAND S760

• 16 BIT STEREO SAMPLER
BEST U.K. PRICE!

ENSONIQ ASR10

STEREO SAMPLER NOW WITH DIRECT TO DISC SAMPLE RECORDING SOFTWARE.

AVAILABLE FROM NOTTINGHAM, BIRMINGHAM & LEEDS STORES

EMU ES132

• 32 VOICE • 2MB EXPANDABLE TO 32MB (SIMMS) • 16 BIT
• COMPATIBLE WITH E111, EMAX 2 AND AKAI S1000 LIBRARIES
32 4 POLE RESONANT FILTERS
• TIME COMPRESSION / EXPANSION • 4 SEPARATE OUTPUTS • DYNAMIC FX

ONLY £1199

FINANCE AVAILABLE (Subject to Status)

Why should YOU buy from Carlsbro?

1. If your gear breaks down and you need help whilst we are repairing it, we offer you a FREE HIRE SERVICE. The only thing that we ask is that you originally bought the gear from us.
 2. All Carlsbro stores are staffed by musicians, fully qualified in helping you purchase the correct item for your needs. However, if you get home and for any reason you feel uncomfortable with your purchase, come straight back to Carlsbro and you can exchange it for an alternative item.
 - Under normal circumstances we allow upto 14 days for you to return your goods (subject to condition of item.)
 3. If there is anything we have not done to help you with your purchase of if you are not happy with any aspect of our service, we urge you to tell us. We do not want you to be satisfied - we want you to be DELIGHTED!
- ...all this AND we will match any genuine written quote!

NEW KORG X5DR
• 64 VOICE • 8 MB ROM
• HALF RACK £CALL

KORG X5

THE LATEST HOT PRODUCT TO JOIN THE X RANGE OF KEYBOARDS, FEATURING • 61 NOTE VELOCITY KEYBOARD • 128 GENERAL MIDI PROGRAMMES • 8 GM DRUM KITS, • 100 PROGS, • 100 CDM81S, • DIGITAL EFFECTS • PC INTERFACE.

£789 inc. VAT

ALESIS QUADRASYNTH

• 64 VOICE POLYPHONIC • 76 NOTE KEYBOARD • ADAT INTERFACE
• SUPERB DIGITAL EFFECTS

• HUGE 16MB ROM WAS £1499
ONLY £999

KURZWEIL K2000

SYNTHESIZER / SAMPLER KEYBOARD AND RACK EXPANDER

CHOOSE FROM THE STANDARD KEYBOARD SYNTHESIZER TO THE FULLY ARMED RACK MODULE WITH FULL SAMPLE OPTION.
• HIGH QUALITY 'FAT' SOUNDS • ACCEPTS WAVE DATA FROM S1000 / ASR10 ETC

From Only £1999

ROLAND XP50

IMAGINE THE POWER AND UNMATCHED EXPANDABILITY OF THE NOW INFAMOUS JV1080, ADD A 61 NOTE VELOCITY AND AFTERTOUCH KEYBOARD PLUS THE NEWLY DEVELOPED MRC PRO 16 TRACK SEQUENCER GIVING UPTO 16 MIDI CHANNELS PER TRACK, LOOP AND PATTERN RECORD AND REALTIME PHRASE SEQUENCING AND YOU HAVE SOMETHING VERY SPECIAL AT YOUR FINGERTIPS AND ALL FOR

ONLY £1399

VINTAGE VAULT

E-MU VINTAGE KEYS / PLUS VERY POPULAR RACK MOUNT MODULE FEATURING 8MB OF HIGH QUALITY SAMPLES FROM OBERHEIM, SEQUENTIAL CIRCUITS, MOOG, ROLAND, RHODES, MELLOTRON, ARP ETC., ETC FROM UNDER £800

ROLAND VINTAGE SYNTH ANALOGUE SOUND EXPANSION BOARD
226 SOUNDS FROM THE JUPITER 8, JX10, SH101, TB303, ARP MOOG, OBERHEIM, S.C. AND MORE... ONLY £249 FITS MOST MODELS OF JV/JD SYNTHESIZERS. CALL FOR DETAILS.

BASS... THE FINAL FRONTIER...

THE DEEP BASS NINE PURE ANALOGUE MONSTER FEATURING • DYNAMIC ANALOG FILTERS INCLUDING RESONANCE • SAWTOOTH AND SQUAREWAVE WAVEFORMS
• ON BOARD MIDI TO CV @ INVERTER • EXTERNAL AUDIO PROCESSING CAPABILITIES
• FILTER CONTROL VIA FRONT PANEL KNOBS OR MIDI ALL FOR ONLY £449

NOVATION BASS STATION FEATURES ALL THE ELEMENTS THAT ARE REQUIRED TO PRODUCE SOME OF THE BEST SOUNDS IN THE BUSINESS. 02 OSCILLATORS • FULL ANALOG FILTERS INCLUDING RESONANCE • TB303 TYPE SOUNDS
SELLING FAST AT ONLY £349

New Bass Station Rack Coming Soon! £399

We Accept: Cash Switch

RECORDING



BEHRINGER EURODESK 24-8-2

Brand new including 5 year guarantee!

SPIRIT PRICE CRASH!

16.8.2 Studio

• 8 GROUP WITH 2 BAND EQ ON EACH GROUP BUS • 6 VERSATILE AUX SENDS • 4 STEREO EFFECTS RETURNS • 4 BAND EQ INC. 2 SWEPT MID • TEN 16 SEGMENT BAR GRAPH METERS & MORE

WAS £2426

NOW £1499

24.8.2 Studio

WAS £3570

NOW £1999

32.8.2 Studio

WAS £4368

NOW £2699

16.8.2 Studio LC

• 8 GROUP BUS • 3 BAND EQ • 7 STEREO FX RETURNS • 10 AUX SENDS

LAST FEW £1279

YAMAHA PROMIX 01

CALL INTO YOUR NEAREST CARLSBRO STORE FOR A DEMO OF THIS EXTRA ORDINARY NEW AUTO-MATED 16 CHANNEL DESK. CHECK THESE FEATURES: • FULL MIDI AUTOMATION • MOTORISED 60MM FADERS • TWO INTERNAL EFFECTS (CAN BE STORED WITH MIX SETTINGS) • INSTANT MEMORY RECALL OF EQ, LEVELS AND SETTINGS • FOUR FADER GROUPS • ANALOG 2 TRACK IN / OUT • MIDI IN / OUT • 24 BIT INTERNAL PROCESSING • 20 BIT AD/DA CONVERTORS • 36 BIT INTERNAL PROCESSING • DYNAMIC RANGE IN EXCESS OF 100dB

£1899

SIGNAL PROCESSORS

LARGE STOCKS OF SIGNAL PROCESSORS FROM ALESIS, ROLAND, BOSS, YAMAHA, BEHRINGER, DIGITECH, ART, ENSONIQ, ZOOM AND MORE.

YAMAHA

FX770 MULTI EFFECTS.....£499

BEHRINGER

FULL RANGE OF BEHRINGER SIGNAL PROCESSORS NOW IN STOCK.

• EX2200J DUALFLEX II £129 • EX3001 ULTRAFLEX £215 • EX1000J BASSFLEX £215 • MOX2000 COMPOSER £325 • SNR202J DENOISER £199

...AND MORE AT GREAT LOW PRICES!

ALESIS

QUADRAVERB 2

SPECIAL PRICE £749

ZOOM SCOOP

Zoom 1202

STUDIO EFFECTS UNIT

new £169

Zoom 9120

MULTI EFFECTS UNIT

new £279

MICS

COMPREHENSIVE SELECTION OF LIVE AND STUDIO QUALITY MICROPHONES INCLUDING AKG, BEYER DYNAMIC, SHURE, NEUMANN, SENNHEISER ETC.

AKG C3000

PERFORMANCE MICROPHONE • CARDIOID / HYPERCARDIOID POLAR PATTERN • 20HZ - 20,000 HZ FREQUENCY • 200 OHM IMPEDANCE • LARGE DIAPHRAGM

Was £499

Our Price **£299**

MIDI RECORDING

MAIN DEALERS FOR ALL INDUSTRY STANDARD SOFTWARE PACKAGES INCLUDING CUBASE, CUBASE SCORE, CUBASE AUDIO, CUBASE WINDOWS, NOTATOR LOGIC, LOGIC AUDIO, SAW, CAKEWALK AND MANY MORE....

MULTITRACKERS

NEW TASCAM 480mini

• 12 INPUTS - 8 MONO INPUTS + 2 STEREO INPUTS • XLRs ON INPUTS 1 AND 2 • 48V PHANTOM POWERING ON INPUTS 1 AND 2 • 3 BAND EQ WITH SWEPEABLE MID ON ALL 8 CHANNELS • MULTI MIX MODE GIVES 20 INPUTS ON MIXDOWN

£1299

TASCAM 484

• 2 TAPE SPEEDS • 12 MIXER INPUTS • 2 BAND EQ • 2 EFFECT SENDS • UPTO 4 TRACKS SIMULTANEOUS RECORDING • DBX NOISE REDUCTION • PITCH CONTROL • XLR MIC / LINE INPUTS 1 - 4 • AUTO PUNCH IN / OUT

£679

TASCAM 424

• 3 TAPE SPEEDS • 8 MIXER INPUTS • 2 BAND EQ • LOGIC CONTROLLED TRANSPORT • UPTO 4 TRACKS SIMULTANEOUS RECORDING • DBX NOISE REDUCTION • PITCH CONTROL • 3 POSITION INPUT SELECTORS

£499

TASCAM PORTA 07

• HIGH TAPE SPEED • 4 MIXER INPUTS • 2 BAND EQ • STEREO EFFECT RETURNS • UPTO 4 TRACKS SIMULTANEOUS RECORDING • DBX NOISE REDUCTION • PITCH CONTROL

£359

TASCAM PORTA 03

4 TRACK MINISTUDIO

£199

Fostex XR5

NEW CASSETTE MULTITRACK RECORDER FROM FOSTEX FEATURING • 4 CHANNEL INPUT • 2 AUX SENDS • 2 STEREO AUX RETURNS • DOLBY NOISE REDUCTION • 4 DIRECT TAPE OUTPUTS • 2 INSERT POINTS • HIGH SPEED RECORDING / PLAY (9.5CM/S) • PITCH CONTROL

ONLY **£375**

DIGITAL RECORDERS

ENTER THE WORLD OF DIGITAL RECORDING, AND YOU'LL EXPERIENCE UNSURPASSED SOUND QUALITY WITH UNRIVALLED FACILITIES. EASE OF USE AND A HIGH LEVEL OF CONTROL NOT NORMALLY FOUND ON ANALOGUE MACHINES. FOR THE LATEST AND BEST SYSTEMS CURRENTLY AVAILABLE CALL YOUR NEAREST DIGITAL RECORDING SPECIALISTS.

- FOSTEX RDB • TASCAM DAB8
- ALESIS ADAT • AKAI DR4D
- NEW AKAI DR8

WE HAVE EVERYTHING YOU NEED FOR A SIMPLE 4 TRACK SET UP TO A FULL 24, 48, 64 TRACK SYSTEM OR MORE!

TASCAM DA30mkII

DAT RECORDER / PLAYER

• JOG / SHUTTLE WHEEL • 48KHZ, 44.1 KHZ SAMPLE RATES • SPDIF • AES/EBU LIMITED STOCKS ARRIVING • ORDER YOURS NOW...

£1299 inc. VAT

SONY DTC60es

DAT RECORDER • NOW AVAILABLE

£799 inc. VAT

Carlsbro

WHAT MUSICIANS NEED

4 Smallbrook, Queensway, **BIRMINGHAM**: ☎ 0121 643 4655
77-79 Osmaston Road, **DERBY**: ☎ 01332 348156
71a High St., Old Town, **HEMEL HEMPSTEAD**: ☎ 01442 217541
3-4 York Towers, 383 York Road, **LEEDS**: ☎ 0113 240 5077
22 Humberstone Road, **LEICESTER**: ☎ 0116 262 4183

182-184 Chesterfield Road North, **MANSFIELD**: ☎ 01623 651633
2 Sovereign Way, Anglia Square, **NORWICH**: ☎ 01603 666891
11-13 Hockley, **NOTTINGHAM**: ☎ 0115 958 1888
720 City Road, **SHEFFIELD**: ☎ 0114 264 0000
35-39 New Hall Street, Hanley, **STOKE ON TRENT**: ☎ 01782 205100

MAIL ORDER WELCOME

SHEFFIELD STORE
NOW OPEN TILL
8.00pm WEEKDAYS

We've had the analogue synth revival; now it's the turn of the analogue sequencer! GORDON REID checks out Analogue Systems' brand-new 16-step analogue sequencer, and explains just why you might want such an apparently obsolete device.

Analogue sequencers, it seems, are a bit like policemen and Number 25 buses — you can never find one when you want one, and then a whole bunch of them come along together. So, is 1995 going to be the year of the vintage sequencer? Doepfer Musikelektronik started the ball rolling in 1993 with the MAQ16/3 (although that is, strictly speaking, a MIDI sequencer, and only analogue in style) and Analogue Systems, brainchild of vintage synth expert Bob Williams, are now following in their footsteps. With more British 16-step sequencers already in development, maybe it's time to look again at why these obscure pieces of equipment, built from relatively primitive electronics to obsolete principles, can still attract such devotion — and such significant wads of money. After all, look what you can get for £700... a round-trip ticket to Colombia, an Atari, colour monitor, hard drive and squillion event 100-channel MIDI sequencer... or, a 3-channel 16-event analogue sequencer in a 2U box. But which is the right one for you?

QUALITY STREET

In a world where British synthesizer products have traditionally exuded the unmistakable air of "cottage industry" manufacturing, the first impression you get when taking the TH48 from its box is one of uncompromising quality. No doubt far more expensive to manufacture than necessary, it looks

good, it feels good, and... well, we'll see. The custom-built knobs are exact copies of original ARP2500 hardware, the switches are expensive 'rocker' types, and the 15 chromed socket-nuts are all aligned exactly the same way. Equal care has been taken internally, proving that beauty can be more than skin deep. This is a box built to look good, and to last.

The TH48 is supplied with a mains lead, three 3.5mm patch leads, and an Allen key for removing or replacing knob heads. A nice touch, that. Unfortunately, the review unit had no manual, but not to worry — operation is easy and intuitive, so let's get sequencing...

IN USE

Sixteen steps has become something of a norm for analogue sequencers, and Analogue Systems have not seen fit to break with tradition. However, instead of the usual single or dual row of voltage controls, the TH48 offers three. Since Rows A and B have associated semitone Quantisers, these are clearly the ones designed for traditional pitch sequencing duties. On the other hand, Row C has a zero to two-second 'Slew' control for portamento and other voltage-controlled effects. Each Row features an independent 'range' control, offering ± 7.5 volts for a maximum of 15 octaves on a volt/octave synth, while all three Rows share the reset/run/trigger toggles found underneath each step.

Setting up basic sequences couldn't be easier: first, decide which row to use, and connect the 'CV Out' and appropriate 'Trigger Out' ('S-Trig' for Moogs, and the conventional 'Trig' for almost everything else) to your synth. Don't forget to use the quantiser or there'll be tears! Next, decide which steps you are going to use ('run'), which will send triggers ('trig') and where the sequence will loop ('reset'). Then work your way through the sequence, using the Step button, and set the pitches using the small but accessible knobs. Finally, adjust the Speed of the internal clock between one step every four seconds and 25 steps per second. It's instant 'Karn Evil 9' or 'Love to Love Ya Baby', according to taste. Finally, leave 'Random' Off for conventional sequences, or switch it On for quasi-random selection of which step plays when.

But this is only where the fun begins. Using an ARP2600 as a test bed, it was possible to create

Stepping to it!

ANALOGUE
SYSTEMS
TH48
SEQUENCER



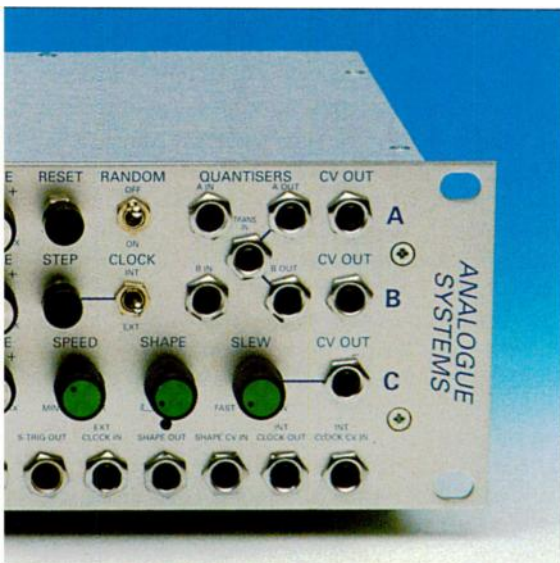
some superb musical effects quite impossible without the TH48. For example, connect Row C's CV Out to the ARP's filter pitch control, and direct white noise into the audio input to re-create some seriously acidic bleeps and bloops. Next, feed two different, but harmonically related, sequences to the CV inputs of oscillators 1 and 2, and direct them through the filter to add a pulsating musical backing. You're now ready to patch oscillator 3 directly to the ARP's on-board mixer, and play melodies from the keyboard. Hold on... a 4-part polyphonic ARP2600? Damn right. Now we're cookin'.

THE FUN GOES ON...

The TH48 was designed by a vintage synth enthusiast for the benefit of like-minded vintage synth enthusiasts, and I've yet to explore fully some of its more exotic features. These are accessed using the remaining knobs and I/O sockets: Trans In, Quantiser A In, Quantiser B In, Clock Int/Ext, Ext Clock In, Shape, Shape Out, Shape CV In, Int Clock Out, and Int Clock CV In (see box 'Exotic Features' for more details). Clearly a close relative of the voltage control modules of the late '60s and early '70s, the TH48 will sit happily alongside Roland System 700s, ARP2500s and 2600s, and Moog Modular Systems. Consequently, an open mind and some free experimentation can yield startling results. There's no room within this review to do more than scratch the surface, but see the separate 'VCF' box for some idea of what the TH48 makes possible.

CV VERSUS MIDI

It's tempting to compare the TH48 to the Doepfer MAQ 16/3 (reviewed Sound on Sound, July '93). After all, both products are designed to produce repetitive sequences and effects that can easily be modified in real-time. But, whilst a MIDI sequencer like the Doepfer can look like its analogue counterpart and offer many additional facilities, it lacks one important facility inherent to voltage control: you can't add multiple MIDI controllers and audio signals together to create new effects. Consequently, you can't realistically compare a MIDI sequencer (the Doepfer) to a computer-based MIDI software sequencer, or to the TH48 and its vintage brethren. If you need an analogue sequencer, you need an analogue sequencer. Period.



VCF — VOLTAGE CONTROLLED FUN

- Set up a sequence and apply an LFO to the Int Clock CV In. This, of course, modulates the speed at which the sequence runs.
- Apply keyboard CV to the Trans (transpose) In socket, and play the keyboard to modulate the sequence in real time.
- Apply heavily filtered noise or Sample & Hold to any input for random pitch or temporal modulation.
- Modify the shape of the gate pulse (Shape) to alter the amplitude and/or filter envelopes on the synth. This results in more human sounds and sequences. Apply noise to the Shape CV In for random envelope modulation.
- Drive the Ext Clock In at audio frequencies, and use the 16 steps to define a complex waveform. Direct this back to the synth as an independent oscillator. The shape is multi-stage and heavily quantised, so it's sort-of digital. And it sounds it.
- Use the Quantiser Ins and Outs to quantise changes in control voltages, such as the synthesizer's initial filter frequency. Synchronise and process an analogue drum machine through the ARP in this way for pure techno.
- Shortages of patch-leads and inputs notwithstanding, try all or as many as possible of the above simultaneously.

OMISSIONS AND IMPROVEMENTS

I can see some users complaining about the small knobs and compact styling of the TH48. After all, faders give far better visual feedback than knobs ever can. But I'm not one of the whingers. Analogue Systems have obviously made a conscious decision to keep the TH48 as small as possible and, whilst 2U is a very tight space into which to cram so many controls and interfaces, I never once found myself nudging the wrong knob or knocking an interface lead. Maybe I've just got lovely petite fingers...?

Despite all of the above, the TH48 could be improved, although three modifications would make it very difficult to criticise. The first would be the ability to step through Rows at different speeds, making it possible to create more musical poly-sequences by modulating one Row from another. The second would be a method of creating simultaneous sequences of differing lengths, and the third would be the capacity to chain Rows together for sequences of up to 48 steps. Mind you, no other product, current or vintage, offers all these facilities. Indeed, none combines all the existing abilities of the TH48. Still, one can dream.

CONCLUSIONS

There will be many players in this MIDI-dominated world who can't imagine why anybody should want to spend £700 on an analogue sequencer. But you can't dismiss the genre. Second-hand units from ARP and Korg, far more limited than the TH48, sell for hundreds of pounds. Indeed, you'll be lucky to get change from a grand if you want a genuine Moog sequencer. Consequently, if you're after a true analogue sequencer, the TH48 deserves to be the first, and until more competition appears, may be the last unit to check out. Alternatively, Bogota can be nice at this time of year. The choice, as they say, is yours... **SOS**

FURTHER INFORMATION

- E** TH48 £699 inc VAT.
- A** Analogue Systems, 17 Cannis Road, St Austell, Cornwall, PL25 4EB.
- T** 01726 67836/851611.
- F** 01726 67836.
- A** EMIS, 17 Stockwell Drive, Mangotsfield, Bristol BS17 3DN.
- T** 0117 956 1855.
- F** 0117 956 1855.

EXOTIC FEATURES

- Trans In: apply keyboard CV to this socket, and play the keyboard to modulate the sequence in real time.
- Quantiser A In/Quantiser B In: these allow any voltage from a synthesizer to play musical scale-type patterns that will always have chromatic tuning.
- Shape: this circuit shortens or lengthens clock pulses to give enhanced triggering effects to envelope shapers.

ANALOGUE SYSTEMS TH48 £699

PROS

- Excellent construction and attention to detail.
- Lots of Ins and Outs for flexible signal routing.
- Clear, simple and quick to use.
- 15-volt range.

CONS

- Mains On/Off switch inaccessible on the back panel.
- No way to step through Rows at different speeds.
- No way to chain Rows together.

CONCLUSION

A well-built, simple-to-use, yet flexible analogue sequencer with little (if any) current competition. The Germans will love it.



Photo courtesy Fostex.

back to basics

Part 2: You might think that the layout of your studio is determined purely by where your monitors go and where you sit, but as PAUL WHITE explains, there are a few areas where you have exercise a bit of care.

PLANNING YOUR FIRST HOME STUDIO

Good studio layout is largely a matter of ergonomics, but what feels comfortable for you may not necessarily be the best place for the equipment. The purpose of this article is to examine the 'position-sensitive' parts of a typical project studio, so that you can 'design out' potential problems at the planning stage. For example, it's fairly well known that speakers need to be set up symmetrically, and that they shouldn't be positioned too close to corners — but what other items of studio equipment are sensitive to where you put them?

ELECTRIC MUSIC

Looking first at the mains electricity side of the installation — it's always wise to run all your audio

equipment from the same ring main or spur; the golden rule is not to share this with any piece of equipment that create large surges of current, such as central heating systems, coffee machines, fridges and freezers, electric cookers, air conditioners and fan heaters with thermostatic switches. Failure to follow this rule can result in random clicks or pops on your recordings, and can conceivably cause computer crashes.

You should also avoid running signal cables, especially unbalanced feeds or mic cables, alongside mains cables, as hum may be induced from the alternating magnetic field that surrounds all current-carrying mains wiring. If a signal cable must cross a mains cable, it's best to ensure it does so at right angles — like this, the induced hum current due to magnetic interaction will be at

a minimum. Serious induced hum problems usually only arise when mains cables and signal cables are bound together in the same bundle, but it's always good practice to keep them as separate as possible anyway, just to be on the safe side. It's also a good idea to keep cables as short as is practical, and to use balanced connections wherever equipment has balanced inputs and outputs (see the 'Balancing Act' box for more on balanced inputs and outputs).

Large transformers also generate significant electromagnetic fields, which can induce hum in nearby sensitive equipment (for example, guitar pickups, mic amps and record turntable pickups) — and, sadly, amongst the greatest hum-inducers are the transformers belonging to large power amplifiers or mixing console power supplies! As a rule, never put mic preamps or instrument preamps right next to a power amplifier in an equipment rack, and ideally, leave a unit or two of space above and below power amps and Power Supply Units (PSUs). Not only does this reduce the risk of picking up hum, it also helps provide good ventilation.

LIGHTING

Conventional light bulbs don't normally cause interference, but fluorescent lights can induce hum and buzz into sensitive equipment. Fluorescents can be useful for maintenance work between sessions, but it's best to turn them off when you're working, unless you're absolutely sure they're not contributing to the background noise. Electronic light dimmers are even worse, so avoid these, both in the studio and nearby rooms.

Interestingly, the currently popular energy-saving bulbs are also based on a type of miniature fluorescent tube, but I've installed five in my studio and can't detect any difference in background noise level whether they are on or off. Even so, if you're thinking of doing the same, I'd recommend you check carefully to see if they're having any adverse effect. I moved over to this type of lamp because conventional filament bulbs last, on average, only a couple of weeks in my studio, possibly something to do with the vibration. Furthermore, the heat output from five ordinary bulbs is around 300 Watts more than from the same number of 'equivalent light output' energy-saving bulbs. In summer, this can make quite a difference to the comfort of your studio, especially if you don't have air conditioning.

MONITOR INTERFERENCE

It's hard to imagine making modern music without involving computers in some capacity, but if you've ever tried to record a guitar in the same room as a computer monitor, you probably know already that the resulting hum and buzz problems are far worse than you get from fluorescent lights. Single-coil pickups (of the type used on Stratocasters) are the most vulnerable, and in extreme cases, you have to sit ten feet or more from the monitor

to reduce the background buzz to an acceptable level — and even then, you might still need to use a noise gate.

You may already have noticed that interference is worse at some angles to the monitor's axis than at others, and the same is true if you rotate the guitar. By finding a relatively 'quiet' angle to work at, and by maximising the distance between guitar and monitor, you should be able to get the interference down to an acceptable level, but if

THE BALANCING ACT

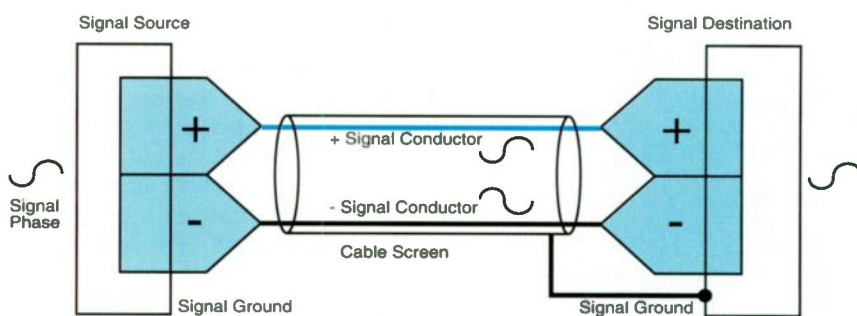
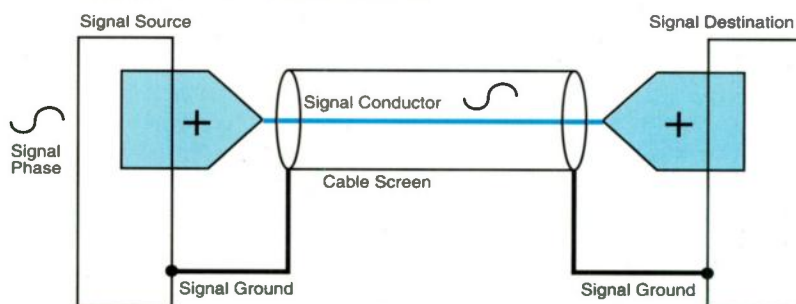
I used the terms *balanced* and *unbalanced* when talking about leads and connectors in the first part of this series last month, they've cropped up again this month, so perhaps they're worthy of a few words of explanation.

Analogue audio signal connections can either be *balanced* or *unbalanced*. An unbalanced connection relies on a two-conductor cable, and in the case of screened audio cable, this comprises a central core surrounded by woven or foil conductive screen. Though the screen (which is generally connected to ground), offers a degree of protection

connector (usually an XLR or stereo jack), you'll see that the normal signal connection is usually referred to as 'plus' while the inverted signal is 'minus'.

At the receiving piece of equipment, the 'minus' signal is inverted once again to bring it back into phase with the 'plus' signal and the two are added together. Why does this help? As the two signal wires are physically very close to each other, it's reasonable to assume that any interference will affect both conductors pretty much equally. When the 'minus' signal is reinverted at the receiving end, any interference on that line will also be

Unbalanced (top) and Balanced (below) connectors.



Note that in a balanced system, the screen may often be left disconnected at the 'source' end to assist in the prevention of ground loops

against electromagnetic interference, it is still possible for traces of outside interference to become superimposed on the wanted signal.

Balanced systems were developed to provide increased immunity to electromagnetic interference, and the principle is very simple. Instead of a two-conductor system, balancing involves using three conductors, one of which is still an outer screen, the other two being inner wires used to carry the signal. The reason for having two signal cables is that one has to be fed with a phase-inverted version of the signal, and if you look at the wiring details for a balanced

inverted, so when the 'plus' and 'minus' signals are added, the overall result is that the two interference signals cancel each other out, while the wanted signals combine. Even this isn't quite perfect, as you don't get exactly the same interference signal on each conductor, and the phase-inverting circuits at either end of the line aren't 100% accurate either, but even so, the amount of interference remaining on the final signal is a tiny fraction of what it would be on an unbalanced connection in similar conditions. The diagram shows both balanced and unbalanced connections.

Your first home studio

▶ not, the only viable options are to either record the guitar while it is played in another room, or to run your computer with the monitor turned off for a while (if it will let you!).

Humbucking pickups are less susceptible to radiated hum and buzz, but you shouldn't let your monitor force you into changing your guitar. Note:

demagnetiser, but I'm not guaranteeing it'll work every time! To avoid this problem, either work with magnetically-shielded monitor speakers, or keep your speakers at least 18 inches away from your screen.

THE EVILS OF SMOKING AND DRINK

It's worth noting that smoking doesn't only damage your health, it also significantly shortens the life of your faders, pots, switches and patchbay jacks. Other enemies of electrical equipment include soft drinks; the sugars and acids contained in most soft drinks have a very corrosive effect on circuit boards and component leads, so if you do spill a mug of orange juice into your faders, or into your favourite reverb unit, expect the worst!

Banning clients from standing drinks on your mixer or effects racks is the obvious thing to do, but if disaster does strike, turn off the affected gear at once, unplug it from the mains, and soak up as much liquid as you can using paper towels. If you have electrical knowledge, you can try removing the cover (but note that you may well invalidate any warranty still in operation by doing this — and *please* make sure the unit is unplugged!) and cleaning the circuit board with a cloth dipped in distilled water. Once the equipment is cleaned and allowed to dry, you'll probably find it works OK, but if in any doubt at all, get the equipment professionally cleaned and serviced by a competent service engineer. This needs to be done at once, before serious corrosion sets in.

In the case of contaminated faders, carbon types are best replaced, whereas conductive plastic models can usually be taken apart and cleaned with washing up liquid and water. Squirting WD40 through the slots may make you feel better, but is unlikely to cure the problem.

I think I've covered all the main points, and I think you'll agree that it shouldn't be too difficult to avoid most of the above problems once you realise that a problem exists in the first place. A studio is a complex system involving many pieces of electrical equipment and a great deal of wiring, so if you just sling it all together and expect it to work properly without giving the overall system any thought, on your own head be it!

505

THE OUTSIDE WORLD

Naturally, you have much less control over signal interference emanating from outside your studio than you do over interference that stems from your own equipment or mains supply. If you're unfortunate enough to live next door to a radio ham (or worse still, a commercial radio transmitter or taxi depot), you might find that nothing you do can keep stray broadcasts out of your audio chain, short of turning your whole studio into a Faraday cage (an earthed, metal-lined box or cage) and filtering all incoming mains! Unfortunately, there's no legal recourse to this menace providing the transmitter is licensed, so if you can't afford to take the Faraday cage

approach, all you can really do is to try to come to some kind of arrangement as regards transmitting times (in the case of radio amateurs) — or move!

Other problematic outside sources of interference include welding equipment (particularly gas welders), and any heavy industrial plant that uses high-powered motors. Nature isn't entirely guilt-free either, and it's as well to unplug all your gear in the event of a thunderstorm, because a lightning strike anywhere in the near vicinity could easily vapourise every semiconductor device in all your electronic equipment if it's been left plugged in, even if it's switched off!

if you use a notebook computer with an LCD screen, you won't suffer from this problem.

Before leaving the subject of computer screens, another uncomfortable combination is loudspeakers and computer or video monitors — unless the speakers are magnetically shielded. This time it's the monitor that suffers, as the magnets in the speakers may be powerful enough to deflect the electron beam inside the monitor tube, causing the monitor display to become distorted and the focus to deteriorate. With colour monitors, you often find coloured patches on an otherwise white screen — a sure indication of a nearby magnetic field. In extreme cases, you can end up with a permanent magnetic charge on the display tube, and picture quality won't entirely revert to normal when the speakers are moved away. If this happens, try switching the monitor on and off a few times so that the automatic degaussing circuit operates, but if the problem still persists, you may have to get the tube professionally demagnetised (I've actually degaussed a TV screen using a tape head

“Tape recorders should be kept away from strong magnetic fields. Sticking cute fridge magnets on the side of your recorder is definitely not a good idea...”

MORE ON MAGNETICS

Tape recorders should be kept away from strong magnetic fields (like those associated with large transformers) as the signal coming off a playback head is so small that any interference can add considerable noise and hum to the output. It's also important not to bring any form of permanent magnet into contact with any part of the tape transport, or you could end up with a magnetic charge on the heads and tape guides, which will not only affect the quality of new recordings, but may also cause existing recordings to deteriorate when they are played back on the machine. Some charge build-up is inevitable, which is why regular demagnetising is recommended, but strong magnets such as guitar pickups, magnetised screwdrivers, loudspeakers and so on should be kept well away. Sticking cute fridge magnets

on the side of your recorder is definitely not a good idea!

Tapes, particularly analogue tapes, can suffer permanent damage if stored near a strong magnetic field. Digital tapes are less susceptible, but there's no point in pushing your luck, so look after these too! Avoid storing tapes near to, or on top of, monitors, close to power cables or transformers, or indeed near *any* other obvious source of magnetism. Tapes also need to be kept at a relatively stable room temperature, in a low humidity environment, and must be protected from dust by means of suitable packaging or self-seal plastic bags. Direct sunlight is particularly damaging to tape. Giving your studio a regular clean with a vacuum cleaner will help to prolong the life of both your tapes and your tape heads.

◀ HARD disk made EASY ▶



Digital hard disk recording that gets the balance right

from any track; copy, move, insert or erase phrases across multiple tracks and instantly play back the edit without any loss of the original material. The jog/shuttle wheel lets you find the right edit point easily by rolling the recording back and forth at any speed you choose, or use the 9 locate points and 100 stack points to call it up directly. And with the DR8's unique TAKE comparison function you can make up to 5 recordings on any one track before selecting the best one. All these editing functions involve no loss of sound quality. And if you make a mistake, the UNDO function lets you try again.

The aim of the perfect recording medium is to reproduce exactly what the musician lays down, mix and edit the signal without quality loss and play it back with complete fidelity. And to do it simply, without fuss or complexity.

To achieve the first, digital recording direct to hard disk is the answer, but until Akai brought their long experience of digital audio to the problem, the second, equally important part, was so much wishful thinking.

Now, based on the technology of the successful DR4, Akai have launched the DR8 dedicated 8 track hard disk digital recorder/player in a format as familiar and easy to use as a conventional tape machine, and at a highly competitive price. The Akai DR8 is capable of professional quality 16 bit linear 8 track simultaneous recording and playback on a choice of hard disks. A 1 gig hard disk allows up to 3 hours and 17 track minutes recording time at 44.1 kHz, and the onboard digital interface makes data backup to .DAT easy. An optional memory upgrade will allow 4 track record/ 8 track playback from an external magneto optical disk, and it is possible to chain up to seven DR8 units together without the need for a synchronizer to increase the number of tracks to 56.

The DR8's powerful, non-destructive editing functions have the same logical feel as working with analogue tape. Random access to the disk lets you instantly play back or edit



A sophisticated, programmable 16 channel mixer is built in and lets you mix the 8 internal tracks with 8 external channels.



Options include an 8 or 16 channel realtime EQ board, MIDI and SMPTE interface boards and an Alesis® ADAT digital interface to send and receive 8 channel audio signals from® ADAT using a single cable. Remote operation is possible with the MT8 Mix Tablet and DL8 Remote Control Unit.

Most of the advantages of the DR8 can be found in the 4 channel DR4 hard disk recorder and its dedicated DL4d remote control. The DR4 offers the same high quality recording performance as its bigger brother, the same easy operation of editing functions and the unique Track/Merge facility to maximize disk space.

In the realm of digital sound, you can trust Akai to get it right.
®Alesis and ADAT are registered trademarks of Alesis Corporation.

Akai (U.K.) Ltd
 E.M.I. Division, Haslemere Heathrow Estate
 Parkway, Hounslow, Middlesex TW4 6NQ
 Tel. 0181 897 6388 Fax. 0181 759 8268





ZOOM 9150

VALVE DSP GUITAR MULTI-EFFECTS PROCESSOR

Eventually, pretty much everyone tries to recreate that old vintage valve guitar sound by using an old vintage valve, but Zoom have teamed tube technology with a powerful digital effects DSP to combine the best of old and new. PAUL WHITE finds out if the marriage works.

When I first read the words 'Valve DSP', I had a mental image of a custom chip about the size of Tesco, populated by acres of glowing valves and powered by a medium-sized sub-station. Obviously, the term wasn't meant to be taken literally, and what it actually means is 'a unit combining both valve and DSP technology'.

My initial reaction when switching on the Zoom 9150 was that I'd seen (or rather heard) it all before, but within minutes, I found myself tweaking patches, playing riffs and generally having a good time. I still think we've seen it all before, but not necessarily all in the same box or at this kind of price, and because the 9150 is so intuitively set out, you can dive right in there and start to create new patches without even opening the manual.

The deal is this: you get a wall-wart powered 1U rack processor (which you can use with or without the included rack ears), which combines a valve preamp stage (single 12AX7A) with a programmable DSP effects section not dissimilar to that used in other Zoom multi-effects units. Output filtering is employed so that you can get a good 'amp' sound by DI'ing straight into your mixing console, and working alongside the various effects is Zoom's own ZNR noise reduction system to keep the inevitable side effects of high gain overdrive to a minimum. Two external effects loops allow further devices to be patched in, and one of these

is programmable, allowing you to either include the external device in a given patch or not.

Real-time modulation provides the user with the ability to change certain effect parameters in real time, using either an optional foot control or a MIDI device capable of sending controller information; to make programming easier, the front panel features individual bypass controls for each of the main effects blocks including the analogue, valve preamp.

As is traditional with guitar-related processors, there's a front-panel, high-impedance input jack as well as a line-level input jack on the rear panel; an input level control, along with a clip warning LED, is all that's needed to match the guitar to the unit. The main outputs, also with a level control, are in stereo, and there's a convenient headphone jack for private practice. A proprietary multi-pin connector is available for plugging in the optional Zoom FC50 or 8050 foot controllers.

Insert 1 is mono in, mono out, while Insert 2 is mono send, stereo return, though it may also be used in mono. A nice touch is that Insert 2 may also be programmed (on a 'per-patch' basis) to be either in series or in parallel with the internal DSP effects; in parallel mode, it may be fed either from either the pre- or post-EQ signal.

ZOOM 9150 £449.95

PROS

- Easy to use.
- Realistic price.
- Good range of contemporary and vintage guitar sounds.

CONS

- Input Clip LED isn't always as informative as it should be
- I don't know if I dare mention pitch shifter again but... pitch shifter — there, I've said it!

SUMMARY

A good-sounding, versatile guitar preamp/effects package that would work well both live and in the studio. Could double as a general-purpose studio effects unit if you choose a clean preamp setting.

24 Hour Telephone Sales and Support
24 HOUR

DAWSONS

24 Hours a Day 365 Days a Year
Lowest Prices Guaranteed
All at 15 Days Satisfaction

Interest Free Credit
No need to visit the shop.
Just phone us up and all the
details can be taken without
you even leaving the house!

Roland MS-1 **£125** deposit
0% Finance
plus 6 monthly payments of £50
Total credit price £425

*Ideal entry point sampler
Free Sample CD
Auto Hooping
Stereo*



SPiRiT
Spirit Studio Deals

Spirit Studio 16/8/2 **£299** deposit
plus 10 monthly payments of £120
Total credit price £1499

Spirit Studio 24/8/2 **£499** deposit
plus 10 monthly payments of £150
Total credit price £1999

Spirit Studio 32/8/2 **£899** deposit
plus 18 monthly payments of £100
Total credit price £2699



E-MU ESi-32 **£199** deposit
0% Finance
plus 10 monthly payments of £100
Total credit price £1199

Plus FREE 10 U Rack, 20 HD Disks and FREE DELIVERY



Roland XP-50 **£1399**
0% Finance
And receive 2 vouchers enabling you to 15% off a Roland JV1080 expansion board.

Coming Soon

- 64 Note Polyphony
- 4 Expansion Ports
- Excellent Sequencer
- Direct from Disc Midi File Player



SPECIAL ADAT 24/8/2 PACKAGE
• Spirit 24/8
• Alesis Adat + Looms
£3999 inc. VAT & Delivery

ORDER NOW!



Emulator IV **£4800**
IN STOCK NOW!




Roland JV1080 **£179** deposit
FREE DELIVERY
0% Finance
plus 10 monthly payments of £90
Total credit price £1079

And receive 2 vouchers enabling you to 15% off a Roland JV1080 expansion board.



YAMAHA ProMix 01 **£400** deposit
0% Finance
plus 18 monthly payments of £80
Total credit price £1840

FREE DELIVERY



AKAI SO1 **£199** deposit
0% Finance
plus 10 monthly payments of £50
Total credit price £599

£299 deposit
plus 10 monthly payments of £100
Total credit price £1299

£2800 deposit
plus 10 monthly payments of £130
Total credit price £1799

£499 deposit
plus 10 monthly payments of £170
Total credit price £1299

£599 deposit
plus 10 monthly payments of £170
Total credit price £2299

£3000 deposit
plus 18 monthly payments of £100
Total credit price £2799


Plus FREE Time & Space Sample CD

Plus FREE Time & Space Sample CD of your choice

Plus FREE CD Rom Player & CD Rom

Plus 2 FREE Time & Space Sample CD of your choice

Plus FREE CD Rom Player & CD Rom



Roland VG8 **£499** deposit
0% Finance
plus 10 monthly payments of £150
Total credit price £1999

MUST BE HEARD TO BE BELIEVED

- Ultimate Guitar System
- Physical Modelling
- COSM & HRM Technology
- Includes GK2A



YAMAHA SY85 **£199** deposit
0% Finance
plus 10 monthly payments of £80
Total credit price £999

FREE DELIVERY



AKAI DR8 **ON DEMO**



KORG OSR/W **£398**
ORDER NOW!

LIMITED



YAMAHA HI-TECH TG500 **£139** deposit
0% Finance
plus 6 monthly payments of £85
Total credit price £649



Oktava Mics **Call for best prices**



ATARI **£549**
• 1 Meg Atari
• Hi-Res Monitor
• E-Magic Notator

LAST SHIPMENT EVER

Please Call Now for Availability



YAMAHA HI-TECH MU80 **£199** deposit
0% Finance
plus 10 monthly payments of £50
Total credit price £699

FREE DELIVERY



BassStation **Call for best prices**



If at any time within 15 days of purchase you are not satisfied, then we will refund the original price advertised for an equivalent item of a lower price. This provided that the items you return are in the same condition as when you received them. We will not be responsible for any damage to the items you return. We will gladly refund the difference.

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. But some items are not eligible for this policy. 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.

65 Sankey Street, Warrington WA1 1SU
0925 245422
FAX 0925 417812
24hr

Knowledge, Advice and the best deals are only a phone call away



Dawsons Mail Order Telephone Lines are now open 24 hours a day, 365 days a year. AND we DON'T mean an answering phone. Have you ever needed help and advice out of normal hours - well now this facility is available! (Shop hours are as normal.)

DAWSONS

ZOOM 9150

► Up to five effects can be used simultaneously, made up from the following blocks:

- Preamp
- EQ
- Modulation
- Delay
- Reverb

The Preamp section offers eight different choices of clean, overdrive and lead (very overdrive!) settings, each of which has a number of editable parameters, while the EQ block can work as a 3-band EQ, EQ-enhancer, auto-wah or pedal-controller wah. Modulation provides all the stock modulated delay effects such as flanging, chorus and phasing, but it also includes pitch shifting, tremolo/panning, a rotary speaker simulation, and direct pedal control pitch for those obligatory hooligan dive bombing bits.

Delay is used for setting up either mono or ping-pong (alternating left and right) delays up to a maximum delay time of 1S, and Reverb provides conventional reverb, early reflection, ping-pong delay, and delay panning. If you don't need to use the reverb section, its RAM allocation may be donated to the delay section to add up to 900mS.

Altogether there are 27 basic effects types from which to choose, and though the sampling frequency is only 31.25kHz (giving a theoretical audio bandwidth of around 15kHz), the fact that most guitar amps have a far more limited bandwidth than this means that the subjective sound isn't compromised in any way.

IN THE DRIVING SEAT

The mandatory tour of the presets is achieved using the Rotary Edit dial, and if the adjacent Dial Rush button is pressed, you can skim through the presets 10 at a time. There are 99 factory preset patches and up to 99 user patches may be stored; as delivered, the user patches contain copies of the factory patches. Swapping between the user and preset banks is simply a matter of hitting the front panel Memory Bank button; all the patches have titles visible in the custom LCD window alongside the patch number.

Editing patches is easy: once you're in Edit mode, pushing any of the individual Effect buttons in the centre section will call up the edit menu for that effect block, and a simple paging system steps through the various edit pages, all of which access a single parameter. Tweaking is accomplished via the Edit Dial, and even though the depth of 'tweakability' isn't as great as with something like the Zoom 9050, there's still plenty of scope for creative sound shaping without feeling restricted. A sixth button labelled Total/Bypass functions as a bypass button in Play mode but provides access to additional patch features when in edit mode. It's here that you decide how Insert point 2 is configured and what the overall effects patch level should be.

A Utility section is included to handle functions such as patch naming, MIDI global settings and the MIDI mapping of any 128 of the available patches to MIDI program change numbers. It's also in this section that you may assign a MIDI control change number to take care of the 9150's overall level, as well as deciding exactly how you'd like the Bypass button to work. Normally the Bypass leaves any reverb or delay effect to finish doing its stuff, but you can opt for a heavy-handed 'mute-everything-now' approach if that suits you better. SysEx dumping and loading is also handled here, and you can opt to send: All settings, All Patch Settings, MIDI Settings or the Current Buffer contents. Patch names are transmitted along with the patch information.

THE SOUNDS

With any guitar processor, its viability as a DI'able recording tool rests on the effectiveness of the preamp's overdrive characteristics and the output's speaker/amp simulation filter circuitry. In both these vital areas, the 9150 scores highly, and because the input stage includes a simple compressor system (just four fixed depth settings to choose from), it is possible to set up smooth, sustaining clean tones as well as being able to make mildly distorted sounds work more convincingly. There are two clean patches, one of which bypasses the valve altogether, and though EQ is available in the digital EQ section, the preamp also has variable tone and/or colour depending on which basic amp-type setting you choose. Using the various overdrive options, it's possible to emulate all the classic rock sounds quite closely. For example, there's the heavily-notched British stack sound, the middly American metal sound, and various classic '70s rock sounds to choose from. I particularly like the way the second harmonic tries to lift itself out of the sounds as they sustain, which sounds quite similar to the effect you get from standing close to a real amp. There's no more 'grit' in the sound than you'd expect from a miked-up combo, and though the tail end of the decay can be a little raggy, the same is true of every guitar preamp I've tried to date, especially if you've got a fairly bright, biting tone set up.

Winding down the gain to produce more of a blues tone also works pretty well, with a reasonable amount of 'touch sensitivity', though this still doesn't have quite the 'feel' of a real amp. As you might expect from this type of device, what you hear from the studio monitors isn't the same as what you'd hear from a guitar amp in the same room but more like what you'd expect a guitar amp to sound like on record. Certainly the sense of loudness and power is there, even at quite low monitoring levels. Zoom's ZNR noise reduction also resides in the Preamp section, and though you can sometimes hear a little noise behind an overdriven or heavily EQ'd sound, it does keep the gaps between notes clean without seeming to affect the natural decay of the notes. Also, as it comes before the delay and reverb sections, these aren't adversely affected, as would likely be the case if gating was applied right at the output.

"My initial reaction when switching on the Zoom 9150 was that I'd seen (or rather heard) it all before, but within minutes, I found myself tweaking patches, playing riffs and generally having a good time."

The digital effects are pretty standard, but very competent for all that. I still can't make myself like the sound of budget pitch shifters (they make everything sound like an underwater sitar!), but everything else is fine, with the classic tremolo and rotary speaker setting being particularly useful. With only around 10 parameters to choose from per effect block, setting up is very fast and easy, and even though the reverb parameters look very basic when compared to those of a dedicated reverb unit, you can still create gated and reverse sounds by changing the envelope of the Early Reflections module; for New Age freaks, the conventional reverb can be adjusted from 0.15 all the way up to 105.

If there is a restriction, it is that the effects are always patched in the same order, and though the preset order is logical for most applications, it's sometimes nice to be able to chorus or flange the output from a reverb, rather than having reverb always at the end of the chain, as is the case here. I also found that my PRS guitar, which has a very high output level, was capable of clipping the input stage even with the 9150's gain turned down. This only happened when I played very hard, but a dual-sensitivity input for humbuckers and single-coil pickups could have solved this. Also, still on the subject of gain structure, some of the patches went into overload well before the clip LED came on, so

it may be that this isn't monitoring the optimum point in the signal path, or maybe it doesn't check for processor overload. Either way, you have to rely on your ears more than on the flashing red LED to let you know that the input level setting is too high.

SUMMARY

Given its mid-range price tag, the 9150 turns out to be a really nice sounding unit with a very musician-friendly operating system. The guitar sounds it produces are both rich and varied, but I hesitate to attribute all this to the tube preamp, as I've heard equally good sounds from some of the better solid-state recording preamps. All the effects sound well up to scratch (aside from the pitch shifting, which would appear to be impossible to implement properly in a budget unit), and the possibility of real-time control, especially wah and pitch-bending, will no doubt appeal to the live performer as well as the recording musician.

"Using the various overdrive options, it's possible to emulate all the classic rock sounds quite closely."

SOS

FURTHER INFORMATION

- £ 9150 £449.95 inc VAT.
- A MCMXCIX, 9 Hutton Street, London NW8 8PR.
- T 0171 723 7221.
- F 0171 262 8215.



No deposit interest free credit available on most items, with subsidised finance available on everything else!

We are clearing all our ex DEMO stock, phone for one off special deals!
Large selection of used equipment always in stock.

SYNTHS IN STOCK



S2, S2 Rack, S3, WX2, WX2m,
 & the NEW SX2 & SX3



SY35, SY85, MU5, MU80,

Hello music, CBX-K3,
 TG100, TG300, TG500, QY8, QY20,
 QY300, MDF2, QR10, RY10, RY20,
 W5, W7, VL1, VL7.



Classic Keys, Proteus FX,
 Vintage Keys Plus, Performance,
 ProteusOrchestral, Morpheus,
 Ultra Proteus, ESI32, EIV.



Quadrasynt / Rack



Bass Station / rack

QUASIMIDI

Quasar, Technox



KC20, K11, G-Mega, G-MegaLX



K2000 v3, Micro Piano



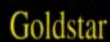
MS40, MS50, MS60



KKI, KKIL

Orla Commander 80

CHARLIE LAB Digital



GMK49, S230, S330, S325, S525



X5, X3

MIXERS IN STOCK



1202, LM3204, CR1604,

Mackie 8-Bus



BKX8600, BKX8800,

PMC802b, PMC1202B,

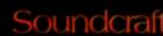
PMC1602B

SAMSON

1502, 1604, 2204

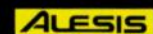


Minisound, Minipower,
 Groove, Powercase.



Spirit Folio range

EFFECTS IN STOCK



Microverb III, Midiverb III,
 Midiverb IV, Quadraverb,
 Quadraverb 2, 3630, MEQ230



FXR, FXR Elite, MR-1,
 Multiverb Alpha



REV 100, R100, EMP700,
 GC2020



GX2, CX2



PCL3200, PEQ3400,
 PEQ3600

0117 956 1855

Mon/Tue 10am-5pm Closed Wed Thur-Sat 10am-5pm

17 Stockwell Drive, Mangotsfield Bristol BS17 3DN

Other times by appointment only.

SAMPLE PURE INSPIRATION:

SAMPLE-CDs BY: A.M.G. • BEST SERVICE • BIG FISH • EAST-WEST • GREYTSOUNDS • IJO ENTS. • INVISION • NORTHSTAR • Q-U-P ARTS • SAMPLEHEADS • TIME+SPACE • VOICE CRYSTAL • WC MUSIC RESEARCH • ETC...

LISTEN BEFORE YOU BUY

Now you can be certain that the sample library you buy will deliver the sounds you need.

Our reputation is on the line every time you make a purchase, so we distribute only the highest quality products available, from the world's best developers, and we offer UN-BIASED and helpful advice to mail-order customers. However, if you prefer to listen before you buy, please visit one of the following 14 locations and listen to the entire contents of the world's top 100 audio sampling CDs on one of our Sony 100-CD Sample-CD Jukeboxes.

So far, our **SAMPLE-CD JUKEBOXES** are already installed at:
 • Soho Soundhouse, 114 Charing Cross Rd, LONDON W1, Tel: 0171-379 5148; • Music Lab, 72-76 Everholt St, LONDON, Tel: 0171-388 5392; • C.T.I., Fumbally Court, Fumbally Lane, DUBLIN 8, Ireland, Tel: Dublin 45 45 400; • Music Village, 10 High Rd, Chadwell Heath, ROMFORD, Essex, Tel: 0181-598 9506; • Sound Control, 61 Jamaica St, GLASGOW, Scotland, Tel: 0141-204 0322; • Carlsbro, 22 Humberstone Rd, LEICESTER, Tel: 01533-624183; • Carlsbro, 11-13 Hockley, NOTTINGHAM, Tel: 01602-581888; • Dawsons Music, 65 Sankey St, WARRINGTON, Cheshire, Tel: 01925-632591; • Emis, 17 Stockwell Drive, Mangotsfield, BRISTOL, Tel: 01179-561855; • Andertons, 58/59 Woodbridge Rd, GUILDFORD, Surrey, Tel: 01483-38212; • A1 Music, 88 Oxford St, MANCHESTER, Tel: 0161-236 0340; • Musical Exchanges, 89 Old Snow Hill, BIRMINGHAM, Tel: 0121-236 7544; • Sound Control, 10 Moseley St, NEWCASTLE, Tel: 0191-232 4175; • Time+Space (by appointment only), BERICHAMSTED, Herts, Tel: 01442-870681.

FUNKY ASS LOOPS

Brand new from East-West, & produced by the New Power Generation (they do all the drums & programming for Prince). "Seriously HOT! 5 stars for content, 5 for value and 5 for sound quality" (Keyboard, USA). This super-funky disc from the USA will prove to be the inspiration for many hits. All grooves played live - but not just with traditional drums - you won't believe the sounds used, and you get all the separate component samples as well. **Out now.** (MP-ROM versions also in the pipeline). **£59.95**



X-STATIC GOLDMINE 2. 1500 Hip-hop loops & Ol'Skool Funk samples. Loops are all made to fit with 'LoopMaps' helps intermixing of loops with different BPMs). • Deep Bass Tones & Grooves • Funky Guitar Riffs • Old Clavinetts, Rhodes & Organs • Horny Horns • Chedy Synths • Jazzy Flutes • Vinyl FX • Rolls • Fills • Drums & Percussion. • Audio CD: £59.95 Akai CD-ROM £149.00 BOTH: £199.00
X-STATIC GOLDMINE 3. Massive selection of Hip-hop, Ragga, Techno/hardcore, etc. This disc is PURE DANCE in the tradition of the original X-Static Goldmine. Usability and credibility of this disc is well up to usual standards. An essential studio item for dance producers. **Audio CD: £59.95 £59.95 EACH**



TEKNOINDUSTRIAL
 From the producers of the 5-star Rated sample CD Technophobia! This new CD just got reviewed by the USA's No.1 magazine 'Keyboard'; it also scored 5 stars for content, 5 for value and 5 for sound quality! (a techno CD record previously held only by 'Zero-G Technoance'!). Loops, kicks, snares, sound effects, industrial percussion noises, vocoder, basses and synths. **Out now** (CD-ROM versions coming soon). **Audio CD: £59.95**



XX-LARGE THE KILLER BRAND NEW! THE SEQUEL FROM THE MAKERS OF X-LARGE
 Over 100 minutes (different mono samples on the left and right tracks). 750 synths, chords, organs, voices, pads (synths are multisampled). Techno & trance hooks. 250 Basses, 750 Drumloops (80% in stereo, & perfectly tuned and grouped into BPMs from 130-200 BPM), Analog Drum Machines (adjusted to every possible variation). **£59.95**

FUNKY BASS. 2CD set by VLAD NASLAS. (Sequel to "Funk Guitar"). Instantly usable DEFINITIVE collection of funky bass sounds & rhythms. Styles from Motown to Meltdown. "A marathon technical achievement... immaculately recorded, sound & playing is convincingly 70's - AUDIO DYNAMITE" (Sound on Sound). CD 1 features riffs & FX supported by multi-samples on CD 2. 100% original. Over 3000 samples. Trade in your audio CD (out now) for the forthcoming CD-ROM versions.



HEART OF ASIA
 One of the most comprehensive collections of Asian instruments & phrases. Digitally recorded in the field, this remarkable 2-disc set includes over 1 gigabyte of exotic Chinese, Malay, Nepalese, Tibetan Javanese, Hindi, Sanskrit, Mandarin, Thai & Indian samples, including instruments, phrases, opera divas, chants, speech, gamelan orchestra, monks. Perfect for your next film score, album or remix project. **Audio 2CD set: £79.95. CD-ROM 2CD set: £299**



FUNKY ELEMENTS CD-ROM
 Both audio CD volumes have now been combined to make one CD-ROM (Over 50MB). (Over 1900 samples!) - all programmed into killer patches ready to play. Fat with feel, this disc is guaranteed to serve up that 'funk sound'. Essential for all retro-funksters. **★ ★ ★ ★ ★ Five Star review.** Loops, drums, horns, guitars, all you need. Still one of our very best selling libraries & now much more accessible. **RELEASE DATES: Akai and Sample-CDs: March 95; Roland: April 95.** **£149**

FREE CD/FREE CD-ROM

Select EITHER "SAMPLEMANIA 2" - the BRAND NEW Time+Space Showcase Sample-CD or "INTERACTIVE" - the Best Service showcase (includes audio samples and MAC/PC interactive showcase). **YOU MAY HAVE ONE OF THE ABOVE CDs FREE WITH ANY ORDER but only when the total order value is £49.95 or over).**
 or choose "NOW! 2 - THE FUTURE", the NEW AMG Showcase CD (Only £10.00 when purchased with any AMG CD), (all the above CDs are packed with samples & demos from existing & future products). **YOU CAN ALSO GET A FREE CD-ROM** - the Time+Space Showcase CD-ROM in Akai S3000/S1000 format. **Over 250MB of samples** from many existing & future products. It's **FREE** when you order any other CD-ROM!
***OFFERS LIMITED TO ONE PER HOUSEHOLD, WHILE STOCKS LAST**

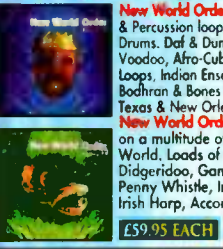


PHANTOM HORNS
 New from Zero-G, a top-class horn sample library featuring the dynamic and much admired sounds of the UK's most in-demand horn section, The Phantom Horns (incl. John Thirkell & Gary Barnacle, whose album credits read like a who's who of megastars). Packed with riffs, hits, swells and all the other horn elements you'll need to add real brass impact to your tracks. **£59.95**
 Out mid-March.

Techno T3 / Deep House
 From the makers of "LA Riot". Guaranteed to pump your freaky hallucinations! 74 minutes of deep deep house and techno samples • Tribal • Acid • Trance • Destructive basses • Synth stax from the fastest analogue machines • Includes construction kits, loops & components. **Audio CD out now (Akai CD-ROM coming soon).** **£59.95**



OverDUB
 House & acid jazz library
 By Uberschall, the German sampling maestro. 1200 sounds from the private library of DJ/producer MOUSSE T (remixer for Shabba Ranks and Inner Circle). Several versions of each drum loop, allowing flexibility. All loops are listed according to BPM. Stocks of new material to inspire new House and Acid Jazz projects. **£59.95**



New World Order Journey # 1. Fantastic Collection of Ethnic & Percussion loops. Tribal Rhythms, Ritual, Djembe, Talking Drums, Daf & Dumbek Loops. Calypso. Reggae, Haitian Voodoo, Afro-Cuban, Congos & Bongos, Latin Funk. Tabla Loops, Indian Ensemble, Taiko and other Rhythms from Japan. Bodhran & Bones from Ireland, Street Beats & Shuffles from Texas & New Orleans. Amazing!! All original recordings.
New World Order Journey # 2. Extensive performances on a multitude of acoustic Instruments from all over the World. Loads of seldom heard Folk/Historical Instruments, Didgeridoo, Gamelan, Sitar, Pan Flutes, Water Flutes, Penny Whistle, Irish Wooden Flute, Bouzouki, Banjos, Irish Harp, Accordions, Bagpipes, Shawms, Crumhorn, Hurdy Gurdys, Jew's Harps. Plus vocals. Loops, Riffs, Slides, Chords, Scales etc. **£59.95 EACH**



ZERO-G ETHNIC II
 ★★★★★ (Sound on Sound). Another exotic set of samples recorded by the Paradise Organisation. The producers of the highly successful "Zero-G Ethnic" sample CD have been roaming Africa, India and the far east for 2 years in pursuit of material for a new disc. This is the result, with all samples recorded "in the field", and it's dynamic. An enormous collection of ethnic vocals, rhythms and instrument riffs. **Audio CD: £39.95**

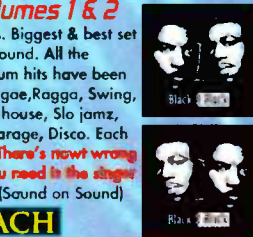


Vindaloo
 By Hoggie & The Turbinator at Nu-Groove Productions. The definitive Bhangra Sample CD. A spicy concoction of Indian percussion loops, single sha hits and authentic Bhangra instrumentation/FX. Mostly in stereo. Loops grouped in "kits" of similar sounds and tempos. "There's something good about this product... Never before have so many Bhangra ingredients been so accessible... Feel the feel. **FRANK!** (Sound on Sound). **Audio CD: £59.95**

CALL FOR FREE CATALOGUE!

Only the newest releases are in this advert - YOU MUST GET THE FULL CATALOGUE!!
 We also have a FREE 48-page Book called "Don't Take Our Word For It..." containing full reprints of over 50 magazine reviews of sample CDs & CD-ROMs!
 All existing customers should have received this catalog automatically. Make sure we have your correct address!
72 COLOUR PAGES - 100's of PRODUCTS!

BLACK II BLACK Volumes 1 & 2
 By Steve McIntosh & Joe Charles. Biggest & best set of kickin' R+B samples around. All the loops, Vocals, Brass lines, & Drum hits have been specially recorded. Features Reggae, Ragga, Swing, Jazz house, Euro house, Mad house, Slo jamz, Rap, Guitar licks, Bass lines, Garage, Disco. Each volume runs over 73 minutes. "There's nowt wrong with this soulful set - now all you need is the singer and the song. ★★★★★ (Sound on Sound)" **£59.95 EACH**



Peter Siedlaczek's ORCHESTRAL COLOURS
 Siedlaczek's name means pure class. His latest project is a specially recorded collection of rich & evocative orchestral samples that will bring colour & inspiration to your music • Hits & Finales • Moods & Timbres • Orchestral layers, chords, arpeggios, tremolos & Glissandos • Runs & Sequences. A film composers dream. "Quality is guaranteed. You have never been able to access such superb orchestral material so cheaply before. ★★★★★ 5 stars" (Sound on Sound). **Audio CD: £39.95, CD-ROM: £149**



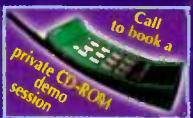
FUNKY RHYTHMS YOU CAN'T LIVE WITHOUT
 NEW from the USA, a huge slice of hot sampleable FUNK! - a great weapon for hip-hop, house, hardcore & funk production. All new, original, license-free stereo DRUM loops plus 100's of original funky BASS loops - over 900 bars in total. Most loops are 2 bars (standard feel plus variation for breakdown). **Audio CD available NOW. £59.95**



RHYTHM OF LIFE VOLUME 2
 By the GROOVE GURUS. Ensemble and solo grooves plus single hits of exotic percussion instruments. Sleigh Bells, Temple Bells, Cimbolom, African Frame Drum, Log Drums, Gongs, Vibes, Xylos, Marimbas, Koto, Shakuhachi, African Pads, Javanese Anklung, Flexatone, Talking Drum, Water Phone, Bell Tree, Tabla, Santor, Tamtam, Kodo Drums, Thai Shawm, Kabuki, Philipina Harp, and many more!! Looser, more ambient feel than Rhythm of Life 1. **£39.95**

CALL 01442 870681

TIME+SPACE - THE WORLD'S FINEST COLLECTION OF PROFESSIONAL SOUND LIBRARIES ON CD & CD-ROM



STOP PRESS! NEW from A.M.G.: Two HOT new releases should be out by the time you read this: LOUP SOUP and BLACKBEAT - call us for all the juicy details about these two high-profile products! **Audio CD: £59.95**



ANALOG TO DIGITAL VOL. 2: A2D - Raved about by Dance producers for its usability and versatility for everything from Ambient/Trance to the hardest of Hardcore Techno. • Atmospheres • Loops and Tunes • Drums and Percussion • Keyboards and Synths • Pads and Moods • Special Effects • Waveforms • 708 Samples • 79 minutes. **£59.95**

AMBIENT VOLUME 2. THE SEQUEL by IAN BODDY, which achieved a **5-star** five-star review in Sound on Sound magazine. Comes very highly recommended. A wealth of rich synth atmospheres & textures from one of the UK's leading synthesists. **Audio CD: £59.95. NOW ALSO ON AKAI CD-ROM VOLUMES 1 & 2, BOTH ON ONE CD-ROM - 500MB FOR ONLY £149**

GOTA YASHIKI'S "GROOVE ACTIVATOR". Brand new Drum & Percussion grooves, chops & fills. Gota's work with the likes of Soul II Soul, Bomb The Bass, & Simply Red is already part of pop folklore. His ability to make machines groove is legendary. This CD is very different, and a guaranteed source of inspiration. Quality, originality and creativity of the first order. **Audio CD: £59.95**

LOOPZILLA! Huge 2-disc set from Big Fish Audio, USA. Over 1000 Big Fat Drum Loops, Bass Loops, Guitar Loops, Live Grooves and Hip Hop FX. It's a monster collection! **NOW ONLY £69.95 for this 2 CD set.** Going down a storm & now even better value.

HANS ZIMMER GUITARS. From internationally acclaimed film composer Hans Zimmer. Powerful guitar textures /incredibly detailed and expressive/ Ranges from pristine acoustics to 57000 electric. Also massive rock guitar grooves each presented in every key and at various tempos. This library contributed to the sonic success of many films incl. The Lion King, Cool Runnings, True Romance, etc. A must-have for any serious sample collector. **Audio: £59.95, CD-ROM: £199.00**

DRUM TOOLS. LIVE R&K & Pop Loops. Very flexible. Tempo Sets, Inspiration Grooves & Individual Hits to allow flow and natural feel. 4/4 Straight, 4/4 Shuffled, 6/8, Blues, Brush- Big Section of Inspiration Grooves. Full Loops (BD, SD & Hat/ Ride), Fills, Separate Hat & Ride Loops, Perc Loops & Flams. By people from the Roxette team. **Audio CD: £59.95**

PETER SIBLACZEK'S CLASSICAL CHOIRS. From Czechoslovakia comes an incredibly haunting & inspiring set of vocal sounds. Awesome vocal power. An absolute masterpiece. **5-star** Five-star Review. (Sound on Sound) **Audio CD: £59.95. CD-ROM versions: £149.00**

ZERO-G "DATAFILES". World's best-selling dance sample collection ever. Over 3250 killer samples. Spurned countless chart hits. Now available as set of 3 CD-ROMs in PC "WAV" file format (**£19.95 each**), or 3 audio sampling CDs (**£19.95 each**), or one **AKAI CD-ROM (500MB, £99.00)**

NOW CD-ROM 510 MB! New samples from latest AMG Producer Series CDs. On Akai, Roland or SampleCell CD-ROM for only **£59.95!** Many of the sounds will never be available elsewhere. Material from Vince Clarke, Keith Le Blanc, Gota Yashiki, Megabass, Global Trance Mission, plus the entire contents of the "Now!" CD. **AMAZING VALUE 1 CD-ROM: £59.95**

"JAZZ LARGE". Worlds largest selection of dance grooves on a single CD. 1500 loops in groups of 80/85/90/95/100/105/110/ 115/ 120/125 & 130 BPM! Includes tuning chart for BPM's. **£59.95**

URBAN FLAVOR NEW! A collection of original and fresh programmed loops for Jazz, Soul, Funk, Hip hop, and Swingbeat. Includes a selection of percussion and miscellaneous FX. **Over 451 loops, 1005 samples in total. Audio CD: only £39.95**

SAMPLE DATA STORAGE HARD DRIVES • REMOVABLE DRIVES
Do you have a sample storage problem?
In today's studio environment it's becoming increasingly difficult to find enough disk space to store all your samples. We have been tackling this problem for years - call us for advice before buying elsewhere.



Optical Cartridge Drives
BOX Clever 230 Mb including 5 cartridges: £699 including VAT.
PHILIPS 230Mb Optical Cartridge: £44.95 inc. VAT
External Hard Drives
BOX Clever 730 Mb: £399.00 including VAT.
BOX Clever 2.1 Gig: £999.00 including VAT.
Syquest Drives
BOX Clever 200 Mb: £499.00 including VAT.
200 Mb Syquest Cartridge: £99.00 including VAT.

NOW PLAYING AT PRO-AUDIO DEALERS NATIONWIDE!
Time+Space Sample-CD Jukeboxes, fully-loaded with the world's Top 100 Sample-CDs!



MINDBLOWING NEW SOFTWARE

Circle Elements™
The INTERACTIVE sample-based music composing program that everyone's talking about.
YOU DON'T NEED A SAMPLER! YOU DON'T NEED A KEYBOARD! JUST YOUR PC OR MAC!!!

Get ready for whole new FAST creative playground in sound! It's a plug'n'play world of sampled sounds and rhythms. One quick go on this interactive Circle and you'll be amazed at what you see and hear. Combine natural sound effects with funky rhythm loops with the Moscow Symphonic Orchestra! This is no joke - it soon becomes your interactive reality - no matter what your standard of musicianship!

Totally Fascinating Concept
Each "CIRCLE ELEMENTS™" CD-ROM disc contains 1000 internationally flavoured natural, synthetic or instrument sounds & rhythms, specially prepared and pre-looped. We call these "Elements". Just load, for example, some riffs, licks, chords and rhythmic loops, then place some of these elements inside the circle (the uniquely-designed work screen) and press play. You'll be amazed. The sounds always fit together. Build new sound collages of any duration. And no musical knowledge is required to use the unique "CIRCLE ELEMENTS™" work screen - you just need common sense and a good ear for what sounds good!

Creative Energizer
You'll find that your mind opens naturally to new musical ideas. Combine, stretch and stack sounds in many different ways - even stack complete "Circle's"! All sounds are laid out in both 8 and 16 bit, & you can also import your own sound material (such as the 3250 sounds on the Zero-G Datafile PC WAV CD-ROMs for starters! - £19.95 for each disc). It feels just like a game - yet it's actually an amazingly powerful new way to create music with samples - a revolution in the way music can be constructed. Create tracks easily & quickly and have loads of fun along the way - and that really is the best recipe for making successful music.

There are 2 Circle Elements CD-ROM titles available so far. Each includes the software, plus:
Circle Volume 1: "Intergalactic" £29.95 includes over 1000 dance and electronic samples, and
Circle Volume 2: "Planet Earth" £29.95 includes over 1000 natural sound effects and musical instrument sounds, etc. Or you can buy the special package of
BOTH titles for only £49.95 (save £10.00)
(To use Circle Elements you need either: a PC 386 computer or better & 4Mb RAM or better & Windows 3.1 & Soundcard 8/16-Bit & CD-ROM drive; or: MAC computer with 68020 Processor or better, & 4Mb RAM or better & CD-ROM drive).

FAST MAIL ORDER

REMEMBER TO ASK FOR YOUR FREE 72-PAGE 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), postal orders, bank draft, building soc. cheque, or cash (please send cash by registered post for safety). **TO ORDER: TEL 01442 870681 • FAX 01442 877266**
If paying by personal cheque 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 806 • BERKHAMSTED HERTS • HP4 8EP • ENGLAND
International orders: please add £5 airmail or £10 express airmail. EC countries: please give your international VAT number if you have one.
Prices are subject to change without notice. E&OE excepted.
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.
Dealer Enquiries Invited
Time+Space
THE LEADING EDGE OF SAMPLING TECHNOLOGY

ZERO-G "TECHNORANCE". All the classic techno synth & FX samples you need, each presented with a short demo to show their effectiveness. This CD is the crowned king of the world's techno sample CDs, having achieved top-rated reviews in USA, Germany & UK. **Audio CD: £59.95. Also available on Akai S3000 & SampleCell CD-ROMs for only £99.00 (Roland coming soon).**

DNA BEAT BLOCKS FEATURING SLY DUNBAR. World's No.1 Reggae drummer & Producer (half of Riddim Twins Sly and Robbie). There's nothing like this on the market! The styles & sound are simply overwhelming • Reggae • Ska • Dancehall • Bhangra • Comes with MIDI-files on floppy disk for the loops! **READ THE FANTASTIC REVIEWS!**

HALLELUJAH! WORLD CHOIRS & VOICES Shanty choruses & anthems. Produced by Peter Simonson. Includes: Dance & Pop Choirs • Gregorian/Monk Choirs • Gospel Choir • Background choirs • Classic soloists • Ragamuffin • Choir of Nuns • Vocal hooks • **CD £59.95 or CD-ROM £149.** • Total fascination! **5-star review in Sound on Sound (Aug 94)**

STEVE STEVENS GUITAR SAMPLES (EAST-WEST, USA): Renowned for his guitar work with Billy Idol, Steve has delivered all the trademark sounds that made him famous, plus awesome guitar FX. The sound quality is immaculate. Majority of the CD is multsampled and has been thoroughly tested for playability on a keyboard. **Out now. Audio CD: £59.95. or CD-ROM for Akai, Roland or SampleCell: £149.00**

STEVE REID'S DEFINITIVE PERCUSSION. World-renowned percussionist Steve Reid has played on over 300 records, films & TV shows from Supertramp to En Vogue. 100's exotic hand drums & instruments from Africa, Brazil, India & Cuba; Every nuance of attack & tone. Plus a vast selection of classic film percussion effects. A top-class library from the USA. **Audio CD: £59.95 (Akai or SampleCell CD-ROM: £124.95)**

FUNK GUITAR by VLAD NASLAS. The Definitive Sample CD for Classic Dance Guitar Rhythms & FX. "Meticulously prepared & presented... engineering & playing first class... cool, fresh & funky... a definitive collection. 5-stars (SOS). ALL ORIGINAL #1700 SAMPLES • ESSENTIAL for anyone in a funk groove. **Audio CD: £59.95 (Akai, Roland or SampleCell CD-ROM: £149.00)**

400s of PHAT SLAMMIN' HIP HOP. Wicked new sample collection from USA, for Rap, Hip Hop, Old Skool, R&B and Acid Jazz. Over 1000 samples. • Slammin' bass wipes & drum loops • Killer construction kits • Funky guitar riffs. • One of the best Hip-hop style sample CDs around • lots of variety means you can use it for all sorts of other styles • Construction kits make it very versatile. **Audio CD: £59.95.**

DANCE / INDUSTRIAL 2 Double CD! Loops, plus all the component percussion elements used to make them, plus their programming on an accompanying MIDI-file floppy disk. A very professional approach from East-West (USA). **5-star** Five-star Review. (SoS mag) **Audio CD £59.95. CD-ROM: £149.**

ALPHADANCE. This is the BIG NEWS from Germany - Alphadance - 2 CDs and an Akai CD-ROM section is included! - VERY usable. We can tell you that this is UNMISSABLE. No hype. This material has been tried & tested for effectiveness. And the price! This is no misprint! **Both discs for... £59.95**

SYNCLAVIER LIBRARY. Highly coveted collection previously only available to Synclavier owners. A series of 5 CD-ROMs in Akai, Roland or SampleCell formats (and possibly Kurzweil by the time you read this): • Essential Percussion. • World & Orchestral Percussion. • Keys & Guitars. • Brass & Winds. We rate these discs very highly. Impeccable reviews in press! Definitely recommended!

SUPREME BEATS PERCUSSION LIBRARY. Pain, mystery, love, desire, and celebration played on more than a hundred instruments, from rainsticks to talking drums to Nigerian batas. Over 4 hours of inspiring acoustic percussion grooves and samples on this truly outstanding 4CD boxed set. Featuring the supreme talents of Bashiri Johnson. **Boxed set of FOUR AUDIO CDs for £199.00**

GIGAPACK 1 & 2. ROLAND CD-ROMS 2 DOUBLE CD-ROM PACKAGES: Monstrous! Over a gig of mind-blowing sounds on each 2-CD-ROM collection, all laid out on the keys for Roland 700-series samplers. Gigapack 1 includes "Classical Choirs" library, and Gigapack 2 includes the new "Hallelujah" library! **Also now available! Best of Gigapack Vols. 1 & 2 for Kurzweil K3000! (£279)**

NO! FUNKY ELEMENTS! Out now! - even BETTER than its predecessor - It fills in all the gaps left by "THE FUNKY ELEMENT!" so between the two you've got all areas covered! Enjoy. **5-star Review (SoS, March 94).** CD-ROM versions for Akai & SampleCell due for release in March - includes BOTH audio CD volumes on 1 disc! **£149**

BASS LEGENDS. Earth-shaking bass grooves & samples from 3 of the greatest bassists: Marcus Miller, John Patitucci & Abe Laboriel. All grooves are given in every key & multiple tempos. CD-ROM versions also include an extravagant variety of multisamples of instruments from the players' private collections. **Audio CD: £59.95 CD-ROM: £199**

BLUNDER! Yes - the sequel is here - and it's an absolute BLUNDER! What they said about volume 1: "For instant loop gratification, stop here...this CD is faultless...it's another dance workstation, but fresher than most!" (SOS). "Perfect for the most vicious dance track... enough useable samples on this CD to fit into any kind of track... 9/10." (Future Music). **£59.95**

Anne Dudley first came to fame as one of the shadowy figures behind the seminal *Art of Noise*. But she refused to be confined by the boundaries of pop, and has since exercised her considerable talents in album arranging and composing for film and TV. RICHARD BUSKIN talked to her about her musical history and forthcoming album.

A composer, musician, arranger and producer, Anne Dudley originally gained a Performer's Diploma, Bachelor of Music Degree and the B Music Prize for the highest marks in her year at the Royal College of Music, before then acquiring her Masters Degree at Kings College.

However, disliking what she viewed as the very narrow approach towards classical composition, Anne felt more drawn towards pop music. Her training had provided her with a diverse understanding of the traditional, the *avant-garde* and the popular, and her fascination with the immediacy of pop's creative process led her to become a session keyboard player and arranger. At around the same time, she began the professional relationship with producer Trevor Horn that continues to this day, and it was as part of Horn's 'A Team' that she arranged tracks such as ABC's 'The Look of Love', Frankie Goes To Hollywood's 'Two Tribes' and Malcolm McLaren's 'Buffalo Gals' (which she also co-wrote).

Other mid-'80s arrangements included Wham's 'Everything She Wants', Paul McCartney's 'No More Lonely Nights', and some of the tracks on his *Press To Play* album, while the association with Trevor Horn also led to the founding of Art of Noise, whose pioneering, innovative use of sampling had a wide-ranging influence that is still evident in much of today's hi-tech music. Collaborations with Duane Eddy ('Peter Gunn'), Max Headroom ('Paranoimia') and Tom Jones ('Kiss') all made the charts, while tracks such as 'Moments In Love', 'Beat Box' and 'Crusoe'

the Sound that Anne built

ANNE DUDLEY

provided a kind of blueprint for the remixology age, but soon it was time for Anne Dudley to move on once again.

Television themes and scores for films such as *Buster* and *The Crying Game* have won her widespread acclaim, while the album *Songs From the Victorious City*, her 1990 collaboration with Killing Joke singer Jaz Coleman, won critical plaudits for its ambitious combination of Arabic music with Western pop.

Now comes *Ancient and Modern*, a project which sees Anne Dudley returning to her classical roots and exploring the English choral tradition by way of a choir and a 50-piece orchestra, with modern embellishments of traditional hymns courtesy of state-of-the-art recording technology.

Anne's husband, Roger, is the engineer on all of her projects, as well as her artistic sounding-board.

TOOLS OF THE TRADE

Composer, musician, arranger, producer; in what order do you see yourself?

"Well, that very much depends on which project I'm working on at any particular time. The balance between those categories has changed throughout the years, really. I suppose nowadays I do more composing than anything else. I think that if you can make your living as a composer you're probably the luckiest person in the world. It's got to be the best thing."

Do you prefer composing to actually making the music?

"No, I consider that to be all part of the same process. What I particularly enjoy about composing is the fact that you see it through from absolutely



nothing on the sheet of paper to the finished product. I mean, I don't let go of it at any stage — I perform some of it myself, I conduct it myself, I get involved in the mixing — and it's very satisfying to do that. I think some composers feel that the studio is some sort of unknown quantity and that there will be other people getting in the way, but I don't see it like that."

So the writing is an on-going process from, as you say, the paper to the studio, but how much do you actually complete on paper? Is it fairly detailed and does that also vary according to different projects?

"Yes, it does vary. During the past year, for example, I did the score for a TV show called *Anna Lee*, and we did five episodes. Now, some of them were very synth-orientated and used a lot of samples, and so I was in the studio building up layers of stuff. Then, if I used strings or other instruments, I would use them as a sort of final coating. With *Ancient and Modern*, on the other hand, it's more a case of the whole thing appearing in your head and then transcribing it onto paper, because the sort of musicians that you're working with are not improvisers. They expect to see absolutely everything written down. That's not to say that there's no room

for interpretation — of course there is — and at every session things get changed, but there is a fundamental difference between classical musicians and classical singers, and session keyboard players, session guitarists and session singers."

In terms of the popular music material with which you have been involved, have you tended to write in the studio?

"Yes, in more or less the same way as everybody else does. I'm sort of famous for always having a piece of manuscript paper handy. I'm very fluent in transcribing things down and I just find it a very convenient shorthand, rather than having to remember what you or somebody else did."

What does your studio setup comprise of here at home?

"We have a [40-channel] Soundtracs Jade desk, and in terms of multitrack machines we did all of *Ancient and Modern* on [Alesis] Adats. So we acquired four of those, but we also have a two-inch Sony 24-track. It's like an old washing machine but it works fine, and it's still a very convenient



Anne Dudley

► format, certainly for the film and television stuff that I do. Then there are the old synthesizers, which I love dearly..."

Which ones?

"Well, my PPG Wave — it's not even a Wave II — is. I think, one of only two or three that were ever made! In those days I had so little work that I was actually able to spend some time working out how to drive it. So I actually know all about this weird synthesizer! It had really terrible presets, you see, whereas what sold later synthesizers, of course, was the presets. I still, however, love the Wave a lot, and the Minimoog — I understand that sort of analogue synthesizer. In fact, there was a very good manual with the Minimoog which provided an excellent introduction to synthesizers in general.

"Then there's my Wurlitzer electric piano, although I don't use that very much, and that's

about it for the really old ones. Otherwise, I use the D70 as a master keyboard, together with a C-Lab *Notator* for Atari."

How do you get on with the touch sensitivity — or lack of it — of synthesized instruments?

"I always think that synthesizers have no business being touch sensitive, actually. A piano is a piano and the touch sensitivity on a synthesizer is always going to be artificial. It's the physical thing of a piano and it's going to be somebody's interpretation of it on a synthesizer — and different on every synthesizer — which may not suit you. My Wave and my Minimoog have no touch sensitivity and it's almost like they're more real that way. Synthesizers are great but it's no good using them as pianos — they're a thing apart, different."

So do you hold onto the old gear because you actually like what it does or simply because you're used to it?

"Well, the things that I've held onto have certain features that I don't think I could recreate on anything else. I've also grown fond of them, and at the same time they have virtually no re-sale value, so there'd really be no point in getting rid of them!"

So it's pretty much the same setup as you had in the Art of Noise days.

"Yeah, more or less."

FAMOUS NAMES

How did you work with Trevor Horn when arranging the likes of Frankie, ABC and Malcolm McLaren? How did that relationship work?

"Very well! Trevor's a very inspiring producer, actually. I've never quite come across anybody who has the ability to get the best out of people like Trevor does, and I don't know what it is about him. I think it's that he's able to trust you while at the same time also pushing you to achieve a little bit more than you would if you were just sort of working on autopilot. He also has a great understanding of music — he knows exactly how a chord structure works and how you can change things to make something better. He has a very acute ear.

"So, our relationship is very open and honest really. There's no sort of pretentiousness or blinding each other with science. He talks a lot... actually, he used to write me letters describing exactly what he wanted. I wish I'd kept them! He'd send me a rough mix of a Dollar track and a note saying, 'I want brass on the chorus — Earth, Wind & Fire; and strings for the verse — Barry Manilow.' It was this sort of shorthand that we'd get into. He doesn't send me letters any more, but he'll always talk in terms that I understand. He knows a great deal of music — classical, jazz and rock — so he's able to make these convenient references."

In terms of the work itself, there was quite a difference between, say, 'The Look of Love' and 'Buffalo Gals.'

"Well, it didn't feel so at the time. It just felt like a progression. I suppose what was different was

SAMPLING & THE ART OF NOISE

The Art of Noise pioneered the innovative use of sampling. Do you now think it's been done to death? "Yes. Precisely. What did we start? I like to think that we did do different things with sampling, and we had no idea really that it would become as hackneyed as it is now."



Maybe you were using it as just one device, whereas now it has become all-dominating.

"Yes, that's right. It was just one element of the sound that we were creating."

In the beginning the use of samplers was an innovation, but do you not feel that much of the technology which is now being utilised is, in fact, cutting down on innovation? You know, people with moderate or no talent fiddling around with a sequencer until they come up with something...

"Yes, that's right. What I think has happened is that it's become much easier to do something. Everybody's son and daughter has got a synthesizer and a sequencer and everybody's instantly a 'composer'. Before the advent of these sequencers you actually had to learn to play something well. Now, it's very hard to play the guitar well and it's very hard to play the piano well, and if you spend years learning how to do it you're sort of exploring your own individuality as well. If, on the other hand, you just use a sample or a preset on the synthesizer and let a machine do all of the difficult stuff for you, where's your own personality in that? I hear so much music which is completely devoid of personality, and I think that's

probably the reason. It is easy, and once you start doing it how are you going to take that backwards step to actually ask yourself, 'How do I put my own personality into the music?'"

Aside from the serious side of what you did with Art of Noise, was there also a jokey element?

"That was one of the things that I think distinguished us in our heyday. There was so much seriousness and po-facedness about rock in those days that nobody was really having fun, but music is fun, it should be fun. It should be a lot of other things as well, but we did have a lot of in-jokes with what we were doing. There's a lovely quote, which no one has ever really picked up on, on one of our tracks called 'Who's Afraid O?', a militaristic-type piece. We sampled parts of the news broadcasts from when America invaded Grenada, and just in the middle there's this crazy little quote from The Theme From M.A.S.H. Nobody's ever noticed it, but it all seemed appropriate at the time. There was the sound of helicopters coming in and we said, 'What we need here is The Theme From M.A.S.H.' 'OK, stick it in. Wait for the publishers to sue us!' What have I said!... It was a tiny quote! A jazz quote, you know! Anyway, those were the things that we liked to do, to have fun."

Aside from the fun, what else do you think music should do? Inspire?

"Inspire... Challenge.

It's like somebody once said; 'There would be life without music, but it wouldn't actually be worth living,' and that's how I feel about it. I mean, when you think about it, what would be the point? If music hadn't been invented it would just be like this [silence] all the time, yet, if you think about it, why should human beings have invented music? We don't

need it — well, apparently we don't need it — but every culture, even primitive cultures, have discovered music and it's become very important to them. So, maybe we do need it as much as we need food and warmth and shelter."



POWER

WITHOUT CORRUPTION

SPIRIT



SEE YOUR SPIRIT DEALER FOR DETAILS



APPLICATIONS

Studio nearfield monitoring

Video edit and post-production suites

Multimedia

THE INSIDE STORY

- As with Spirit mixers, the electronic design of Absolute 2 uses **high quality components**, including film capacitors and an air-cored inductor, in a circuit that embodies classically simple design principles. Terminals allow **bi-wired** as well as standard connections.
- Rather than compromise with off-the-shelf components, we use **custom hardware** built to our specifications - both drivers are exclusive to Absolute 2.
- The **ferro-fluid cooled soft-dome tweeter** ensures minimal distortion, with excellent heat dispersion. Not only does that mean a more accurate sound, but it puts less strain on your ears after long periods of high-volume monitoring - and don't pretend you don't like it loud!
- The LF driver features a **solid cast chassis** and **30mm edge-wound voice coil** for optimum efficiency and cooling. That means you can push Absolute 2 to the limits and still hear music, not distortion.
- The vented cabinet employs a **special port design** that does more than simply deliver extended bass response. With its carefully chosen dimensions, air turbulence is reduced, contributing to Absolute 2's smooth, uncoloured low frequency characteristics.

The advanced vented cabinet design complements the 6.5"/165mm low-frequency driver to give smooth, extended bass response. The soft-dome tweeter and high quality crossover keep the frequency response smooth right up to a crisp high end that's free of unnatural colouration - unlike the harsh sound of some low-cost monitors.

Of course, it would be a shame if you could only appreciate Absolute quality in the studio, so we've included magnetic shielding to ensure that Absolute 2 is safe for use next to video and computer screens, and terminals for bi-wiring mean that you can also use Absolute 2 as a superior hi-fi speaker. Read on to find out how we did it...

When we looked around for an affordable speaker that matched Spirit standards of audio accuracy and quality, we found there was no such thing - so we built it ourselves. The result is Absolute 2, the only loudspeaker in its price range to deliver this much power with this much precision - a thumping 100W of professional sound.

Whatever the size of your studio, whether you're mixing music or dubbing sound for picture, the basic requirements for an effective nearfield monitoring system are the same: an uncoloured, flat frequency response, minimal distortion, and an ability to deliver high volume when you need it.

Absolute 2 offers all this, at a price that no other professional monitoring system can touch - because we know from our experience with mixers that good design and high quality construction doesn't have to cost more.

Spirit by Soundcraft.
Harman International Industries Ltd.,
Cranborne House,
Cranborne Industrial Estate,
Cranborne Road, Potters Bar,
Hertfordshire EN6 3JN, England.
Tel: +44 (0)1707 665000.
Fax: +44 (0)1707 665461

GURU APPROVED

Like all Spirit products, Absolute 2 is designed and built in the UK. We set an exacting brief for our team of British monitor specialists to create an affordable loudspeaker, capable of delivering the clear, honest sound of Spirit mixers. But before the result could bear the Spirit name, it had to pass the guru test. Would it measure up to Graham Blyth's standards of excellence? As the designer of many classic mixers over the last 25 years, he knows a thing about accurate monitoring, and he's a hard man to please. Fortunately the design team excelled themselves, turning in a speaker with professional performance at an unbelievable price: a speaker that Graham, and all the Spirit team, can welcome into the Spirit range.



For information on Absolute 2 or other Spirit products, simply complete and return the coupon to the address shown. I am interested in: Absolute 2 Spirit mixers

Name:

Address:

Post Code:

What application will you use your Absolute 2 for?

What magazines do you read?

Please tick here if you do not want to be kept on Spirit's mailing list

SOSWMB

A Harman International Company



Anne Dudley

▶ that ABC had songs, or at least the basis for songs, and Malcolm didn't have anything at all. So, yes, I suppose there is quite a difference when you come to think of it.

"I wasn't involved in the process that they went through with Duck Rock, going around the world collecting various bits and bobs. I was only involved when they started putting them all together, trying to collate it into some sort of sense. Yeah, that was very much ad-libbed in the studio, really. One never knew what was going to happen from day to day. Half way through it Malcolm lost interest and became interested in Puccini and opera — of course, that was to become his next project, but he hadn't even finished the first one yet! I remember him coming in one day with this score to 'La Boheme' or something and saying, 'I love this bit!' We were working on 'Buffalo Gals' at the time! It was really difficult and I think Trevor managed terribly well. Trying to tie [McLaren] down and get him to concentrate on anything for 10 minutes was impossible."

When it came to working with Paul McCartney, did that require a totally different approach in as much as, considering what had already taken place in his career, it was difficult to tell him what to do?

"Yes."

And, despite surface appearances, was he really receptive to your ideas?

"Well, I'm not really sure. He works with new musicians all the time and he is receptive to ideas. He keeps up to date with what's going on and he likes to be part of it, but, as you say, for the people who work with him I think this vast history is rather intimidating and perhaps one gets a bit nervous. Once again, however, he's a great musician and he's got a great ear. He can hear things to a very detailed extent. He's not literate at all, musically, but he sings what he wants very clearly and precisely; it's not vague at all."

But do you like that kind of work, when you're going in with someone who has such a big reputation?

"Well, I wouldn't turn down the opportunity to work with McCartney. On the one hand it's intimidating but on the other hand it's stimulating."

TV & FILM WORK

Do you find your film and TV work to be double-edged, in that while the pictures provide you with some sort of direction they can also be limiting to your own creativity?

"Yes, they can be. I like the work in that I don't have to start with a blank page. I have a definite job to do. It's all been discussed. Someone will say, 'I want you to heighten the emotion in this scene,' or 'I want you to add to the excitement in this scene.

I think it should start approximately there, it should come down there and then it should end around about there.' So you have this crossword, if you like, that you have to fill in, but on the other hand it can be a bit frustrating if the cues are too short and you feel that you want to do something a bit more broad and sweeping. You can get a bit fed up with the sort of '1-minute-5-seconds' syndrome.

"At the same time, the music's only a part of the whole sound of a film. Because once you've done it and mixed it, somebody else takes hold of it and adds sound effects, adds dialogue and sometimes cuts it about in a way that you don't want them to, and you lose your grip on it really. It's not quite the same as making a record. So, yes, it is double-edged; it's good and it's bad."

How specific are TV producers in telling you what they want?

"Yeah, it can do. It depends on who you're working with. I work with a producer called Brian Eastman, who's produced *Jeeves and Wooster*, *Poirot*, *Forever Green*, *Anna Lee* — loads of stuff, and he's very competent at telling you what he wants. He understands music and he'll even suggest, if he doesn't like a particular chord, that you substitute a major chord in place of that diminished chord, and you think, 'Eeek!'

"Having said that, we all change our minds from time to time. I mean, we discussed *Anna Lee* for months and we decided that we were going to have a harmonica theme tune. So, I worked on several theme tunes, but then when we actually cut it together it didn't really work at all. I think we were probably wrong to have started on it before seeing some footage, because the actual visual look of something is something you can't glean from a script, and that should determine what style of music you'll go for.

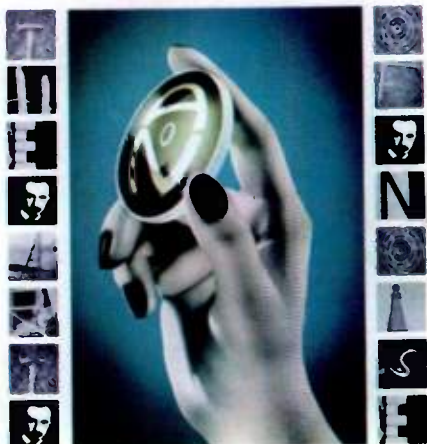
"So, anyway, you'll get somebody like Brian who's very clear and concise with his music instructions, and then I've just finished *Kavanagh QC*, on which the producer was Chris Kelly. He gives pretty good instructions as well, but they're not as detailed and technically concise as Brian's. He'll sort of paint with a broad brush. I always like to sketch through things and play them to the director and the producer before we get into the studio with 20 or 30 musicians. Occasionally, when we're trying to spot the music on the episode, we'll do it here at home and I'll be playing around with keyboards, but generally I'll tend to sit in an editing room and just make notes of how something starts at 00:59:57 and finishes at 01:20:00 or whatever."

But when they first come to you and describe what the project is and what they want, will you play something then and there, even if just to convey the feel, and therefore avoid working fully on the material only for them to say that it is not what they want?

"Yes, that sort of thing happens a lot, unfortunately. I do often get a feel for something in my head as we first speak, but then at a pretty early stage, before I've got too far down the line, I'll bring them all over here and run through some stuff. For example, on *The Crying Game*, the first

"I always think that synthesizers have no business being touch sensitive, actually."

The Art of Noise



In Visible Silence

Turnkey - London's Exclusive SPIRIT Auto Dealer

Soundcraft's SPIRIT Studio console changed the face of the 8 bus mixer market. Despite many imitators, its mix of features, functionality, sound and build quality have kept it at the top. Add to this a superb automation package using double MIDI resolution and the best computer control software we have seen, and you have an unbeatable combination.

Turnkey's unparalleled experience with the product has led us to be appointed as London's only SPIRIT Auto dealer. We have the desk on permanent demonstration with Steinberg's Auto software (available for Mac or Atari).

Our large stocks of 16, 24 and 32 channel versions enable us to offer you the SPIRIT Auto at a price comparable to many non-automated



competitors, and with the software bundled free (RRP £499).

If you're in the market for an 8 bus mixer, call us now for an appointment. You won't be disappointed!



£100 of free leads*!

We know how frustrating it can be to get your new mixer home and find that the small quantity of cheap leads you had can neither cope with all the ins and outs, or do the sound quality of the mixer any justice. That's why we've decided to give away £100 worth* of leads absolutely free with any Soundcraft SPIRIT Folio. These are not just any old cables, but a high quality design made from oxygen-free cable. We have the full range, anything from a single phono lead to ready-wired looms. What's more, if you buy a Rac Pac or a Folio 4, we'll also give you a pair of Audio Technica ATH-609 monitoring headphones (RRP £49.95) and a System-2000 10U desk rack (RRP £39.95)!

* £50 with Folio Lite

If you're looking for a high quality budget mixer, the chances are Soundcraft have already built it. From the compact Folio Lite to the 8 auxiliary Folio 4, the whole range features ultra-clean circuitry, top quality Neutrik connectors and great sounding E.Q. Take a look at our comparison chart to see which one fits your needs and budget. Of course this can't tell the full story, but we have the entire range on permanent demo, and even if you can't come in, we'll upgrade any model within 30 days of purchase. So transform your studio today with a Folio package from Turnkey, the West End's exclusive SPIRIT dealer.



	Price	Total Inputs	Mono Inputs	Stereo Inputs	Stereo returns	Aux sends	Inserts	Sub Groups	Direct Outs	PFL / Solo	EQ Bypass	EQ Bands
Folio Lite	£311	18	4	4	3	2	4	×	×	✓	×	2
Folio 10	£369	12	6	2	1	2	mix	×	×	✓	×	3
Folio 12 / 12 R	£434	14	8	2	1	2	mix	×	×	✓	×	3
Folio SI / SI R	£524	20	2	8	1	2	mix	×	×	✓	×	3
Folio Rac Pac	£899	28	10	2	7	6	chan	4	✓	✓	×	3
Folio 4	£1174	30	12	4	5	8	chan	4	×	✓	✓	3

- Jack -> Jack 2' £3.49
- Jack -> Jack 3' £3.99
- Jack -> Jack 5' £5.10
- Jack -> Jack 10' £6.85
- Jack -> Jack 20' £7.85
- M. XLR -> Jack 20' £10.59
- F. XLR -> Jack 20' £10.59
- XLR -> XLR 20' £12.75
- St. phono -> phono £4.49
- phono -> Jack 10' £5.30
- 6x Jack -> Jack 2' £10.99
- 4x Jack -> Jack 4' £14.95
- 8 Way looms
- Jack -> Jack 5' £34.95
- Jack -> Jack 10' £42.95
- Jack -> Jack 15' £49.95
- Jack -> phono 5' £32.95
- Jack -> phono 10' £39.95

Turnkey, 114-116 Charing Cross Road, London WC2H 0DT **0171 379 5148**

Anne Dudley

► stuff I wrote was really weird and very intense, and Neil [Jordan, the writer/director] said, 'I don't think that's right. I think we need something more romantic and lightweight.' 'Oh, OK,' I said, and so then I had a slightly different starting point. This sort of thing happens."

Is that due to crossed lines or you being given a fairly broad canvas on which to sketch your own ideas?

"Well, I don't usually think it's anybody's fault. Sometimes the terms that people use to describe music are a bit too vague, and when they hear what you play they realise that you've produced exactly what they've asked for but it isn't actually what they want!"

What about when you're up against filmmakers who keep changing their minds and throwing in new ideas?

"If that happens you tend to lose the thread, and as a composer you tend to lose your patience and interest. You think, 'If this is what they want I'll do it, but I don't think it's any good' — and that's bad. And then they have these research screenings, where they ask people questions. At that stage it's music

written by committee and that's always a disaster."

ANCIENT & MODERN

Thinking about *Ancient and Modern*, do you feel that in the past, through your use of devices such as sampling, you were rebelling against your classical musical roots, and that you have now returned to them?

"Yes, I think it's a question of increasing confidence. If you study classical music it's very easy to be intimidated by the geniuses who have gone before and think, 'God, I'm average!' That, in turn, can actually make one very reluctant to write anything. It certainly happened to me, but because I've physically written a lot of music during the last two or three years for film and television I've actually got better at it. It's like driving a car. You learn certain techniques, certain ways of writing, and it seemed to me that this all sort of came together at the right time. I wanted to do something which was a bit more challenging. I wanted to make a record rather than just produce music for films —

EAST MEETS WEST

Let's move onto *Songs From the Victorious City*, which combines at least three musical heritages: Ancient Egyptian, Islamic, Western pop. Is there a danger when you bring these together that Arabic people will just perceive the end result as being plain Western music and that Westerners, meanwhile, won't hear the Western influence and just think of it as Arabic music?

"There are examples when the combination of two very different sorts of music has really worked very, very well. For instance, Paul Simon throughout his career has taken whatever elements of whatever culture he wants and used them in his own songs, and his songs are so strong that it's always worked, whether it's been the samba music of 'Me And Julio Down By The Schoolyard' or the South African sounds on *Graceland*.

"On the other hand, I think the problem is that once you start getting interested — as Jaz and I did — in Arabic music, it begins to sound quite normal to you. Its weirdness goes away, and so what you might have perceived as quite odd three or four months ago you now think of as quite normal. Therefore, you're not listening to it as a normal Western listener would do, and so I think that in the end the album possibly sounded a bit too Eastern as opposed to Western."

Do you think that it actually did sound too Eastern, or was that just to Western ears?

"Well, I'm led to believe that it's an extremely successful album in Egypt and Morocco and Turkey, although, of course, you can't ever tell because in those countries you sell one copy and bootleg a thousand! Anyway, I think it worked better for Eastern ears than for Western ears, and if I had my life to live again I would do it differently, but I suppose that's true with almost everything that one does.

"It was difficult to mix that album correctly, because there was lots of stuff on the tracks and if it was given just a bit more of this and a bit more of that, its whole perspective would change. So it was a tricky one that perhaps we didn't quite get right."

How do you work together with Roger in terms of recording and mixing?

"He does it, I moan at him! No, he's actually a very severe critic of mine. He doesn't let me get away with anything that's verging on the mediocre. He knows me very well, he knows when I'm coasting and he doesn't let me, so that works quite well."

That's being more than an engineer.

"Yes, well, I think that's being a partner, really!"

That's almost like being your producer.

"Yeah, well I do need somebody else. He produces the film stuff as well, because if I'm out conducting musicians I can't also be in the box, and I'd rather conduct the musicians. But you need somebody in the box who has got a perspective on it, and it's also very useful to have somebody who knows the music already, because we will have worked on the demos together. At the same time, he also brings a lot of his ideas to the mixes, things I haven't thought of, and that's very good. What I dislike about mixing is actually having to sit for three or four hours while it all comes together, because that's when I feel I lose my perspective. So, what I really like is to leave somebody to get on with it and then come in fresh and say, 'This is not right, this is not right, I really like that,' and so on. I just feel it is better that way, rather than me sitting there and losing my sense of judgement."

After *Songs From the Victorious City* were you tempted to continue along that road, or, in another way, have you done so with *Ancient and Modern* in terms of continuing to fuse different forms of music? Is that in itself a continuing theme?

"I see the work that I've done as a continuing stream, really. I don't think that I've changed particularly, but I just think that the different things that I've done are perhaps different facets of my musicality."

Is that all part of the fact that you come from a classical background and that, by your own admission, when you were studying you didn't like a lot of what was going on in the classical world and were therefore attracted to pop music?



"I'm what you call an all-rounder. At college I was never going to be a classical pianist. I was not that good, but I was terribly good at things like keyboard harmony and sight-reading and all of the things that the concert pianists were hopeless at. I mean, you'd ask them to improvise Happy Birthday and they wouldn't know where to start! And as for reading a chord sequence, well, forget it! So, I was always very competent at that sort of thing whilst not being particularly brilliant as a performer."

More musical but maybe not a virtuoso.

"Yes, I think that the things that I've done have been musical and perhaps not virtuosic. It's interesting what you say, though. I haven't seen it like that. A lot of what I know has been a sort of fusing of different elements, rather than a pure rock or pure jazz or pure anything. Yeah, I think you're right, but I've never seen it in those terms before."

While you feel that your work has evolved in a logical way, are you ever particularly concerned with holding onto an audience from project to project? Does that even enter your mind?

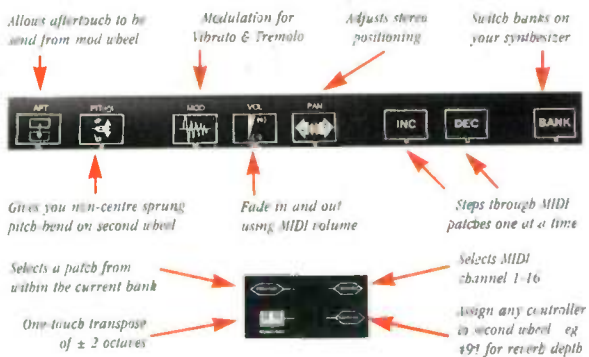
"No, it doesn't, actually. I never have the slightest idea as to who's going to listen to the music or enjoy the music, and so it's always a delight to me when people do like it. I always do it for myself."

A Real Mother at £599?



At an RRP of £599, Fatar's new Studio 900 master keyboard makes the case for combining your favourite sound modules and rack samplers with a single high quality master keyboard even more persuasive.

With 88 piano hammer action keys at your disposal you simply won't want to play anything else, and a host of features means you won't need to either - Like program change, Midi Channel Change and Transpose, plus the ability to assign parameters such as Volume, Pan and Aftertouch to a programmable wheel.



Stab, Massage & Bounce

The secret of the FATAR action lies in the patented Hammer. Whilst most Piano Action instruments rely on damped or weighted keys, Fatar's Hammer, on the other hand, is thrown up and forward on it's pivot as the key is depressed, mimicking exactly the mechanism of a traditional acoustic piano.



The combination of more mass moving through an arc means greater acceleration of the key and a remarkably increased dynamic range. You'll find you can put huge power into chord stabs and loud passages whilst the natural inertia of the hammer provides exactly the right kind of counter-balance that lets you massage real piano keys for expressive pianissimo. Equally important is the tiny bounce a hammer gives the key as it comes to rest. It's this bounce that lets you play those two-handed paradiddles - and while we are talking percussion it's worth remembering that keyboards are used for triggering all sorts of things these days.

If you need more MIDI control then check out the all-new Studio 1100 and the current 2001 models. Both combine the Famous Fatar feel with unparalleled features at the price.

All Fatar 88 note keyboards are equally at home, live and in the studio and each is available in standard or fully flight cased versions.

STUDIO 900

* 88 weighted keys with hammer action * Velocity sensitive * Pitch bend wheel and programmable wheel * Two parallel MIDI outputs * Sustain input jack * Volume input jack * Programme change, MIDI channel change, transpose, programmable wheel (Volume, pan, aftertouch, pitch, mod etc...) SRP £599

STUDIO 1100

* 88 weighted keys with hammer action * Velocity sensitive with aftertouch * Four zone capability with programmable memory * 2 dedicated wheels * Hold pedal socket * Fully assignable control data slider * Master volume slider/pedal socket * Send patch change/ bank select for each zone * Adjust touch sensitivity. SRP £849

STUDIO 2001

* 88 weighted keys with hammer action * Velocity sensitive with aftertouch * 43 character backlit LCD display * 64 presets stored internally * Optional memory card for 64 additional presets * 4 MIDI inputs may be used for additional MIDI devices * All studio 2001 functions available for the external keyboards * 4 fully independent MIDI outputs * 64 MIDI channel outputs * 2 programmable control wheels * 4 programmable control sliders * 2 programmable dual switch buttons * Preset increment/decrement input * 2 programmable control voltage inputs * 8 keyboard zones may be defined over local or external keyboard regions. SRP £1099

FATAR 61 key master keyboards

STUDIO 610/610+

* 5 Octave 61 Keys * Velocity sensitive (aftertouch on 610+) * Assignable control wheel * Key transpose * Sustain pedal input socket * Keyaction assembly designed for minimum flex and positive seating * 2 MIDI outs * Send patch change, bank select * Volume pedal input. SRP £249

CMS 61 PC MIDI KEYBOARD

* 5 Octave 61 Keys * Velocity sensitive (aftertouch on 610+) * Assignable control wheel * Key transpose * Sustain pedal input socket * Keyaction assembly designed for minimum flex and positive seating * 2 MIDI outs * Send patch change, bank select * Volume pedal input. SRP £299



FATAR STUDIO SERIES
 MASTER KEYBOARDS

ARBITER
 GROUP PLC

For a brochure and details of your nearest FATAR stockist, call Arbiter Group PLC, Wilberforce Road, London NW9 6AX
 Tel: 081 202 1199
 Fax: 081 202 7076



Anne Dudley

► something that I could keep control of all the way through — and this idea had been buzzing around in my head for several years. So, I just met the right people at the right time and made the record.

“I used to love those pieces where Bach uses a hymn tune and does this wonderful counterpoint all around it. The most simple example I can give you would be ‘Jesu Joy of Man’s Desiring’, which has this wonderful flowing melody and then the hymn tune comes in, the melody comes back and they all fuse together. On one of the Art of Noise albums I attempted to do the same thing: there’s a piece called ‘Finale’, where I used a chorale tune for four clarinets and had this weaving string part around it, and that was the start of this interest that I had in using ancient melodies in a modern context.

“I started messing about with using the tune ‘O Come, O Come Emmanuel’ and I thought, ‘Well, suppose I put around it that very repetitive, percussive sort of counterpoint that people like Phillip Glass use.’ Because I love that music, I love those ‘minimalists’, but I just wish occasionally that there’d be a tune and then I would really like it a lot better! So, I thought, well, suppose I start with what you might loosely call a minimalist texture and actually introduce a tune — in the same way that Bach introduces his tune for his contrapuntal textures — what would that be like? So I started messing about with it and I really liked the things that were happening, and

so about three or four years ago I started on the first demo of ‘O Come, O Come Emmanuel’. From there I then found some other tunes that I really liked, and started doing the same sort of thing with them.

“Now, I didn’t think it would be any good going into a record company and saying, ‘What do you think about an album of hymn tunes?’ But I was doing a new publishing deal earlier [in 1994] and I went into Chrysalis Music and met an A&R guy there named Steve Ferrera. He’s an extraordinary chap, a classically trained percussionist who is a very good drummer as well, and when I told him about my idea he really grasped it immediately and said he’d like to hear any demos that I’d done. So I sent the demo in to him and he asked for more, and they then had the confidence to go with it.”

What were your influences for the different pieces on the album?

“I suppose it’s a pretty eclectic mixture. In fact, one of the tracks [‘Canticles of the Sun and Moon’] even has some African percussion on it, and that actually was Steve Ferrera’s idea. I’d already put in a few tom toms and he said, ‘I think this rhythm ought to be more like a rolling African rhythm.’ I said, ‘Do you think that sort of thing is OK within a classical texture?’ and he said, ‘Do it!’ So I did.

“This album is sort of pop and classical, even

in the way that it was conceived and recorded — I did the hymn tune and then I did the percussion loop, and this percussion loop sounded so great that I wanted to use it again. Now, I had a wind band booked for a session in a week’s time to do an arrangement of the Prelude, and I definitely had time on the session to do another piece. So I decided to keep this African percussion rolling around and use a very, very straight 4/4 — sort of very English — harmonisation of the tune and score it for the wind band. I wouldn’t even play them the African stuff in their cans; I’d just give them a straight click. Now that really is a clash of cultures, but they played it very straight, the African rhythm is running beneath it and I must admit that I like it very, very much, because it’s one of those very fresh and spontaneous things that one normally doesn’t have a chance to do with classical music. It’s usually very cut and dried, and organized months in advance.”

Tracks such as ‘Canticles of the Sun and Moon’ and ‘Veni Emmanuel’ comprise gentle choral music complemented by the modern, whereas ‘The Holly and the Ivy’, for example, is more a case of the modern complemented by the ancient. How did you formulate the composition of each piece?

“Interestingly enough, the chord sequence that I used for ‘The Holly and the Ivy’ had originally been intended for another piece, but in the end ‘The Holly and the Ivy’ seemed to be a tune that was better suited. There are some pretty strange changes in the chords, and the tune of ‘The Holly and the Ivy’ is such a strong melody that I just let it ride over these rather weird chord changes.

“So that started from a modern viewpoint and I imposed the ancient melody on top of it, and I suppose that was my closest homage to John Adams and the minimalists. But, as you quite rightly point out, the others start from the ancient melodies and weave the counterpoint around them.”

How do you formulate musical compositions in your head?

“Well, it’s always difficult to discuss and actually try to analyse how you compose something. I once read a very good book by a composer called Hindemith in which he described how, when you start a piece, you do have this very strong picture in your head as to how it should be. He said that if you’re outdoors, there’s a thunderstorm and you see a portion of the landscape lit up by the lightning, you see it all very clearly, this sort of abnormally bright aspect, and that’s how it is with a composition. You see it very clearly, very unusually bright, and then you sort of work towards the detail of getting that right.

“That’s the closest I can come to describing how I compose, and that doesn’t mean to say that I don’t take some false turns and do a lot of crossing-out, but generally you start and you finish and you hope that what goes on in the middle makes some sort of sense!”

SOS

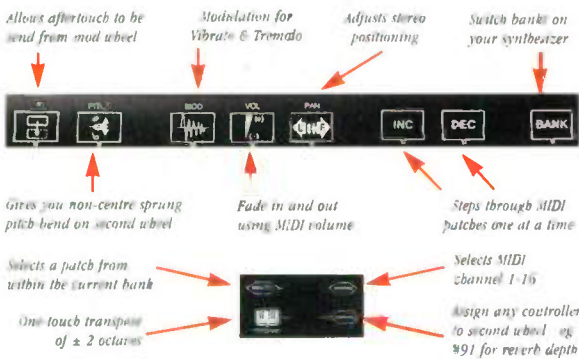
“I never have the slightest idea as to who’s going to listen to the music or enjoy the music, and so it’s always a delight to me when people do like it.”

A Real Mother at £599?



At an RRP of £599, Fatar's new Studio 900 master keyboard makes the case for combining your favourite sound modules and rack samplers with a single high quality master keyboard even more persuasive.

With 88 piano hammer action keys at your disposal you simply won't want to play anything else, and a host of features means you won't need to either - Like program change, Midi Channel Change and Transpose, plus the ability to assign parameters such as Volume, Pan and Aftertouch to a programmable wheel.



Stab, Massage & Bounce

The secret of the FATAR action lies in the patented hammer. Whilst most Piano Action instruments rely on damped or weighted keys, Fatar's Hammer, on the other hand, is thrown up and forward on it's pivot as the key is depressed, mimicking exactly the mechanism of a traditional acoustic piano.



The combination of more mass moving through an arc means greater acceleration of the key and a remarkably increased dynamic range. You'll find you can put huge power into chord stabs and lead passages whilst the natural inertia of the hammer provides exactly the right kind of counter-balance that lets you massage real piano keys for expressive pianissimo. Equally important is the tiny bounce a hammer gives the key as it comes to rest. It's this bounce that lets you play those two-handed paradiddles - and while we are talking percussion it's worth remembering that keyboards are used for triggering all sorts of things these days.

If you need more MIDI control then check out the all-new Studio 1100 and the current 2001 models. Both combine the Famous Fatar feel with unparalleled features at the price.

All Fatar 88 note keyboards are equally at home, live and in the studio and each is available in standard or fully flight cased versions.

STUDIO 900

* 88 weighted keys with hammer action * Velocity sensitive * Pitch bend wheel and programmable wheel * Two parallel MIDI outputs * Sustain input jack * Volume input jack * Programme change, MIDI channel change, transpose, programmable wheel (volume, pan, aftertouch, pitch, mod etc...) SRP £599

STUDIO 1100

* 88 weighted keys with hammer action * Velocity sensitive with aftertouch * Four zone capability with programmable memory * 2 dedicated wheels * Hold pedal socket * Fully assignable control data slider * Master volume slider/pedal socket * Send patch change/ bank select for each zone * Adjust touch sensitivity. SRP £849

STUDIO 2001

* 88 weighted keys with hammer action * Velocity sensitive with aftertouch * 48 character backlit LCD display * 64 presets stored internally * Optional memory card for 64 additional presets * 4 MIDI inputs may be used for additional MIDI devices * All studio 2001 functions available for the external keyboards * 4 fully independent MIDI outputs * 64 MIDI channel outputs * 2 programmable control wheels * 4 programmable control sliders * 2 programmable dual switch buttons * Preset increment/decrement input * 2 programmable control voltage inputs * 8 keyboard zones may be defined over local or external keyboard regions. SRP £1099

FATAR 61 key master keyboards

STUDIO 610/610+

* 5 Octave 61 Keys * Velocity sensitive (aftertouch on 610+) * Assignable control wheel * Key transpose * Sustain pedal input socket * Key/action assembly designed for minimum flex and positive seating * 2 MIDI outs * Send patch change, bank select * Volume pedal input. SRP £249

CMS 61 PC MIDI KEYBOARD

* 5 Octave 61 Keys * Velocity sensitive (aftertouch on 610+) * Assignable control wheel * Key transpose * Sustain pedal input socket * Key/action assembly designed for minimum flex and positive seating * 2 MIDI outs * Send patch change, bank select * Volume pedal input. SRP £299



FATAR STUDIO SERIES
MASTER KEYBOARDS

ARBITER GROUP PLC

For a brochure and details of your nearest FATAR stockist, call Arbiter Group PLC, Wilberforce Road, London NW9 6AX
Tel: 081 202 1199
Fax: 081 202 7076



Anne Dudley

▶ something that I could keep control of all the way through — and this idea had been buzzing around in my head for several years. So, I just met the right people at the right time and made the record.

"I used to love those pieces where Bach uses a hymn tune and does this wonderful counterpoint all around it. The most simple example I can give you would be 'Jesu Joy of Man's Desiring', which has this wonderful flowing melody and then the hymn tune comes in, the melody comes back and they all fuse together. On one of the Art of Noise albums I attempted to do the same thing: there's a piece called 'Finale', where I used a chorale tune for four clarinets and had this weaving string part around it, and that was the start of this interest that I had in using ancient melodies in a modern context.

"I started messing about with using the tune 'O Come, O Come Emmanuel' and I thought, 'Well, suppose I put around it that very repetitive, percussive sort of counterpoint that people like Phillip Glass use.' Because I love that music, I love those 'minimalists', but I just wish occasionally that there'd be a tune and then I would really like it a lot better! So, I thought, well, suppose I start with what you might loosely call a minimalist texture and actually introduce a tune — in the same way that Bach introduces his tune for his contrapuntal textures — what would that be like? So I started messing about with it and I really liked the things that were happening, and

so about three or four years ago I started on the first demo of 'O Come, O Come Emmanuel'. From there I then found some other tunes that I really liked, and started doing the same sort of thing with them.

"Now, I didn't think it would be any good going into a record company and saying, 'What do you think about an album of hymn tunes?' But I was doing a new publishing deal earlier [in 1994] and I went into Chrysalis Music and met an A&R guy there named Steve Ferrera. He's an extraordinary chap, a classically trained percussionist who is a very good drummer as well, and when I told him about my idea he really grasped it immediately and said he'd like to hear any demos that I'd done. So I sent the demo in to him and he asked for more, and they then had the confidence to go with it."

What were your influences for the different pieces on the album?

"I suppose it's a pretty eclectic mixture. In fact, one of the tracks ['Canticles of the Sun and Moon'] even has some African percussion on it, and that actually was Steve Ferrera's idea. I'd already put in a few tom toms and he said, 'I think this rhythm ought to be more like a rolling African rhythm.' I said, 'Do you think that sort of thing is OK within a classical texture?' and he said, 'Do it!' So I did.

"This album is sort of pop and classical, even

in the way that it was conceived and recorded — I did the hymn tune and then I did the percussion loop, and this percussion loop sounded so great that I wanted to use it again. Now, I had a wind band booked for a session in a week's time to do an arrangement of the Prelude, and I definitely had time on the session to do another piece. So I decided to keep this African percussion rolling around and use a very, very straight 4/4 — sort of very English — harmonisation of the tune and score it for the wind band. I wouldn't even play them the African stuff in their cans; I'd just give them a straight click. Now that really is a clash of cultures, but they played it very straight, the African rhythm is running beneath it and I must admit that I like it very, very much, because it's one of those very fresh and spontaneous things that one normally doesn't have a chance to do with classical music. It's usually very cut and dried, and organized months in advance."

Tracks such as 'Canticles of the Sun and Moon' and 'Veni Emmanuel' comprise gentle choral music complemented by the modern, whereas 'The Holly and the Ivy', for example, is more a case of the modern complemented by the ancient. How did you formulate the composition of each piece?

"Interestingly enough, the chord sequence that I used for 'The Holly and the Ivy' had originally been intended for another piece, but in the end 'The Holly and the Ivy' seemed to be a tune that was better suited. There are some pretty strange changes in the chords, and the tune of 'The Holly and the Ivy' is such a strong melody that I just let it ride over these rather weird chord changes.

"So that started from a modern viewpoint and I imposed the ancient melody on top of it, and I suppose that was my closest homage to John Adams and the minimalists. But, as you quite rightly point out, the others start from the ancient melodies and weave the counterpoint around them."

How do you formulate musical compositions in your head?

"Well, it's always difficult to discuss and actually try to analyse how you compose something. I once read a very good book by a composer called Hindemith in which he described how, when you start a piece, you do have this very strong picture in your head as to how it should be. He said that if you're outdoors, there's a thunderstorm and you see a portion of the landscape lit up by the lightning, you see it all very clearly, this sort of abnormally bright aspect, and that's how it is with a composition. You see it very clearly, very unusually bright, and then you sort of work towards the detail of getting that right.

"That's the closest I can come to describing how I compose, and that doesn't mean to say that I don't take some false turns and do a lot of crossing-out, but generally you start and you finish and you hope that what goes on in the middle makes some sort of sense!"

SOS

"I never have the slightest idea as to who's going to listen to the music or enjoy the music, and so it's always a delight to me when people do like it."

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 SOUND BUSINESS 0181 559 0373



SoundScape
Powerful PC based hard disk recorder
• 8 Tracks upwards
• Real time digital EQ
• Digital Mixing
• Locks to any sequencer using the same PC



PC Computer system for sequencing and hard disk recording + multitasking
The way of the future (NOW!)
Please call for prices & info



ALLEN & HEATH
GS3 16:8:16 / 24:8:24 / 32:8:32
One off super deal on Allen & Heath GS3 & GS3V range of mixer boards (Top Spec)
Call now for info & SPECIAL PRICES

EAST LONDON AND ESSEX'S TOP RECORDING EQUIPMENT CENTRE
NEW AND SECONDHAND

SOUND BUSINESS

Recording equipment sales. Your one stop studio centre

ALL THE LATEST KEYBOARDS AND SOUND MODULES FROM:



EMU
AKAI
ROLAND
YAMAHA
ENSONIQ
GENERAL MUSIC
KORG, FATAR

ALLEN & HEATH

The Best of Mixers to Mix With.
Stop Press - New Releases - Stop Press
New GS1 Range
32:2 - 24:4:2 - 16:8:2
(Example) with 16:8:2 = 40 inputs on remix + MIDI mute + Phantom Power etc.
Also 8 channel expander unit 8 Busses under a Grand
£995
Orders being taken now!
PHONE

Soundtracs



Introducing the fabulous new
Topaz.
Mixing Console.
24-8-24 32-8-32-2
Very High Spec
Call For Info & Unbeatable Low Prices

Behringer
NEW RELEASE



8 Bus, 48 inputs, dual channel, 4 band EQ on every channel, 6 stereo aux returns, 5 year guarantee
£1999

NEW BARGAINS

- Allen & Heath GS3 / GS3V 16 / 24 / 32. SPECIALS
- Soundtracs Solo MIDI / Logic / Topaz. SPECIALS
- Studiomaster Whole Range SPECIALS
- Digidesign Sound Tools for Atari Meg 4.
- Cost £2500 Very Special £750.00
- Trustg Monitors (Atari) £139.00
- LA Audio 4 x 4 Comp / Gate / De-esser £295.00
- Art Alpha SE (Retail £500) £325.00
- Alesis Whole Range PHONE
- Fostex MC102 - 12 / 2 Mixer + Cassette £335.00
- Atari Falcon 030 4 meg + 65 meg H / D £650.00
- Mackie Mixers, whole range, very high spec. PHONE
- Kawai KV4 4x independent Multi Effects in 1 unit. Retail £899 Special £495
- Roland A30 Mother K / brd Very Special. £395.00
- Soundtracs Topaz (new) Console. PHONE
- Neuman U87 (R-1950.00). The Best £1595.00
- Beyer DT100's The Best £115.00
- NEW Sony DTC60ES. DAT Recorder. PHONE
- Alesis ADAT £2195.00
- Alesis BRC. Controller £1050.00
- Roland S760 Sampler £1495
- Roland OP760 / 1 Interface Card £295
- NEW Tascam DA30 MKII Pro DAT Recorder with 44.1 kHz PHONE
- SanAmp GT2 The Ultimate Guitar Pre Amp £149
- Key Electronics MS101 MIDI interface for PC. £75
- MIDIman MM401 MIDI interface for PC. £65
- Denon full range of CD Players, Cassette Machines, Amplifiers etc. PHONE
- Tascam 8516B 16-track 1" Recorder, spare channels cards & master control card for above PHONE
- Plus - Much - Much - More - Please Phone.
- EX DEMO & SECOND HAND BARGAINS**
- XRI Systems XRSYMPTE Synchroniser. £225
- TEAC 3440 4 track Hi speed + RX9 DDX Noise reduction unit £350
- Tascam M20 10:2 Mixer with 4 band parametric EQ module £200
- Tascam MH40 Mk II Headphone Station £265.00
- Various Secondhand Mics PHONE
- Fostex 812 Mixer (12/8/2) £795.00
- Fostex E16 - 16 track 1/2 Recorder. £1900.00
- Fostex B16 16 track 1/2" recorder. £1700.00
- Tascam DA88 £3200.00
- Tannoy PBM 6.5 near field studio monitors. £250.00

MIXING CONSOLES
SOUNDTRACKS
SOUNDCRAFT
MACKIE
STUDIOMASTER
TASCAM
FOSTEX
SAMSON

DAT RECORDERS
NEW SONY DTC60ES
AIWA XDS1100
TASCAM DA30 MkII
TASCAM DA60
FOSTEX D10
FOSTEX D20 B
PANASONIC SV3700

WE ARE MAIN SUPPLIERS FOR:
TASCAM FOSTEX SONY YAMAHA
REVOX DENON AIWA SOUNDCRAFT
OTARI STUDDER SOUNDTRACKS ALLEN & HEATH
STUDIOMASTER DRAWMER ALESIS
LEXICON XRI SYSTEMS SYMETRIX BFL
ART ARX-SYSTEMS APIEX TANNAY JBL
QUESTED AKG NEUMANN AUDIO
TECHNICA SENNHEISER ROLAND KORG
AKAI C-LAB STEINBERG OMNI PHONICS
AUDIO MANAGEMENT ATARI DIGIDESIGN
KLARK TEKNIK STAND EASY PANASONIC
SOUNDSCAPE BB-DIGITECH BEHRINGER
GENELEC MANLEY MIKIS GENERAL MUSIC
MACKIE MICROTTECH GEFIL
PLUS MUCH MORE

AKG - STOP PRESS - AKG
Fantastic deals on
AKG C3000
large diaphragm
Top Quality Vocal Mic
Retail = £530
Our Price = £295

NEW RELEASE
SONY DTC60ES
DAT RECORDER
Fantastic Spec. Records at 48 & 44.1 KHz
IN STOCK NOW
Retail = £799
Special New Year Price
£PHONE

FOSTEX RD-8 DIGITAL MULTITRACK RECORDER



Comes with a pedigree that outruns the rest (Alesis ADAT compatible)
All prices available on application. Call Now!
Fantastic Low Price from
Call Now!

Comes with a pedigree that outruns the rest (Alesis ADAT compatible)

ALESIS ADAT



★★★★★
STAR BUY

All prices available on application. Call Now!

Fantastic Low Price from
Call Now!



STOP PRESS THE DEAL OF THE CENTURY STOP PRESS

FOSTEX R8
8 track Recorder
PLUS 812 (12 : 8 : 2 Mixing Console)
36 Inputs on mixdown
This is the Ultimate 8 Track Deal Ever Available
An Exclusive offer from Sound Biz -
Please Call For Info and Prices

SOUND BUSINESS STUDIO SALES

Sound Business House, (Near Woodford Central Line Station) Woodford Green
Telephone: 0181-559 0373
Fax: 0181-559 0444
Mobile: 0860-188388
United in and dedicated to the pursuit of musical excellence
OPEN SEVEN DAYS 9am to 9pm
MAIL ORDER SPECIALIST UK/EUROPE/THE WORLD



SYCO

THE POWER BEHIND YOUR SCREEN

PROTOOLS

ProTools 3.0

Digidesign's high end digital recording/editing package receives a major system upgrade.

Enhanced system features include:

- 16-48 tracks of record/playback
- 8-64 channels of analogue/digital I/O
- TDM virtual digital mixing & plug-in environment included
- ProTools 3.0 software

Increased modularity:

- System I/O is no longer tied to the number of tracks
- Can add up to eight 8-channel devices

Choice of audio interfaces:

- 888 I/O – 8 balanced XLR in/out, 4 AES/EBU digital I/O
- 882 I/O – low-cost, 8 balanced jack in/out, S/PDIF digital I/O

Vastly reduced cost:

Call for more info and pricing



SAMPLECELL II
units: mm x: 23.9889 y: -32.9847

32-voice sample playback system. Uncompromising studio performance with 32 CD-quality voices, 8 polyphonic outputs and up to 32 Mb of RAM. Wide choice CD-ROM sound libraries available, and with graphic sample editing enables you to build up exactly the sounds you need.



3rd PARTY ADD ONS

Lexicon NuVerb

Lexicon's renowned world beating reverb, on your Apple Mac.

KS Waves L1-Ultramaximiser

Offers you full dynamic control of your audio

KS Waves Q10

Great sounding equalisation to enhance your audio.

POSTVIEW™

Integrated digital video and VTR control software for Pro Tools. Allows Pro Tools to import an accurate, random access digital 'Postview Movie' and play it back from within Pro Tools. Grab your video to hard disk and once imported into PostView there is frame accurate synchronisation between the audio and video.



SOUNDTOOLS II

The professional stereo direct-to-disk digital recording and editing system, used on more albums, films and videos than any other system of its kind. Provides: Waveform editing at single sample-resolution • Real-time compression/expansion/ noise gate • Stereo time compression/expansion • Pitch shifting • Parametric/graphic EQ • SMPTE synchronisation.



MASTERLIST CD

CD Mastering software to create standard, fully 'Red Book' compatible masters with full PQ sub-code information. Trims weeks off turn-around time, improves the quality of your finished discs and provides significant savings.

Audio 8

ACCESSORIES

TDM Bus

Get rid of your patchbay! The TDM bus replaces it with a single computer cable and a handful of expansion cards. Route up to 256 channels of 24-bit digital audio among various I/O ports, digital signal processing cards and effects processors on plug-in cards.

Expansion Chassis

Not got enough NuBus slots? The expansion chassis provides up to 12 extra NuBus slots to let you add more Pro Tools channels, create a multicard SampleCell II system, or create a powerful TDM-bases digital studio.

DINR (Digidesign Intelligent Noise Reduction)

Software-based 'plug-in' digital signal processor to remove hum, tape hiss and cleaning up background noise from old masters and film tracks.

SESSION 8

The affordable multitrack digital recording and editing system for the home and Project studio. 8-channel hard disk recording with multichannel digital mixing. 10x2 analogue sub-mixer for connecting synths, samplers and outboard gear. Sequencer-style digital audio editing. Computer-controlled input patching. (Available for PC and Mac).



NOW AVAILABLE – 882 I/O interface. Low cost, balanced 8in/8out interface for use with Session 8 and/or audio sequencers



SAMPLING

Akai S3200

Akai's most comprehensive sampler to date, providing 32 voices, multiple analogue outputs, digital I/O, SCSI interface, SMPTE reader/generator, 8Mb RAM (expandable to 32Mb), and hard disk recording software ALL AS STANDARD!

Superb S3000 continues to cement the strong position forged by S1000/1100, and now offers 'S3200 upgrade' option.



Roland S760

Offering exceptional value, this machine comes with 2Mb RAM (expandable to 32Mb), SCSI interface and optional digital I/O plus RGB display/output board, all in a 1U chassis.

S760 Pro-Pack

- S760 Sampler
- OP-760-1P Power Sampling Expansion
- DA-400 4 Channel D/A Converter
- Colour Monitor
- 10Mb Ram
- £ Special Bundle Deal
- £ Call for Upgrade Deal



NEW EMU SAMPLERS

ESI-32 - LOW COST

32 voice polyphony, 16 part multi-timbral • 2Mb RAM expandable to 32Mb with standard SIMMS • Reads S1000, S1100, EmaxIII & EIIIx series library over SCSI • Powerful DSP Functions, including time compression/expansion • 32 resonant filters • 4 outputs • Optional SCSI & S/PDIF interfaces

NEW



EIV - THE NEW STANDARD

128 voice polyphony, expandable to 32 part multi-timbral • 128 resonant filters • Expandable to 128Mb RAM • Optional 32Mb flash RAM memory for instant access •

Large icon-driven interface • Optional 8-channel digital interface & effects processor.

Call us for the up-to-the-minute spec on this amazing unit

NEW



SEQUENCING/MIDI

Emagic

Notator Logic/Audio software supports Digidesign DAE!



Steinberg

Cubase Audio V2 expected anytime now!

Opcodes

Vision and StudioVision move from strength to strength, whilst the Studio 3 and 4 Mac interfaces provide LTC/MTC sync for your Mac sequencer.

MOTU

Mark of the Unicorn Performer V5 is out now, and the MIDI Time Piece II is still our most popular professional Mac/MIDI/ LTC interface.

Akai MPC3000

Latest in Akai's MOC range. 16-bit stereo sampling, as on the industry-standard S3000 range, with full sample capability, plus the renowned drum sampler from the MPC60. Up to 16 MB memory, SCSI, SMPTE, and optional VDU outputs. An unbeatable solution for integrated sequencing and drum sampling.



AKAI DR8d

Eight channels of hard disk recording; this modular system allows you to add more channels when you want. There's a great optional remote controller, plus MIDI, SMPTE, and further digital/SCSI options. For those who don't need so many channels, the DR4d gives you the same thing with - yes, you guessed it - four channels.



SOUND LIBRARIES

We can supply all the popular sound libraries on CD-ROM for your particular sampler including Akai, Roland, Emu. Call us for details and prices.

DATA STORAGE

Optima - 4mm and 8mm tape systems that mount on your desktop just like a hard disk. 2.5Gb of storage with near hard-disk performance and incredibly low media cost.

Sony - Magneto optical disk systems for the ultimate in removable data storage with quick access.

CD-ROM - Drives from Apple and Sony.

Max Optix - 5.25" Optical drives featuring an extremely fast access time coupled with the ability to read & write cartridges from 650Mb to 1.3Gb

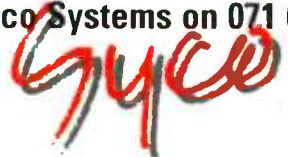
Rorke Data - Range of removable hard drives.



Microp2lis New, innovative, cost-effective stacking and removable hard drive system for audio and video data storage.

THE SUPPORT BEHIND YOUR SYSTEM

Call Syco Systems on 071 625 6070



Syco Systems
Kimberley Road London NW6 7SF
Telephone 071 625 6070 Facsimile 071 372 7660

ALESIS ADAT

The multitrack digital recording system. Start with 8 tracks and build up to 128. We also have the Fostex RD-8. With its built-in SMPTE/EBU Timecode reader/generator the Fostex RD-8 can synchronise as either master or slave and can even convert to MIDI timecode for seamless integration into the most complex project studio.

We have the answer to ADAT synchronisation, with products from TimeLine, JL Cooper, as well as Alesis. Whatever your application we can sync your ADAT system!



NEW LOW PRICES ON ADAT!
Call for details

QUADRA



ACCEPTED



ACCEPTED

INSTANT CREDIT

ACCEPTED

TRANSAX

ACCEPTED



With 660 patches and 18 drum kits, General MIDI support, internal effects, 64-note polyphony, 32-part multitimbrality with two MIDI Ins, and direct serial connection to your Mac or PC, Yamaha's new MU80 tone module already looks like a winner at £699 inc VAT. Add to this heavyweight features list the fact that you can take external audio and feed it through the MU80's internal effects (that's right, you can sing or play guitar through it) and this may be the next 'must have' module for any self-styled musician. I've lost count of the number of musicians who have dreamily said "wouldn't it be great if you could go to a gig with just one module and a microphone, and have all the effects and EQ under MIDI control". Well here it is...

MU

Generator!

Could this be the ultimate one-box solution to your sound generation needs? KEVIN EARLEY finds out.

YAMAHA MU80 TONE GENERATOR

FIRST IMPRESSIONS

The front panel display of this half-rack unit is as good as, if not better than, the Roland SC88 Sound Canvas — the MU80's main competitor in this price band — with a bargraph showing MIDI activity for 32 channels, and mini graphics depicting the reverb, chorus, volume, expression, pan, and variation settings for the currently selected Part. The main bargraph display can also be selected to give information about other parameters for all channels at once, which makes it a doddle to set relative values. However, I would prefer the use of numbers for accurate setting of chorus/volume values, instead of the radar-style graphics which are simply approximations.

To the right of the backlit, green LCD are 15 fingertip-size buttons arranged in two groups. Those with an internal LED select from several main edit pages, while the plain black ones are used to move between parameters and change values; all are closely grouped, however, making it easy to hit the wrong button by accident, and difficult to push two together (necessary for certain functions). Special praise goes to the Mute/Solo button, which allows you to shut off all but one Part for selected listening during a busy song — very useful. Another clever little trick hides behind the Enter button; when changing parameters, a swift double-click on Enter will display the correct System Exclusive (SysEx) message for the currently selected edit/value, making it simple to type this into your sequencer's SysEx editor. This makes for

accurate and minimal use of SysEx only when necessary to set a particular edit in motion. No more 15 minute bulk dumps at the start of your songs!

On the left of the front panel is an input gain rotary control and a quarter-inch jack socket with the modest label 'A/D Input' (essentially an analogue-to-digital converter). This facility has been done before on other units, but nowhere near this price! If you plug a microphone, guitar, or tape send into this socket, you can route it to any of the MU80's internal effects and control it all with MIDI commands from your sequencer. Several excellent applications for this feature spring to mind. For a solo artist, this means total simultaneous control of vocal effects and the sequence itself. The same applies to a guitarist who wants to play along to sequenced backing tracks for rehearsal. For the home studio, the MU80 allows ample sequencing polyphony and MIDI-controlled effects for your mixer. In fact, if you're a good singer on a very tight budget, and don't require backing vocals, it should be feasible to

record via the MU80 straight to a DAT or MiniDisc without using traditional tape at all.

The remaining front panel controls are a mini-jack headphone socket and a combined power pushbutton/volume control.

AROUND THE BACK

Here we have two MIDI Ins, one Out and one Thru, Left and Right Audio Out, DC Power In, a 'To Host' serial connector (8-pin mini DIN) and a switch to select Mac, PC, or MIDI input. All very obvious really.

The MU80 behaves like a standard 1MHz MIDI interface when connected to a Macintosh computer's serial port (Printer or Modem), saving you up to £50 for a separate unit. On a PC it also connects to the serial ports, and uses Yamaha's CBXT3 serial driver. It should be noted that the serial ports on a PC usually operate at a slower speed than MIDI, so you will not be able to send too much data before it chokes up. Still, the MU80 is dead handy if you are running your sequencer from a laptop, and saves the cost of a dedicated PC MIDI interface.

When the rear panel switch is set to 'MIDI' the unit behaves like two 16-Part multitimbral sound modules, each having a separate MIDI input. The idea is that you can run 16 channels from your sequencer, and use the other input for a master keyboard for you to play along.

MUTUALLY EXCLUSIVE?

The MU80 offers four modes of operation, accessed from the front panel Mode button: XG, TG300, C/M or Performance. TG300 and C/M modes are included essentially to provide backwards compatibility with

YAMAHA MU80 £699

PROS

- Easy to use.
- High quality sounds.
- A great workhorse.
- Makes SysEx control easy.
- Those effects!

CONS

- Odd SysEx anomaly.
- Slightly bland.
- Yet another 'wall wart' PSU.

SUMMARY
At this price, there's nothing to touch the MU80 for features.



previous Yamaha and Roland equipment. XG is Yamaha's new 'General MIDI-and-a-bit' equivalent to the Roland GS mode found on the Sound Canvas range. In addition to the standard features of General MIDI, XG offers control over many more parameters via Continuous Controllers or mini System Exclusive dumps (see 'Control Freaks' box for a list of the parameters available).

With the different modes there must be a reliable way to switch between them when using a sequencer, and this can be done by sending the MU80 a short SysEx message. However, I found that when the Roland SysEx message which makes a Sound Canvas go into GS mode was sent to the MU80, the unit jumped not into XG mode but into TG300 mode instead. I can see the advantage in having a Yamaha device respond to Roland SysEx for those people who use commercial MIDI Files with the messages already embedded for the Canvas, but it seems odd to select the TG300 mode. Strange, but only a minor niggle if you have the correct Yamaha SysEx handy (see 'SysEx Messages' box). In its favour though, when the MU80 receives a 'GM On' message it switches to XG mode, giving all the usual General MIDI options and all the extras. Just something to be aware of.

THE SOUNDS

One of the best ways to check out a synth or tone module is to play the internal demo through a pair of good quality monitors; the overall clarity can be examined, and sounds can be heard in the context of a busy mix. Since this unit's main function in life is more likely to be as a GM style multitimbral sound source, the sounds will all be based on the GM set, but there are some nice variations available using a Bank Select message to access them.

Happily, the basic multitimbral sounds are

strong and crisp but not harsh, and do not suffer from the muddiness which occurs when you start to load up the outputs with several channels running at once. Even when using soft strings and other analogue-like timbres, the overall clarity was maintained. In Performance Mode the sounds ranged from "yummy" to "yucky", and I did feel that the manufacturer's range was fairly narrow considering the potential — but that's where your own knob-twiddling edit finger comes into play.

The audio outputs were free from noise or hum and, although I couldn't find it stated in the manual, I would swear that the outputs were 18-bit given the clarity.

SEEN IT, DONE IT, EDIT

While not in the same league as more expensive synths, the Performance Mode of the MU80 delivers reasonably powerful editing capabilities for the price, and there are 64 RAM memory locations in which to store your edited Performance sounds, which I actually think is plenty for a device of this type. Almost any aspect of the sound can be changed in real time, with filter cutoff controllable by the now standard MIDI Controller no.74 — so Techno dance fans can have plenty of fun here.

The general structure of sounds reminds me of the Korg M1 or Roland U220, where several Parts are combined on one MIDI channel to give the same effect as a more powerful synthesizer with several oscillators stacked up. A little editing work here would easily produce sounds that are far better than the presets.

In Multi Mode it is possible to edit most parameters via MIDI, so any changes made will stay with your song without permanently altering the original. I personally find this to be the best approach when using this type of module. Alternatively, it is

SYSEX MESSAGES

There are many System Exclusive messages available on the MU80, and the Enter button makes them instantly available. Here are a couple of examples:

XG System On:

F0,43,10,4C,00,00,7E,00,F7

Plonk this at the start of your sequenced song to make sure you have access to all the good bits.

GM System On:

F0,7E,7F,09,01,F7

A/D Part set to active for Microphone input:

F0,43,10,4C,10,00,03,01,F7

The 01 before the F7 is the actual data, so vary this for other types of input.

A/D Part set to receive MIDI Channel 1:

F0,43,10,4C,10,00,04,00,F7

The 00 before the F7 is the receive channel-minus-one, so take a wild guess what to enter for channel 2... Yes, it really is that easy on the MU80.

Yamaha MU80

CONTROL FREAK

Here is a list of the MIDI Controllers available on the MU80 for each MIDI channel, and their corresponding function in XG Multi Mode.

CONTROLLER NUMBER	XG FUNCTION
7	Main Volume
10	Pan
11	Expression
64	Sustain (On or Off)
65	Portamento (On or Off)
66	Sostenuto (On or Off)
67	Soft Pedal
71	Harmonic Content
72	Release Time
73	Attack Time
74	Brightness (Filter Cutoff)
84	Portamento Time
91	Reverb Send
93	Chorus Send
94	Effect Send 4 (Variation or Separate effect)

"If I was on a tight budget and looking for a GM-compatible sound source with plenty of polyphony, the MU80 would currently have to come top of my shopping list."

INTERNAL EFFECTS

The MU80 offers enough effect types to cope with almost any musical style.

- | | | | |
|-----------------|--------------------------|-----------------|-----------------|
| • Hall 1 & 2 | • Early Reflection 1 & 2 | • Tremolo | • Auto Wah |
| • Room 1, 2 & 3 | • Gate Reverb | • Auto Pan | • Pitch Change |
| • Stage 1 & 2 | • Reverse Gate | • Phaser | • Aural Exciter |
| • Plate | • Karaoke 1, 2 & 3 | • Distortion | • Touch Wah |
| • Delay L/C/R | • Chorus 1 & 2 | • Overdrive | • Compressor |
| • Delay L/R | • Flanger 1 & 2 | • Amp Simulator | • Noise Gate |
| • Echo | • Symphonic | • 3-band EQ | • Thru. |
| • Gross Delay | • Rotary Speaker | • 2-band EQ | |

There, is that enough for you?

possible to change any part of the sound on any channel, and then record the lot as a MIDI System Exclusive Bulk Dump and place it at the start of your song. Although this is simpler for some to understand, you may find yourself saving lots of unnecessary data. Still, it's good to have the choice.

As a final sweetener, Yamaha list a Librarian/Editor for Mac, PC and Atari as a coming attraction, hopefully in their generous tradition of 'freeware' software support. Let's hope so.

USING THE A/D INPUT

Let's return to what is probably the unique selling point of the MU80, the A/D Input. Any analogue source (mic, guitar, tape send etc) connected to this input jack is fed to one of two A/D Parts, and then mixed and processed as though it were a normal MIDI timbre. Several special effect programs are available from the internal effects for the guitarist, such as Tube Distortion and Amp Simulator, along with more general settings for keyboard or mixer effect sends, while for vocals we have Compression or Aural Exciter (for a full list of effect types, check out the 'Cause & Effect' box). These are known as the Variation or Insert effects, and are totally independent of the System effects (Reverb and Chorus, which are still available for all the Parts in a multitimbral setup). Reverb, Chorus, Volume, Pan and Variation effect levels are all remotely adjustable, via the standard MIDI Controllers, so once you set the correct A/D source input gain with the front panel control, the rest can be fully automated. This was all so easy to use that things become possible with the MU80 which, in the past, would have required a separate multi-effects unit, such as a Quadverb, and two Sound Canvas or TG100 modules to achieve the same result.

As with most Yamaha effects units, the sound quality is very good, with smooth reverbs and clear chorusing which still leave a solid bottom end to the sound. Obviously Yamaha are drawing on experience gained with their stand-alone processors. The effects alone would probably cost you £200 in a separate unit, and I cannot fault them at this price.

The small niggles I have are firstly that the A/D Part defaults to 'off'. Considering the importance of this feature, this seems a little daft, but only a minor flaw in an otherwise superb design. Secondly, the owner's manual and the advertising implies that two separate inputs can be processed by the A/D Parts (yes, there are two of them) but the manual makes no mention of *how* you do this!

MU80 SPECIFICATIONS

- | | |
|-----------------------------------|--|
| • 64 note polyphony | • 192 Performances |
| • 32 part multitimbral | • Direct Mac/PC connection |
| • 660 AWM2 voices | • 4 independent multi-effects processors |
| • 18 drum kits | • 5-band EQ |
| • 1 x quarter-inch jack A/D Input | |

The MU80 seems to be aimed squarely at the musician on a tight budget, as a 'total solution' for all sound and processing needs, and while it is possible to obtain similar results from a combination of other equipment, it won't be possible at this price. For the gigging band or duo, professional effects control is now a mouse click away. Imagine turning off the reverb when you are speaking to the audience between songs, adding spot echo to a single word or phrase, and setting up the effects precisely how you want them for each song instead of using one general treatment. The best thing is that your selections will be stored as part of the song data, never to be forgotten again.

Basic effects setups for the A/D Parts can be chosen with SysEx messages and then fine tuned with a Controller message. It may sound complicated, but it is easy when you remember that a double-click on the Enter button will tell you the SysEx message for that particular edit. Couldn't be much easier, could it?

IN CONCLUSION

Although obviously competent in general terms, the MU80 sounds initially didn't overwhelm me. Let's face it, with the generally high sonic quality available these days, it would take a miracle to give me the same buzz as I had from hearing my first Roland D50 or Yamaha SY77. However, the more I used it, the more the MU80 impressed me with its fundamental ease of use, its audio quality, and a feature list as long as your arm. In the past, the synth modules which took longest to impress me have been the ones I kept, while other 'instant hits' were soon forgotten or sold.

When I finally got around to hooking the effects send from my mixing desk into the A/D input, the MU80 began to really grow on me as a superb all-rounder. Although powerful, it is easy to operate and offers enough depth to keep a real 'tech head' like me interested, while remaining accessible to a novice. If I was on a tight budget and looking for a GM-compatible sound source with plenty of polyphony, the MU80 would currently have to come top of my shopping list — and the A/D effects section makes it great value for money.

SOS

FURTHER INFORMATION

- £ £699 inc VAT.
 A Yamaha-Kemble Music (UK) Ltd, Sherbourne Drive, Tilbrook, Milton Keynes, MK7 8BL.
 T 01908 369269 (enquiry line).
 F 01908 368872.



WARNING

Once you've tried Silk there's no going back

Unveiling the new 3G Silk Live and Studio Desks, designed to give you total mixing control. They feature true stereo imaging, smoother long throw fading and overall superior flexibility, quality and value for money.

SILK SERIES MIXERS

LIVE: 16-2-1 STUDIO: 16-8-16-2
24-2-1 24-8-16-2

3G

SILK MIXERS
WITH 3 YEAR GUARANTEE

WRH

Please send me full details of the 3G Silk Mixers

Name _____

Address _____

Postcode _____

Sole Distributors: HW International, 167-171 Willoughby Lane
London N17 0SB. Tel: 0181-808 2222

HW
INTERNATIONAL

THE Logical SOLUTION

CUBASE LOGICAL EDIT EXPLAINED

PART 2: This month, SIMON MILLWARD explains how you can use Logical Edit to hype your hi-hats and pep up your Quadraverb+ patches.

The first instalment of this series gave a general overview of the Logical Edit page of *Cubase*; this month, I'll be taking a look at more specific uses of this facility.

A problem which has been experienced by almost every MIDI musician is a lifeless hi-hat track. This may be due to the choice of sound, and/or to the feel of the playing. Feel, or groove, will be dictated by the position and accent of notes, and I'll be dealing here with accent, since position is better dealt with using *Cubase's* Groove Quantize.

bar 4/4 pattern — and I'm also concentrating only on the closed hi-hats. The intention is to accent the first and third beats of each bar and to make all the down-beats a little stronger than the up-beats — without making the sound mechanical. Once the technique has been mastered in its basic form, you can go on to experiment with more elaborate procedures.

- Select a hi-hat part in need of enlivening on the Arrange page, and go into Key Edit, or Drum Edit if you prefer.
- While in the editor, select the Master track by double clicking on the 'Master' button or pressing Control M.

- Double-click in the 'Signature' column and change the time signature to 4/16. Why change the time signature? Because we need to prepare the scene for Logical Edit to accentuate certain notes within each beat. 4/16 is equal to one quarter note beat in 4/4 time.
- Now go into Logical Edit. Start by setting all the hi-hats to velocity values of between 70 and 80.
- Set the FILTER section to 'Equal Note' in the EVENT TYPE column, and the PROCESSING section to a random value of between 70 and 80 in the VALUE 2 column (Figure 1).
- Set Logical Edit to 'Transform' and 'Perform' the operation.

You can save each stage of the process as a preset for future use, or you may feel comfortable working on the fly.

Next, we need to put a stress on all the downbeats of the part. Most drummers would naturally do this, though it does, of course, depend on the feel of the music. It's achieved in Logical Edit by using the BAR RANGE function of the FILTER section.

- Without changing the previous Logical Edit settings, simply add the following BAR RANGE data: a filter for all notes 'Inside' the range '1.0 to 1.48' (Figure 2). This can be selected directly in the BAR RANGE column, or the range can also be adjusted using click and drag in the graphic BAR RANGE found between the FILTER and PROCESSING sections.
- Set the PROCESSING VALUE 2 column to plus 20 and 'Perform' the operation.

The graphic BAR RANGE is a graphic representation of a time segment of your music. With the current time signature set to 4/16, this time segment is equal to 1 beat. If your hi-hat part contains continuous 16th notes, each successive group of four such notes will be acted

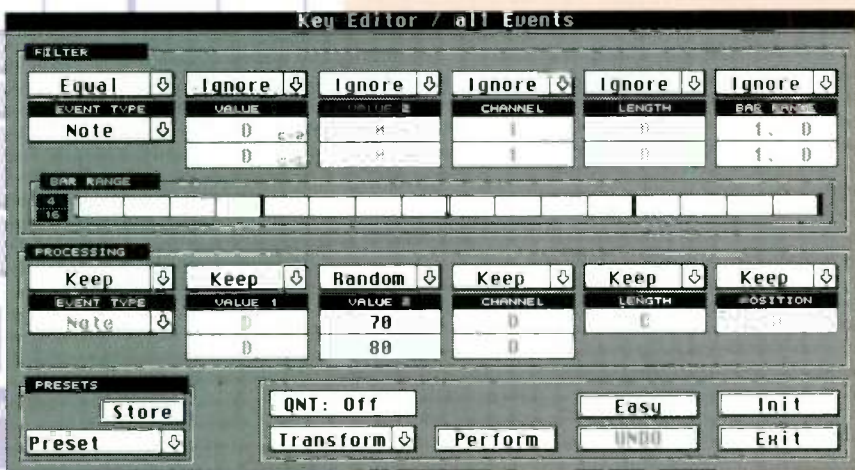


Figure 1.

A real drummer would obviously accent certain beats, and these accents would relate to how he was playing the rest of his kit. It is, of course, well-nigh impossible to recreate the feel of an excellent drummer but, using Logical Edit, we can make up for some of the deficiencies of a drum track that was badly played or input in step time.

HAPPENING HI-HATS

I'm assuming that our hi-hat part is very simple — 16th notes ticking continuously throughout a four-

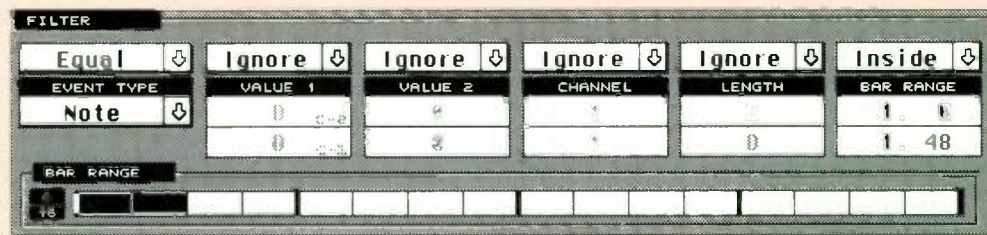


Figure 2.

MARKS

FOR BETTER THAN A PRICE MATCH...

HOW TO PAY:

CREDIT CARDS
We accept all major credit cards
INSTANT DESPATCH
CHEQUES C.O.D.

BANKERS DRAFTS - INSTANT DESPATCH
PERSONAL CHEQUES - 5 DAY CLEARANCE

NEXT DAY DELIVERIES

0% CREDIT AVAILABLE...

WRITTEN QUOTATIONS AVAILABLE ON REQUEST.
6 & 9 MONTHS INTEREST FREE.

BARGAIN BOX

NEW, SECONDHAND & EX-DEMO

Roland MT32 Module.....	£95
Casio CSM-1 Module.....	£79
Yamaha FB01 Module.....	£95
Korg 01WFD Workstation.....	£799
Alesis Quadrasynth.....	£889
Studiomaster KMS1 Microphone.....	£49
Digitech Vocalist II.....	£299
Korg i3 Workstation.....	£1449
Emu Morpheus.....	£899
Akai S01 Sampler.....	£649
Alesis Monitor Ones.....	£299
Studiomaster P7 16/8/16 Mixer.....	£1749
Studiomaster Diamond 16-2 Club.....	£335
Emu Proteus F/X.....	£499
Alesis Quadraverb 2.....	£699

BBE Sonic Maximizer (362).....	£249
Roland JV1000 Workstation.....	£1399
Boss Mex Multi FX.....	£389
Roland RA50 Arranger.....	£249
Beyer Dynamic Radio Headset Mic.....	£369
Korg Wavestation SR.....	£779
Tascam MTS1000 Sync Remote Unit.....	£399
Teac V/370 Tapedeck.....	£89
Studiomaster Diamond Pro 12-3.....	£435
Casio CZ230S MIDI Keyboard.....	£99
Studiomaster 12-2 Diamond.....	£299
Audio Technica 4033 Studio Mic.....	£479
Akai X7000 sampling keyboard.....	£375
Yamaha DX9.....	£160
ART Multiverb Alpha 2.0.....	£249
Carlsbro CPX800 Power Amp.....	£399
Studiomaster Diamond 16-2.....	£299
Studiomaster Diamond 8-2.....	£175
Boss MA15 Micro Monitor.....	£55

Strand 400W Stereo Power amp.....	£240
Alesis Micro Compressor/Limiter.....	£75
Pioneer CDJ 500 CD Turntable.....	£699
Vestex PDT 5000 Turntable.....	£399
Denon DN 2000F Dual CD Player.....	£889
Yamaha DX100.....	£99
Roland PA150 Mixer Amp.....	£299

Time Vault

Fender 1976 Strat.....	£375
Hi Watt Stack.....	£599
Bassman Head.....	£299
WEM Collums.....	£65
WEM 5cm Mixer.....	£40
Roland RS202 Organ.....	£60
Roland RS 09 Strings / Organ.....	£95
Marshall Plexi Head.....	£299

ALESIS

ALWAYS ALL IN STOCK

MONITOR ONE
CALL US



NEW Alesis Midiverb 4.....	CALL
NEW Alesis Quadraverb II.....	£699
Alesis Quadrasynth.....	£1099
Alesis Microverb.....	£159
Alesis Midiverb.....	£249
Alesis Quadraverb Plus.....	£315
Alesis Quadraverb GT.....	£365
Alesis 3630 Compressor.....	£249
Alesis MEQ230 EQ.....	£215
Alesis PA100 Power Amp.....	£269
Alesis D4 drum module.....	£295
Alesis SR16 drum machine.....	£219

AKAI

New Low Prices

Speak to our hard disk recording expert Mat	
Cheap Memory Upgrades.....	PHONE
S2800 Sampler.....	£1199
DR4 Hard Disk Recorder.....	£1299
DR8 Hard Disk Recorder.....	£2999
S01 Sampler.....	£679
S3000 Sampler.....	£2100

Lexicon

LEXICON NEW REFLEX.....	£399
LEXICON NEW VORTEX.....	£449
LEXICON JAM MAN.....	£333
LEXICON ALEX.....	£333

ZETONE

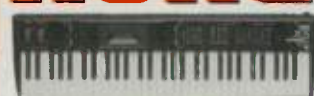
9150 DSP.....	£CALL
NEW Studio 1202.....	£CALL
9050 Guitar Multi 1/x.....	£499
9002 Pro Guitar Multi 1/x.....	£325
2020 Guitar Multi 1/x.....	£249

Studiomaster



STUDIOMASTER P7 16/8/16 Mixer.....	£1849
DIAMOND CLUB 9-2 Mixer.....	£285
DIAMOND CLUB 12-2 Mixer.....	£319
DIAMOND CLUB 16-2 Mixer.....	£369
DIAMOND PRO 12-3 Mixer.....	£499
DIAMOND PRO 16-4-3 Mixer.....	£749
DIAMOND PRO 24-4-3 Mixer.....	£999
SESSIONMIX 16-2 Mixer.....	£699
STAR SYSTEM Mixer.....	£899
PROLINE GOLD 16-4-8.....	£CALL
SHOWMIX 16-2.....	£1199
VISION POWERHOUSE 8-2.....	£899
VISION POWERHOUSE 12-2.....	£CALL
KMX SPEAKER SYSTEMS.....	PHONE
VISION SPEAKER SYSTEMS.....	PHONE

KORG



KORG Oasis.....	£CALL
KORG X5 Keyboard.....	£699
NEW KORG AX30G Guitar Multi Effects Unit.....	£375
NEW KORG X2 <i>New in Stock</i>	CALL
KORG X3 Workstation.....	CALL
KORG 01W/FD Workstation.....	£1XXX
KORG O5R/W Module.....	CALL
KORG I2 Interactive Workstation.....	£1XXX
KORG I3 Interactive Workstation.....	£1XXX
KORG Wavestation SR.....	£825
KORG AUDIO GALLERY PC/Mac.....	£3XX
Korg Wave Drum.....	CALL

RARELY BEATEN ON PRICES

TASCAM

NEW Tascam 488 Mk II.....	£1199
Tascam 07 Hi speed, individual EQ on each channel.....	£300
Tascam 424 Portastudio.....	£400
Tascam 464 Portastudio.....	£549
Tascam DA30 Mk II DAT machine.....	£1000
Tascam 112 Mk II Tape Deck.....	£400

NEW DA-30 Mk II DAT Machine.....CALL IN STOCK



Tascam mixers please call

E-MU



NEW EMU ESI2 SAMPLER.....	£1099
NEW CLASSIC KEYS.....	CALL
MORPHEUS.....	CALL
PROTEUS F/X.....	£499
VINTAGE KEY PLUS.....	£390
PERFORMANCE 1.....	£249
PERFORMANCE 1+.....	£319

SENNHEISER

Sennheiser HD435 Headphones.....	£22
Sennheiser HD320 Headphones.....	£37
Sennheiser HD340 Headphones.....	£59
Sennheiser HD440II Headphones.....	£32
Sennheiser S20II Headphones.....	£85
Sennheiser 25/13 Closed Headphones.....	£129

ULTIMATE

Desktop Stand.....	£99
Stealth Stand.....	£49
Microphone MC 66.....	£59
One Hand Stand.....	£25
Microphone MC 07 Stacking Stand.....	£25
Guitar XLP193 Acetal Guitar Stand.....	£25
Apea Stand.....	£189
Studio Stand.....	£39

ART

NEW ART MIXR Elite.....	£375
ART ALPHA SE.....	£CALL
ART FXR Reverb, Delay, Chorus.....	£179
ART X-12 MIDI Unit Controller.....	£139
ART FXD elite.....	£249
NEW ART ECC Command Centre.....	£399
NEW ART MIXR Reverb.....	£149

Roland



NEW MS1 SAMPLER.....	£399
ROLAND JV1000.....	CHEST PRICE
NEW JS30 Sampling Workstation.....	CALL
ROLAND JV-35 SYNTHESIZER.....	CALL
ROLAND JV-50 EXPANDABLE SYNTHESIZER.....	CALL
ROLAND JV-90 EXPANDABLE SYNTHESIZER.....	CALL
VINTAGE S&P BOARD SV80/04.....	£730
ROLAND RD-500 Digital Piano.....	£1799
ROLAND SC88 Super Concert 87.....	£CALL
ROLAND GR09 Guitar Synthesizer.....	£399
ROLAND GK2A Pick Up.....	£115
ROLAND S760 Sampler.....	£1445
ROLAND CARDS, BOARDS, FILES.....	ALL IN STOCK

BOSS

NEW BOSS RV-70 Reverb rack unit.....	£319
BOSS RV-3, 16 bit reverb delay pedal.....	£149
BOSS PS-3, Pitch Shifter, 10 modes, 2000 reverb delay.....	£149
BOSS DR5 Rhythm Section.....	£375
BOSS SE-70 Multi Effects.....	£385
BOSS DS330 Module.....	£299

SKB CASES

SKB 160 Rack Case.....	£119
SKB 160 Rack Case.....	£140
SKB 170 Rack Case.....	£165
SKB Pop up mixer case.....	£129
SKB 170 Shock Mount Case.....	£179

BEHRINGER

BEHRINGER ULTRATFX EX3000.....	BEST
BEHRINGER AUTOCOM MDX1000.....	BEST
BEHRINGER COMPOSER MDX2000.....	BEST
BEHRINGER COMBINATOR MDX8000.....	BEST
BEHRINGER INTELLIGATE XR2000.....	BEST
BEHRINGER AUTOQUAD.....	BEST
BEHRINGER DUALFX.....	BEST

NOW OPEN ! OUR NEW CAMBRIDGE STORE. See Shape of things to come

6-8 ST NICHOLAS STREET • IPSWICH • SUFFOLK • IP1 1TJ

01473 287872 or 254150

57 FOXALL ROAD • IPSWICH • SUFFOLK • IP3 8JU • 01473 250195

CALL MAIL ORDER DIVISION
Mail - Mark
QUOTE LINES

BUYING OR SELLING
SECONDHAND
FOXHALL ROAD

CUBASE LOGICAL EDIT EXPLAINED

OBJECT NAME	SYSTEM EXCLUSIVE	VALUE RANGE
Left Delay	F0,00,00,0E,02,01,02,03,XX,00,00,F7	0 - 127
Right Delay	F0,00,00,0E,02,01,02,05,XX,00,00,F7	0 - 127
Feedback Left	F0,00,00,0E,02,01,02,04,XX,00,00,F7	0 - 50
Feedback Right	F0,00,00,0E,02,01,02,06,XX,00,00,F7	0 - 50
Delay Output	F0,00,00,0E,02,01,08,04,XX,00,00,F7	0 - 50

Figure 5.

► That's five objects.

- First, create a four-bar Mixer part on the Arrange page. Go to the MIDI Mixer page and create new objects using the 'New' tool and select 'Sys-ex' in the 'MIDI message status' menu of each object. Type in the settings shown in Figure 5 for the new objects.

- The five objects should be appropriately named and sized, and should end up looking something like Figure 6.

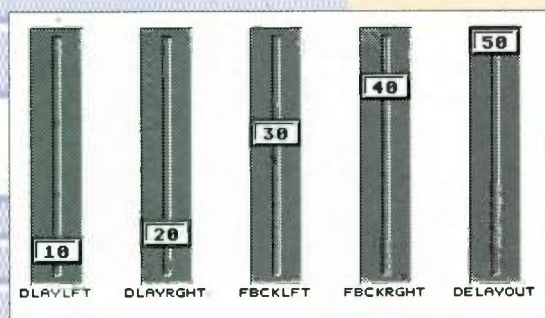


Figure 6.

- Save your new Mixer Map as 'TESTQUAD', or something similar.

- Set your Quadraverb to System Exclusive ON in the MIDI menu of the unit and select a patch which uses the EQ PITCH DELAY REVERB configuration — such as PROGRAM 44 'Echo 2 to the Left', for example.

- Test that each Mixer object has an effect on the Quadraverb by moving the faders (each parameter should be seen to change visibly on the unit's display window).
- Next, set the song position of Cubase to Bar 2. Go into 'Write' mode and set up a static mix by moving the faders to positions of 10, 20, 30, 40 and 50 (for example) and 'Keep' the mix.
- Now go into List Edit: the five MIDI Mixer events should be visible at bar position 2. Looking at the VALUE columns reveals that VALUE 1 represents the number of the object and VALUE 2 the setting of the fader for each object. If we now go into Logical Edit, it becomes a straightforward matter to alter the settings of the object faders using the VALUE 2 column.

Figure 7.



- Set up the Logical Edit page as follows: ignore the FILTER section and set a random value of between 1 and 127 in the VALUE 2 column of the PROCESSING section. Logical Edit should be in Transform mode. Figure 7 illustrates what you should be seeing. Save this as a Logical Edit preset under the name of 'Randomix' (for example) and leave the editor.

Now comes a clever move. When the new Logical Edit preset is used, it's best that the resulting changed values are sent out via MIDI immediately. The Options menu contains an item called 'Chase Events'. This should be set to 'Active' for Mixer data. Cubase will now chase the latest status of MIDI Mixer events as they occur in the song. But it will also chase changes in the status of events as they are edited using Logical Edit, if the Song Position pointer is set to later than the position in which the events first occurred. So, set Cubase to Bar 3, since our original MIDI Mixer events have been recorded at Bar 2. Using the 'randomix' Logical Edit preset while in the Arrange page should produce the desired random output to the Quadraverb, the activity of which should be visible in the unit's display. If not, then try jogging some activity by moving the song position pointer forwards a touch.

Try setting up a drum pattern cycling between bars 3 and 4 and treat the sound with the Quadraverb. Use the Logical Edit preset repeatedly while the pattern is cycling, and each time you will have a slightly different effect, according to the new random settings of the objects. If the effect is too extreme, the low and high limits of the random function in the Logical Edit preset could be changed to 10 and 50, for example.

SERENDIPITY

So what's the point of all this? Well, I have found serendipity (ie: stumbling upon something wonderful by accident) to be extremely valuable when searching for new sounds or effects. If a more comprehensive Mixer Map is used, a large number of parameters may be randomly manipulated, and dramatic changes in the character of the effect are possible.

If you don't wish to get involved in creating MIDI Mixer objects, use the pre-written maps supplied by a number of sources, including Steinberg themselves or Club Cubase. Move only the objects required for randomisation while in 'Write' mode on the MIDI mixer page and 'Keep' the mix. These objects alone will be effected by the 'randomix' Logical Edit preset. Try the technique on any Mixer Map and you may be pleasantly surprised by the results.

It has become evident here that the power of Logical Edit is enhanced when coupled with the strengths of the other editors and the settings of other parts of the program. I have successfully used the above technique to create a whole new bank of effects for my Quadraverb+. I did use a far more complex set of Mixer maps for the job but the added work was worth it. Next month's article explores the control of MIDI Controllers using Logical Edit. Until then, happy hi-hats and many random returns!

CONDENSER MICROPHONES FOR STUDIO RECORDING

AKG C1000
 BEST SELLER! Cardioid condenser plus ppc100 polar pattern converter battery or phantom power.
£199

AKG C3000
 This mic now represents incredible value for money - Buy one today!
£299

AKG C414
 All time classic vocal mic with 4 x switchable polar patterns, attenuation and HPF...
£749

ATM 4033
 The Audio Technica 4033 has become a much coveted mic in the studio - marvellous
£499

NEUMANN TLM103
LOWER PRICE!!
 TLM 193 Special Offer
£699

BEYER MC834
 Non-pattern switchable, top class condenser mic, very clean sound.
£539
 Special Offer

Samplers

AKAI
 Including SCSI cable, mains cable, caddy and manual.
 FREE! * CD-ROM drive + CD-ROM
 (S-301S is required with S2800 and S3000)

Model	RRP	Axis
AKAI S2800 sampler	£1299	Call
AKAI S2800i (8M + SCSI)	£1799	Call
AKAI S3000 sampler	£2299	Call
AKAI S3000i (8M + SCSI)	£2799	Call
AKAI S3200 sampler	£3499	Call
AKAI CD3000 sampler	£2799	Call

Options & Memory Upgrades

EXM-01 1Mb for S01	99
EXM-002 2Mb for S3000 series	179
EXM-008 8Mb for S3000 series	480
IB-301S SCSI board S3000 series	119
IB-302D digital i/f for S3000 series	299
IB-303T smpte board for S3000	149
IB-304F 2nd filter/direct-to-disk S3000	439
SB3001P piano board S3000	169

Outboard

REVERB / FX

Model	RRP	Axis
ALESIS Midiverb 4	399	339
ALESIS Quadraverb Plus	499	349
ALESIS Quadraverb 2	899	799
ART DXR preset delay unit NEW!	249	179
ART DXR Elite delay unit NEW!	329	229
ART RXR Elite reverb unit NEW!	329	229
ART FXR multi-ix preset unit	199	179
ART DRX-2100ES multi-ix (Monster!)	499	369
DIGITECH VHM2 'Vocalist'	680	599
ENSONIO DP4	1299	1099
LEXICON LXP-1	459	379
LEXICON LXP-5	459	379
LEXICON MRC	399	325
LEXICON Alex	389	349
LEXICON Reflex	469	389
LEXICON LXP-15	979	799
LEXICON PCM-80	2113	1980
LEXICON 300	4641	POA
LEXICON 480L with LARC	10569	POA

DYNAMICS

Model	RRP	Axis
ALESIS 3630 comp/lim	275	219
BEHRINGER 'Compressor'	342	299
BEHRINGER 'Autocom'	236	199
BEHRINGER 'Intelligate'	342	299
BEHRINGER 'Autoquad' gate	429	372
BEHRINGER 'Denoyer' 2ch	214	185
BEHRINGER 'Multicom' 4ch	342	299
BEHRINGER 'Suppressor'	257	222
BEHRINGER 'Combinator'	1279	POA
DRAWMER 1960	1028	945
LA AUDIO 4x4	349	329
LA AUDIO 4C	399	379
LA AUDIO 4G	399	379
LA AUDIO CX2	249	POA
LA AUDIO GX2	249	POA
LA AUDIO Multi Gate	995	899

EQUALISERS

Model	RRP	Axis
Amek/Neve 9098	816	POA
MTA Signature Series stereo EQ	1169	999
AMEK 9098 Rupert Neve EQ	426	320
DBX 2x15/1x31 band graphic	299	259
BEHRINGER PEQ305 parametric		

ENHANCERS

Model	RRP	Axis
BBE 462 Sonic Maximizer	299	259
APHEX Type C2 'Big Bottom'	238	198
BBE 362 'Sonic Maximizer'	299	269
BBE 362NR 'Sonic Maximizer'	340	299
BEHRINGER 'Dualflex II'	149	129
BEHRINGER 'Ultraflex II'	257	222
BEHRINGER 'Bassflex'	257	222
BEHRINGER 'Edison'	299	249
SPL Stereo Vitalizer	586	499

Near Field Monitoring Package

Save over £230!
ALESIS Monitor ONE
 Fantastic deep sound!
 RRP: £399 inc VAT
 Mus. Audio price when purchased separately £339 inc VAT
£549 For BOTH!!
OMNIPHONICS Footprint 75
 RRP: £382 inc VAT
 120 watts per channel into 8 Ohms
 80 watts per channel into 8 Ohms
 Mus. Audio price when purchased separately £279 inc VAT

Recording

Hard Disk Recording
AKAI DR8
 8 tracks of non-linear hard disk recording with non-destructive editing and 16 channels of on-board mixing.

AKAI DR4
 Four track hard disk recorder with options including midi and smpte sync plus digital in/out as standard.

Packages with Hard Drives...

AKAI DR8 8 track HD	RRP 3299	Axis POA
AKAI DR4 + 1.0AV Gb drive	£3585	
AKAI DR8 + 2.1AV Gb drive	£4199	

Digital Tape Multitracking

Model	RRP	Axis
AKAI DR4d 4 track HD	1499	POA
AKAI DR4d + 340Mb drive	£1599	
AKAI DR4d + 520Mb drive	£1799	

Options & Accessories

IB-112T smpte board (DR4)	£169
IB-113M midi board (DR4)	£169
IB-110D 2nd digital in/out board (DR4)	£199
IB-802T smpte board (DR8)	£249
IB-803M midi board (DR8)	£199

DAT Machines

New FOSTEX D5 & D25 coming soon!
 New TASCAM portable coming soon!

SONY DTC-50 £799
 Digital in & out
 3 x motor
 Super Bit Mapping
 44.1 & 48K analog

TASCAM DA30 MDI (RRP:1299) £1155
 AES Digital in & out
 Jog Wheel
 No copy prohibit
 44.1 & 48Khz analog

FOSTEX D10 £1990
 AES Digital in & out
 Jog Wheel
 Time Code option
 44.1 & 48Khz analog

Desks

AMEK BIG
 We have one only of these fine consoles available as an ex-display model. 28 inputs in large frame (44) with recall and fader automation. Inc PC.
AMEK Big by Langley (display) 21931 15999

SPIRIT FOLIO By Soundcraft
 Fantastic compact consoles at very affordable prices.
 Folio Lite £299
 Folio 10:2 £368
 Folio 12:2 £429
 Folio RACPAC £899
 Folio 4 20:4:2 £1173
 Folio SI 18:2 £524

TASCAM M2600
 This is a sure fire winner from Tascam. With Absolute Sound Transparency (AST™) the M2600 is going to find itself a home in many a digital studio!
 TASCAM M2600 16 input RRP 2499
 TASCAM M2600 24 input RRP 3299
 TASCAM M2600 32 input RRP 3799

MACKIE

Model	RRP	Axis
MACKIE 8 Bus 16:8:16	2875	Call
MACKIE 8 Bus 24:8:24	3590	Call
MACKIE 8 Bus 32:8:32	4395	Call
MACKIE 24 chan extender	2699	Call
MACKIE CR1604 16:2	949	899
MACKIE 1202	355	339

SAMSON AUDIO
 From America a range of consoles and outboard that represents incredible value and performance.

Model	RRP	Axis
SAMSON MPL 1502 15:2	299	249
SAMSON MPL 1640 16:2	599	499
SAMSON MPL 2242 22:4:2	749	699

ALLEN & HEATH GS-3
 The GS3 has midi muting on just about everything - even the aux output! And you don't need a sequencer to run it!
STOP PRESS... GS-1
 16:8:2 rack mount console for only £999!!

Model	RRP	Axis
A&H GS3 16:8:16	2583	1999
A&H GS3 24:8:24	3825	2680
A&H GS3V 16:8:16	3818	POA
A&H GS3V 24:8:24	5381	POA
A&H GL2 14:4:2	1173	899

SOUNDTRACS Topaz
 Soundtracs' latest addition, the Topaz, is proving very popular with many project studios. One or two ex-demo consoles may be available - please call!

Model	RRP	Axis
SOUNDTRACS Topaz 24:8	3288	2899
SOUNDTRACS Topaz 32:8	4228	3699
Meterbridge for 24		899

STUDIOMASTER P7
 These consoles are expandable right up to 40 inputs and have midi muting on all channels and returns.

Model	RRP	Axis
STUDIOMASTER P7 16:8	2584	1895
STUDIOMASTER P7 24:8	3288	2429
P7 8 channel extender	969	618

AXIS audio SYSTEMS

PROFESSIONAL AUDIO EQUIPMENT SALES & SERVICE

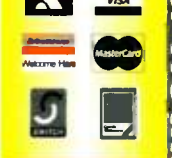
FAX
 on (0161) 474 7619 for an instant quote



Installation Service

MAIL ORDER

TECH SUPPORT



Digital Package
 Multimedial Record/!



Complete Hard Disk Recording Set Up!
 1. APPLE Macintosh Performa 600 (Same as ILLX) w/ Keyboard, Mouse & 14" colour monitor - 3 x NuBus slots! Includes: ClarisWorks
 2. STEINBERG Cubase Audio + DIGIDESIGN AudioMedia II
 3. MICRONET 540Mb SCSI hard disk drive
 4. OP CODE Midi Translator II

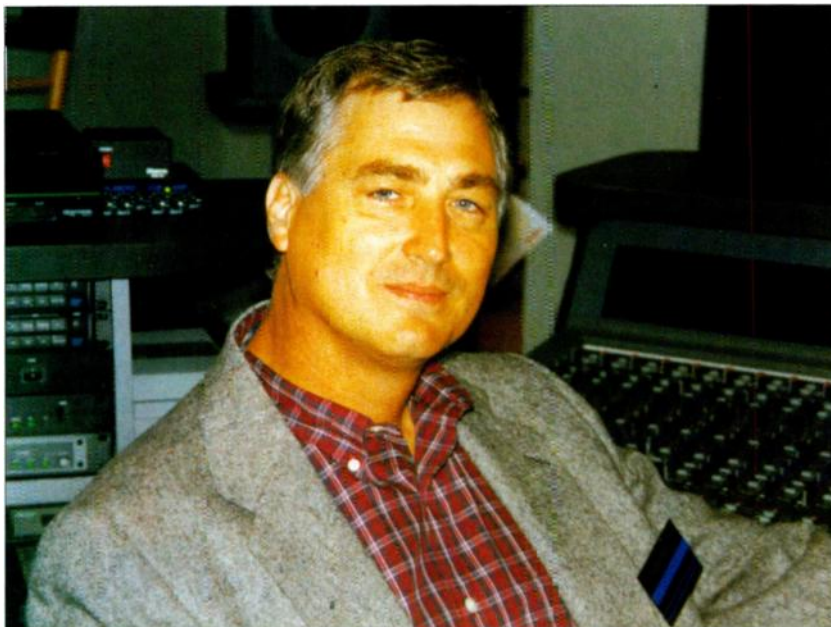
£2898
 Including all cables

Phone the Sales Order Hotline Now! on 0161 474 7626

0161 474 7626

All prices shown are subject to change without notice. All prices include VAT. E&OE

AXIS AUDIO SYSTEMS LTD 3 WATERLOO ROAD STOKE NEW BRIGHT CHEESHIRE, SK1 3BD FAX: 0161-474 7619



Before joining Alesis, Frank Kelly worked in a number of radio stations in southern California, where he gained his recording and production experience. He then moved into design engineering, and in 1973, started with UREI. He stayed with that company for 17 years, which taught him a lot about power amplifiers and loudspeakers. Around five years ago, Frank left UREI, and, after a short break, got together with Keith Barr and Russell Palmer (the Chairman and President of Alesis respectively), and

“We did that because we have the worldwide distribution and name recognition in the studio business, so it was a logical step. We had first to develop the manufacturing and marketing structure for the loudspeaker business to follow, and the easiest way to start that was with much smaller speakers.”

DESIGNING THE MONITOR ONE

How did you go about designing the Monitor Ones?

“This is where I need to introduce Walter Dick. He is the principal acoustic designer of the Monitor One, and was the Engineering Manager at JBL during the '70s, their golden period as a transducer manufacturer. In the '80s, Walter went to Gauss, where he developed some of the highest powered transducers you can buy today — he's a real force in the industry, and as you can imagine, he knows a lot about loudspeakers!

“The idea for the Monitor One came from Alan Wald and Keith Barr; I recall a meeting where we were considering where to go next. The Alesis vision of the dream studio was incomplete at that time, and the nearfield monitor was one of the missing pieces. Many people in the company — Walter, for example, who has a good common-sense approach to design — thought that although there were successful products in the nearfield market, many of them still appeared to be compromises in terms of what could be done with existing technology. We didn't need to reinvent

the appliance of sci

FRANK KELLY OF ALESIS

was invited to join Alesis as Director of Engineering.

“When I first came on board, Alesis were developing the RA100 amplifier, after which we went onto the D4 drum module and ADAT. ADAT at that time was coming out of our R&D labs, where Keith [Barr] had spent several years perfecting the technical details of what made ADAT work, but we still needed to turn it into a product we could actually manufacture.

“About a year later, I got the opportunity to do what I really wanted to do, which was to be in charge of a larger business unit, as opposed to staying in straight engineering. So with Keith and Russell's wisdom and blessing, we started the Sound Reinforcement division of the company. The plan was to expand Alesis by taking advantage of our existing sales force and distribution network, and with products that were slightly different from those Alesis had produced for the studio market.”

But the first loudspeaker product to come from your new division was the Monitor One studio monitor, not a PA system.

loudspeakers, or come up with new cabinet material — all that was needed was appropriate execution of existing technology.

“All of the drivers in our products are proprietary, but make use of existing materials. They're designed either by us or to our specifications, and made exclusively for us. The only material that's actually new is the synthetic rubber coating on the Monitor One. We didn't really copy anybody — I've been asked a number of times what sound we were after, and to what extent we analysed the competition. Certainly, we looked at and listened to our competitors. We considered Yamaha's NS10s to be among the principal ones, because they were a popular product, and we wanted to get a handle on what their users were hearing. But I can say without reservation that we made no attempt to copy any of our competitors; in fact, our goal was to come up with something better, and we learned early on that there were various deficiencies in existing products, both in their performance and their sound.”

TOUCHING BASS

I've used the Monitor Ones, and they give the impression of accuracy, but with a more extended bass response than you might expect from such a compact monitor. How was this achieved?

"The first point to make is that the bottom end response of the Monitor One at medium listening levels is really just a function of transducer design and a properly-sized box — there literally is no magic in that. I'm surprised that other manufacturers haven't been able to get to that level of performance, because it's quite possible if you take care of all the things that contribute to that performance properly. The oversized port in the Monitor One, which we call the Super Port, largely affects the transient response at high levels, and its design was based on work that Walter has done over the past 30 years. Quite often, when people do solutions for box designs, they pick a port diameter based on existing materials, either for cosmetic purposes or cost restraints. The larger the port, the more you have to deal with; it can be unsightly, and the ports also need to be made longer to compensate, because there's a direct trade-off between the diameter and the length. You also have the physical limitation of a box that's only 12 to 15 inches deep — you can't have a port that's 20 inches long without having a bend inside the box or some other mechanical accommodation.

"Most manufacturers carry out a computer 'cookbook' calculation for their box dimensions and ports, and end up with a port that's around one or one and a half inches in diameter, because that's the way they've always done it. That makes the tube maybe three or four inches long, but with analysis, you see a couple of things that happen under heavy bass use. A great deal of air has to

move in and out of that port — you can check that for yourself by playing a typical monitor loud and putting your hand near the port.

"In a nutshell, Walter has found that at high volumes, turbulence is developed within the port, and this reduces the port's effective diameter. This changes the box tuning, rather like sticking a sock in the port. It can also change the resonant frequency of the system, which in turn affects the load impedance the amplifier sees. At resonance, the loudspeaker load is largely resistive, but above and below resonance, it becomes reactive. We

Alesis, once the champions of budget effects, drum machines, and more recently the ADAT digital recording system, have now diversified into mixing consoles, amplifiers, and studio monitors, with every sign that the list will continue to grow. PAUL WHITE spoke to Alesis' Frank Kelly about some of the new directions the company is taking.

wanted to stabilise that, so we used a large-diameter, folded port, giving a port size of around two and half inches in diameter by 13 inches in length. It isn't the prettiest thing in the world, so we put it on the back, but the net result is that the Monitor One performs better at higher levels both in terms of its bass performance, and in the way it handles fast attacks."

ENTER MATICA

How did you fire the imagination of the buying public with the new series of Matica power ▶

ence

The Alesis vision of the Dream Studio...



► amplifiers? They're so often just boring black bricks...

"There were some corporate groans when I suggested that we should build a power amplifier, because they've come to be seen as a commodity item. I feel that the manufacturers have to take some of the blame for the 'Watts per dollar' war that's going on in the music stores today — it's perceived that there's no difference in the performance of amplifiers other than the amount of power that they put out. We don't agree with that argument, in the same way as we don't agree that all compressors, tape recorders and mixing desks are the same. We're in the music business because we like to listen, and we like the emotional experience of what good sound provides — so we believe we should pay attention to how our power amps sound, and how they perform."

On the face of it, a power amp takes a signal and just makes it bigger. Providing it doesn't distort the sound or run out of current, there should be no problem, so why are there so many imperfect designs?

"Under fairly undemanding conditions, at low to medium power levels, you could probably get away with using any number of power amplifiers, although there *are* amps out there from reputable manufacturers that don't sound as good as

ENGINEERING AT BOTH ENDS

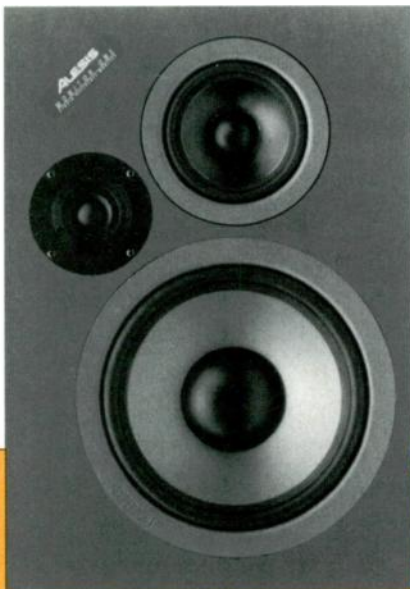
I've looked inside your power amplifiers, and you seem to have approached the engineering from both ends; the unit is designed with a very effective-looking cooling system, and yet the circuitry has been designed almost along hi-fi lines.

"That's exactly right. Amplifiers have some interesting manufacturing-related problems because of the size and weight of the materials used. The package must be designed both for ease of manufacture *and* for quality, and you have a number of forces that are working against you. I consider how the product is made to be just as important as the circuitry. Customer support must also not be overlooked, because it's a much bigger picture than if you were making something like a compressor.

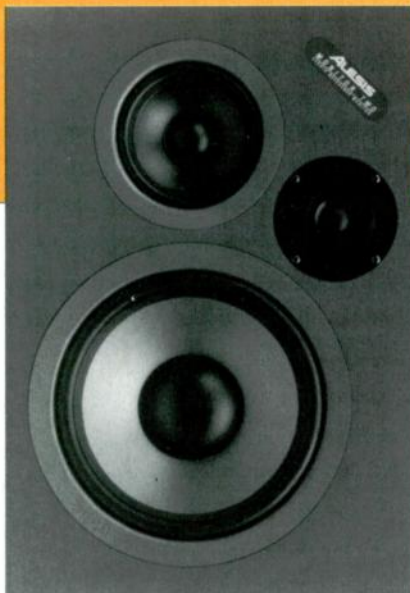
"Unfortunately, there isn't much new in the way of linear amplifier circuits these days, and many people have either copied each other or designed products based on the semiconductor manufacturers' application notes. Even outright cases or piracy are not unknown. Without getting into the details of our circuit design, we took a different approach, and addressed the points that affect the amplifier's sound. The Matica amplifiers have a slew rate of 80 volts per microsecond, or 160 volts per microsecond in the mono mode, and to my knowledge, that probably makes them the fastest professional quality amplifiers out there. That directly affects the transient intermodulation distortion of the amplifier. You might still ask why we need such a wide audio bandwidth, when the human hearing range extends only up to 20kHz or below. A typical sound system comprises many components, each with its own bandwidth, and when these components are combined, you find that the effects of bandwidth limitation are cumulative. Add up all the odd dBs of roll-off and you can end up with significant attenuation at 20kHz, and, perhaps more importantly, undesirable phase shifts occurring an octave or so below that.

"We employed bi-polar transistors, because there's no doubt in my mind that we can make a better quality power amplifier in terms of sound, price and reliability using a bi-polar design. This is a good opportunity to talk about the relationship we developed with Motorola, the semiconductor manufacturers. Until we started working with them, power amp manufacturers were forced into using what are really consumer audio transistors developed in Japan over the past 15 or 20 years. We felt a need to develop a new generation of high power, high 'safe operating area' transistors. The co-designer of the Matica amps was actually a consultant to Motorola in the development of these parts, and this gave us a bit of an inside track. I wish I could say that it was an exclusive arrangement, but Motorola made a substantial investment in this as well, so they have now made these parts available to other people.

"Another thing you might notice is the A-link multipin connector on the back of the amplifier.



The original Alesis Monitor One (top) and the Monitor Two (below).



ALESIS MONITOR TWOS: YOU READ IT HERE FIRST...

At the time of this interview, I'd just had a sneak preview of the prototype Monitor Two three-way midfield monitor, and I have to admit that it sounded very impressive. It had the same sound character as the Monitor One, but with an obviously extended bass response. Given the projected price range (sub-£1000 per pair), this should also turn out to be a popular design, and of course we'll bring you a full report just as soon as we can get our hands on a pair.

they should — you can hear the difference between power amplifiers if you know what you're listening for. Beyond that, in demanding applications, for example in live sound, where you may be on a hot stage, or out in the sun with a number of speaker loads of dubious impedance connected together — in these circumstances, the amplifier needs to be better designed. All the garage bands I know just add more speakers when they increase the size of their PA — they never seem to get rid of any of the old ones!

These are real-world situations, and we think it reasonable that anyone in live sound should be able to buy a power amp that not only *doesn't* cost a lot of money, but also has good, clean sound to go with it."

THE MATICA AMP: STAYING COOL

The Matica amplifier is fan-cooled, yet I believe you've devised a system to ensure that fan noise isn't a problem in studios.

"Many studios avoid using fan-cooled amplifiers altogether, in favour of convection-cooled models. Unfortunately, convection-cooled amps are a little more expensive, and there's a practical limit as to how much heat you dissipate that way. Our CoolSink thermal management system starts with the amplifier circuit design, which is optimised to produce as little heat as possible, though that still leaves a significant amount to

deal with.

"Our fan speed control circuit is unique in that the fan speed depends on the level of signal going through the amplifier. If the signal stops, the fan runs at a very low, idle speed, and because it's shock-mounted, it's very quiet anyway. When music is played through the amplifier, the fan speed comes up immediately, but of course any fan noise is masked by the sound coming from the speakers.

"Heat is the enemy of power amplifiers, it's what causes power transistors to fail — but one of the main

failure modes is thermal stress caused by constant temperature changes. That means it's not so serious that things get hot, but it's important to reduce thermal cycling to a minimum. Because our fan comes on as soon as a signal is present, the transistors are being cooled before they've had time to heat up, and this keeps them at a more even temperature than a traditional system, which relies on temperature sensors located on the heatsink. Our tests have shown that you can put these amplifiers in a studio control room and noise is not a problem."

What we've done is to keep our options open for adding accessories such as active crossovers, rather than limiting ourselves to what we can physically put into the amplifier case. The architecture also allows you to implement remote control schemes."

These new products obviously bring your Dream Studio concept, and Dream PA for that matter, a little closer to fruition, but there are still obvious gaps to be filled if you're to present an entirely Alesis system. On the sound reinforcement side, it seems logical for you to move into live sound consoles and PA loudspeakers.

"Let's just say that we won't do things the way you might expect other manufacturers to do them.

We like to look at the fundamental science behind the ways things are done, and that causes you to question some assumptions that other people may have made. We have a few new things cooking in our labs, though for obvious reasons, I can't tell you what they are right now."

Given the needs of the typical gigging musician, the aim must surely be to come up with smaller, more portable sound systems that still deliver the required level of performance?

"I think that's a good way to define our aims, yes. The bedrocks of sound reinforcement are amplifiers, loudspeakers, mixers and so on, so it's safe to assume that we'll be going in that direction — but with unique products."

SOS

loopism's



volume one



loopism's



Featuring 25 loops and 115 different hardware samples

loopism's



cd's £11 - vinyl £7 (each)

we now offer a "state of the art", in-house service for 1 off CD's, highest quality, branded media, (74 min £26 + vat), call for more info.

can pay by cheque, postal order or credit card; p&p inc for UK only; call for our multi-currency discount details

please note our new free mail-order address! if outside the UK write to: po box 3, sth croydon, CR2 0YW.

d-zone direct

d-zone direct, freepost cn3194, south croydon, surrey, CR2 0UZ.
telephone (0181) 651 3633 & 0956 233332 - facsimile (0181) 651 3633.

d-zone direct

THE HEART OF YOUR STUDIO

NEW LOW PRICES ON ADAT!

Call for details

MACKIE

Excellent sound quality and rugged construction

1202

Ultra compact, low priced • Great for MIDI suites, video mixing or stage work.

CR-1604

Rack mount or table-top • 4 stereo aux returns • Stereo-in-place solo • Better than digital S/N and Dynamic Range

Q*Trax

16, 24, 32 input configurations • 24 and 32 versions expandable in groups of 24 • True parametric EQ, with variable Q 'Triple Bussing' with 24 tape outputs • Level and Mute MIDI automation ready



ALESIS

Alesis ADAT

THE digital multitrack system • 8 tracks of 16-bit digital audio on one SVHS tape • Link ADATs together to give up to 128 tracks • Complementary BRC remote – full control of functions and transport controls • Now with extended recording time – up to 52 minutes

Still the best-selling digital multitrack and we have the widest experience of installing ADATs for any application.



JL COOPER

ControlPoint™ Universal AutoLocator
Powerful, compact and affordable
• Controls Alesis ADAT, Focusrite RD-8, Tascam DA-88, other recorders and digital workstations.

APHEX

Model 105

Affordable, logic-assisted 4-channel gate with low control feedthrough • Suitable for wide range of applications, including controlling leakage and attenuating unused mics.

Easyrider

Low-price 4-channel compressor • Easy to use with applications from recording and mixing to post-production and stage monitoring

Type C2

Low-cost Aural Exciter • With 'Big Bottom' for added impetus at low frequencies



TASCAM

DA-88

Eight track digital recorder using Hi-8 video tape • 108 minutes recording time • Multiple machines give up to 128 track capability • ±6% pitch shift • Optional RC-848 Remote with meter-bridge gives full control of up to 6 DA-88s.



LEXICON

The Leader in Digital Effects

NEW! PCM-80

The new standard-setting stereo effects processor from Lexicon. Builds on the success of the PCM-70 – and then some! 200 presets cover a wide range of applications, including music performance and production and has a range of effects specially designed for video post-production and dance remixing. Available now – phone for demo.



ALESIS

Quinta One

The new loudspeaker from Alesis, specifically designed for near-field monitoring • Incredibly accurate bass response • Handles 120W continuous and over 200W peak



PA100

100W Power Amplifier with Alesis quality.



GEFELL

Fantastic audio quality using original George Neumann M7 capsule design

NEW! UMT715

Transformerless • Switchable (omni/bidirectional/cardioid) • Superb sound • Wider dynamic range • Improved sensitivity • 10dB pads

MT715

Cardioid-only version of the UMT715



SMS 2000

Modular condenser studio microphone system, with exchangeable cardioid, hyper-cardioid and omnidirectional capsules



UM525

Valve mic • Complete with flight case, power supply, Mogami cable, suspension mount and windshield.

MT715 SMS2000



FOCUSRITE

Can't afford a Focusrite console? Get some of that renowned Focusrite signal processing with the Red range.

- Red 1 – 4-channel mic pre-amplifier
- Red 2 – 2-channel parametric equaliser
- Red 3 – 2-channel compressor limiter
- Red 4 – NEW Studio pre-amplifier up to 7 stereo sources at either -10dB or +4dB
- Red 5 – NEW Power Amplifier 2 x 250W @ 8Ω (Peak 720W)
- Red 0 – A 2U blanking plate to match the rest of the range

AMEK

System 9098 EQ

Designed by Rupert Neve, with similarities to the circuitry of the 9098 console. A powerful, yet subtle and creative tool, this is EQ of the old school, but with lower noise, lower distortion and the ability to handle higher frequencies.

NEW!



The mixing console is still the heart of any recording studio – choose the best at Stirling, and combine with the latest digital recording systems.

TACTILE TECHNOLOGY

M4000

Digitally-controlled, analogue mixing desk • The most complete automation of any desk • Fader automation • recallable snapshots of every other function • Moving fader automation option • Modular design lets you start small (48 tracks) and grow in capacity (up to 240 inputs) without growing in size.



OTARI RADAR

DIGITAL MULTITRACK

Brilliant new direct-to-disk digital recorder that looks and feels just like your old analogue tape machine – you don't need to be a computer genius to operate it!

Expandable from 8-track to a full 24-track system, for less than £17,000 (incl. remote).

"Without doubt RADAR is the most exciting recording product that I have seen in the last 10 years." – *Dominic Hawken, Audio Media Oct 94*

Phone for a demo to see what all the excitement is about.



DDA

INTERFACE

The ideal mixing console for the smaller project studio, A/V and live • Loads of features for not much money • DDA's traditional low-noise audio quality.



FORUM COMPOSER

Ideal for project studios •

- 24, 32, 40 input configurations
- 8 fader-controlled group outputs • 24 tape returns direct to stereo mix • Low noise performance



AKAI

DR8d – Random access, 240Mb hard disk recorder

Record and playback 8 channels simultaneously • 42 minutes recording at 48kHz • Easy to use with precision editing capabilities

DR4d – As above, but four channels

S3200 – Digital sampler

32 voices • Multiple analogue outputs • Digital I/O • SCSI interface • SMPTE timecode generator/reader • 8Mb RAM (expandable to 32Mb) • Hard disk recording software



DYNAUDIOACOUSTICS

PPM3

Extraordinary output from a compact monitor. Frequency response 40Hz-20kHz. Max. output in excess of 120dB SPL @ 1.25m. Real power for even the smallest project studio.



RM10

High quality near-field monitor for less than you would expect • Exceptional transparent mid and HF response • LF limit a full octave below the common standard

PLP10

Passive loudspeaker protection device • Fits in line from amplifier to loudspeaker • Cheapest way to protect tweeters and voice coils



Chord SP1232

High power amplifier with superlative audio reproduction • Accepts the most demanding loads • Ideal for driving mastering monitors or sound reinforcement sub-woofers

AMEK BIG

28 or 44 frame with dual path modules give 65 or 88 inputs • 4 stereo line inputs and 4 stereo FX inputs • 12 buses selected to 24 outputs, Direct Outs and 8 aux sends • Amek Angela-like EQ • Amek Supertrue automation • Optional Amek Virtual Dynamics



DRAWMER

DC 1000

Unique, valve, front-end processor • Mic and guitar inputs • Compression and equalisation • 2U rackmounting

DC 200

Budget stereo compressor • Separate expander section • Bargraph metering • 1U rackmounting

DC 100

Quad Noise Gate • Frequency sensitive gating • Variable release • Hard and Soft gating modes

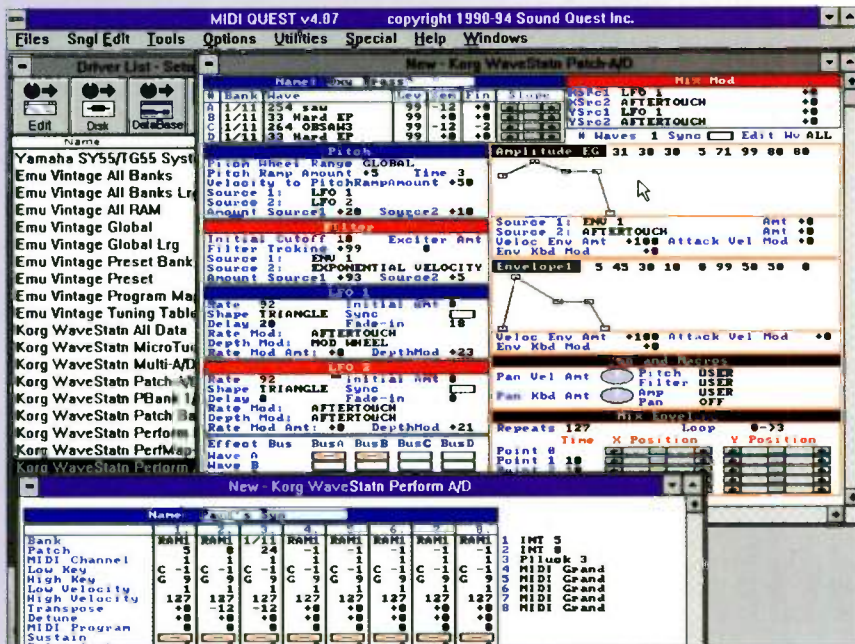


0171 624 6000

Stirling



STIRLING AUDIO SYSTEMS Ltd.
KIMBERLEY ROAD, LONDON NW6 7SF



Some of the edit screens for the Korg Wavestation.

GETTING STARTED

MIDIQuest and its instrument drivers are supplied on two 3.5-inch 1.4Mb disks with a 60-page manual, which is adequate, if not exactly brimming with detail. After a few days' use, I found myself referring to the on-line help instead which, although not context-sensitive, was nevertheless welcome. Both manual and on-line texts lacked an index, which made some things hard to trace — for example, it took me some time to find the setting for MIDI Patchbay delay (it's under Utilities, option 'Default Parm Windows', if you're interested). Installation was quite painless, as was the addition of instrument drivers, and I was very quickly in and mousing around.

First impressions are important, and I have to say that I was disappointed by the general look of the program. The editor screens were untidy, and some of the sliders very small and fiddly, whilst the larger ones reminded me of certain tired old DOS programs.

Strangely, the use of colour made things worse rather than better, giving a rather tacky appearance overall, and I found it irritating that I couldn't override any of the defaults.

SOUND QUEST

UNIVERSAL EDITOR/LIBRARIAN

MIDIQuest

A synth editor program for your computer can expand your synthesis horizons and encourage you to discard those presets in favour of original creations. But what if you have more than one synth — surely it's going to cost a fortune to buy an editor for each? Not necessarily, as PAUL NAGLE finds out.

MIDIQUEST £235

PROS

- Wide range of instrument support.
- A common 'front end' to synth editing.
- Not obsolete when gear changes.
- Librarian and database functions for versatile data storage.
- Instantly create whole new banks of sounds using randomisation, mixing and blending of existing patches.

CONS

- Looks horrible!
- Manual is a little sketchy.
- Some drivers don't cater for instrument-specific features.
- Drivers don't always edit every available parameter.

SUMMARY

A well-featured multi-instrument editor/librarian which takes the headaches out of patch generation and storage. Especially suited to a complex MIDI setup.

As synths grow more complex, paradoxically they seem to grow smaller and less accessible. With a whole rack of single-unit modules, each with a tiny LCD and, perhaps, a dozen or less buttons, you can find yourself spending a lot of time learning the programming styles of a number of manufacturers and scrolling through zillions of subtly different pages by prodding a button the size of a gnat's kneecap. Imagine if there were a way to access all your instruments via a common, friendly interface, one which remained constant even as synths came and went in your setup. Don't you think you might be tempted to create a few sounds of your own if you could only grab hold of some knobs and sliders? *MIDIQuest* version 4 from Sound Quest Inc. is just such a 'front end', and is available for DOS, Windows, Atari, Amiga and Mac formats, providing a universal editor, database and librarian for 160 instruments, effects units and other MIDI doobies. (See box for full list.) It is the Windows 3.1 version that we're looking at here, but most of the features apply to all platforms (the program will work on any PC capable of running Windows 3.1 but, of course, runs better on bigger machines with oodles of RAM. You need a MIDI interface too, naturally).

Alas, this function appears to be restricted to the Amiga version.

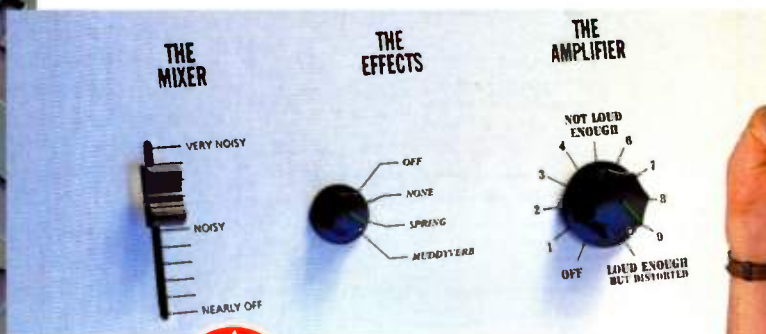
Fortunately, there is far more to *MIDIQuest* than mere looks. After adding drivers for my collection of synths, I proceeded to grab hold of some data so that I could give it a good tweaking. The program uses the right mouse button to audition notes, with the convention of left/right movement to vary pitch and up/down to alter velocity. Additionally, there are options to play sequences, chords, and so on, all of which are handy when you want to hear your edits in some kind of musical context. Usefully, the program supports multiple MIDI ports, so you might want to hard-wire the connections needed to get SysEx to and from your synths. Alternatively, there is MIDI patchbay support which, if you have a MIDI patchbay, saves all that messing about with cables. Sadly, the patchbay doesn't revert to a 'play mode' program change after receiving SysEx from a synth, meaning that if you wish to audition sounds via your keyboard, you need to switch the patchbay manually afterwards.

INSTRUMENT DRIVERS

MIDIQuest knows about instruments via their drivers — many of which are split into several parts according to function. As an example, there are seven separate options for the Korg O3RAW, ranging from individual patches, to drums, combis, global, All Data, and so on. This prevents any one driver from becoming too large and complex and allows you to home in on exactly what you wish to edit. Once installed, you have to give each driver some information about the synth — such as its channel,

THERE'S ONLY 3 THINGS WRONG WITH MOST POWERED MIXERS

POWERSTATION



Why Do You Need a Powered Mixer?

You don't – if you want to keep carrying a separate mixer, reverb unit and power amp to all your gigs. Let's face it, it's enough hassle setting up instruments and mics without worrying about another set of leads. PowerStation gives you everything you need between stage and speakers in a single, rugged package.



Why Compromise?

At Spirit we believe that quality doesn't have to carry a price premium. However, designing PowerStation gave Spirit's design guru, Graham Blyth, greater challenges than mere affordability. In 25 years of mixer design Graham had steered clear of low-cost powered mixers, because he didn't want to be associated with the terrible reputation many had for poor audio and build quality. However, when we told him that PowerStation had to be a tool that audio-philosophers would be proud of he soon changed his mind! Read on to find out how he designed a console that gives you performance, power and change in your pocket.

With PowerStation Graham Blyth has excelled himself. A new pre-amp design that will take any signal you throw at it, plus a subsonic filter to tackle rumble without stopping you using bass EQ. On-board digital effects are by Lexicon – the choice of large studios around the world. Even the power amp is an audiophile's dream, really meeting its specifications to deliver 300 watts (peak) x 2 of pure Spirit sound*.

So what's missing? Just the hiss, muddiness, reverb and distortion that you'd expect to find on a powered mixer at this price. Read on to discover how it's done.

Bullet-Proof Mic Pre-Amps

With gain ranging from 0 to 60dB Graham's new UltraMic™ pre-amps give you even more signal handling capacity to connect signals ranging from low output dynamic mics to

active DI boxes without fear of clipping. Just as important, at -129dBu EIN their noise performance exceeds that of many so-called professional mixers.

High Pass and Subsonic Filters

A new no-nonsense 100Hz High Pass Filter with an 18dB/octave cut-off means you can tackle low frequency rumble even more effectively. An additional 40Hz subsonic filter across the outputs lets you create bass-heavy mixes without overloading PA cabs with frequencies they can't handle.

Mono and Stereo Inputs

You won't just be using mics on stage, so we've given you two full-spec stereo line input channels in addition to the 8 mono mic/line channels – ideal for keyboards and samplers. We've also included a stereo return, a 2-track tape return and inserts on the mono channels.

LEX Appeal

Lexicon effects have pride of place in the effects racks of studios around the world. A carefully selected range of breathtaking effects algorithms adds a final polish to your music.

British EQ

Everyone knows British EQ is the best. PowerStation's mono inputs use Graham's acclaimed 3-band EQ, with swept mid for the fine control over your sound that's not available with simple tone controls.

7-Band Graphic EQ

Don't believe manufacturers who tell you that their simple graphics will solve feedback problems: to isolate the 'ring' at exact frequencies really needs at least 27 very steep, close-spaced filters. Instead, PowerStation's graphic EQ has been designed as a creative tool to give you a brilliant sound whatever the room acoustics. 6dB of cut or boost is available for precise fine tuning of your sound.

The Right Controls, for Real Control

New 60mm channel faders offer smooth response, and 100dB of attenuation for complete silence on fade outs. Custom-designed controls provide an even spread of gain, ensuring that you will never get annoying leaps in level with even the smallest adjustment.

Flexible Routing

Configure PowerStation to exactly your requirements. Aux 2 can either be routed internally or to an external processor and Aux 1 is switchable pre/post fade too, for pre-EQ stage monitoring or more effects.



We've even given you a comprehensive patchbay above the master section. This allows you to bypass the power amp to drive a bigger PA, feed another mixer into the power amp, or even route external signals (or the aux outputs) through the graphic EQ.

Power Amp

Most powered mixers deserve their reputation for using poor quality power amps that don't actually meet their power rating specifications. PowerStation, whose 300 watts (peak) x 2 stereo amp*, designed by UK power amp guru Douglas Self, offers both audiophile performance and enough power to blow your socks off. Road tested around the world for a year, we can guarantee this amp exceeds its specs.

Rugged Good Looks

PowerStation is built like a tank. Period. A hinged cover protects the mixer from beer, dust and roving hands that shouldn't be playing with your knobs. Rack ears are available too for rackmount use.



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 660482



SPiRiT
By Soundcraft

H A Harman International Company

For free brochures and a booklet written by pro-audio journalist Paul White on how to get the best from your mixer in a variety of situations, simply complete and return the coupon to the address shown.

I am interested in: Power Station colour brochure

Information on other Spirit consoles:

Live Recording Full Range

Name

Address

Post Code

What application will you use your powered mixer for?

What instrument(s) do you play?

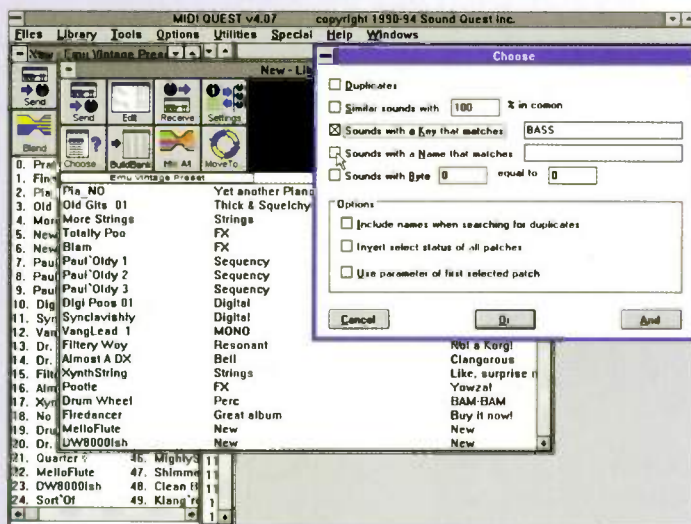
What magazines do you read?

Tick here if you do not want to be kept on Spirit's mailing list

SOS

* 265 watts RMS x 2, continuous into 4Ω

SOUND QUEST MIDIQuest



Library sound selection.

► MIDI In/Out ports, and patchbay program change. A handy feature allows propagation of these settings to all associated drivers; once they are set up, they can then be pretty much ignored.

EDITING

The edit screens are built from a series of virtual sliders, knobs, tick boxes, numerical fields and graphical envelopes. Because *MIDIQuest* gives a common interface to all its devices, some specific objects, such as the Wavestation's vector envelope, have to be represented by the closest equivalent — in this case, a series of sliders. Others, such as the Korg 03R/W, offer trimmed-down access to some settings — effects settings, for example. If you need to change reverb time, you have to go back to the gnat's kneecap approach... In general, though, this works OK, and maybe future versions will include new objects and improved drivers for all instruments; it's a pretty tall order to cater for so many instruments and Sound Quest have packed in an awful lot here.

If you wish, you can create new librarian drivers for unsupported instruments, and for the really adventurous, a separate program, *Tech Quest*, is

available that allows creation of synth drivers from scratch — but you really need to know your SysEx and your checksums before tackling that baby!

Before starting any edit session, it is wise to save the entire setup of your synth. Many of the instrument drivers feature an 'ALL BANKS' or 'ALL DATA' option, which you should use in case your synth's memory is magically wiped as you poke around the multitude of menus. The useful 'FAST TIPS' option gives device-specific advice and hints and is available for each driver — it will often contain details on how to switch on SysEx 'receive & transmit', or how to set the device ID for those instruments that need one. Once you're sure that everything is safely backed up, you can get inside your synth and see just how all these wonderful noises are generated. Virtual knobs might not be as intuitive as the real thing but they're a good second best and it shouldn't take long to get to grips with your particular instrument. If you're still nervous about dragging those sliders and squashing those graphical envelopes, there's always...

...INSTANT GRATIFICATION

I was very impressed with *MIDIQuest*'s 'instant gratification' mix and blend options, which can be used to forge new sounds quickly by combining elements of existing ones. I must confess to spending the longest part of my time with *MIDIQuest* mixing and mashing my sounds into new and wonderful shapes; many were surprisingly musical, while others were just plain silly... Note that the program doesn't 'know' which parameters affect level, so some of your new patches may be somewhat understated in the volume department. Individual patches can have selected (or all of) their parameters randomised, with the degree of randomisation variable between subtle and really wild. You can very quickly generate new patches, rejecting the no-hopers at once and coaxing the possibles into something usable with the editor. Every now and again, you'll come across a pearler — as the names are mulched up too, it may be called something like ArgXwibble, but it's more interesting than 98 versions of 'Strings2'. I generated

INSTRUMENTS SUPPORTED

FULL EDITOR/LIBRARIAN SUPPORT

- Alesis: D4
- Boss: DS330.
- Casio: CZ1; CZ1000; CZ101; CZ3000; CZ5000; VZ1; VZ10M; VZ8M.
- Digital Music Services: MX8.
- Emu: Proteus MPS; Proteus XR + Protologic; Proteus 1; Proteus 1 + Protologic; Proteus 1 Orchestral; Proteus 1XR; Proteus 2; Proteus 2XR; Proteus 3; Proteus 3XR; Vintage Keys.
- Ensoniq: ESQ1; ESQM; KS32; Mirage; SD1; SQ1; SQ2; SQ80; SQR; VFX; VFX SD.
- JL Cooper: FaderMaster; MSB Plus; MSB Rev2; MSB1620.
- Kawai: G-Mega; K1; K1 Mk2; K11;

- K1m; K1r; K4; K4m; K4r; Spectra; XD5.
- Korg: DW6000; DW8000; EX8000; i2; i3; M1; M1ex; M1R; M1Rex; M3R; 01RW; 01W; 01W FD; 03R/W; 05R/W; T1; T2; T3; Wavestation; Wavestation AD; Wavestation EX; Wavestation SR; X3.
- Oberheim: Matrix 6; Matrix 6R; Matrix 1000.
- Peavey: DPM V3; DPM3.
- Roland: CM1000; CM300; CM32L; CM32P; CM64; D10; D110; D20; D5; D50; D550; D70; E10; E20; E35; E5; E660; E70; GR50; Juno 106; JV1000; JV30; JV80; JV880; JW50; JX8P; KR Series; MKS80; MT100; MT200; MT32; R5; R8; R8M; R8 Mk2; RA90; SC155;

- SC33; SC55; SC55 Mk 2; SCC1; SD35; U110; U20; U220.
- Sequential: Prophet 5.
- Turtle Beach: Multisound Classic.
- Waldorf: Microwave.
- Yamaha: DX1; DX100; DX11; DX21; DX27; DX27S; DX5; DX7; DX7IID; DX7IIDF; DX7S; DX9; FB01; RX7; SY22; SY35; SY55; SY77; SY85; TF01; TG100; TG300; TG500; TG33; TG55; TG77; TX7; TX802; TX816; TX81Z; V50; WT11.

LIBRARIAN SUPPORT ONLY

- Alesis: HR16; HR16B; SR16.
- ART: DR1.
- Boss: SE50.

- Digitech: DSP128; DSP256.
- Ensoniq: EPS.
- Eventide: Harmoniser.
- JL Cooper: PPS100.
- Kawai: K3; K3m; K5; K5m; R100; R50; 707; DDD5; D58; DVP1; EX800.
- Korg: Poly 800; S3; SDD3300.
- Lexicon: LXP1; LXP15; LXP5.
- Rhodes: 660; 760.
- Roland: A50; A80; GP16; JD800; P330; Pro E; RA50.
- Sequential: Drumtraks; Multitrak; Prophet T8; Prophet 10; Prophet 600; SixTrak; Tom.
- Voce: DM164.
- Yamaha: DMP7; RX11; RX17; RX21L; SPX90.

some wonderful starting points that have subsequently evolved into classy sounds. I'll be claiming them as totally original — only *MIDIQuest* knows different! Personally, I think all this random generation business is what computers do particularly well and (with the exception of Dr T's fab KCS sequencer) it's a real shame we don't see more MIDI programs with similar features.

Some synths have so many controls that they won't fit on a single screen, but most of the drivers are very manageable and easy to manoeuvre. Everything works pretty much as you'd expect, with sliders draggable, knobs twiddleable, numbers incrementable and tick boxes, er, tickable. There is no enforced limit to the number or type of windows that may be open at once, which is handy if you need to compare bits of two different patches. There are the usual cut and paste options for transferring parts of one voice to another. A slight annoyance involved the method of auditioning members of a newly created/loaded bank using the mouse. You are forced to enter the edit screen for each individual member before the right mouse audition function works. There's some feeble excuse about "Windows architecture" in the manual, but I know of other programs that manage this OK, so come on guys, get it sorted! A welcome four edit buffers are provided, to let you keep various stages of a new edit, which beats the more common 'compare' or single 'undo'.



Creation of a new bank of sounds by mixing elements of another.

After some time fiddling with a sound, you can send it back to the synth, save it to disk, export it to a .MIDI file or add it to your library/database.

THE DATABASE & LIBRARIAN

The database is a versatile means of storing any combination of *MIDIQuest*'s sound data. It's an ideal way of saving a complete snapshot of your system to reconfigure at a later date, or to keep



See us at MEMS '95
Stand 285

- Sound Station for Windows £99
- PC Drummer for Windows £49
- Song Wright £99
- Musictime 16 £149
- Cakewalk Home Studio £99
- Sound Card MIDI/Mixer £34

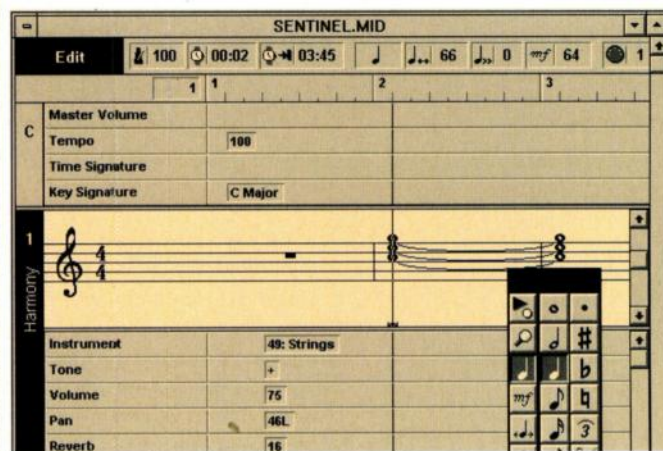
Sales hotline ☎ 0181-658 7251

All prices include VAT, But exclude carriage. E&OE
PC Services 78 Beckenham Road, Beckenham, Kent BR3 4RH

Audition GS for Windows

£99

A UK written Windows MIDI sequencer from Sunrise Software. With full support for the MIDI GS standard, Audition uses standard MIDI files and works in music notation. Record and playback via MIDI, or enter music with the mouse, edit the music, set pan, chorus, reverb and voice anywhere on any track, and edit Roland Sound Canvas voices including drums! Audition includes a dedicated drum track and will load type 1 and 0 MIDI files.



New version with score printing facility!

SOUND QUEST MIDIQuest

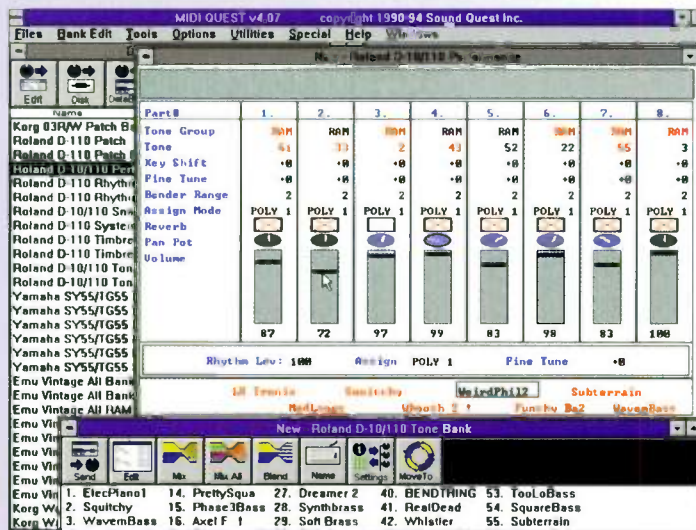
- ▶ multiple related banks for the same or different instruments. One thing that I noticed at about this point was the completely open-ended file naming structure. Before creating vast collections of saved files, it is important to decide what you're going to call them. The program does not impose its own names for databases, banks, individual patches and libraries, so you need to think this out early on to save confusion later. I'd have been happier to

of other sequencers will have to carry on incrementing numbers with the mouse as they squint over their shoulder at a distant 19-inch rack, but *MIDIQuest* also provides the option to save the SysEx data as part of a .MID file, which even the most limited sequencer should be able to import. This attention to detail is very pleasing, and it's a shame that more software isn't written with the same open-ended approach. The manual mentions the ability to convert from sound banks created by other programs — Dr T's excellent *Caged Artist* series for one — although I have yet to discover how to do this. During use, the program only crashed a couple of times — once whilst I was attempting to load a .SYX file. The program warned me it didn't recognise the file type, despite the fact that it was responsible for its creation, then promptly fell over. Alas, it took Windows and a version of this article down with it which, I suspect, shouldn't have happened (!)

CONCLUSION

After having used *MIDI Quest* for several weeks, I have become quite comfortable with it. Once I got over the cosmetics of the program, I started to appreciate its flexibility and the sheer number of possibilities on offer. I believe that it currently supports the widest range of devices for any program of this type, with new drivers available free from the distributor or from the Sound Quest Bulletin Board (in Canada). With software like this, there's no longer an excuse for sticking with the same old synth presets and sounding like everyone else. It really can take away much of the pain of programming, and the random/mix/blend features are extremely quick and fun, whilst still leaving you the final choice of which patches to keep and which to throw out. Anyhow, you can always generate a fresh batch later! The ability to save patches as SysEx, .MID files and *Cakewalk's* PATCHES.INI allows *MIDIQuest* to integrate with just about any existing setup. I found it ran well alongside *Cakewalk*, which loaded patch data in SysEx form, generated the patchname file and recorded SysEx changes from its sliders into a song, all without a hitch. It just goes to show that under Windows you should not be restricted to buying all your programs from one company — when things work as smoothly as this. If your synth is so good you don't need an editor, *MIDIQuest's* librarian and database features might still be of interest, but if you've always felt you wanted to start making some original noises but didn't know how, this could be a good place to start.

SOS



A simple way to manage your sounds.

stick with imposed names, maybe overriding them if I wanted, but I soon decided on .DAT, .BNK, .PAT, .LIB, and so on for file extensions, and then things seemed to become clearer.

Unlike a database, a library can only store the same type of information together, such as collections of SY85 Patches, D110 drum maps, or M1 combis. But its usefulness is in bulk storage and retrieval — you can have a library of all your D50 sounds, gathered from the four corners of the earth and catalogued for ease of access. Actually, the library isn't quite so slick as others I have seen and lacks many of the keyword search features I have enjoyed previously (you know the kind of thing: "find me all resonant, bass, synth or natural, original sounds which aren't crap, please"). Instead you are allowed to add a line of description with a format of your own choice and from which searches can be made. It can work OK, but you need to organise yourself from the start, or it could mean lengthy re-cataloguing exercises when you finally conceive a consistent way of describing sounds.

FILE SAVES & LOADS

MIDIQuest is capable of saving individual sounds, banks and libraries in a variety of formats. Sound Quest get top marks for including the ability to save patches as *Cakewalk's* .SYX and .INI files, meaning that if you use *Cakewalk* you can refer to your sounds by name and, additionally, store full patch dumps as part of a *Cakewalk* song. You need never worry again about synchronising synth patches and their corresponding compositions. You can even export bank lists as plain text files for those other programs that can utilise them. Users

FURTHER INFORMATION

- £ *MIDIQuest* Windows version £235 (version reviewed 4.07); *MIDIQuest* for all the other platforms (DOS, Atari, Mac, and Amiga) £219 each. Prices include VAT.
- ▲ Arbitr Pro MIDI, Wilberforce Road, London NW9 6AX.
- T 0181 202 1199.
- F 0181 202 7076.



ESI-32

EMULATOR TECHNOLOGY. BREAKTHROUGH PRICE.

Looking for your first sampler? Or a reason to retire the one you've got? Look no further. ESI-32 delivers more power than samplers costing twice the price—at a price that will leave you wondering what the catch is.



No catch. No joke. The ESI-32 digital sampling instrument is jammed with the same features that has made the Emulator® IIIx professional digital sampling system indispensable in both studio and performance environments worldwide. Try these on for size...16-bit audio resolution; 32-voice polyphony; up to 32MB of sample memory; complete compatibility with EIIIx, Emax II and Akai S1000/S1100 sound libraries (That's over 50GB!); 32 4-pole digital resonant filters and a variety of powerful DSP functions (like time compression/expansion and virtually distortionless pitch transposition over 10 octaves)...just for starters. We've even included ten user-assignable front-panel trigger keys for playing sounds without connecting a keyboard.

That's right. All those BIG features that used to come with a BIG price tag are now yours for a price that's—small. Standard models start at just £1199 (incl. BTW), to be exact.

While ESI-32 is ideal as a first sampler, it could also very well be your last. Right out of the box, ESI-32's professional features, stellar audio quality and incredible ease of use make it a great value at any price. But ESI-32 also offers expandability so you can customize your unit as your needs grow. Load it up with 32MB of RAM SIMMs, opt for S/PDIF digital I/O and advanced SCSI interface upgrades and replace the onboard floppy drive with a 3.5" Syquest 270MB removable hard drive.

Yep...ESI-32s can be a powerful introduction into digital sampling or ultimately support all of your power-user needs in full-blown studio and performance situations.

Naturally, you're going to want to see how ESI-32 stacks up against the competition. We invite the comparison. We're confident that when you see what you'll have to pay to match ESI-32's features, you'll make the next logical move...through the door of your local E-mu dealer to check it out in the flesh.



E-mu Systems, Inc.

P.O. Box 660015, Scotts Valley, California 95067-0015 • 408-438-1921

U.K. E-mu Systems, Ltd., Suite 6, Adam Ferguson House,

Eskmills Industrial Park Musselburgh, EH21 7PQ • 44-031-653-6556

© 1994 E-mu Systems, Inc. E-mu, E-mu Systems and Emulator are registered trademarks, and the E-mu logo is a trademark of E-mu Systems, Inc. All other trade and product names are property of their respective owners.

Sutekina music

ADVANCED MUSIC TECHNOLOGY

21 DENMARK STREET
LONDON
WC2H 8NE

ONLY 2 MIN
Tottenham Court Road
WALK FROM

**digidesign
AUDIOMEDIA II**

DECK II

THESE TWO GREAT PACKAGES FOR THE MAC ARE IN STOCK NOW. CALL FOR PRICES.

Roland

NEW MS-1

SAMPLING ON A BUDGET

JS-30

ELECTRONIC PERCUSSION

MASSIVE SHOWROOM EVERYTHING ON DEMO

KAT NEW TRAPKAT & MALLETKAT PRO IS HERE

SAW Software Audio Workshop

SAW Utilities Rack 1 on

WAV/SND EDL File Format Converter

Audio Compressor Limiter

Equalizers

Echo Effects Generator

Auto Panner

SAW UTILITIES CALL

S-760

IN STOCK AT A LOW PRICE

JV1080 £POA

ddrum 3

MACKIE

ON DEMO & IN STOCK

1202

S BUS

1604

Roland

TD-7 & TD-5

IN STOCK

Yamaha's new mixer represents a breakthrough in affordable automated digital mixing. Moving faders, two internal effects processors, 16 balanced Mic/Line inputs, 20 bit AD/DA converters, Parametric EQ with library function allowing you to save your own EQ settings (it also contains presets designed for specific applications, recall all your mix settings at the touch of a button. This machine is a favorite at Sutekina so come and see it for yourself.

YAMAHA

Pro Mix 01

Programmable Mixer



KORG

ON DEMO

WAVEDRUM

VL1-M

We are appointed dealers for this groundbreaking new synth module, call for a demo.



KORG X5 ONLY £699



YAMAHA

MU80 IN STOCK



CALL FOR A GREAT DEAL

SONSONIQ
TS-10
IN STOCK
£CALL

GREAT DEALS ON **Steinberg**

ONLY £159inc

Cubase COMPACT FOR WINDOWS

Best Deal



ReCycle!

THE ULTIMATE TOOL FOR SAMPLED GROOVES

Best Deal



Novation
BASS STATION
£CALL

MAIL ORDER HOTLINE 0171 240 7696

PROMPT 24 HOUR
DESPATCH

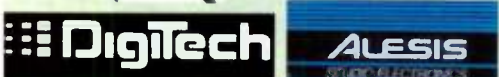
**THE NEW TASCAM DA30mkII
£CALL FOR LOWEST DEAL**



**PC
SOUNDCARDS**



**EFFECTS
PROCESSORS**



We have a massive range of studio effects in stock and on demo. our ART range includes the ALPHA SE, FXR, FXR ELITE and DXR ELITE. Our lexicon range includes the PCM-80, ALEX, VORTEX AND REFLEX. Our stock of ALESIS products includes the neW MIDIVERB 4 and the QUADREVERB 2 all at unbeatable prices.

ENSONIQ	
TS-10.....	£Call
TS-12.....	£Call
ASR-10R.....	£BEST
KS32.....	£BEST
SQ1+32.....	£Call
SQ2 32.....	£Call

CALL US FOR DETAILS OF THIS GREAT PROGRAM.

DIGITAL EIGHT TRACKS



**LOWEST DEALS ON
KURZWEIL K2000R**



**VERSION 3.0 SOFTWARE
IN STOCK**

**MIDI
INTERFACING**



MUSIC QUEST 2 PORT SE.....£Call
MUSICQUESTNOTE1.....£Call
MUSIC QUEST NOTE 1/+.....£Call
**ALTECH MAC INTERFACE
IN STOCK.**

MICROPHONES

A LARGE SELECTION OF MICROPHONES ARE AVAILABLE FROM STOCK. PRICES START FROM AROUND £39 AND LINES INCLUDE AKG, SHURE AND AUDIO TECHNICA



CREATE AND PRINT YOUR OWN MUSICAL NOTATION. EASY TO USE AND AVAILABLE ON PC AND MAC PLATFORMS.

SAMPLING



DR8 & DR4D AT SUTEKINA



At SUTEKINA, we guarantee the service that you expect from a pro-audio sales shop. Our team of expert sales staff will be able to help you with any queries or advice that you may need, regardless of product. We deal day to day with everyone from the beginner to the pro user so whether its a MIDI lead or a full SUTEKINA package, do not hesitate to call or visit us, as you will find that our prices and packages deals cannot be beaten. Our two digital recording suites have on permanent demo the latest in digital recording technology and for those of you that cannot visit us, our rapidly expanding mail order division will have you order processed within seconds of your call for a prompt 24 hr delivery. So if you want to save money and have the back up that we pride ourselves with, call us now on
**0171 240 7696
or fax us on
0171 240 3398**

When PAUL JOHNSON decided he'd like to teach a Music Technology course at the college where he works, there was one small problem: he had to build the studio himself during the summer holidays, on a shoestring budget with help from just two students. Impossible? Let's find out...

Last year, while reading through the syllabus list for 'A' levels at the college where I work, I came across a new course — Music Technology. What immediately struck me was that here was a new course which was written by music professionals, had 60% of its exam marks based on real studio experience, made use of most of today's current studio technology — and, more importantly to me, would be great fun to teach. The minimum equipment specification was quite mild: a minimum of a 4-track recorder, a cassette to master on, a small selection of microphones, and a sequencer which could be within a workstation or computer-based. Our college already had an 8-track Tascam Midstudio in our media studies department, plus my own racks of outboard equipment, which I let the students use. I didn't really expect any extra funding for a new course, but as our Director of Finance is quite used to me asking for money, I put in a proposal with a request for a digital 8-track studio, to be based in a 100 year-old building which was shortly to be vacated by our brickwork unit. Countless meetings with our senior management team followed, then they gave the go-ahead — on one condition: I had to do it myself, as my funding requirements left nothing spare to pay

contractors. I was given permission to employ two of our students over the summer holidays, but that was it. To make the whole plan even more tricky, I couldn't order anything until the week before the holiday, and the studio had to be up and running in 10 weeks, ready for the new intake of students.

At this point, I should mention that I teach Media Studies, Communications, and now Music Technology. All my experience is in that field, and my construction experience is simple home DIY. The only special skills I have for a project like this were those gained last year when I constructed a small sound studio for our media department. I convinced myself that all I had to do was think a bit bigger!

My first step was to prepare two lists of requirements:

1: The building list. Timber, sheeting, insulation, fixings, and so on.

2: The equipment list. Mixer, monitoring, outboard racks, and so on.

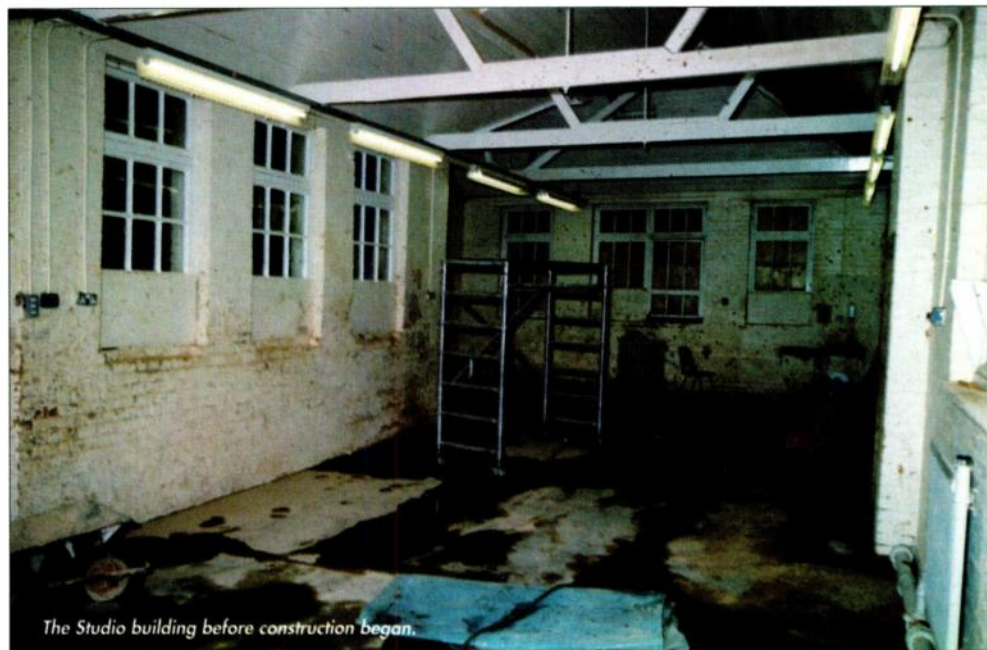
The equipment list was reasonably simple. A basic shopping list was compiled, pruned, then extended again when the prospect of gaining some additional funds appeared. The real problem was soon apparent: to order building materials you really need a plan.

THE BUILDING

The workshop to be vacated by the brickwork department looked ideal. It's an old Victorian school building with walls about 350mm thick, a concrete floor and a very high ceiling. Once the brickwork built by the students in the middle of the room was removed, we had a clear space 15m x 6.5m. At this stage I spotted that the next room was also to become available and suggested to management that this would make a superb space for our theatre studies department, if it could be provided with flooring and lighting equipment. This, of course, would also be just the place to record concerts, choirs and other events which might require an audience. Although there would be a budget available for contractors

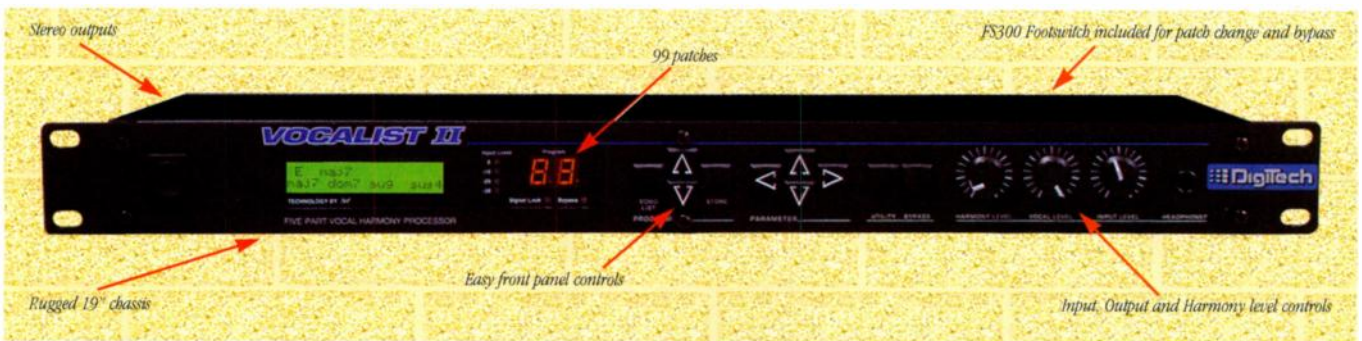
MISSION IMPOSSIBLE?

BUILDING
A SCHOOL
STUDIO IN
10 WEEKS



The Studio building before construction began.

THE INDUSTRY STANDARD 5 PART VOCAL HARMONY PROCESSOR



The introduction of DigiTech's Vocalist range has led to a revolution in live vocal performance, allowing up to five-part harmonies of stunning realism and accuracy - complex vocal performances and tight, precise stereo ensembles at a price any solo performer can afford.

And so simple to use, creating rich harmonies doesn't require hours of study - either of musical theory OR of the instruction manual!

VOCALIST II

- Up to 5 part vocal harmonies
- Ideal for use with SMFs (Standard MIDI Files) in a live situation
- 99 patches
- Vocoder mode
- Easy to use
- Built-in effects
- Pitch correction/randomisation

Take the classic Vocalist II - up to five-part harmony and a wealth of programmable features such as vibrato, pitch-randomisation, portamento, pitch correction and 99 patches, all in a classy 19' rackmount package.

Programme your own harmonies or benefit from the huge range of STANDARD MIDI FILES on the market

Contact your DigiTech dealer for a demonstration now.

THE NEXT LEVEL



New for 1995, we introduce the Studio Vocalist; enhanced Vocalist Technology, optimised for the recording studio.

The Studio Vocalist carries the same familiar programming and control as the existing Vocalist range, but now with updated controls, outputs and features such as 1/4" and balanced XLR inputs and outputs, separate outputs for each voice, optional digital I/O and an auxiliary

STUDIO VOCALIST

- Natural harmonies and pitch correction
- Intuitive operation
- XLR and 1/4" jack ins and outs
- Separate outs for each voice
- 48v phantom power
- Full frequency response (20Hz - 20kHz)
- Keystroke MIDI out for automation

loop which allows connection of a compressor or other dynamic processor.

Simply take your live or recorded vocal part, and you can have up to five individual harmony parts, each with it's own output, timing, vibrato and of course pitch variations.

Call your local DigiTech dealer to discover how your performance can be transformed.

On stage and in the studio.

STANDARD MIDI FILES: THE REVOLUTION



Standard MIDI Files (SMF) discs contain MIDI data for complete backing tracks of popular songs when used with MIDI sound sources such as synthesizers and drum machines. The Tune 1000 and Heavenly Music ranges of Standard MIDI Files have pre-programmed harmonies, fully compatible with the DigiTech Vocalist range.

ALSO FROM DIGITECH: THE VHMS



The VHMS, like the Vocalist II, provides up to five part harmonies but features a massive 256 patches (128 user, 128 factory) and a more comprehensive user-interface. Stylish, compact design - ideal for live, home or studio use and full MIDI specification ensures compatibility with SMF (see left).



Distributed exclusively by

ARBITER

A Division of Arbiter Group PLC
Wilberforce Road, London NW9 6AX
Tel: 0181 202 1199 Fax: 0181 202 7076

BUILDING A SCHOOL STUDIO IN 10 WEEKS

► to do this part of the work, I would have to do the planning and act as project manager.

The time scale was obviously going to be the major problem, and I knew from my previous project that building studwork walls to fit the available space meant odd-sized panels, and this had taken up a lot of time. My idea this time was to build the studwork in multiples of the sheet sizes that I was intending to use. Plasterboard

sheet of large graph paper and cut out suitably scaled wall panels which I joined together with sellotape. I could then move them around until I ended up with a workable plan. I then took the coordinates of the joins in the panels and used that as the basis of the computer plan. It worked! The timber list was prepared and the materials were delivered ready for the first day of construction.

CONSTRUCTION

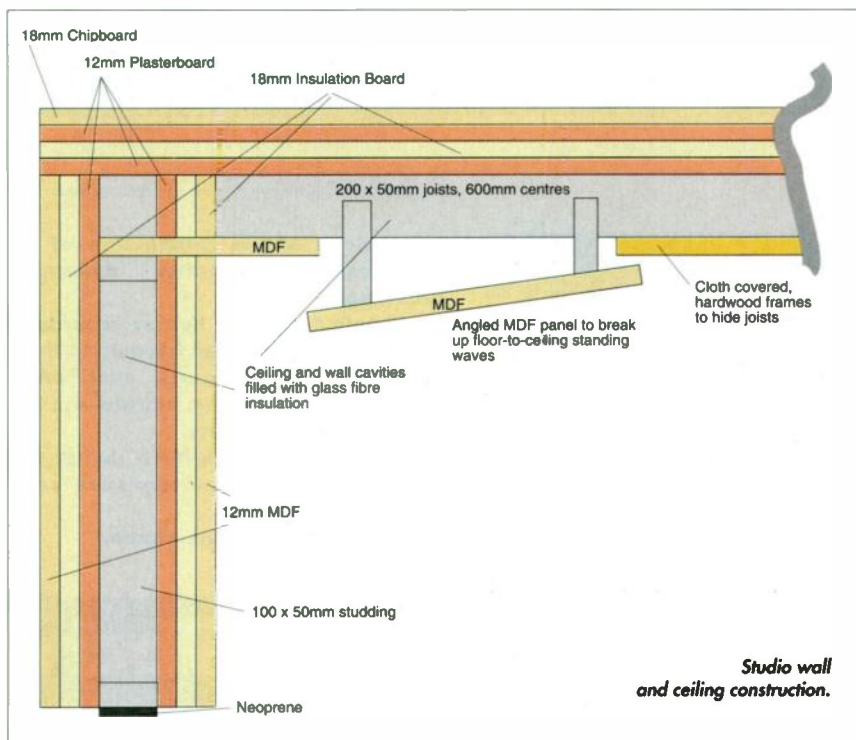
The first problem we found was that the floor was not level. There appeared to be the remains of an old fireplace on the long wall, and where the hearth would have been, the floor rose by 4cm. It looked as though my plan to have all the panels the same size would have to be amended before we even started. After a bit of head-scratching, I decided that the simplest way to solve the problem was to mark out where the panels were going, and once happy with the layout, simply build the panels where the floor had a hump 50mm shorter, so that the tops all aligned. This would leave a gap at the bottom, which could be infilled with concrete once the wall was self-supported by the panels either side.

The construction of the studwork was very conventional, using 100x75mm timber. We made up each frame on the floor using the existing walls as a brace to nail against. Once each frame was complete, we laid plasterboard sheets over the timber and nailed them to the frame with just a few nails to prevent them from moving. It became easy at this stage to use the plasterboard edges to get the timber frame exactly square. We then added the insulation board, followed by the outer layer of plasterboard (see box 'Acoustic Design'). This last layer was nailed into place using nails at about 200mm spacing. It then took two crowbars and four people to get it upright and into the correct place. The inner skin was added when the panels were up in place and secured together. Some of the panels had to join to others at angles other than 90 or 180 degrees, and to get around this problem we ended up not gluing in place the end timber upright, allowing it instead to swivel in the frame. To accomplish this, we had to sacrifice any noggins in the end of the frame and leave the sheeting un-nailed on this end timber, until after the panels were joined together. Despite my reservations on reducing the rigidity of the panels in this way, we were amazed at how the whole structure locked solid when the ends were coach-bolted together. The ceiling timbers were 50 x 200mm joists and these were installed on top of the panels in a slightly unusual way. I knew from all the reading I had done that the ceiling would be difficult to do, and in fact we were still deciding what to do with it as the walls were going up! As we didn't want to take up valuable wall space with large traps and resonators (as all the articles had suggested) I decided that the best place for them would be in the roof space. To this end, I decided to use a 600mm-deep ring of MDF, which was screwed to the top plate of the walls all the way round the studio and control room areas. The ceiling joists were then screwed and glued to the top. This method, of



The Studio with inner shell walls in place.

comes in sheets 1200 x 2400mm, so I designed the studio walls around 2400 x 2400mm panels, with a half-width size available at 1200 x 2400mm. I had the room sizes and the panel sizes so it seemed a simple matter to use a computer to work out the studio plan. I don't usually find computers a problem but it became apparent very quickly that the software didn't let me produce the plan without involving lots of maths to work out angles and distances. In the end I drew a floor plan on a



Studio wall and ceiling construction.

course, left the gaps between the joists open to the outside world and we spent a great deal of time sealing these with off-cuts from the joists. The actual roof was to be of plasterboard and insulation board sandwich, as in the walls, but with the addition of flooring-grade chipboard to the top side. In the centre of each area we left out three joists and created instead a large open space which would become a bass trap. We constructed an additional enclosure on the roof (looking like a top hat), which, with the 250mm below, gave adequate depth to the trap. The space between the joists was filled with insulation, and small pieces of MDF were screwed to alternate joists, giving the completed ceiling a series of square holes showing the insulation. I reasoned that having a fully absorbing ceiling could alter the acoustics of the room to make it too dead, so I suspended squares of MDF below most of the cavities, all at different angles to the floor, to disperse standing waves. These panels also provided a suitable location for the low-voltage lighting we were going to use. The next stage was to clad the inner surfaces of the two areas, which didn't take too long.

The studio floor was going to have to be quite simple, mainly due to cost, and it was reluctantly decided to dispense with any form of floating floor and simply lay flooring-grade chipboard onto timber battens. This would give us the necessary space for under-floor cabling. At around this time we

ACOUSTIC DESIGN

The actual acoustic design of the studio was arrived at by using all the published material available to me. I have back copies of *SOS* and other magazines going back a long way, and various books from our college library. As I have no formal acoustic training, I adopted a simple approach: I went through each article and noted all the suggestions, tips and techniques, working on the principle that if all the books said the same about a particular subject, it was probably vital; if only a few mentioned it, I could afford to give it lower priority. By this method I built up a list of essential building techniques, plus a shorter list of niceties which could be included if I could actually build them, or had the budget to even consider them.

As the actual building was of a fairly massive construction, I felt I could afford to use one timber shell with cladding on both sides. My previous project used a separate outer and inner shell with an air gap between, but standing on the same floor with standard neoprene isolation between the shell and the floor. I decided to use 100mm thick studding for the panels, and a sandwich of

two sheets of plasterboard, with insulation board between them, on the outside, with a plasterboard/insulation board/MDF sandwich on the inner face. I decided to use MDF on the inner face as it is strong and dense, easy to decorate, and fairly tough when the students knock chairs into it. Experience in the other studio showed that plasterboard itself was not suitable as a final decorative surface, as it damaged too easily.

The other studio also showed my inexperience as a carpenter when it came to fitting the doors. They always leaked sound, as the fit, when closed, was not exactly snug, so I looked at using patio-type doors as room dividers. It was obvious from looking at the various studio magazines that this was now a very common feature, and I immediately decided to use them in my plans. We checked out various prices for 8-foot patio doors and found that prices for what appeared to be similar doors varied by over £1000 per door! Needless to say, the college were keen on the cheapest, and since I couldn't find any major paper specification differences, they were duly ordered.

also finalised the plans to build blockwork plinths for the monitor speakers. These were duly built and clad in MDF to provide a decorative surface.

Then the patio doors arrived, and we immediately discovered one of the reasons why they were cheap ▶

Sounds OK programme patches with the aim that they are usable and without weird after touch, pitch changes and other odd blips.

Our sounds are programmed for musicians in their creation of new and innovative music

SY85 UK Sounds

"UK Sounds" Our best selling sound disc 94! 128 new patches Still only £19.00 Buy all 4 sound source discs and get "UK Sounds" Free

K2000 Vintage to Modern 100 Progs

"Out Of This World" (K2K club) "Outstanding" (Customer View) Packed full of synth sounds old and new, plus organ sounds and Special FX £29.00

Sounds OK

Tel: 01276 22946

10 Frimley Grove Gardens
Frimley, Camberley, Surrey
GU16 5JX

Please add £2 P+P to orders.

Callers always welcome by appointment.

Korg 01W sounds

by Sound Source

We highly recommend Stage and Studio. This set is packed full of the most usable patches ever.

- OW01 Symphonic collection
- OW02 Non-linear explorations
- OW03 Urban dance/Pop
- OW04 Radical film textures
- OW05 New age textures
- OW06 Acoustic set
- OW07 Modern synthesis
- OW08 Industrial cybertech
- OW09 Stage and Studio
- OW10 Country/Acoustic folk

Available on Disc or ROM

SY85 sound sets by Sound Source

- SY801 Super R&B
- SY802 Country/Acoustic Folk
- SY803 Hybrid Textures
- SY804 Radical film textures

£32.00 each – Buy all 4 for £79.00 and get UK Sounds FREE!!
Phone for TG500 discs.

We also stock sounds for:

JV80, D70, D50, D10, MT32
SY99, SY77, SY22, DX7,
TX802, TX16W, T Series, M1
Wavestation, 03rw, X3, M3r, K1, K4
Plus loads more.
If not listed, just phone

SOUND SOURCE

Unlimited, Inc.

Roland

JD800

- JD801 Urban Pop Collection
- JD802 New Age Collection
- JD803 Film Textures
- JD805 Progressive artist
- JD806 Jupiter Textures
- JD807 Hybrid Textures (Top Seller)

D50/550

- D501 TV/Film
- D502 Power Synths (Top Seller)
- D503 Dance Mix
- D506 Producer series
- D507 Artist series
- D508 Super R&B
- D509 Atmospheric txt/FX
- D510 Country/Folk collection

D70

- D701 Proteus XR Impressions
- D702 Atmospheric textures
- D703 Synth collection (Top Seller)
- D704 Artist Series
- D705 Industrial Cybertech
- Plus JV80, SC55, U20, D110, MT32

BUILDING A SCHOOL STUDIO IN 10 WEEKS

THERE'S A HOLE IN MY... PATIO DOOR

Earlier, I mentioned problems with the patio doors. The only unsatisfactory area of the studio construction is in its soundproofing. The patio door frames leak. A small amount of leakage is through the glass, mainly due to a small air gap of 6mm (the use of doors with at least a 10mm air gap is recommended). The frames, however, are the worst problem. We spent a lot of time and money putting mass into the walls, and in the end the performance of the doors is the weak link. Fortunately we don't have too many loud rock bands, and the isolation between areas is still sufficient for our needs, but it could have been better. We found that most double-glazing firms can provide details on the thermal performance of their products, but few have any specs regarding sound transmission.

► — the advertised hardwood frames appeared to be made out of hardwood dust and resin: they looked like wood, but as soon as we started to drill them we ended up with plastic-covered bits! More on this later. The doors themselves appeared to be well made and were assembled quite quickly. The first took four hours to install, but by the time we got to the third, we were down to 40 minutes per door.

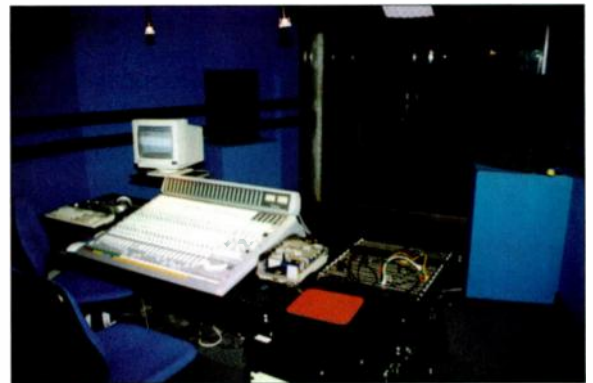
By this stage, there were large amounts of cabling appearing from various holes in the flooring and the lights were up and running. Painting and decorating started, and two weeks later we were about finished. Equipment started to turn up, carpets were laid, and cables were cut to length. The stand for the mixing desk arrived and was put in position. The studio now actually looked as we had hoped. The acoustic tiles for the dead end of the recording area had arrived, but my quest for suitable adhesive was causing problems. I had ordered the correct type from the tile supplier, but what turned up was 10 tubes of silicon sealant. These were returned, and replaced with 10 more tubes of the sealant. In the end, we discovered that although the sealant tube didn't once use the term glue or adhesive and was anything but sticky, it was indeed the right stuff and up went the tiles. We finished off the interior with some fabric-covered frames over the last of the holes in the ceiling and that was it — building complete.

THE EQUIPMENT

The APRS show was looming, so I decided to prepare my final list of items and actually go and have a look — in our area, we don't actually have any dealers who stock pro equipment. I arrived at the APRS exhibition with, effectively, a large wad of money in my pocket. Would this make the dealers more interested in my requirements? Not a chance. My choice of desk was reasonably simple — 24-channel, 8-buss, preferably with a meter bridge, and costing less than £4000. I had

Soundcraft stand. After being ignored for a while, I started to turn some of the pots on the mixer I was considering. Students are not known for their gentle touch and I wanted to get a feel for the strength of the controls. I thought I was in luck when an Exhibitor-badged person headed for me, but all he did was reach across and reset the knobs I had touched. Not a word passed his lips, and he returned back to his glass on the other side of the stand. Although there was not a technical reason for crossing the desk off the list, that's what I did.

Next stop was the Mackie stand. No brush-off



The completed studio.

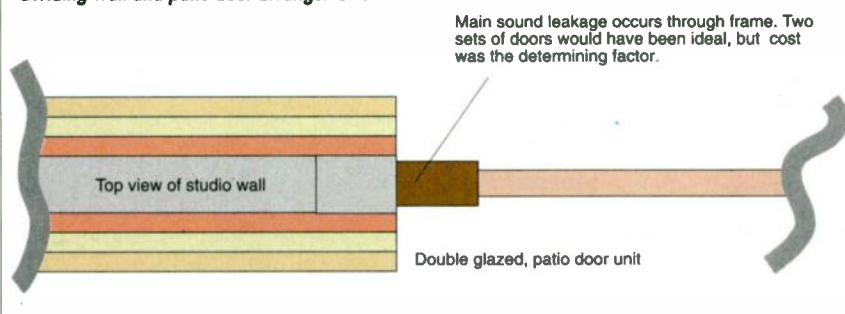
this time, but no help either. Still, I did work out for myself that this mixer would not do all the things I required. Its sonic performance couldn't be faulted, but I felt the students could have problems getting the desk to do what it was capable of.

A very pleasant chap on the Allen & Heath stand showed me the GS3 mixer, but for various reasons this particular one wasn't on my list. I had heard very good reports on the Soundtracs Topaz desk, and read a couple of good reviews, so I searched one out. I thought I was in for another problem when the first comment from the man on the stand, when he saw my college name on the badge, was "This is a bit sophisticated for a college, you know". Thankfully, he wandered off, to be replaced with a chap who admitted he wasn't from the sales division but from the engineering side. Here was a man apologising for knowing all about the operation, reliability and installation of the very desk I was interested in. The Topaz was put in pole position. With a few notable exceptions, I was not made to feel welcome at all on most of the big name stands. On the other hand, the smaller exhibitors seemed to go out of their way to be helpful, and didn't seem to mind spending time when there was no obvious possibility of a sale.

THE DEALER

Our college does not have a formal tendering system for projects of this kind, but it is in my interest to get the best possible deal I can. I put together the list of equipment I wanted, plus a couple of items where I was prepared to let the dealer choose. I asked for prices on the following items from a number of firms, with the request that an early reply by fax was preferable, due to the time scale. ►

Dividing wall and patio door arrangement.



narrowed the choice to three makes, all well-known names. I don't see why I shouldn't name them, as my experience might help others, and possibly encourage the distributors to be a bit nicer to their prospective customers. First I headed to the



S Turbo



S2
MUSIC PROCESSOR

KEYBOARD

61 keys (S2 Turbo), 76 keys (S3 Turbo), Weighted synthesizer type, Dynamic and Polyphonic Aftertouch sensitive, Rack 3 unit (S2R)

SOUND GENERATION

PCM, Waveables, Multitop, Crossfade Multitone and Subtractive Synthesis • 6 MBytes Internal ROM (Sounds)
2 MBytes Internal RAM (PCM Samples) • 6 x 18 BIT DACs
4 Sound Edit Modes: Single, Dual Oscillator, Dual Crossfade, Sound Patch Matrix (for programming DrumKits or special Sound configurations) • 2 Digital Effects Processors (Reverbs, Delays, Modulation Effects) • 32 Oscillators
Polyphony 32 notes max • Dynamic allocation of voices with assignable priority • 16 parts multitimbral, 16 Layers, 16 Splits, 32 Dynamic Switches • 32 Digital Filters, fully programmable (5 resonance types with Low Pass, High Pass, Band Pass, Parametric Boost, Parametric Cut) • Dynamic Stereo Panning

CONTROLS

S2 Turbo, S3 Turbo: 2 Wheels, 2 Pedals/Footswitches, 7 Function Buttons, 7 Sliders, all fully programmable, Volume Pedal
S2R: 2 Footswitches, Volume Pedal

SAMPLE LOADING

Sample Translator Version 2.0 already installed
This reads disks in a range of formats, including Akai S1000 (HD formatted), Avalon, Sound Designer, Sample Vision and Wave.

MEMORY

Motorola MC68302 Microprocessor (16 MHz) • 6 MBytes internal ROM (Sounds) • 2 MBytes internal RAM (Sequencer)
2 MBytes internal RAM (PCM Samples) • Sound Library (500 internal sounds and over 1500 sounds storable in RAM)
DSP Effects Library (64 - 64) • 100 Performances • 10 Songs
Optional Static Memory Expansion (512 KB)

EDITOR

Desktop Editing with graphic display of functions • Undo, Compare, and Clipboard functions
Graphic Display: 240 x 64 pixels with near backlight • 14 function buttons • Internal time/date clock

SEQUENCER

16 tracks • Resolution: 1/192 of 1/4 note • Events: approximately 250,000
Background Song loading • Realtime, Overdub, Quantize, Realtime Delay, Microscope Editing
Compatible with Standard MIDI file (Atari/IBM compatible)

DISK DRIVE

3.5" high-density diskettes • Formatted in 1.62 MB, Formatting in MS-DOS (1.4 MB) or Atari (720 KB) • Loads and Saves:
PCM Samples, Sounds, Songs, Performances, DSP Effects • Sample Data Compression (up to 2 MB of Sample Data stored
on a single disk) • Loading of software updates with new User Programs and software options
Possibility of saving up to 100 Songs and/or 1000 Performances divided into 10 groups on a single disk.

MIDI

Complete Master Keyboard functions • 32 independent MIDI channels • 2 MIDI In • 2 MIDI Thru • 2 MIDI Out
MIDI Merge (Input MIDI data can be processed and modified) • Song Position Pointer In/Out (Play Mode)
System Exclusive • Clock In/Out

AUDIO OUTPUTS

Stereo Master (L/R) 4 outputs programmable separately or in pairs • Headphones



• S3 Turbo (76 key version)



S2R Music Processor



KEY AUDIO SYSTEMS LTD. UNIT 0, CHELFORD COURT,
ROB. JOHNS ROAD, CHELMSFORD, ESSEX CM1 3AG
TEL 0245 344001 FAX 0245 344002



*MOTOROLA is a trademark of MOTOROLA Inc. *AKAI is a trademark of AKAI PROFESSIONAL

BUILDING A SCHOOL STUDIO IN 10 WEEKS

- ▶ • Soundtracs Topaz 24-channel mixer.
- Meter bridge for above.
- Alesis ADAT.
- Panasonic 3700 or Tascam DA30 DAT.
- Tannoy 12DFM monitors.
- Suitable amplifier for monitors.
- Proteus FX sound module.
- Yamaha TG100 sound module.
- Alesis Quadverb.
- Alesis Midiverb III.

I chose the dealers by simply looking through back issues of magazines for those dealers who seemed to stock all that we needed. To save you skipping through to find out who supplied the gear in the end, it was Music Lab. They responded by fax within the hour, followed it up with a phone call to check a few details, and convinced me on the phone that they really knew what I wanted. The other player needed three phone calls to get them to send the fax after two days. They too spoke to me on the phone, but only to interrogate me as to my choice of equipment — they didn't think my choice of desk or speakers would be suitable and they were anxious to quote me for alternatives. I told them I had indicated where I was happy to accept a recommendation, but that I had made my choice on the other items. The fax duly turned up but the quote was too expensive. I wasn't sorry, and was quite ready to give the order to Music Lab. The other dealer then phoned again and asked if they had the order, and I decided to tell them that they hadn't. At this point, the dealer spokesman said that they had miscalculated the price and would send a replacement fax. They wanted to know what price I had been quoted, but I didn't want to tell them. They

then gave me another price on the phone, it was still too high, and when I made this clear, I was offered free tapes! I suggested that this was not a very professional way to run a business and closed the call. A new fax then arrived from them, complete with a sarcastic comment saying that they always provided a professional service, and giving me the new price. This was, by now, lower than Music Lab's quote and included some tapes. However, I wasn't sure what level of backup I could expect from them, so I ordered from Music Lab. They phoned to thank me for the order, and it duly turned up in a few days.

THE INSTALLATION

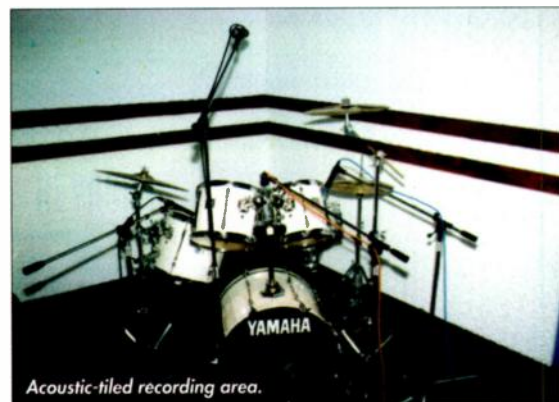
Installation went quite smoothly until we came to fit the meter bridge. I phoned Soundtracs and they explained that I wasn't going mad — what I had was an early desk with a late meter bridge, and all I needed was a set of ribbon cables, which I could fit myself. They told me how to do it and the cables turned up within a couple of days. I had decided to use a patchbay with jack socket connections on the underside so that I could amend the layout as more equipment was bought and as student needs changed, but this meant that over 300 jack plugs

needed to be soldered on. I completely underestimated the amount of wiring required. The floor swallowed up 100 metres of multicore and simply wiring the mixer to the patchbay used over 100 metres of cable — and it's right next to the mixer. However, it has already become the hub of the studio. Patching changes can be made very quickly between sessions and we couldn't do without it.

Then real problems started. One by one, the Topaz channels started to either hiss, buzz or crackle. Using phantom power sent the meters up hard into the red and the phase reverse switch sounded like gunfire. After two weeks we had problems on 12 of the 24 channels. I knew that the desk would have to go back, but with 25 students using it almost every day, the course would come to a full stop if we had to lose it. I hoped that we could get by until the Christmas holiday, but it soon became apparent that things were seriously amiss. When I phoned Soundtracs and described the problem, they recognised it immediately — a rogue batch of diodes had got into the manufacturing system, but the company didn't know which mixers had the dodgy parts, and until they go wrong there was no way of telling. I explained that we couldn't do without the desk, and they advised me to contact Music Lab. Gary at Music Lab realised that the only way out was to get the mixer exchanged. The next day it turned up, and we swapped it for the



Soundtracs Topaz desk being used by an Music Technology student.



Acoustic-tiled recording area.

dodgy one, which went back to the factory. The new desk is up and running, with no delay to the students at all. This made my decision to stick with Music Lab the right one.

The studio is now occupied for an average of six hours a day and looks like getting busier. Our College has a restricted service radio station about to start, and we're going to broadcast a 20-minute live band set each night, which our students will mix, record and edit. This should give them experience of recording 20 different bands during a four-week period. So far, the studio has generated a number of new bands, made up from our students. These range from rock bands, through jazz, blues, funk, rave and orchestral. We now seem to even have a 20-piece jazz band!

The whole project took 10 weeks to get up and running, and has been so successful that one major problem has come to light — I can never get in myself, as it's always full of students.

SOS

“The whole project has been so successful that one major problem has come to light — I can never get in myself, as it's always full of students.”

The Macintosh Music Company

If you use an Apple Macintosh™ computer in a music production environment chances are you're using Opcode software or an Opcode interface

Why? - Because no other company offers such a wide range of software solutions and intelligent MIDI/SMPTE interfaces

A range of interfaces that includes the best selling MIDI Translator II and the professional Studio 5Lx

A range of software that includes the award winning Vision sequencer and the new Overture notation package

And all fitting seamlessly into OMS - the elegant Opcode innovation that simplifies MIDI set-ups

Opcode - The Macintosh Music Company

OPCODE

▲ OPCODE VISION v2

Award winning sequencer featuring user programmable groove quantise.

▲ OPCODE STUDIO VISION AV

All the features of Vision plus the ability to control any Sound Manager 3 hard disk recording hardware & AudioMedia II.

▲ OPCODE STUDIO VISION PRO

All the features of StudioVision AV plus full Digidesign Session 8™ and ProTools support™.

▲ OPCODE OVERTURE

New, easy to use professional 64 staff score writing software with full OMS compatibility.

▲ OPCODE MIDI TRANSLATOR II

Biggest selling Mac MIDI interface in the world. 1 IN, 3 OUT giving 16 channel support. Use two simultaneously for 32 channel support.

▲ OPCODE MIDI TRANSLATOR PRO

2 IN, 6 OUT Macintosh MIDI interface giving full 32 channel support.

▲ OPCODE STUDIO 5Lx MIDI-SMPTE MAC INTERFACE

15 INs & OUTs for 240 channel compatibility. Reads & Writes all SMPTE formats inc 29.97 non-drop. Full patchbay functions.

▲ OPCODE STUDIO 4 MIDI-SMPTE MAC INTERFACE

8 INs & OUTs plus 2 extra THRUs. 128 MIDI channel support. SMPTE read/write inc. 29.97 non-drop.

▲ OPCODE STUDIO 3 MIDI-SMPTE MAC INTERFACE

2 IN, 6 OUT Macintosh MIDI interface giving full 32 channel support. Plus SMPTE read/write sync.

together with all future con period of this Agreement an

(C) For avoidance of doubt composing of the music to the music in respect of any

NOW IT IS AGREED as f

Definitions

1 "The Contract shall me Period" terminat terminat

"The Rights shall me Period" Agreemu

"The Rights shall me Extensio Period" Agreeme the Pub Cover R

"Publish" shall m through music in

Royalty

LIVE & DIRECT

Would you always want to see a live performance before signing someone?

"Quite often I will, because it's more tangible then. Realistically you've got to get up off your arse and create something more tangible than a demo in your bedroom — otherwise why are people going to be interested in you? Instead of wasting your time sending tapes to A&R men, get some gigs, get some press in, spend your time doing self-promotion. Then you'll have record companies phoning you. You've got to do it for yourself. Why should anyone else do it for you?"

Do you look at audience reaction? "The customer's always right. I sit in A&R meetings with record companies and I feel sometimes that I have to say 'look, you can't lose touch with the public, don't ever patronise the public.' So many of these people only have friends within the business, their life is within the business, all their records are free — when was the last time they went out and parted with £12 to £15 for a CD? How do they know how that feels out of your pocket?"

People & Politics in the Music Business

▶ and what are they going to turn to now? Time is not being given to the marketing and building of artists. There's so much pressure to deliver right away — if not, get rid of them."

When you do sign someone, what kind of money is involved?

"Each situation is different. You're trying to tailor that situation for a group or writer or solo artist. You want to make their life as comfortable as possible to assist them achieving goals. It could be anywhere from nothing to £100,000."

Do you discourage big advances?

"At the end of the day you have to put your money where your mouth is. You can't mess about, but by the same token the artist needs to be aware that you've got to make all this money back, and they should be thinking more long-term than that. Some artists might think 'yeah, I want to go and do a bank raid, get as much money as I can now. I've got five minutes of fame or whatever, so I'll just take what I can.'"

Regarding royalties and payouts, once the money starts coming in, as a writer, what's the split?

"The splits vary depending on the terms of the deal but it's probably about 70% to the artist, 30% to the publisher. Royalties are passed on once you've recouped your balance. You try and get the best split you can."

What's the typical length of contract signed, or typical length of development time that you would give someone?

"There's no typical length of development time, because you'll stick with somebody as long as you can see momentum there. If there's always some momentum and the deal is manageable in terms of the risk money, then you'll keep going with it. But if things come to a grinding halt then what can you do but give up? A typical length of contract would be one year, with three one-year options, I would have thought. Some want more, some less. If you were to ask for four one-year options then you would be pushing it."

GREAT SONGS & GOOD DEMOS

Does a great song make the hairs on the back of your neck stand up? Is it obvious?

"Yes. There are millions of things out there which are total rubbish and a few things which are good. What you're looking for is an even smaller percentage, which is brilliant — and it is glaringly obvious."

So something genuinely good is going to get taken up?

"Someone will take it up. Sometimes you have to pass on something because it's in the same area as something else you've got. There are also other factors you have to consider — you might not be able to work with the act's management, or they may be signed to a record company who you know aren't going to react in the right way... Firstly you have to have brilliant songs and a brilliant talent, but the luck of the music business is getting all those other factors into place as well, all at the right time."

How many artists are willing to give up what they passionately wish to do with their songs in favour of your advice?

"If I'm saying things which the artist strongly opposes, or if I have an idea for a particular artist and say 'this is where I can see you going', and they totally disagree, then I wouldn't sign them. What's the point in that? It's hard enough as it is, there are so many other outside factors to consider that if you're not getting on — forget it! There are plenty of other people. It's about relationships, it's about their attitude and their vision. It may be totally different from yours and you might think: 'in that case I don't see it happening'. You may be totally wrong in terms of success, but let someone else find out, they might get on with them."

If you come across a writer who performs on a demo tape, who writes good songs, but you could have someone performing them better, do you mix and match writers with artists?

"It's up to them to do that — why should I do it? There are too many people that think the music business owes them a living. It doesn't owe anyone a living. It's hard and you need to be competitive. So you have to be self-critical if you're a writer."

So if you're recording a demo and you're unhappy with the way you're performing it, should you get someone who can improve on the performance?

"Yes — it's up to you to make that happen. If you can't make that happen — go and do something else."

How hungry are artists for songs?

"Well, A&R men at record companies who are putting together songs are very hungry for it; they get hit by loads of things which are wrong from publishers, partly because of a lack of communication and partly because people are sending songs 'off the shelf' and not really taking the time to go and sit and talk to the A&R man, run certain writers by him and really involve him in the process. So I think they are desperate for good songs; everyone is, and there is a shortage of good material. They'll hear lots of album tracks but they want to hear singles."

Is there a particular type of song or music that you personally have a passion for? Is there anything in particular that you're looking for?

"No, just something that's brilliant — it goes right across the board. Something that's brilliant will always stand out. I think, through publishing, that your taste does broaden. I think you learn to appreciate all sorts of music. When I was writing songs, I was so blinkered to other sorts of music that it ultimately hindered the songs I was writing. I think if you've got a broad taste in music and you can appreciate all sorts of music, particularly if you can appreciate what's in the charts at the moment and then relate that to what you're doing, then you're going to be a better song writer."

Would you say as a writer you need to develop a style and stick with it, or be varied?

"It's whatever your passion is for. Do what you believe in, because ultimately that's what you



do best. But while you're developing that craft and while you're learning to do what you do best, don't be blinkered about anything. It's no good just saying 'I don't like bands like Take That, they're just popular in the charts' — they've made some great records. Listen to it properly without any pre-conceived ideas and then come back and see how you can improve your stuff."

Is there a structure that you would say works in writing a song?

"What, you mean like a format? I think a good writer makes a formula for one particular song, and then next time tries to break that formula."

DEMOLITION MAN

What do you recommend regarding demo tapes — how many songs, how fast to get into a song? What about outside presentation of the tape case and inlay; does it make any difference to you?

"Not at all. Let the music speak for itself, then if someone really likes the tape and they say 'oh, I'd like a picture', then you can do something."

Dominic plays the first song on my tape, and just as the first chorus begins, he fast-forwards to the next song.

"I'll tell you what I think after I've heard them all."

With the same brief hearing he fast-forwards again. On the third song he listens to the chorus completely and begins listening to the second verse. He stops the machine there.

"The songs aren't good enough, they have the same old chords, and lyrically I don't think it's anything special. You've got to think about what's happening in the charts — how do you relate these to what's happening nowadays? If you're writing this as the artist, it's not good enough — the voice isn't good enough, and you either take a knock and improve, or decide that maybe it's not good enough and try a different tack. If you're thinking about doing covers for other artists, why are they going to want to cover a song like that? I could write a song as well as that."

To learn something from you, what should I do? What advice would you give?

"Firstly, go away and write some better songs. If you're serious about being an artist, I don't think you'll cut it, because I don't think your voice is good enough or distinctive enough, personally."






At this point, I told Dominic that I would still continue writing, bearing his advice in mind. He was kind enough to present me with an Ivor Novello award from a nearby office. It was one which had been awarded to Annie Lennox, but I can dream!

SO5

"I think a good writer makes a formula for one particular song, and then next time tries to break that formula."

MIDI interfaces? Pound for Pound there's no competition!

No single manufacturer produces the best value MIDI interface for every music application. In each case, we've searched the world to give you the best value solutions - No contest.

<p>PC desktop</p> <p>Music-PC "MPC401-II"</p> <p>100% compatible with the industry-standard MPU401, this highly reliable card will work perfectly with any PC music software on the market. The ground-breaking new version includes a standard WaveBlaster™ connector. You can now use any of these cheap synth daughterboards without a sound-card! Easy to install, works with DOS and Windows</p>  <p>£65 </p>	<p>PC multi - port</p> <p>Voyetra "V•22"</p> <p>The cheapest option for people wanting to break the 16 channel barrier. The V22 offers 2 merged MIDI inputs and 2 individual MIDI outputs giving 32 separate MIDI channels : it's like having 2 MPC401s at once. The V22 is recommended by most PC software houses including Steinberg.</p>  <p>You can now use up to 4 V22s at once</p> <p>£99 </p>	<p>PC parallel port</p> <p>Voyetra "VP•11"</p> <p>The most reliable and convenient external MIDI interface for the printer port. No switching cables or restarting windows is necessary, just plug your printer into the VP11 and switching is done automatically. Intelligent buffered operation means no lost data, even when using SysEx / MTC. PSU included</p>  <p>£115 </p>
<p>PC serial port</p> <p>Key "MS-124"</p> <p>The cheapest way to get 4 separate MIDI outs. The KEY Mediator MS124 connects to the serial port of any PC, providing full bandwidth MIDI record and playback. Comes with standard Windows 3.1 driver, but also works with a long list of non-windows software. No separate power supply is required, 9 pin serial connection lead is included.</p>  <p>£149 </p>	<p>PC SMPTE / MIDI</p> <p>Voyetra "V•24s"</p> <p>This famous SMPTE / MIDI card strikes just the right balance between features and price. 2 Merged ins, 4 separate outs (64 channels), reads & writes all 5 SMPTE frame-rates, free-wheeling, reconditioning and click-track sync. All terminals are mounted on a sturdy metal box.</p>  <p>recommended by Steinberg for use with Cubase</p> <p>£249 </p>	<p>Macintosh™</p> <p>Altech "MIDIFACE"</p> <p>From the company with the longest pedigree in Mac MIDI interfaces, the MIDIFace connects to the printer or modem port of any Mac. It is highly reliable and universally compatible. Its basic 1-in, 3-out design can be expanded by using 2 interfaces at once to give 32 MIDI channels. No separate PSU is required and the 8 pin serial lead is included.</p>  <p>£49 </p>

ARBITER
MUSIC TECHNOLOGY
Computer Music Centres

ABC Music Kingston 0181 974 5505
Active Sound Watford 01923 246282
Andertons Guildford 01483 38212
Biggars Music Glasgow 0141 332 8676
Dawsons Warrington 01925 245422

Millenium Nottingham 0115 955 2200
Multimedia Music Mansfield 01623 422668
Music Inn Nottingham 0115 978 4403
Sutekina Central London 0171 836 0127
Techmate Colchester 01206 793355

NO COMPROMISE

THE TASCAM 488 MKII

TAPE CUE-

This controls the monitoring of tracks recorded on tape. Allows you to hear tracks already recorded whilst over-dubbing.

BALANCED XLR MIC INPUTS -

With switchable 48v phantom power for use with pro microphones

MIC/LINE INPUTS-

Accepts line level sources such as keyboards. Channels 1-4 have Trim controls allowing amplification of microphones or electric guitars.

INPUT SELECTOR-

Selects the channel input; Line, Tape or TASCAM's unique Multi Mix feature which allows you to use tape and line inputs when mixing - gives you a massive 20 inputs on mixdown! Who else does?

THREE BAND EQ - with MID SWEEP!

Essential for a really flexible EQ section. Make sure that the 8 track you buy has it available on all 8 main channels.

EFFECTS SEND-

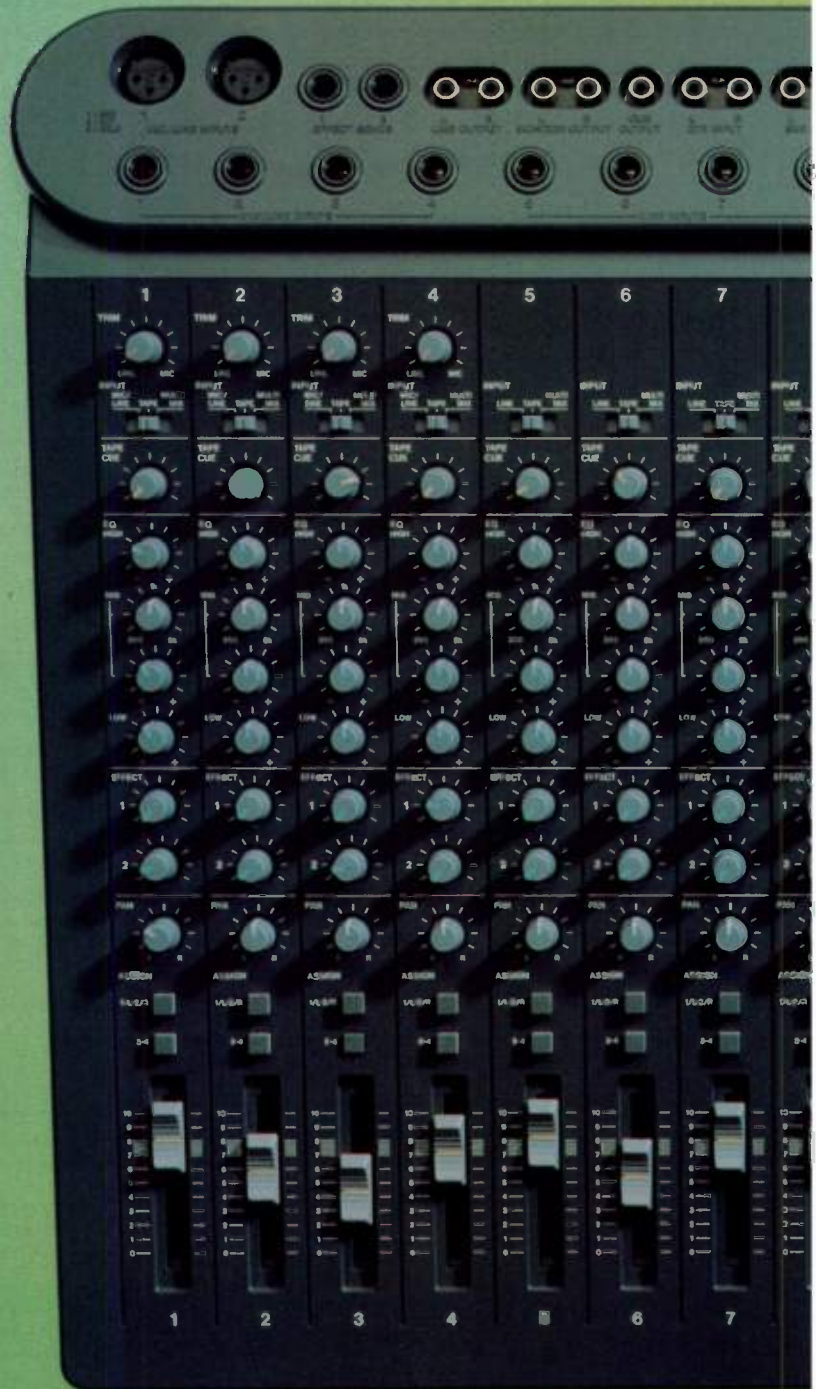
2 Independent effects sends.
Sends signals to your effects units, but can also be used as fold back sends for extra monitoring purposes.

INSERT POINTS (Channels 1 & 2)-

These jacks allow you to insert a signal processor (such as a compressor), in the channel path. Great for processing vocals, acoustic guitars, etc..

PITCH CONTROL-

Playing along with an instrument with fixed tuning. This control allows you to increase or decrease the speed of the tape by 12 %.



USE INCLUDED

II 8-TRACK PORTASTUDIO



STEREO INPUT CHANNELS-

These channels are perfect for stereo inputs such as keyboards, modules, drum machines or effects units.

dbx NOISE REDUCTION - *

Probably the most effective noise reduction system around. dbx ensures the quality of recordings, even when bouncing tracks. The 488II's SYNC IN/OUT feature allows you to bypass the noise reduction if you're syncing sequencers via MIDI.

MONITOR SECTION-

Is this comprehensive or what! You can monitor the groups, tape cue, channels 9-12 or the return from your stereo master. Output is via headphones or phono output at the back of the 488II

TAPE TRANSPORT-

TASCAM tape transports and heads have always been built to the highest standards in the business - the 488II is no exception. With seriously low wow & flutter levels, the transport runs at double speed for the highest sound quality. When you don't have a cassette loaded the capstan in the transport stops running, preventing wear if you're only using the mixer section. Nice touch Eh!

AUTO LOCATE FEATURES-

The 488II has comprehensive auto locate controls, repeat, and programmable punch-in and punch-out and rehearsal functions. If at first you don't succeed you can try again and again and again.....

WD1 8YA Tel: 01923 819630 Fax: 01923 236290

Please send me information on the 488 MKII. My current
equipment includes: _____
NAME: _____
ADDRESS: _____

Time Management

Timing delays, stolen notes, lack of sampler memory... having trouble playing back your sample files over MIDI? But all these problems can be things of the past. All it needs is a little care and planning — as WILF SMARTIES explains.

MIDI TIMING DELAYS & YOUR SAMPLER

A MIDI note takes time to happen. The theoretical limit is two-thirds of a millisecond during running status. This means that a 10-note chord played over a MIDI bus must have a spread of at least 6mS... Furthermore, any receiving instrument is not going to respond instantaneously to incoming MIDI fire. Some instruments process note events really quite slowly, especially when faced with a frontal assault on many MIDI channels. This can make the timing errors much worse. Vic Lennard, the UK MIDI supremo and *Sound On Sound* Atari Notes columnist, tells me that some older instruments, in the worst cases, can experience delays in excess of 100mS. What about those who claim that their sequencer resolution is inadequate at 384ppqn? Perhaps they are looking at the wrong end of their MIDI cable...

Using the single MIDI port of an Atari ST to drive an entire composition is not exactly unheard of, especially amongst the financially-challenged. Unfortunately, this often causes timing problems when there are large numbers of events queuing up to be played at critical bar positions. The first

beat of any bar is the obvious source of heavy MIDI congestion, with drums, drum loop triggers, bass and chords all occupying the same position. The most profound way to reduce note time-smearing is simply to ensure that not too many notes are jostling to get out of/into the same MIDI output/input at once. There are a few ways of achieving this.

HARDWARE SOLUTIONS

The first (and most common) hardware solution is to use an MIDI output expander. Using one of these, you can dilute the flow of MIDI information by having four or five individually addressable parallel MIDI outputs, each boasting 16 MIDI channels. Nearly all pro users work this way, and in a multiple MIDI environment you'd be mad (or poverty-stricken after buying all those instruments) not to get one.

If you have more than one MIDI sequencer to hand (including perhaps a drum machine or workstation), you can try spreading the sequencing load between them, sync'ing them together with MIDI song pointers or MTC. This is unwieldy, though, and storing sequence data for a song over more than one machine is a real drag.

SOFTWARE SOLUTIONS

Being of a Northern persuasion, I am particularly fond of these, as they cost nowt. Also, to my mind, they can often deliver better results, with fewer restrictions, than the hardware solutions. Why is this? Well, firstly, a hardware solution is only relevant where more than one instrument is being used. If you've only got one sampler in the house, four MIDI ports will not be a lot of use to you. Secondly, as soon as you have different sequencer tracks mapped to different outputs, you have complicated the sequencing procedure. Obviously, this can detract from music creation, which in my opinion should take place in as unfettered an environment as you can muster.

• Manipulate those loops...

I, like many other people, like stacking drum loops high. Most people trim their loops so that they trigger from the bar start — but, as already explained, if you trigger a lot of stacked loops at the same point (the bar start), you will almost certainly introduce timing errors in some of the loops. However, in order to tighten up the rhythm, you

ADVANCE WARNING...

One way to avoid areas of MIDI note event congestion is to advance or retard loop tracks by means of Track/Pattern Play parameters, but this is not always successful, since the small amounts usually employed can shift the feel of subsequent loop tracks. If you must do it, and you are a *Cubase* user, watch out when you are looping around a bar or two. Any note (such as a loop trigger) right at the start of a sequencer loop cannot be advanced in *Cubase*. This means that the chances are that the note won't play at all on the second repeat, because although the first note trigger will remain where it is, the trigger for the second repeat will be advanced. Assuming the loop trigger note runs from bar start to bar end (as is usual), the second key on command will occur *before* the first key off. It's often worth trimming loop trigger note lengths back a few ticks from the normal legato value in order to overcome this, and related, problems.

On the other hand, advancing tracks containing instruments with slow attack (like strings) by a considerable amount will not only improve the feel of your song, it will keep those string chord note events well away from any on-the-beat action.



THE TOTAL SOLUTION

FOR THE LOWEST TOTAL*

For some years now, one computer more than any other has been the heart of music systems: the **Atari**. **MIDI interfacing was standard**, the price and performance were right... and programmes like Notator and Cubase gave musicians the feel they were looking for.

Atari took things a stage further with the Falcon030 and astounded the MIDI world with the rare achievement of **16-bit A/D and D/A conversion and Motorola-based Digital Signal Processing as standard** on a personal computer - pre-requisites for today's expanded musical horizons,

undreamt of just a few years ago.

Now with the **FALCON MKII**, C-LAB has introduced a model **optimised for Music and Digital Audio Production**, a further milestone in the field of Hard Disk Recording.

The **FALCON MKII** is the only computer which gives you the vital components of the digital audio studio - as standard!

Using programs like Steinberg's Cubase Audio, up to **16 audio tracks of vocals and acoustic instruments can be recorded side-by-side with conventional MIDI tracks** - up to 12 minutes per track on the **FALCON MKII's** internal 500meg SCSI hard drive.

These tracks can then also be edited in the normal way on-screen.

Further sound manipulation is available **using the DSP for EQ, effects and mixing**. The DSP and SCSI ports allow the system to communicate with Digital Interfaces, 8-Output Expanders and additional fixed or removable SCSI drives like Syquest and CD-ROM.

No more hardware or software installation nightmares... **just plug in your software key, power up and you're away.**

On demo now in all professional Music and Pro Audio dealerships. **Check it out today.**



C-LAB
FALCON MK II

*S.R.P. £1999 plus VAT



MIDI Timing Delays & Your Sampler

- ▶ could try altering some of the samples so that not all triggers lie exactly at the bar start, by adding silences of differing lengths to the start of your samples. In fact, you could re-sample the loop with a precursor of silence, and use a MIDI trigger to initiate recording. This would enable you to insert a precise length of silence (1/16, or 1/8 of a bar, or whatever), making for easy time re-alignment on the sequencer. The loop trigger would then need to be moved back by the length of the silence added, moving it away from the point of data congestion at the start of the bar.



• In on an up beat...

Another way to relieve MIDI data congestion is to move loop start points, so that some loops trigger from a point other than the first beat. For example, take a 1-bar loop and record (or preferably re-sample) two cycles. Now trim the copy so that its start point is maybe a quarter beat ahead of the start of the



second cycle. Now, the loop trigger note will fall a quarter beat before the bar start, thus dismissing it from the area of maximum MIDI data congestion. Not only this, but when the loop is switched into play there will be an appealing quarter beat 'fill' leading in to the bar. Needless to say, there is no point in moving all your loops by the same amount, otherwise you'll just be back where you were, but in a different

place — if you get my meaning!

Incidentally, another and more elegant way of shifting the loop start point is to loop the bar within the sampler, then just move the start point while the loop length is locked — you can do this with Roland S700-series and Akai S3000 samplers.

• Shifting the feel

If you have never tried moving whole loops away from their original bar snap, now is a good time to try. Percussion loops often sound really funky when simply shifted by a beat or two (or even fraction thereof). Drum loops moved by two beats are likely as not going to give a usable result. Give it a try. Not only does feel-shifting help to even up the MIDI data flow, the resultant groove is bound to be more original.

• Boiling it down

Where loops are layered to create a composite beat, but are not required to be mixed separately, you could re-sample the group, thus reducing several MIDI triggers down to one. This also has the benefit of freeing up polyphony in your sampler (for more on sample polyphony, see the 'Note Stealing' box elsewhere in this article).

If you want independent control in the mix of the individual members of a group of loops, but the loop members are meant to fire together,

there is no reason why two or more loops should not have the same note number and MIDI channel. This applies to any sample-stacking situation — for example, when layering piano and strings together, or when you are octave doubling.

• A word on stacking order

Not all sequencer tracks are equal. Tracks are

RAM RAIDING

One serious limiting factor for all but the most well-heeled samplers is RAM capacity. It is usually very good value for money to cram in as much as your sampler can take, and if you run out of RAM in the middle of composing, there are various ways to claw some free space back. The first, most obvious one is to delete any samples that might be accidentally or carelessly loaded and which have no part in the composition (the Roland SP700 has an automatic routine for doing just this). Next, check that all samples have been truncated properly — this usually frees up a good 20% of your RAM! Some drum loops often comprise two identical bars, and in such cases, the first half can be deleted and the sample re-looped. Converting your sample frequency to a lower, less

high-fidelity one is another possibility, though I tend to keep everything at 44.1KHz (except live vocals, which I feel benefit from a 48K sampling rate) for ease of digital transfer to and from DAT and CD.

Some multi-sampled instrument sets, like pianos, strings and organ, can occupy up to 16Mb on their own! One way around this is to develop a 'Demo' copy of the full instrument, with fewer and/or shorter samples. In the case of a full semitone set, you could take every third sample. Standard mapping would be: 111222333 (and so on...) across the keyboard. However, it is always possible to hear where the sample changes in this configuration. You could try 121232343454565... as a mapping series. In this way, no two adjacent notes will have the same sample,

and a reasonable illusion of a different sample for every note is possible.

Other ways to cut down on RAM would be to examine how much of the keyboard any one instrument utilises in a composition, and to delete any unused 'fringe' samples. Or you could make up a patch where the original sample density is retained where most of the playing is focussed, but where the samples are thinly spread in those areas where only a few notes are used.

Finally, stereo samples may be reduced to mono — especially if they are routed to a mono output of your sampler anyway! Do remember, though, when making up 'Economy' versions of your favourite sounds, to retain a copy of the original, so that you can call it up again if a mastering situation arises.

NOTE STEALING AND PATCH PRIORITY

Akai S1000 and S1100 samplers have 16 simultaneously available voices, while the Roland S700 series has 24, and the Akai S3000 series 32. If you are using one sampler as a major sound source, there will be times when you simply run out of notes. What usually happens is that the 17th note that plays (in the case of the S1000/S1100) will cut out the first, if this is still sounding. This is called note-stealing. If the interrupted note is a sustained string sample, a noticeable pause will occur. If a long vocal line or drum loop is interrupted, the effect will be catastrophic. On the other hand, notes stolen from a fast-moving, short sample set, such as a percussion part or blippy sequence, will hardly be noticeable. The effect might even produce interesting variations! Often, even interrupted bass and drum samples are hard to spot on first listen. If your sampler has a Priority function (as Akai and Roland ones do), you can decide which voices will be interrupted first. Always prioritise loops and vocals. Kicks and snares are a favourite, too.

Monophonic keyboard mapping can be another way of keeping polyphony down to digestible levels. This is particularly suitable for basses and other naturally solo instruments, where overlapping sample decays are undesirable musically, as well as being polyphonically profligate.

scanned in an order, usually from top to bottom — that is, track 1 is read first, then track 2, and so on. Tracks with co-incident note events will send these to the MIDI port in the track stacking order. Therefore, you should place the most time-critical note events at the top of this order — that is on track 1. The most time-critical event is not the kick drum, as many might think — this is re-triggered several times per bar — but the *longest drumloop*. If the latter is out by a few ticks when it is triggered, it will remain out for its entire length! Pecking order should really be loops first, followed by single hit drum and percussion voices. Vocals usually fit in somewhere near the end, while sluggish strings or anything ambient should definitely be on the bottom of the pile.

• Thinning out non-note events

Of course, there's more to MIDI than notes, but in most instances, sequencers give non-note information lower priority — so aftertouch or pitch-bend information should not cause note delays. Still, it is a good idea to keep even this data as thin as possible, and in particular to ensure that any large packets of information, such as system exclusive equipment set-ups, are inserted before the music starts. In the midst of a song, SysEx information can cause delays in succeeding, rather than coincident, notes. Some sequencers have a data-thinning routine, which may be applied over a whole arrangement to keep your controller information down a minimum, but I nevertheless still find myself manually thinning out controller events.

Timing problems are not the only reason to avoid recording unnecessary controllers. They eat up sequencer memory (or host computer RAM), and this in turn slows down just about every sequencing operation. Sometimes, continuous controller information is recorded by accident (for example, you press too hard on your keyboard and record a whole string of polyphonic aftertouch information, a prime memory muncher). Such problems can be prevented by setting the MIDI filters on your sequencer's input to ignore incoming aftertouch data, or whatever. To take another example, when you are making MIDI volume alterations in real time, you can sometimes record 50 or more events, when all you really want to effect is an instantaneous level change. In a case like this, delete 49 of the recorded events, set the remaining one to the exact level required, and move it to just where you want the level change to occur.



Signex
PRO AUDIO PRODUCTS

**PATCHING
PERFECTED**

We don't make connectors. We don't make cables. And we don't 'badge' our products for anybody else. Our business is connector panels - an area we have specialised in for over ten years. So perhaps it is not surprising that the Signex range is considered by so many to be the only serious choice. But don't take our word for it, check out the features and the quality for yourself before you settle for an inferior substitute. Signex - The COMPLETE patching system.



ISOPATCH panel

With its unique lateral board design offering inherent rigidity and easy normaling, the classic ISOPATCH has remained the market leader for over ten years. Suitable for balanced and unbalanced signals with a choice of rear terminations and integral strain relief on solder versions, the ISOPATCH is simply the best value in 'A' gauge patching.

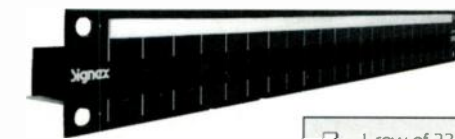
- 2 rows of 44 A gauge Jack sockets
- 2 and 3 pole versions available
- Jack, RCA or solder rear connections
- Half or Full normaling on all channels



ISOPATCH BANTAM

Similar in construction to the ISOPATCH, the ISOPATCH BANTAM is fitted with 96 'Bantam' type (4.4mm) Jacks. Rear connections are via 6 integral 37 pole 'D' type rear connectors which eliminates the need for internal wiring. Top PCB gives access to commoning points and program pads for normaling. Direct solder connections can also be made if a lacing bar is used.

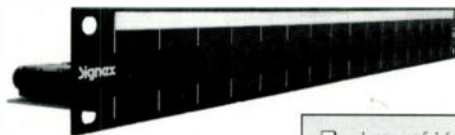
- 2 rows of 48 Bantam-type Jack sockets
- PCB construction - No internal wiring
- Integral multi-pole rear connectors
- Half or Full normaling on all channels



MIDI panel

The increasing role of MIDI in project studios has led to increasingly complex interconnections, often leading to a 'rats nest' of cables and boxes. The Signex MIDI panel is the ideal way to tidy up those connections, forming the ideal central control point for all your MIDI connections. The Signex MIDI panel is available with DIN or solder rear terminations.

- 1 row of 22 MIDI sockets
- All components mounted on one PCB
- Can be used for MIDI In, Thru or Out
- DIN or solder rear connections



XLR panel

The Signex XLR panel uses nylon body, PCB mounting, XLR type connectors and is available in male or female versions with Jack or solder rear terminations. On board 'program pads' allow the XLRs to be wired with pin 2 or pin 3 'hot'. The Signex XLR panel is by far the most cost effective way of achieving an XLR compatible connector panel.

- 1 row of 16 Male or Female XLRs
- All components mounted on one PCB
- Programmable XLR phasing
- Jack or solder rear connections



UNIVERSAL panel

Based upon the Neutrik unified body XLR connector, the Signex UNIVERSAL panel offers an extremely versatile system for creating custom connector panels. Modules are retained from the rear of the panel giving a very smart appearance. A wide range of modules is available and the UNIVERSAL panel can be supplied empty or populated with a range of popular connectors.

- 1 row of 8 or 16 module positions
- Wide range of modules available
- Easy rear screw mounting of modules
- Versatile 1U rack-mount panel

Manufactured and distributed in the UK by

ISOTRACK

OVERSEAS DISTRIBUTORS REQUIRED

PO Box 747, POOLE, Dorset, BH12 4YG
Tel/Fax (0202) 747191

REALWORLD

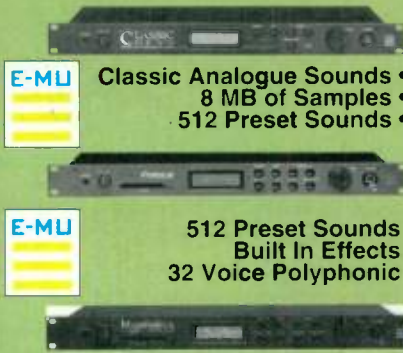
Music & Technology

32 BROADWAY,
STRATFORD

LONDON E15 4US

0181 227 6060

FAX: 0181 227 6070



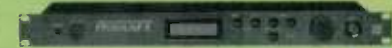
E-MU
Classic Analogue Sounds •
8 MB of Samples •
512 Preset Sounds •

E-MU
512 Preset Sounds •
Built In Effects •
32 Voice Polyphonic •

- 512 Preset sounds
- 32 Voice Polyphony
- Built in effects



E-MU
16 Mb of Sounds •
512 Presets •
32 Voice Polyphonic •
Built In Effects •



E-MU
8 Mb of Sounds •
Expandable to 16Mb •
32 Digital Filters •



ESI 32

- 32 Voice Polyphony Sampler
- 2Mb RAM



ECALL

ENSONIQ TS10



- 24 Track workstation
- Reads ASR/EPS library
- 2Mb Sample Memory
- 4 Audio Outputs

ENSONIQ ASR10R



- Rock version of ASR10, with SCSI and 8 audio outputs

ENSONIQ ASR10



- 16 Track sequencer
- 2Mb RAM (EXP. 16Mb)
- V3 reads Akai / Roland CD's
- SCSI, 8 o/p and digital I/O option

ENSONIQ SQ1



- 61 Key Workstation
- 180 sounds
- 32 Voice
- 16 Track sequencer

ENSONIQ TS12



- 76 note weighted version of TS10

ALESIS QUADRASYNTH

- 16 bit sounds
- 76 keys
- 64 Voice polyphony
- 16 Mb RAM



ALESIS S4

- 19" Rackmount version of the Alesis quadrasyntH



• SECONDHAND • EX-DEMO • SECONDHAND • EX-DEMO • SECONDHAND • EX-DEMO •

KEYBOARDS

Roland A50 Controller Keyboard	£599
Roland JX1	£299
Roland D20	£599
Roland JX8P	£499
Roland JV30	£699
Roland D10	£499
Roland S10	£499
Roland JX10	£699
Roland OS09	£199
Roland PC200	£159
Roland SH101	£199
Emax III Keyboard	£1999
Ensoniq TS10	£1299
Ensoniq K776	£1299
Ensoniq VFX	£599
Ensoniq SQ80	£499
Ensoniq EPS	£799
Ensoniq EPS16 Plus	£1199
Ensoniq ES01	£449
Yamaha DX11	£399
Yamaha DS55	£299
Yamaha SY77	£799
Yamaha DX27	£199
Yamaha DX21	£229
Casio CZ1000	£199
Casio CZ5000	£399
Akai X7000	£399
Korg Poly 61	£299
Korg Poly 61	£199
Korg M1	£799
Korg 707	£399
Korg Wavestation	£799
Kawai K11	£599
Kawai K5	£399
Kawai K1	£299
Kawai PH50	£199
Roland Juno 6	£199
Octave Klitten	£299
Moog Rouge	£299
Trilogy	£249
Prophet 5	£899

SOUND MODULES

Boss DS330	NEW
Roland SC55	£399
Roland SC7	£299
Roland U110	£349
Roland D110	£299
Roland MT32	£179
Roland A880 Midi Patchbay	£299
Roland MKS70 (JX10)	£699
Roland MKS30 (JX3)	£349
Roland MKS10 (Piano)	£199
Roland MKS7 (Strings)	£449
Ensoniq SQR	£499
Ensoniq EPS16 Plus R	£1299
Akai S700	£399
Kawai K4R	£399
Korg Wavestation AD	£1099
Korg M1R	£799
Korg M3R	£499
Oberheim Matrix 1000	£399
Oberheim Matrix 6R	£699
Evolution EVS1	£199
Proteus FX	£599
Peavey V3	£399
Korg OSR	£499
Yamaha RY20	£399

ANALOGUE CITY

Spirit Folio 10:2	£299
Roland MKS70 (JX10)	£699
Roland MKS30 (JX3)	£349
Roland MKS7 (Strings)	£449
Roland Juno 6	£199
Roland Juno 106	£599
Roland JX8P	£499

Roland TR808	OFFERS
Roland TR909	OFFERS
Roland TG303	OFFERS
Roland SH101 (Red)	OFFERS

Oberheim Matrix 1000	£399
Oberheim Matrix 6R	£699
Korg Poly 61x	£299
Prophet 5	£899

SEQUENCERS

Roland MC50 Mk2	£599
Roland MC300	£399
Roland MSQ200	£199
Korg DF1	£149
Alesis MMT8	£149
Atari 1040 + Mon + Pro 24	£299
Atari Falcon 4mb + 64mb HD	£649
Atari Falcon 14mb / 207 HD	£999
Apple Mac 475	£799



Boss DR660	NEW
Roland R8	£399
Roland TR606	£129
Roland TR707	£179
Alesis SR16	£199
Alesis HR16	£179
Korg S3 + Dance Card	£399

Roland TR808	OFFERS
Roland TR909	OFFERS
Roland TG303	OFFERS
Roland SH101 (Red)	OFFERS

SAMPLERS

Casio FZ10M	£799
Casio FZ20M	£899

Roland S10 Keyboard	£499
Roland MKS100 module (S10)	£399
Roland W30	£699
Casio FZ1	£749
Cheetah SX16	£399
Akai S900	£599
Akai S950	£799
Akai S01	£649



Emax III Keyboard	£1999
Emax II rack	£999
Ensoniq EPS Keyboard	£899
Ensoniq EPS 16+ Rack	£1199
Ensoniq Mirage	£399
Korg D5S1 Keyboard	£399
Akai X7000 Keyboard	£399
Akai S700	£399

DRUM MACHINES

Boss DR550	£129
------------	------

NOVATION Bass Station / Rack

£349

- Classic Analogue Sounds
- MIDI
- Two Oscillators
- Realtime Midi fx of filters

- 99 Memories
- CV gate in/out to MIDI
- Audio inputs for filter section

£399



REALWORLD 0181 227 6060

TASCAM 488 II

- 8 Track Cassette
- Balanced input
- Three Band EQ
- 2 Effects Sends

£CALL



TASCAM 424

- 8 Input
- 2 Band EQ
- 3 Speed

£499



TASCAM Porta 07

- 4 Track Cassette
- Hi/Lo EQ
- Effect Send/Return
- DBX Noise Reduction

£399



TASCAM Porta 03

- 4 Track Cassette
- Dolby B Noise Reduction
- Excellent Quality

£199



BOSS

- BOSS DR5 - A new kind of drum machine - Drum, Bass, Guitar and Keyboard sound module - programmable DIRECTLY from any guitar.
- SE-70 MULTI-FX, 16 FX SIMULTANEOUSLY
- GE-21 GRAPHIC EQ
- CL-50 COMP/LIMITER
- NS-50 NOISE ELIMINATOR
- DR-550 MKII DRUM MACHINE
- DR-660 DRUM MACHINE
- DS330 SOUND MODULE
- ME-6E GUITAR MULTI-FX
- ME-10 GUITAR MULTI-FX

MS1 Sampler



MACKIE

SAMSON



1604

- 16 inputs
- 6 Aux sends
- 4 Returns
- 3 Band EQ

1202

- 12 Inputs
- Hi/Lo EQ
- Compact Design

MPL 2242

- 22 Inputs
- 4 Buss Mixer
- 4 Band EQ
- 8 Aux / Inputs

MPL 1640

- 16 Channel
- 2 + 2 Buss
- 3 Band EQ
- 12 Inserts

MPL 1502

- 15 input mixer
- Rack mount Available
- 3 Band EQ
- 2 Aux sends

ALESIS



- SR16 Drum Machine
- D4 Drum Module



- Quadverb Plus
- Quadverb GT
- Midverb 3
- Q2
- MEQ 230 Graphic
- RA100 Power Amp
- 3630 comp/lim

ROLAND

- JV1000 Workstation
- JV90 Synth
- JV50 Synth
- JV35 Synth
- A30 Mother Kbd
- JD990 Module
- JV1080 Module
- SC88 Sound Canvas
- SC55 Sound Canvas
- S760 Sampler
- MS1 NEW!
- MC50 II Sequencer
- MT120 Sequencer

AKAI



• S3200



• S3000

• S3000i



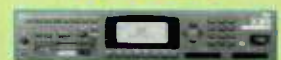
• S2800

• S2800i



• S01

KORG



- X3 Keyboard
- X3R Rack
- X5 Keyboard
- I3 Workstation



- 05R Rack

YAMAHA



- MU80 Module
- SY99 Keyboard
- W7 Workstation
- W5 Workstation
- VL7 Virtual Acoustic Synth

2-TRACK RECORDERS

- Revox A77.....£399
- Revox B77 mk11.....£499
- Revox C270.....£1599
- Sony DTC750 DAT.....£349
- Caslo DA7 DAT.....£399
- Tascam X3.....£149
- Tascam 32.....£499

4-TRACK RECORDERS

- Fostex 280 s/h.....£499
- Sansul WSX1.....£699
- Sansul MR6.....£499
- Vestax MR44.....£399
- Yamaha MT8X.....£999
- Yamaha MT3X.....£399
- Yamaha MT100 II.....£299
- Yamaha CMX1000.....£249
- Tascam 644.....£799
- Tascam 424.....£399
- Tascam 464.....£499
- Tascam 3340.....£299
- Tascam 3440.....£499
- Tascam 144.....£199
- Tascam 244.....£299
- Fostex X15.....£149
- Fostex X26.....£199

3-TRACK RECORDERS

- Akai MG12D 12 Track plus autolocator.....£1799
- Fostex R8 s/h.....£1099



- Fostex M80.....£799
- Fostex A8.....£599
- Tascam TSR8.....£1199
- TOA MR8T.....£699
- Tascam 238.....£699
- Alesis ADAT a/h.....£1999

- Fostex 280 s/h.....£499
- Sansul WSX1.....£699
- Sansul MR6.....£499
- Vestax MR44.....£399
- Yamaha MT8X.....£999
- Yamaha MT3X.....£399
- Yamaha MT100 II.....£299
- Yamaha CMX1000.....£249
- Tascam 644.....£799
- Tascam 424.....£399
- Tascam 464.....£499
- Tascam 3340.....£299
- Tascam 3440.....£499
- Tascam 144.....£199
- Tascam 244.....£299
- Fostex X15.....£149
- Fostex X26.....£199



TEAC

- SWI Sub Woofer System
- RRP £119
- Our Price
- £CALL

RECORDING MIXERS

- Aces 18-16-2.....£1499
- Allen & Heath GS3.....£1799
- Studiomaster 16-8-16.....£1099
- Fostex 812.....£749
- Tascam M216.....£699
- Seck 12-8-2.....£699
- Fostex M350.....£399
- Roland M480.....£799
- Roland M240 Line Mixer.....£599
- Studiomaster 8-4.....£299
- Studiomaster diamond 16-2.....£399
- MTR 6-2.....£99
- Mackie 1604.....NEW
- Mackie 1202.....NEW
- Dynamix 6-2.....£179
- Alesis 1622.....£499
- Soundcraft spirit live.....£799
- Dod 1642.....£649
- Seck 12-2.....£399
- Kawal 12-2.....£399
- Boss BX16.....£399
- Tascam MM200.....£349
- Samson MPL2242.....NEW
- Samson MPL1204.....NEW
- Studiomaster 16-8-16 Gold.....£1199
- Mackie 1604 (s/h).....£649
- Boss KM600.....£79

REALWORLD
 Music & Technology
 0181 227 6060
 32 BROADWAY,
 STRATFORD
 LONDON E15 4QS

Welcome to the REALWORLD

Twango Emotive Modelling System

PAUL WHITE is given an exclusive preview of a new technology that will revolutionise music making — and this time, it really will!

Have you ever wondered exactly how the great classical composers manipulated the emotions of their listeners so precisely, or how a virtuoso player can make the hair stand up on the back of your neck? And have you ever wondered if there is any way to inject this quality into synthesized music? It's tempting to dismiss the question by observing that some people just 'have it' while others don't, and that music, being an art form, can never be precisely analysed, but that explanation obviously didn't satisfy Olaf Lopir, head of the Music Psychology Research department at Norway's Trondheim University.

Like many scientists, Olaf maintains that all art forms have an underlying logic that does stand up to traditional scientific analysis — but rather than trying to prove this point by looking for some quality in the music, he reverse-engineered the problem, by looking first at the human brain. When you think about it, this makes perfect sense,

as both the creation and appreciation of music happens in the brain.

Over the past four years, Olaf's research team has been working with over 200 volunteers to try to isolate not only that part of the brain that responds to music, but also to isolate the key components in music that create the maximum stimuli. Working closely with the university's medical department, and using a Computerised Axial Tomography (or CAT) scanner, coupled to a computer system capable of assigning colours to differing degrees of brain activity, three-dimensional images of the working brain of the listener were produced for a variety of musical and non-musical auditory experiences.

Patients undergoing CAT scans are normally placed on a table inside a large, movable coil, and as this isn't the ideal environment in which to appreciate music, it was decided to use high-quality headphones rather than conventional stereo speakers. Soft lighting was introduced to create a neutral, non-threatening atmosphere, and any volunteers prone to claustrophobia were eliminated from the trial.

It will come as no surprise to those who have an interest in such matters that the majority of the brain's response to music takes place in the right-hand side of the brain — but that isn't the only part of the brain that reacts. Apparently, a lesser degree of

activity also takes place in the visual cortex, suggesting that music is subconsciously translated into patterns or images.

MOOD MODELLING

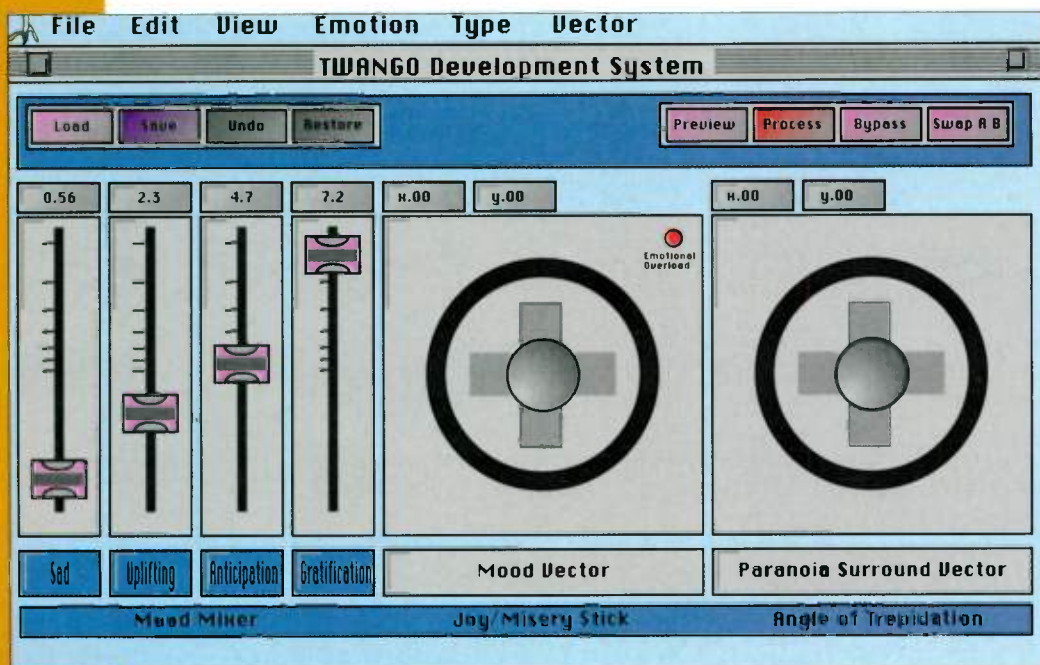
Of course, it's one thing to look at a general reaction in the brain, but quite another to isolate the musical element responsible for a particular emotion. This problem was tackled by getting the panel of listeners to describe their emotional state while test pieces of music were being played. It turned out that the CAT scan images for any individual show significantly different patterns corresponding to the emotions eventually categorised as: Sad, Uplifting, Anticipation, and Gratification.

The next step was to take all the musical passages that produced the same broad emotional reaction, then cross-correlate them to identify what elements they had in common. The various musical passages were checked for spectral content, timing deviation from a quantisation grid based on the mean tempo, and, in the case of non-chromatic instruments, pitch fluctuation (both degree and envelope). Not surprisingly, the timing of the notes played has a profound effect on the *depth* of the emotion created, but not, as it turned out, on the *type* of emotion. Similarly, pitch deviation (such as vibrato) enhances the sense of emotion, but doesn't usually determine the *type* of emotion. The only exception to this was found in tests with single sustained notes, during which it was

found that pitch modulation could influence the way in which the note was perceived.

The results of the spectral analysis were more complex. It seems the musical scale on which any tune is built creates a kind of emotional expectation matrix, which can take the listener in different emotional directions depending on the way in which musical phrases are resolved. What wasn't expected, though, was the result of the 'deep cross-correlation' test, which was designed to strip away everything except the common tonal elements of the test pieces, in the hope of identifying the 'essential something' that makes music have the emotional effect it does.

This part of the experiment was more successful than anyone could have imagined;



Mood Mixer/Vector screen from TWANGO system.

Response

once the superficial musical elements had been mathematically filtered out, the resulting audio file turned out to be remarkably consistent for any piece of music known to create a specific emotion. Heard on its own, the audio is meaningless, and sounds not unlike random noise passed through a vocoder, but when the signal is mathematically subtracted from the original music file, the emotional response of the panel of listeners was found to be considerably diminished, even though there was no obvious difference in the overall subjective sound. In fact, the 'emotokinetic' signal, as it has come to be known, is always at least 10dB below the level of the music from which it is extracted, and thus is never clearly audible in isolation. This finding led to the next obvious experiment — adding a looped version of the signal to bland, synthesized music.

VIRTUAL ARTIFICIALITY

This is where things start to get really interesting; a simple, sequenced string passage was played, using a General MIDI module as a sound source, with no vibrato,

and strict quantisation. Heard on its own, the general response was pretty neutral, but when it was played for a second time with the subliminal 'Sad' emotokinetic signal added, the result was dramatic, with some of the panel members actually dabbing their eyes with tissues!

In addition to the unique emotokinetic signals for the different mood types, the pitch bend characteristics were similarly correlated, and it was found that a specific contour of pitch bend, plus a slightly asymmetrical, delayed vibrato, further enhanced the mood being projected. This contour was extracted, recreated as a MIDI sequencer controller track, and then applied to the lead string part. Again, the panel of listeners noted an increase in emotion, and claimed to feel as moved by the simple MIDI file as they did by a real virtuoso string performance of the same piece of music.

THE SPIN-OFFS

As you might imagine, once the major synth manufacturers got wind of the project, it didn't take them long to work out a way to include this technology in their instruments,

and already three key manufacturers have signed up to license Lopir's emotokinetic mood signature files and pitch modulation profiles to use in their next generation of synths. The new technology, licensed under the name of TWANGO (Trondheim Wave Articulation Nuance Generator/Operator), will enable the user to add subliminal, emotional overtones to their compositions with full vector mapping. Using a simple joystick interface, the user will be able to automatically and dynamically move from, say, a sense of expectation to fulfilment as a chord resolves, or to increase the depth of sadness at the end of a sustained note.

The latest news from the university is that further emotions and feelings are being investigated, and that already, an emotokinetic waveform corresponding to paranoia has been extracted. Perhaps one of the most useful side effects of the paranoia emotokinetic wave is that in most listeners, it creates the illusion that what they are hearing is directly behind them, regardless of the actual sound source. It's obvious that this system is going to become standard issue for all but the cheapest synths, so if you find yourself inexplicably moved to tears by a GM module rendition of 'The Birdy Song' or 'Agadoo', you'll know that you've been TWANGO'd.

SOS

Gateway

The School of Recording, Music Technology and Music Business Studies

In Partnership with the School of Music at Kingston University

Full Time and Part Time Higher Education Diploma Courses.

Throughout the summer there are one week, one month and weekend intensive courses.

One 24 Track, Two 16 Track Teaching Studios, Three Pre-production rooms for practical work and a new Music Technology Teaching Suite.

In-House training is given on Soundcraft, Soundtracs and DDA consoles. We also give training on Neve and SSL consoles in co-operation with Jacobs Studios

Gateway.

c/o The School of Music, Kingston University. Kingston Hill Centre, Surrey, KT2 7LB

081 549 0014

Pro Music - THE MIDI SPECIALISTS

The best midi products, at the most competitive prices, with the fastest despatch and top notch after-sales service too! That's our aim. Whether it's full professional tracks for gigging bands, compilation midi discs, high quality patches for sequencers, or even MIDI software, we can supply the lot.

OVER 1,900 INDIVIDUAL MIDI FILES

- The very best of Soloist and Sound Design midi files, direct to you at only £5.95 each.
- Over 250 new files this month alone!
- Everything from popular standards, classical, jazz, MOR, to the latest chart hits.
- No minimum order quantity - try just one file and put our quality and service to the test - you won't be disappointed.
- Our list of files changes almost every day. Give us a call on 0284 765765 for hot off the press details of our most recent files.

INTERACTIVE PACKS

Gloriously full arrangements of eight chart bailing hits, with printed music and lyrics. All midi packs should be like this. Great value at just £12.99. Latest additions to the series include: Rock, Dynamic, Beatline plus nine more titles in the series. Ring 0284 765765 for the full story.

GREAT NEW SERIES, THE MIDI KEYBOARD LIBRARY

Just in! A great new series of top quality midi packs at an unbelievable price. Where else can you get eight fully orchestrated midi files, with printed music and lyrics, for just £9.99. Latest titles include Eric Clapton, Pop & Rock Hits, Ballads, Stage and Screen and many, many more. Stocks are limited, and are sure to sell quickly, so call now to avoid disappointment.

MIDISTAR

These midi packs are proving so popular that we're almost afraid to advertise them! Eight full arrangements with printed lyrics, for an unbelievable £8.99. New in this month: Phil Collins, Golden Classic Hits, Dance Hits, Slang, Rock, Lead Back, The Police, Love Songs, Pop Essentials.

Meet us at MEMS '95

Take advantage of special show prices + preview what's new.

See us on Stand No 262 Music Sales Ltd.

ORDER HOTLINE (01284) 765765

SYNTH SOUNDS

Thousands of sounds on ROM cards, RAM cards, CD Rom and Alan self-loading disks, suitable for Korg, NI / K2 / D1W etc. Yamaha - SY85 / SY99 / DXT etc. Roland - JV1000 / JD800 / D10 etc. Kurzweil - K2000 plus loads more. Need new sounds, but not sure what's available and compatible? Ring us on 0284 765765 for free and impartial technical advice.

READ ALL ABOUT IT!

Hints, tips, technical know-how and much more besides. Dozens of readable tomes for beginners and old pros alike.

Home Recording for Studio Musicians £16.99
Midi For The Professional £11.95
The Complete Cubase Handbook £29.95
New Updated Edition!

Even in this ad there just isn't enough space to tell you about the hundreds of top quality midi products we have available. Why not call, write or fax for your free copy of our catalogue?

Remember we are Mail Order Distributors for all Steinberg software. Cubase, Music Station and the full range of Steinberg software is now just one phone call away.

Pro Music, FREEPOST, Dorking Way, Berrill's, Godswin, Suffolk, IP13 0BB
Tel: 01284 765765 Fax: 01284 702592

CALL US NOW ON
01202 395135
EXT. 125

THE LARGEST MUSIC STORE IN THE SOUTH



EMM Ltd
 EDDIE MOORS MUSIC LTD
 679 CHRISTCHURCH ROAD
 BOURNEMOUTH BH7 6AE

THE SOUND
 INVESTMENT



FATAR STUDIO 900 88 NOTE FULLY WEIGHTED & CALL
 packaged with KORG N3R £1275. 05RW £975. YAMAHA TG100 £759
 TG300 £999. EMU PROTEUS FX £999. KURZWEIL MICROP £999.



MIDK61 II MOTHER KEYBOARD £239 RRP £400
 61 Velocity Sensitive Keys, Assignable Controller-Wheel, Program
 Memory Function, 16,384 Banks Numbers, 128 Program Change
 Numbers, Foot Pedal Option. **Check Our Package Prices.**



YAMAHA SY99 EXCLUSIVE DEAL £1699
 We have secured a limited number of this flagship workstation at
 over £500 below the RRP. Features include AWM2 + AFM Sound
 Generation, 16 Track Sequencer, Disc drive, 2xDSP Sample RAM
 Memory (expandable to 3Mbytes) £200 worth of free software.

LOWEST PRICES. EXCLUSIVE DEALS!!



**BEHRINGER.
 BEST UK DEALS.**



SONY HRM5 CALL!!



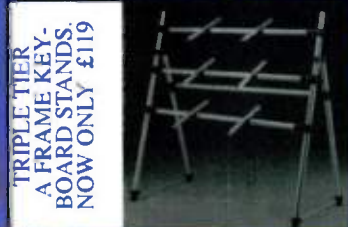
**FOSTEX R8
 EIGHT TRACK
 PLUS
 812 MIXER.
 BEST EVER
 DEAL.**

Our Fostex Prices
 are Too Low To
 Print.
 We Have a Limited
 Quantity Of ex
 demo **D10 DAT**
 Recorders
 at **£1599.**

Fostex
 NOW EVERYTHING CONNECTS



Kawai KC20 Synthesizer RRP£699 Now £379
 160 Sounds, GM Compatible, 16 Part Multitimbral,
 28 Note Polyphonic, 64 Performance Patches,
 Integral Digital Effects + Computer Interface.



**TRIPLE TIER
 A FRAME KEY-
 BOARD STANDS.
 NOW ONLY £119**



ZOOM SPECIALS
 9001 £159, 1202 £169,
 9050S £449, 2020 POA.
DON'T MISS OUT.



EMU ESI 32

CALL FOR DETAILS

NEW AND USED EQUIPMENT SALE.

KEYBOARDS		EXPANDERS		SEQUENCERS		RECORDING	
RolandJuno 6	£199	Ensoniq SQ1+	£649	RolandSD25	£559	Fostex A8	£499
Roland FP8	£1399	Alesis Quadra Synth	£869	Yamaha MU5	£189	Fostex 280	£499
Roland A30	£299	Korg O1RW	£799	Yamaha QX5	£99	Fostex D10 DAT	£1599
Roland JV90	£929	Korg M3R	£499	Yamaha QX21	£75	TascamPorta 03	£199
Roland JV50	£799	Korg O3RW	£599	Yamaha QX1	£225	Yamaha MT8X	£899
Roland AX1	£299	Korg O5RW	£399	Yamaha QY8	£189	Yamaha NS10M	£239
RolandJX10	£699	Korg Audio Gallery	£249	Kawai Q80	£325	Alesis RA100	£219
Rhodes 660	£499	Yamaha TG100	£249	Kawai Q80EX	£349	TascamPorta 07	£319
Rhodes 760	£599	Yamaha TG500	£629	Kawai Q55	£299	Tascam 488	£849
Yamaha DX7S	£369	Yamaha TX 81Z	£175	Brother PDC 100	£149	Tascam 424	£449
Yamaha V50	£399	Yamaha MU80	£529	Seiko MR1000	£39	Tascam 464	£539
Yamaha SY77	£799	Yamaha TG300	£399	SAMPLERS		Studiomaster P7	£1525
Yamaha PF85	£699	Ensoniq SQR	£349	RolandW30	£699	Diamond Club 12-26279	
Fatar Studio 610	£189	Emu Proteus 1	£399	Akai S2800	£1099	Spirit Folio S1	£579
Korg 13	£1399	Emu Proteus 1+	£549	Peavey DPM 3	£899	Alesis ADAT	£1999
Korg 14S	£1299	Emu Proteus 3	£475	Ensoniq ASR10R	£1699	Tascam 32	£499
Korg 01WFD	£1199	Kurzweil Micro	£399	Roland DJ70	£949	Tascam 38	£699
Korg T3	£899	Kawai GMega	£379	Akai S01	£525	Tascam MM200	£369
Korg 01W Pro X	£1899	Roland JV880	£499	Roland S760	£1299	Sony TCD7 DAT	£399
Kawai K11	£549	Roland SC55 II	£399	Akai S1000	£1599	Lexicon LXP5	£349



BASS STATION CALL!!



S-760
 16 BIT SAMPLER

NOW ONLY £1399

EFFECTS

Alesis Quad +	£299	DigitechTSR 12	£329
Alesis Quad GT	£359	Lexicon Alex	£289
ART FXR Elite	£199	Boss SE70	£425
ART SGX2000ex	£569	Roland SDE330	£549
ART FXR	£159	Yamaha FX770	£279
Digitech VHM5	£499	Yamaha GW10	£249
Digitech Vac II	£469	Yamaha SPX990	£579
		Ensoniq DP4	£989



YAMAHA TMX £269



Apple
 Complete Mac Sequencer
 Systems including Cubase
 or Logic only **£1299**



YAMAHA CBX-D5
 Running on PC or Falcon with Cubase Audio, The
 CBXD5 package gives you **999 tracks of sequencing** plus
 four tracks of **direct to disk recording** all controlled
 from the same screen. The four audio tracks include
Digital Mixing with Digital EQ. Two Built in Digital
 Effects Units and Four Separate Outputs.
CBXD5 + CUBASE AUDIO FOR PC OR FALCON
NOW UNDER £1499

DIRECT TO DISC RECORDING.

SoundScape System.
 New Software Controls Eight
 Tracks of Digital Audio.
 This System is Proving To Be
 Extremely Popular. Call For
 More Details and a Quote.

ROLAND DM800 NOW IN STOCK

DR4d
 HARD DISK RECORDER

The revolutionary dedicated direct to disc
 multitrack from Akai is now available at an
 even lower price. We offer a wide range of
 hard drive options from 213 MB to 1Gig + if
 you are interested in a single or multiple unit
 system call us now for a quote.
NEW AKAI DR8D BEST UK DEAL!!

ACCESS. VISA. CREDIT FACILITIES. FAST EFFICIENT SERVICE. OVERNIGHT DELIVERY.

ORLA

88 note Fully Weighted
GM Control Keyboard.
The C80 Retails At £1199.
We Have A Limited
Quantity Available At £899

ORLA PACKAGES
ORLA C80 + ROLAND JV880 £1299
ORLA C80 + ROLAND SC155 £1249
ORLA C80 + YAMAHA TG100 £1099
ORLA C80 + YAMAHA TG500 £1599
ORLA C80 + KORG X3R £1575
ORLA C80 + PROTEUS FX £1249
ORLA C80 + AKAI S01 £1399



COMMANDER

KURZWEIL
Lowest Prices On All Kurzweil Products.
Call For a Quote.
Micro Piano in Stock.
New PC88 Available Now.
K2000 Mem Upgrades
Lowest Ever Prices.

Check Our New Low Hard Drive Prices.



YAMAHA MT8X PACKAGES
MT8X + A100a AMP + prNS10M £1399
Above Package + RV4 Effects £1825
Lowest Ever MT8X Price. CALL NOW!!!



AKAI APPROVED DEALER 94
S01..S28000.S3000.S3200.CD3000.
DR4D.MPC60 II.DP88.DR8D.
BEST UK AKAI PRICES!!!

FAST AND FRIENDLY SERVICE !!!

BEST EVER KORG DEALS

JV-880
MULTI TIMBRAL SYNTHESIZER MODULE
All the power of the JV80 synth at a fraction of the cost.

ENSONIQ S01 + NOW £649

UNBEATABLE EMU DEALS

SAMICK KF II

76 Note Keyboard. Touch Responsive. After Touch. Fantastic Value. Now under £399
Packaged With Korg 05RW £699. Proteus FX £825.
Roland JV880 £875. Yamaha TG100 £599.

O1WFD £1199 **X3R NOW £775**

KORG O1/W SERIES

SONY TCD7 £449 **SONY DTC690S CALL**

The SONY DTC690 is The Best Value Full Size DAT Recorder Currently Available.
Now only £499. (Official UK Stock)

YAMAHA PROMIX 01

We have stock available for immediate delivery. Call Today!!

TOPAZ

4 STEREO EFFECT PROCESSORS

RRP£849 Now £499

4 Independent Stereo Digital Effects in One Unit. 8 Inputs, 8 Outputs, 100 Programs, 400 Effect Settings, Midi Clock Delay Control, Digital In/Out, Stunning Effects Including Reverb, Gate Reverb, Stereo Delay, Chorus, Phaser and Digital EQ.

BOSS DR5 BEST PRICE

We Always Offer The Lowest Prices On all Boss Effects Drum Machines and Modules.

SUPER JD

All The Power of The JD800 in a 2 Unit Rack-7

JD800 RRP £1499 NOW £999

adat CALL!!

CHECK OUR MIXER PACKAGES

Adat plus Mixdown Gold 16-8-16 £3599
Adat plus Studiomaster P7 16-8-2 £3850
Adat plus Studiomaster P7 24-8-2 £4359
Adat plus Soundcraft Spirit 16-8-2 £3299
2X Adat plus Studiomaster 32-8-2 £6999
2X Adat plus Topaz 32-8-2 £7699
BRC plus all Adat peripherals Call!!

TASCAM DA88

We Always Have DA88 Available From Stock. Contact us Now To Discuss Your Requirements.

RC-848 System Remote Autolocator Available Now.
Check our tape prices

P7

SAVE MONEY CALL US FOR A QUOTE!!

We always offer the best deals on the entire range of Studiomaster desks. Check our deals on Allen & Heath, Tascam, Soundtracs and Soundcraft.

ACCESS. USA. CREDIT FACILITIES. FAST EFFICIENT SERVICE. OVERNIGHT DELIVERY.

demo DOCTOR

If you'd like our resident specialist JOHN HARRIS to review your demo tape, just send it on cassette or DAT, with recording details and a photograph, to:
**Demo Doctor,
Sound On Sound,
PO Box 30, St Ives,
Cambridgeshire
PE17 4XQ.**

THE MINISTRY OF PLEASURE

Recording Venue: Lion Studio, Leeds.

Recording Equipment: Tascam MSR16, Soundcraft 6000 series console, Genelec S30 and Yamaha NS10 monitors, Tascam and Sony DAT recorders, Drawmer, Yamaha and Alesis effects, Audio Technica AT4033 mics, Atari Mega 4 running Cubase and Sound Designer II.

Some serious equipment has been used to record the MOP CD — all engineered and mixed by guitarist and keyboard player Guy Hatton. It's yet another example of a band getting fed up with record companies and going it alone, I suspect. The quality of this four-track CD is certainly impressive, with excellent graphics and, more importantly, a good sound. All four tracks have been mixed well, and if there's any criticism to be made it is that they tend to follow a similar arrangement for the first few bars. A pattern of sequencer-triggered synth or sample gradually builds to a beat on each song, and the use of panning is effective for the faster percussive-style sounds.



goes for it, with more use of effects and prominent drums. This really does sound as if it would work in Britain as a single, whereas the radio mix is almost trying too hard — I'd be tempted to edit the dance mix down and use that for radio!

All the sounds chosen are good, and the overall sound of the CD is very smooth — possibly some compression has been used on the mix, as all the levels sound under control. I was impressed with the

top tape

The first two tracks are a radio edit and a dance version of the same piece, proving just how different the same song can sound given two production approaches. The radio mix for example, is complete Euro pop and the excellent vocal sound is very dry — almost too much so for the chorus, which could have done with the widening effect of a good reverb in the stereo mix. In contrast, the dance mix (which I thought far superior) really loosens up and

instrumental balance, which is clear and up-front when necessary. Some of this clarity is achieved by wide panning, but the sound layering has also been done with care. The tendency on quite a lot of demos is to mix everything apart from drums and vocals quite low, or choose a synth or guitar sound that is too piercing to be mixed high. Guy Hatton has managed to make everything sit well in the mix. □

Readers submitting demo tapes should note that SOS regards the inclusion of photos or artwork with demos as permission for the magazine to reproduce this material free of charge, as illustration, with any review of the accompanying tape.

JOHN VALE

Recording Venue: Home.

Recording Equipment: Fostex 260 4-track, Yamaha REX50, Audio Technica PR20.

John actually borrowed all the equipment to make this demo from mate Adrian Stone, the sort of friend everyone wants. John has a strong songwriting streak and makes a passable job of the recording, but unfortunately he falls into the trap of adding too much reverb to the guitar, which consequently sounds too far removed from the rest of the track. The idea of giving the guitar a place in the mix and altering the tone using heavy reverb is not a bad one — it's just a question of finding the right level of effect return.

Drums on the songs are provided by a

Yamaha RX17, and on the first, the snare drum is conspicuous by its absence. Either it's been mixed ridiculously low or John's decided not to use it at all — I suspect the former, because it makes an appearance briefly on a fill which has probably been programmed at a higher level. Even on the second track it's audible but really should be louder.

Guitar riffing features on this second song, but in an interesting and melodic rather than heavy way. I suspect that John has been influenced by Killing Joke, a band he has some connection with, and this would account for the modulation and reverb on the guitar. It may also be an influence on the songwriting quality, which has that air of melancholy, notably in the vocal style and choice of chord progressions. □



Recording Venue: Home.

Recording Equipment: Fostex R8 8-track, Fostex 812 mixer, Sony DTC1000 DAT, Alesis Quadraverb, Drawmer LX20 compressor, Shure SM58 mic.

Currently looking for a deal, Loui and Clyde of 3 AM are producing a lightweight pop sound that suits Loui's vocal style — somewhat reminiscent of early Madonna. The recording method they use involves sub-mixing drums and



bass to tracks 7 and 8 and other backing instruments to tracks 5 and 6. The four free tracks are then available for vocals and any lead instruments. With no

multitimbral keyboard or sequencer, it's not really worth their while investing in a tape sync unit, although I've got a feeling that the Alesis drum machine they use has a sync to tape facility. This would allow a guide drum track to be recorded while overdubbing, and the drum machine then run live on the mix for extra control using the Alesis' separate outputs. Still, Loui and Clyde seem to get a good result with their method, as the two songs I played demonstrate.

A tendency to use a little too much reverb distances the vocal, which would be better right up front in the mix. Some more warmth would also help the vocal sound and perhaps Loui could experiment by singing closer to the SM58 to make use of the bass proximity effect. A pop shield can still be used to avoid popping. Another approach would be to add some mid to the sound around 600Hz for body.

Clean, modulated guitar has been layered up with one guitar on the on-beat chords, and another picking through the verses and choruses, which works well. I also liked the addition of pizzicato strings on the second verse, which built it up nicely. In places I thought that the guitar could come up in

the mix — especially on the Byrds-style runs — and this is simply a matter of confidence and experience with mixing. A compressor across the mix can always be used to smooth out any peaks anyway.

On the second and more moody of the two songs, the vocal has definitely been treated with too much reverb and sounds out of place against the backing. I also noticed that the toms which punctuate the verse and the classic D50 bell/string sounds have been mixed too loud. The drum part in particular sounds messy, and it might have been better to stick to the cabasa and hi-hat rhythm more closely, or to have chosen a softer sound — the hard gated sample is too aggressive for the song.

Both the songs show promise but need to get the hook across sooner. As they are being mixed for A&R people, make sure that the vocal is well to the front and concentrate on getting a good vocal take and sound. On this demo the vocal performance is actually fine and I also liked the harmonies, especially the really high ones, which could become a vocal trademark. On the technical side, less reverb and more care on the mix levels are needed. □

CCCP

Recording Venue: Home.

Recording Equipment: Apple Macintosh running Studio Vision, Fostex A8, Seck 18:8:2, Alesis Quadraverb GT and D4 drum module.

Kicking off with some energy, 'Know the Blues' is a well arranged and produced slice of rock music that could easily find chart success in America with the right artist. Good programming can't really hide the fact that this is crying out for real drums, but Si Humphrey has done a fine job on the drum track, with some well chosen sounds from the D4.

CCCP contains three talented musicians, with Annie McCaig providing some classy tracked-up harmony vocals and Red Cooper some excellent guitar work. Considering that this demo was recorded on an 8-track and simple console, the overall sound is impressive, and the other tracks on the tape are

of a similar quality. The format is standard rock/pop, with few surprises in musical content, but it is well crafted. The choruses are catchy and the backing vocals add to the big rock chorus sound, while the verses all build well. This is achieved by adding extra instrumentation and vocals on the verses as the song progresses.

Keyboards and guitar fit well together without any particular dominance of one over the other. The textured keyboard sounds often occupy the position of backdrop against clean rhythm guitar, but some of the songs are built around looped keyboard sequences which the guitar merely punctuates. The temptation to mix up the power chords has been avoided, which makes the overall sound more



radio friendly without losing the impact.

Overall, it's an excellent tape, and if the band don't get record company interest they should at least get some success from publishing companies with this material. □

WIN 3M TAPES



As an incentive to send in your best demos, 3M are kindly providing prizes for the best tape submitted each month. The lucky winner has a choice of: 20 Scotch XSII-S high-bias C60 cassettes, 10 3M DAT 90 digital cassettes, five reels of 3M 996 quarter-inch tape, three reels of 3M 996 half-inch tape or two reels of 3M 996 one-inch tape. Designed to accept very high recording levels without distortion, 3M 996 tape is packed on precision NAB reels and comes in tough, attractive library cases.

Octane.



of forming, they had written and recorded this demo (I wonder how they feel about it now?) of synth pop. 'Higher Love' features the young vocals of Jane McGowan, which are mixed too low and sound a little thin. I'd suggest adding some lower mid EQ to fatten up the sound or getting Jane to sing a bit closer to the microphone to make

use of the bass proximity effect. A touch of reverb wouldn't go amiss either. The techno sounds of the second track, appropriately titled 'Energise', are repeated to distraction with no development in the arrangement and no change in the sound — one good idea which is repeated *ad infinitum*...

SPIN have already become disillusioned with the business of soliciting A&R departments! As a result, they've set up their own label, called Sound Stuff, and have enlisted the help of a manager. The music is dance and synth based but seems to draw heavily on the rock side of pop for its clever arrangements — and I keep expecting some big power chords to appear. Perhaps fortunately, they don't on the first song, but the lightweight production sound does need beefing up somehow to match the strong vocal style of Marc Whitehead. I'd suggest a more drum and bass orientated mix. The second song again has a clever arrangement and a superb verse groove, complete with wah guitar. And yes, power chords make an appearance on the chorus, but the lightweight drum loop should become heavier to maximise that lift.

I like the photo supplied with this next demo, which gives quite a different and mysterious perspective on Pete Shepherd, aka the **DUB OPERATOR**. On the sleeve he looks pretty out of it — still, that's part of the dub culture. With a limited keyboard setup, Pete has come up with some appropriate sounds — though the drum sound is a bit weak and I can't hear the bass drum, which I think is rolling away on fours on the first track. Some more development in the arrangement would have been useful, as the track is verging on the repetitive side, and the sampled vocals are OK but nothing special. This same criticism can also be applied to track two, although there is more attempt made to vary the sounds. Improvements could easily be made, for example by altering the filter on the bass synth — manually, if need



Dub Operator.



be, while it is running. It sounds as though there may be some VCF going on already, but it's just not extreme enough. A more reggae-influenced style of dub comes into play later on in the tape, and Pete seems to have a better production feel for this.

SIMES DAVIES describes his music as a mixture of rock and classical music, the like of which I've not heard since the old Focus days. Unlike Focus, though, it tends to chop and change rather than develop a theme, and relies heavily on 'rifferrama' rather than melody when the electric guitar is featured. Simes can certainly play well, as the lengthy lead guitar workouts demonstrate, and the guitar sound is also very good — he uses an ART tube pre-amp. The Roland JV30 drums suffer from a lack of production reverb, and I'd suggest recording the snare at least to tape so that it can be treated more effectively. The second track on the demo is taken from a piano concerto Simes is writing, and it is excellently played and recorded. It would be interesting to see how the electric guitar could fit into this piece, rather than recording them separately.

Setting up a good groove for the opening track on his demo, 'Dance it up', **SHAUN KIRKPATRICK** loses his way somewhat by the time the track has run for a minute or so, and nothing really happens. The drums are high in the mix at the expense of the keyboard sounds, and more could have been done to liven up those sounds. The keyboard tracks could have been copied and a separate MIDI channel and in-tempo delay value assigned to the copy. Using the mute feature on his *Notator* sequencing software, the delayed version could have been dubbed in and out or even panned (the Roland D10 should respond to pan controller information). After a subdued start, the "rock concept track", which is the second composition, turns into a rock workout. Good sounds on drums and lead guitar make this a punchy mix which would make good film soundtrack music.

PAUL CLARKE is looking for "an A&R man's opinion of this demo". I'm happy to oblige. What the opening track lacks is a strong hook and the single vocal sample, "feel so good", just doesn't cut it as such. The arrangement is competent but predictable and therefore unexciting, so some new angle or unusual motif would be needed to make this sell. "Like what?" you may ask, to which the standard A&R reply is "don't know till I hear it". On the recording side Paul achieves a good instrument mix but doesn't seem to make much use of effects in the production — delays and modulation would certainly add some more interest to a very dry mix. □

Simes Davies.



► Mixing live onto DAT, **THE UNLIMITED**

DREAM COMPANY sound takes some time to get going, with a percussive conga rhythm anchoring the synthesized and sampled sounds. These crossfade over the rhythm until a triplet echoed banjo takes up a repeating sequence. Some sampled vocals, ambient bells and heavily reverbed growling synth provide the tonal colouration and work well against the dub drum kit sounds later in the piece. All in all, it's a good mix, with a mellow trance-dance sort of feel. The second track, 'Shore Garden', with its predictable wave-breaking backdrop, is nevertheless another hit for me. Groovy drum programming and interesting dub use of modulated delays on the drum track — particularly the snare and 808-style cowbell — provide the perfect foil for the instrumental mix. I'd love to have heard the bass line played by a real bass player, who could have made a fine part just that bit more special. However, nice use of flute, piano and chopped sixteenth-note synth more than make up for it. On both tracks the mixes are excellent with a warm sound and competent instrumental balance, which suits the overall band vibe quite nicely, I'd say.

NICK HARRISON gives scant information about his EP project *Shadow Days*, the opening track of which seems to take a long time to get going for such a short track. The repeating synth riff is mixed too high and the sound is a little uninspiring

— some modulation would at least have varied the tone. The second track starts with an unusual drum mix which is mostly pre-delayed reverb. This works well initially but wears thin by the time the track has been running for over a minute, so when the vocal arrives it's a welcome relief, and I rather liked the almost whispered style. A basic backing of bass, drums and DI'd guitar is too heavy on the drum mix and really needs some variation in the drum pattern — the occasional fill would be nice. However, the sound of the drums is nice, though the somewhat ham-fisted piano playing spoils the overall feel laid down by the rhythm section.

After a somewhat convoluted band history lasting five paragraphs, we finally get down to the nitty gritty of the band **OCTANE**. Within a week



Pockets of Passion EP



215 Harwich Rd
Colchester
Essex
CO4 3DF

tech-mate^{uk}

Tel: 01206
793355
Fax: 01206
791371

Roland

JV-1080  **JS-30** £899
64 note polyphony.
Expandable - 4 boards!
£1085 — Call Now
Grandmothers taken in P/X

MS-1 Sampler
Up to 64 samples, Sequencer
£425 !! Call Now



SC-88 £649
JV-1000 ... £1395
FP-1 £1439
A-30 £329
JV-880 £589
G1-10 MIDI
Converter .. £550

KORG
Amazing New Products

X3
X2
X5 DR New Module
X5
05/RW
i3
i4

} **Call For Prices**

E-MU 

ESi-32 Sampler,
stunning 32 note poly **£CALL**
Performance piano £239
Performance + piano £295
Proteus FX £499
Classic Keys £499
Vintage Keys £POA
Ultra £POA
Morpheus £POA

SAMSON

MPL 1502 15-2 mixer £289
MPL 2242 22-4-2 mixer £699
S6 200 watt mixer amp £359
Servo power amps
From **£249**



SKB CASES

2U.....£79 4U.....£89
6U.....£99 8U.....£115
Pop-up Mixer.....£122

'PC MARKET'
Call for full price list

PC SOFTWARE

Cakewalk Express	£69
Cubasis	£149
Cakewalk Pro 3	£219
Cakewalk Home Studio	£99
Cubase Score	£399
Cubase Lite	£89
Steinberg Music Station	£179
Wave Windows 3	£89
Band in a Box	£69
Encore	£329
Personal Composer Notation	
10 Stave	£99
16 Stave	£199
44 Stave	£349

Lots of other software available.

PC HARDWARE

Musicquest Interface	£79
Musicquest Parallel Interface	£99
Musicquest MQX32M	£195
Musicquest 2 port SE	£185

ROLAND PC PRODUCTS

SCD-10 GM daughterboard	£149
SCD-15 GM/GS	£199
ATW-10 GM + sampling card	£359
SCC-1 GM/GS card	£329

Yamaha YST10
Speakers £69 pair!!

PC Bargain
Yamaha GM Module + Cubase
Lite **£199** inc delivery
HELLO PACKAGE

ENSONIQ PC
Brilliant Soundscape
PC card, music, games **£199**

CALL FOR BROCHURES

YAMAHA

SY35 £475
SY85 £949
W5 £ CALL
W7 £ CALL
TG100 £235
TG300 £485
MU5 £219
MU80 £675
MDF2 £289
QY20 £349
QY300 £799

MIDI Keyboards
FATAR

Studio 49, 4 octave £99
Studio 900, 8 octave £569
Goldstar GMK 49
Pitch bend etc, 4 octave £149
Roland PC200 £165
Roland A30 £329

NOVATION Bass Station
BRILLIANT NEW DUAL OSCILLATOR
BASS SYNTH.

Forget buying old unreliable non-midi synths.
Great fat sounds with full midi spec

ONLY £349 inc. delivery & PSU

MMIOX - £159 Midicon - £99 Bass Station Rack £399



BOOT SALE
This Sunday!

QY8 £159
Kurzweil Micro
Piano £489
Kurzweil RG100
Piano ex demo .. **£985**
ART FXR **£159**
PG1000
Programmer..... **£179**

PHONIC
AMAZING VALUE

6-2 £109
8-2 + rack adaptor £195
New Series High Spec

PMC 8-2	£260
PMC 12-2	£359
PMC 16-2	£425
PMC 24-2	£659
New Compressor	£199
2X15 Graphic EQ	£159

All Phonic with free 24 hour carriage

BEHRINGER **lexicon**
The best

Dualfex	£129	Alex.....	} Call For Best Prices!
Ultrafex	£219	Vortex.....	
Composer	£299	Jam Man.....	
		Reflex.....	

Call for free brochure

JBL in stock!!
Control 1's **£239** Control 5's **£339** MR **£Call**

INTEREST FREE CREDIT! 6 months interest free 12 months 38.4% APR 24 months 38.4% APR 36 months 38.4% APR

Name Date Of Birth

Address

Post Code

How long there Own Rent With Parents

Tel. Home Work

Previous Address if less than 3 years

How long there Marital Status: Married Single

Goods required

Employers name How long there Occupation

Address

Previous Employers name & Address if less than 3 Years

Bank/BS

Address

Sort Code Account No

Deposit Amount

Call for FREE info packs!

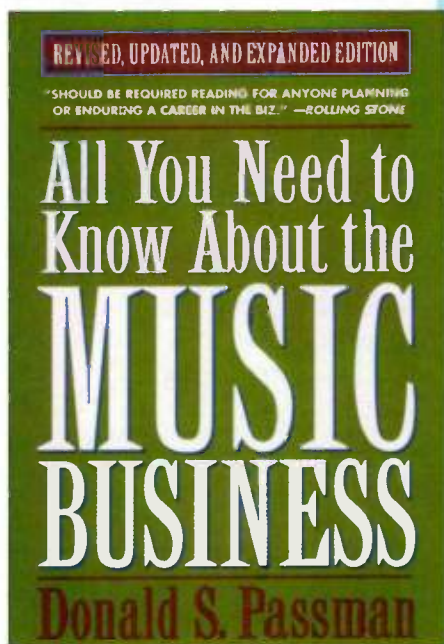
widgets

CONCISE REVIEWS OF ESSENTIAL ACCESSORIES

ALL YOU NEED TO KNOW ABOUT THE MUSIC BUSINESS

Donald S Passman's *All You Need to Know About the Music Business* has already created quite a buzz amongst SOS' readership, following an enthusiastic recommendation in our interview (in the February and March issues) with Brian Jackson, head of publishing A&R at EMI America. We've had dozens of calls requesting details of this book, and we're happy to confirm that it's now available in the UK.

Does it live up to its recommendation? In a word, yes. Passman is a music business lawyer in California, and he loves his job: he started out as a musician, went into law to earn a living and found that he got a buzz out of the business. For him, doing music law is so much fun that it's not even like working. As a result of his enthusiasm and a scrupulously fair streak, he's graduated to a range



of high-profile clients and also teaches a class on the music business at the University of Southern California's Law School, on the Advanced

Professional Program. His book is a clear and approachable overview of how he sees the music business in the USA — though this doesn't mean it's useless in the UK.

Logically enough, the book starts you off at the beginning of your career, with advice on choosing a manager, business manager, lawyer and agent, along with what their responsibilities are and how much money they're due. Part two covers record deals, and this really is exhaustive; if you've ever heard any rumours about the shenanigans that record companies get up to, the confirmation is here. The truth about advances, royalties, recording costs, creative control, and so on, are covered in depth here.

Part three goes into songwriting and music publishing, and clears up the minefield of copyright,

mechanical royalties, songwriter deals and more. The book also goes into 'group issues' (ie. relationships with band members), touring, merchandising and motion picture music — this last section is rather in-depth.

This quick scan of the overall contents just scratches the surface: the actual text goes into enough depth for almost everyone — except possibly for other legal professionals.

Passman's prose is generally lucid, with lots of amusing asides, which lighten your reading and also help to illustrate serious points. Even areas that might seem obvious to some are carefully explained, since Passman presumes that total beginners who know nothing are as likely to be reading his book as experienced musicians looking for an edge. The only drawbacks I can think of is that the book is American, Passman is an American lawyer, and the majority of the business practices discussed are American. If you're planning on becoming an international megastar or foresee working in the States in the future, then there's no problem. Though many music industry conventions are undoubtedly international, you would have to make allowances for UK practices when reading this book. Other than that, *All You Need to Know About the Music Business* is a real eye-opener, one of the best music business books currently in print, and shouldn't be missed. And as a hardback running to over 400 pages, it offers pretty good value. *Derek Johnson*

FURTHER INFORMATION

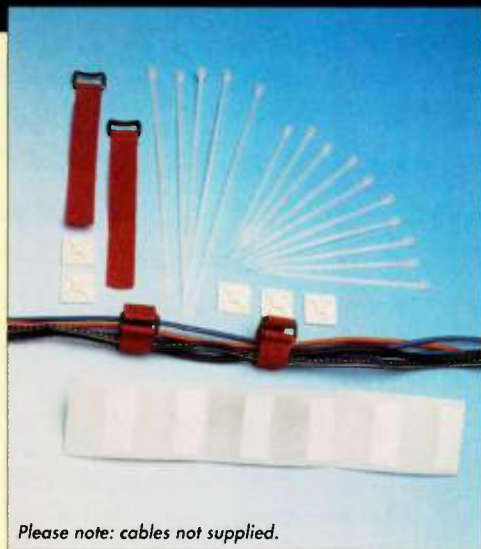
E *All You Need to Know About the Music Business*, £19.99; should be available from selected book stores (ISBN 0-671-88304-6), or mail order from SOS Bookshop (plus £2.50 UK, £6.95 Europe, £9.50 Rest of World postage).

A SOS Publications Ltd, Media House, 3 Burrell Road, St Ives, Cambs PE17 4LE.

T 01480 461786 (24 hours).

F 01480 492422.

SOS CABLE MANAGEMENT KIT



Please note: cables not supplied.

comprises four six-inch Velcro fixing straps, 10 clear adhesive labels for use on cable ends (particularly useful inside patchbays), 10 six-inch cable ties that you can actually unlock when you want to take them off, and five straps of similar design but 10 inches long. In addition, you get five self-adhesive tie mounts that fix to any smooth surface, allowing you to tie cables to flat surfaces as well as to each other — and you get a piece of paper reminding you what you bought!

Well, I tried them, they work, they don't cost too much, and the only criticism I have applies to all mixed bags of goodies, in that you may only want to use some of the items. However, as the overall cost isn't much more than the Velcro cable ties on their own, I think it's a pretty good deal. But then I would say that, wouldn't it? *Paul White*

FURTHER INFORMATION

E The SOS Cable Management Kit, £5.99 plus £1.50 (UK) postage and packing.

A SOS Publications Ltd, Media House, 3 Burrell Road, St Ives, Cambs PE17 4LE.

T 01480 461786 (24 hours).

F 01480 492422.

While rummaging around our mail order department the other day, I came across something I didn't even know we stocked (shows how often I read the mail order pages!), and I decided to take it home and try it out. The package in question was the Cable Management Kit which



BABEL SYSTEMS

WORLDWIDE EXPORT

Mail Order Hotline

081 749 8222

Easy Parking
No Yellow Lines
2 Minutes walk from Goldhawk Road Tube (Barnes South & City Line)



RECORDING

ALESIS

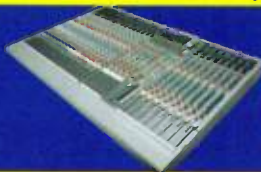
Adat 8 track digital recorder
CALL FOR BEST PRICE



AKAI DR4d & DR8
4 track & 8 track digital hard disk recorders



Fostex R8, G16 & G24
Fostex X18, X28H, 280
Fostex 380 with Dolby S



MICROPHONES
AKG, Audio Technica
Beyer Dynamic
Sennheiser, Shure
Sony

KEYBOARDS

YAMAHA VL1
YAMAHA SY85
YAMAHA SY35
YAMAHA TG 500
YAMAHA TG 100
YAMAHA TG 300



E-MU Proteus range
Morpheus
UltraProteus
Proformance



Ample
Cassette
decks
CD Players

Roland Dm80
4 to 32 track direct to disk system, MAC or separate remote control



SAMPLERS

KURZWEIL
SPECIALISTS
K2000 rack or keyboard
PC 88 keyboard



AKAI S3000 sampler,
16 bit digital stereo,
32 voice with 8 individual outputs, 2mb of RAM expandable to 32 meg.



AKAI S01
Only £62 per month for 10 months on 0% finance



AKAI S2800 sampler
32 voice, 16 bit stereo digital sampler - 4 outputs, 2 meg of RAM expandable to 16 meg.



MIXING DESKS

SOUNDTRACS Solo MIDI Range
16 8 16 / 24:8:24 / 32:8:32
Call for the best prices
Soundtracs Topaz

Soundcraft
Spirit STUDIO / Spirit FOLIO
Sapphyre & Delta ranges
MACKIE



YAMAHA
ProMix 01
16/2
Digital Desk

PACKAGES

If you plan to assemble a package of equipment please don't hesitate to call us for advice on the most up to date systems on the market. Then when you have decided on exactly what you need we will be more than happy to offer you the most competitive price coupled with the best after sales service in the business. We can supply virtually anything audio, so if you can't see what you want listed here - just phone us for a price.

DIRECT TO DISK

Soundscape

8 to 64 track direct to disk recorder 16 bit
Data storage backup to DAT
Pro option with balanced XLR's
AES/EBU audio inputs
Digital In and Out
Variable sample rates
From £2495

DAT

TASCAM DA30
SONY TCD-D7
SONY DTC-690
Panasonic SV3700



SOFTWARE

Steinberg Cubase
Opcode Vision
Notator Logic for Mac/PC/Atari



COMPUTERS

Apple Performa 475 8/250
Apple Performa 630 8/250 CD
PowerMac 6100 8/250 CD
PowerMac 7100 8/700
PowerMac 8100 8/500



FX & OUTBOARD

Lexicon ALEX LXP15 300 & 480L
Alesis Quadraverb GT & Plus
ART Multiverb LTX & Alpha II
Eventide h3000DSE harmonizer
Behringer range of units
Drawmer gates & compressors



MODULES

KORG W55R KORG 05R/W
KORG X5 KORG X3
KORG X2 KORG i3
YAMAHA QY300



Roland S760 sampler
JV1000 keyboard
JV1080 64 voice module



7 Goldhawk Mews, Shepherds Bush, London W12 8PA



SAMPLE SHOP

Our regular look at the hottest new sample CDs and CD-ROMs.

FUNKY ASS LOOPS (SAMPLE CD)



This hot-off-the-press East-West release from Michael Bland and Sonny Thompson, two of the Paisley Park crew, is very good indeed. Tracks 2 to 89 each follow the same format: a full mix loop of (usually) bass, drums, guitar and percussion, followed by the individual elements — drums (probably laid solo, or against a bass/guitar DI'd or miked in another room, as there is absolutely no crosstalk), then acoustically isolated bass, guitar and percussion overdubs, plus single hits from the kit (snare, kick, hi-hats). The latter are always



chopped out of the performance to ensure a good blend when added to the drum pattern on that particular track. Tempos and keys are given, and full mixes and drums are always in stereo.

All these tracks were recorded on analogue multitrack, imparting some pleasant compression, warmth and authenticity to the proceedings, but tape hiss is never a problem. Where hiss is audible, you can usually gate it out easily (the exception being the archive loops at the end of the CD).

Grooves are inevitably a bit Prince-like; more along the lines of a live performance than a studio production. And although the character of the playing is consistent, a pretty wide range of tempos and styles are covered. Hard, tight funk avoids the usual pitfalls of the genre: musical clichés and over-indulgence. Messrs B & T have nothing to prove, and plenty to offer.

Drumming is generally solid, unpretentious and economical, being neither dry nor wet, but hard and 'roomy'. I approve, as this means

that there is space to program your own variations and fills by adding in single hits. It is left to the guitar and bass to give each groove its uniqueness. Unusual bass and guitar patterns do not rely overly on effects for originality; it is largely playing technique which generates the wealth of percussive and scratching effects heard here, as well as the more straightforward funky rhythm and bass parts. Percussion parts tend to be light and complementary, rather than underpin the total groove.

Obviously elements from the above tracks can be taken and used out of context, especially drums and percussion. Not so for track 1, which comprises nothing but 10 different full mix loops, recorded direct to DAT. More entertaining than useful, from a samplers point of view, it does however get you in the mood. Tracks 90 to 92 each comprise eight or nine 'Archive Loops' with either bass or guitar versus drums. Noisy, arrogant and genuinely vintage, rappers should take note. The CD terminates with 24 drum fills. No tempos are given for these.

Conclusion: Once again this month we have a CD unlike any other I've reviewed. It's dead easy to use and select from, and is excellently produced. If Prince is one of your bags and you've got a sampler, this is 4 U. Other style disciples might also want to check this out, especially if (like me) you've previously been a bit suspicious of the relevance of US sample CD production values to UK and European dance music. *Wilf Smarties*

£ **£59.95 inc VAT and P&P within UK.**
A Time And Space, PO Box 306, Berkhamstead,
Herts, HP4 3EP.
T 01442 870681.
F 01442 877266.

STAR EGGS

	FABERGE EGG
	CADBURY'S CREAM EGG
	THE EGG PLANT THAT ATE CHICAGO
	EGE BAM YASI
	JULIE EGE

LF-OIDS VOLUME 1: BASSLINE LOOPS (SAMPLE CD)



Over 67 tracks of synth bass lines with an acid/techno bent, played on a variety of synths arranged around five or six to a track. Filter sweeps are sometimes employed, bar lengths vary from 1 to 4, patterns are BPM grouped and there's no reverb used. Even if you can't find a home for the patterns, chances are you'll be able to clip out some pretty good bass tones. Instruments used include all the classic analogue synths.



Conclusion: Now and then it pays to go bargain hunting, and *LF-Oids* fills quite a big gap in the market very inexpensively. Although many of the sounds (or close approximations) are to be commonly found in hardfloor/club music, mainstream dance sample CDs seem largely to pass them by, favouring more polite, musical timbres. Get rough. Get ready. Get *LF-Oids!* *Wilf Smarties*

£ **£34.95 inc VAT and P&P within UK.**
A Pure Technology, PO Box 997, Rhyl, Clwyd,
LL18 4WA.
T 01745 332535.
F 01745 331331.

CHARLIE MORGAN MASTER DRUMS 2 (CD & CD-ROM)



In the late Eighties it was common practice to close mike the individual sounds of a drum kit and process them as much as possible, to achieve maximum 'boom' or 'crash', using little of the original ambience. Thankfully, we've moved on, and the drum kit as an ensemble instrument is now back in vogue. Charlie Morgan is a leading exponent of 'drum kits with feeling', and this latest offering is a testament to the expressive potential of the drum kit. This audio CD comprises a collection of drum patterns and fills in a number of different styles. The

MAC SYNCMAN £275

A full featured 2 in/6 out MIDI interface and sync box. The Mac Syncman fits conveniently under the Macintosh - or with the included set of rack-ears, it can be easily rack mounted. Features include: SMPTE to MIDI Time Code and Smart FSK sync are both supported. SMPTE reader/writer supports all SMPTE formats including 24, 25, 30 drop and 30 non-drop. Full Jam Sync and Flywheeling capability to ensure rock solid sync. Built-in studio quality SMPTE Regenerator for repair of damaged SMPTE stripes. Three MIDI routing configurations. One MIDI In and MIDI Out on the front panel for easy system integration.

MACMAN £62

The ideal 1 In / 3 Out Macintosh MIDI Interface. MacMan has all the features needed to add MIDI to your Mac. Features include: 1 MIDI In / 3 MIDI Outs. Serial Port Switch - allows printer or modem to be connected directly without having to replug - A MUST for any quality Mac interface. Built-in Activity and MIDI Indicator LEDs. Compatible with all Macintosh computers.

MINI MACMAN £49

1 In 1 Out Macintosh MIDI Interface. The MiniMacman allows your Macintosh computer to send and receive MIDI. MiniMacman draws power directly from the computer itself and needs no external supply - only the connection of the serial cable is required.

SYNCMAN £199

Syncman is the only sync box in its class that reads and writes all SMPTE formats, converts SMPTE to MIDI Time Code or Direct Lock (for Performer), supports Song Pointer Sync, 'JAM' syncs in both SMPTE and Song Pointer Mode, built-in Merge mode, and even allows you to duplicate SMPTE and Song Pointer stripes.

SYNCMAN PLUS £249

Syncman Plus delivers ALL of the Syncman features plus SMPTE to Song Pointer conversion, allowing virtually any sequencer (eg. Alesis MM1-8, Korg M1, Roland W30, D10, and D20) to be SMPTE!

SYNCMAN PRO £349

Syncman Pro is a single space, rack mounted unit that performs every sync function you will ever need. Syncman Pro combines all of the features of our industry standard Syncman, Syncman Plus, MIDI Time Window, SMPTE Time Window, and much more.

VIDEO SYNCMAN £599

The World's first universal Time Code Translator. Supports VITC, Longitudinal Time Code and even has a built-in screen burner!

MIDI THRU £59

1 MIDI In, 4 MIDI Outs, doesn't need a power supply and it's guaranteed for life! The unit is powered from the MIDI In so doesn't need an external power supply.

MIDI MERGE 2X2 £89

2 MIDI Ins merged into 2 MIDI Outs, doesn't need a power supply and it's guaranteed for life! MIDI All Notes Off Message is sent on power up allowing the unit to function as a MIDI 'Panic button'. Measures only 3"x3"x1.25"

PORTMAN 2X4 £156

The first 2 In / 4 Out, Parallel Port MIDI interface for the PC. Perfect for portable or laptop PCs and comes with Windows driver & Cakewalk DOS driver. Works with all Windows based MIDI software and includes Windows Help software for Cakewalk, Cubase and Mastertracks Pro.

midiman
Guaranteed for life

SMARTSYNC £129

SmartSync is the most reliable, most versatile, and most affordable Smart Song Pointer sync box on the market! SmartSync features include merging capability, 'JAM' sync, and much more.

MM-401 £69

MIDIMAN's MM-401 is the finest MPU-401 compatible PC interface on the market. The MM-401 works with any PC compatible. Features include: The only 401 card with a lifetime guarantee. Free software including a System Exclusive Archiver, a MIDI Viewer Channelizer, Diagnostics and more. 1/3 size card - fits into ANY slot. Works at any speed. Works with all MIDI sequencers, editors, Librarians, and games that use the MPU-401. Fully MPU-401 compatible.

WINMAN 1X1 £59

The Winman 1x1 is a 1 In 1 Out Windows PC MIDI interface. Works with all programs that support the Windows Multimedia standard. One MIDI Out gives you 16 separate MIDI channels.

WINMAN 2X2 £99

The Winman 2x2 is a 2 In 2 Out Windows PC MIDI interface. Works with all programs that support the Windows Multimedia standard. Two independent MIDI Outs give you 32 separate MIDI channels.

MICRO MIXER 18 £265

The world's first ultra-quiet 18 channel mixer that fits into a single height, half-rack space. MicroMixer has: 12 channels with gain, pan, dual send controls and clipping LED; 6 additional channels of straight left and right inputs; left and right auxillary returns; a mono return; stereo headphone jack and level controls; and all this in a single height, half-rack space!

MINIMIXER £99

MiniMixer is a digital quality, compact 4x2 (stereo) or 1x8 (mono) mixer that will run for up to a year on a single, 9-volt transistor battery. And MiniMixer's JFET Op Amps make it quieter than the most expensive studio quality mixing boards. MiniMixer measures only 6"x3"x1" and weighs less than 12 ounces!

PORTMAN PC/P £119

The Portman PC/P - the world's first parallel port MIDI interface for the IBM PC! Connects directly to the external parallel printer (Centronics) port on any IBM compatible computer using a standard printer cable.

PORTMAN PC/S £119

The Portman PC/S is a professional 1 In 1 Out MIDI interface that connects externally to the serial port on any PC.

FINELINE £265

FineLine is a single space, rack mounted line mixer which is perfect for the professional and home studio. FineLine contains two groups of ten: 1/4" inputs (20 channels) and 4 XLR microphone inputs which can be configured as a 2x10 (stereo) mixer or as a 1x20 (mono) mixer.

GIG SOUNDS

THE ORIGINAL - THE BEST -
NEW FREE PHONE NUMBER
0500-123-616
CALL WITH CONFIDENCE

86/88 MITCHAM LANE, STREATHAM, LONDON SW16
TEL: 0181-769 5681/3206 FAX: 0181-769 9530

MAIL ORDER • PART EXCHANGE • INSTANT CREDIT AVAILABLE SUBJECT TO STATUS
(WRITTEN DETAILS AVAILABLE UPON REQUEST) • ALL PRICES INCLUDE VAT

NEW PRODUCTS

- Korg X5 DR
- Solton MS 50/60
- Yamaha Pro Mix
- Alesis MIDVerb 4
- Vocalist II
- Sampson Mixers
- Tascam 488 MkII
- Digitar
- Fostex XRS
- Behringer Composer

DEMO STOCK/SECOND HAND

Yamaha V50	£599
Korg X3	£749
Gem S2 Turbo	£925
Peavey DPM2	£749
Peavey DPM Si	£1049
Korg O1W/FD	£1299
Roland D50	£449
Korg T3	£799
Yamaha SY85	£800
Akai S2800	£899
Yamaha TX 81Z	£149
Yamaha TG 300	£499
Korg O5R/W	£479
Emu Classic Keys	£579
Emu Morpheus	£1049
Alesis SR16	£149
Roland TR626	£169
Tascam Porta 03	£199
Yamaha MT8X	£850
Yamaha YPP55	£849
Yamaha PSS 790	£150
Art MR1	£160
Behringer Inteligate	£300
Peavey PRM 312 (pair)	£499
Tannoy PBM 6.511 (pair)	£249
Mackie 1202	£200
Boss BX80	£150
Tascam Porta 424	£439

This Months Give-Away
(with this ad) Limited offer!!
"X" Frame Keyboard Stand
£9.99

Master Keyboards From £119
Fatar - Samick - Goldstar



Soundscape
Call for package deal including
1 GB Hard Disk, Samson 2242, Cables
***** Simply The Best *****

AKAI professional

Available from stock - Best Prices!
SO1, S2800, CD3000, S3000, S3200,
Mega Deal DR4d inc Hard Disk
and MIDI. **Limited Offer**
£1967 only £1449

E-MU ESI-32, Morpheus, Classic and vintage keys, Procussion, Ultra and FX Proteus

AMPEX ANALOGUE & DIGITAL IN STOCK | **KURZWEIL MIKRO PIANO NOW IN!** | **The Latest Range of DIGITECH Processors NOW IN STOCK** | **MACKIE 8 BUSS IN STOCK PLEASE CALL**

Electro-Voice | **Studiomaster**

SHURE | **YAMAHA**

WORLDWIDE EXPORT | **FINANCE** | **0181-769-5681** | **0181-769-3206** | **GIG SOUNDS**

CONTACT YOUR NEAREST DEALER FOR FURTHER DETAILS

DISTRIBUTED BY KEY AUDIO SYSTEMS CHELFORD COURT
ROB. JOHNS ROAD, CHELMSFORD, ESSEX CM1 3AG
TEL: 0245 344001 FAX: 0245 344002

KEY Audio Systems

SAMPLE SHOP

- layout is logical; one style of pattern is assigned to each track, with over 80 different patterns in total. Each track comprises a 1 bar start fill, 4 and 2 bar grooves, 1 and 2 bar loops, as well as additional fills, plus a 1 bar stop fill.

One of the many strengths of this CD is its astounding range of convincing styles, everything from Motown, Swing, Funk, Soul and Blues, to something described as "teenage attitude garage grunge". All are eminently usable, and with so many variations of each pattern, constructing an intelligent sounding drum track, with all the feel of a live drummer, couldn't be easier. The overall sound of the kit is more or less consistent throughout, with variations of snares, brushes and sticks depending on the style. All the patterns are recorded in stereo without any effects, leaving you plenty of options in a mix, and within the context of a track they are easily EQ-able, and cut through nicely. There's plenty of smack to the bass drums, and despite a couple of tracks where the snare has a bit too much 'ring' for my liking, I could see myself finding a use for nearly all of these patterns at some point or other.

Recording quality is good throughout, and lots of attention has clearly been given to the sonic depth and clarity of all the drums. There



are no 'Power Station' huge snares and gargantuan bass drums here, just a traditional, full bodied kit. The lack of any percussion patterns or samples is, I feel, a sensible decision; there is virtually no wasted space on this CD, just lots of professional, musically valid drumming. All the patterns are listed with their appropriate BPMs and the overall impression is one of quality and tightness. There's also a very useful collection of the individual drum sounds on tracks 81-91, making it easy to build your own matching fills and loops.

Conclusion: I can't really see this collection being a hit with the dance music

fraternity, nor anyone looking for monster-sounding rock kits that you'd sell your granny for. What you do get is a selection of intelligently played, and sometimes very subtle, expressive drumming, with an emphasis on 'feel' as opposed to 'power'.
Paul Farrer

E Audio CD £54.99, CD-ROM £149.99 inc VAT and P&P within UK.

A Bridge Recording Company, 7 Riverbank, Hampton Court, Surrey, KT8 9BH.

T 0181 979 0218.

F 0181 783 0614.

A Time And Space, PO Box 306, Berkhamstead, Herts, HP4 3EP.

T 01442 870681.

F 01442 877266.

STEVE STEVENS GUITAR SAMPLE COLLECTION (AKAI FORMAT CD-ROM)



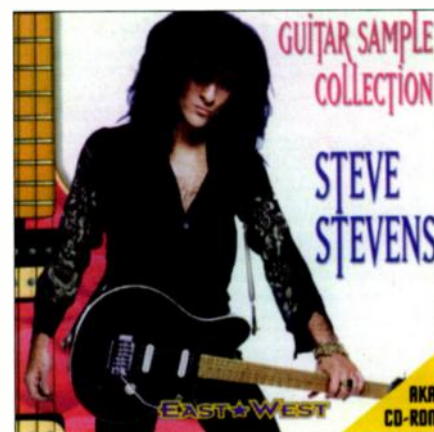
With the sampling copyright laws becoming more and more confused by the day, the producers of this CD-ROM have muddied the waters still further with a rather innocuous piece of small print, tucked away at the back of the CD booklet, which states: "All commercial use of these samples requires written permission from East-West, and must contain the following credit "Guitar samples taken from Steve Stevens Guitar Sample Collection". In fact, lots of other sample CDs also include small print which relates to the commercial use of the samples, so beware — don't just assume that you can lift a sound from a sample CD and use it in a record or soundtrack.

Putting legal headaches aside, it's evident that a lot of time and effort has gone into both the recording and compiling of this Akai format CD-ROM, which comprises a selection of useful guitar sounds and phrases. The sound quality is superb, complete with an accurate description of the type of guitar, amplification, microphones, processing, and even mixing console used to sample each sound. The programs are logically compiled, providing full bandwidth stereo samples followed by 16Mb, 8Mb, and sometimes 4Mb versions, plus mono alternatives to allow you to make the most of your available sampling memory.

The sounds themselves offer a fairly wide variety of rock-based power chords, chugs, 5ths, and triads, as well an authentic version of Steve Stevens' lead sound, made famous in the likes of 'Dirty Diana', 'Rebel Yell' and 'Top Gun'. Again, most sounds give you a wide range of options, including looped or unlooped versions of the same samples. The unlooped samples are long, and usually

culminate in some feedback, pitch-bending or tremolo effect, while the power chords kick like no other guitar samples I have ever heard — when used in a track, they are extremely convincing, and positively ooze attitude.

It isn't all just overdriven and distorted guitars, however; there are some bright chorus and wah-wah sounds, as well as lots of swoops, effects, harmonics, and even an electric sitar. The acoustic guitar section is a



little weak, offering only two styles (picked and fingered), and for some reason, all programs load up with the velocity sensitivity turned to a minimum, which is odd considering that the strength of sampled guitars rests firmly on the ability to programme them expressively. There are no 'off the peg' riffs or licks, but there is an interesting selection of minor chords (including 9ths and 7ths) which would work well in soft rock tracks.

It's very hard to compare this library with anything else you may have heard, and from a user's point of view it offers both flexibility and a high degree of usability. On the negative side, many of the samples are almost 'over processed', leaving little room to add any other effects in a mix, should you need to. The exclusion of any totally clean electric guitars means you're pretty much stuck with what's on offer. Even so this is a very versatile and high quality product, and a serious attempt at providing the definitive guitar sample CD. Although there is a very strong bias towards hard rock sounds, the samples are all meticulously recorded and compiled. If you need guitar samples in Akai CD-ROM format, this is a disk you have to try. *Paul Farrer*

E £59.95 inc VAT and P&P within UK.

A Time And Space, PO Box 306, Berkhamstead, Herts, HP4 3EP.

T 01442 870681.

F 01442 877266.

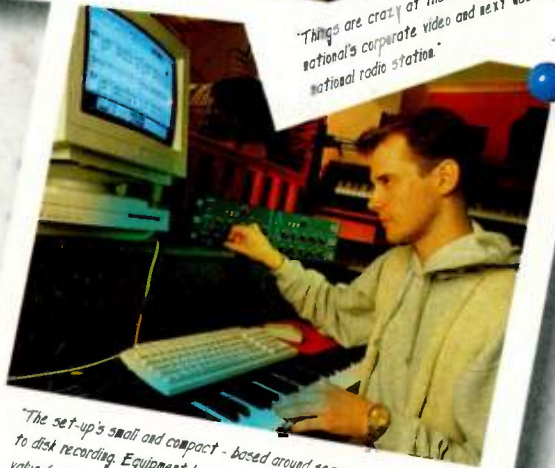
Who in the world uses LA Audio?



"We get all types in here, from Highland Folk music to balls out Rock 'n' Roll. Consequently I've only got time for the very best. - Our clients expect it from us and I expect it from my gear."



"Things are crazy at the moment, I've just finished a score for a multi-national's corporate video and next week I start on a set of jingles for a national radio station."



"The set-up's small and compact - based around sequencers and direct to disk recording. Equipment has to earn its place on audio quality and value (at least until the record company puts pen to paper)."

You do.

Engineering in a top flight studio complex, score writing for film and video, or maybe laying tracks for your latest demo - you're mixing, track laying and recording with LA Audio signal processors.

And what processors.

You engineers and producers revel in the warmth of the Studio Range Classic Compressor and marvel at the facilities of the Multi Gate, which combines 16 MIDI controllable gates and a whole lot more in just 1U.

Then there's the 4 The Family, a range of three processors that offer maximum facility at a surprisingly good value price.



The 4c, 4G and infamous 4x4 have all earned an enviable reputation in your digital studios for class leading features and boring reliability.

And for your home and small studio set-ups? LA's got them covered too with the outrageous LA Lites.

One look tells you they're something special. Use them and this impression is cemented, buy one and the amazing low price convinces.

Visit an LA Audio dealer or call your distributor for more information on three ranges that include processors for every conceivable user in every conceivable application.

But then again, you know that.



Multi Gate

- 16 high quality conventional noise gates in 1U
- All gates fully programmable
- 16 programmable MIDI mutes
- 16 fully variable duckers
- Fast attack coupled with ultra-low noise
- Full support for frequency conscious gating

Classic Compressor

- Two independent compressor/limiter channels
- Balanced inputs and outputs via XLR connectors
- Full stereo or dual mono modes
- Each channel has its own output, attack, release, and ratio rotary controls
- Two large analogue VU meters



4C 4 separate & top quality compressor limiter de-essers

- Ideal for use with digital multitracks
- Switchable high/low filter
- Full & Half band compression - for a great sound
- Selectable cross-over
- Adjacent channel outputs & inputs normalised
- Up to 4 channel multiband compression
- Separate normalised side chain inputs & outputs
- Gain reduction LED metering
- Full stereo linking
- Fully balanced audio inputs & outputs

4G 4 fully independent frequency conscious noise gates

- Ideal for use with digital multitracks
- High speed 5µs gates with external keying
- Unique 'Selective Noise Reduction' for single ended noise reduction on each gate
- Threshold, release, range & high/low filter controls for each of the 4 gates
- Full channel linking
- Selectable high & low filtering on each gate
- Filters independently switchable with separate input/output for external EQ use
- Fully balanced audio inputs & outputs

4x4 2 noise gates, 2 filters & 2 compressor/limiters in 1U

- Ideal for use with digital multitracks
- High speed 5µs gates with external keying
- 4 separate & independent channels
- Filters individually assignable for frequency conscious gating
- Individually assignable filters also allow compressor de-essing
- Switchable compressor side chain
- Gate outputs switchable to compressor input for gated compression
- True stereo linking



CX2 2 separate compressor limiter de-essers

- Switchable high/low filter
- Full & Half band compression
- Selectable cross-over
- Separate normalised side chain inputs & outputs
- Gain reduction LED metering
- Full stereo linking
- Fully balanced audio inputs & outputs

GX2 2 separate frequency conscious gates

- High speed 5µs gates with ext. keying
- Unique 'Selective Noise Reduction' for single ended noise reduction
- Full channel linking
- Selectable high & low filtering
- Independently switchable filters with input/output for external EQ use
- Fully balanced audio inputs & outputs

MX2 2 channel mic pre-amp

- 2 Transformer balanced XLR inputs
- 4 Electronically balanced XLR outputs
- 20dB Pad Switch
- 48volt Phantom Power





atari notes

Need to upgrade your ST's memory? VIC LENNARD looks to RAM the point home...

Why has the ST sold something like a million units in the UK? Why, some 10 years after its appearance, is the ST still one of the best value-for-money home computers? Apart from its innovative design (for a computer

changed. Most of the major sequencing packages need 2Mb if you intend to access all of the features, and software that incorporates sample playback, such as Software Technology's *Breakthru*, will happily use a full 4Mb, if available.

Last month, I looked at the various options you have if you're looking to replace your Atari with a completely new ST, MegaSTe or Falcon. However, there's every chance that there's nothing wrong with any current machine you have that a memory upgrade

else (ie. it doesn't work...)?

The best option is to fit a SIMM board. SIMMs (Single In-line Memory Modules) are the industry-standard memory boards used in most computers, and they simply clip into a slot — no soldering required.

The only problem with fitting a SIMM board in an ST is lack of space. Ever since I fitted a 2Mb upgrade to my STF some years ago (a large, chip-based board that was supposed to sit behind the keyboard), the front of the casing has continued to bow. This is partly due to the size of the board, and partly due to the extra heat generated with the upgrade fitted.

Nevertheless, there is a space between the power supply and the floppy disk drive, and most upgrades utilise this.

DIY TIME...

Could you carry out the upgrade yourself? If you have a fear of anything technical, then possibly not. Otherwise, the job is generally quite straightforward. Flip your ST over and you'll see seven screws in square holes. Once these are removed, the top plastic cover can be taken off by lifting from the left, and manoeuvring the case around the floppy drive button. To the left is the power supply, covered with a metal shield, while the floppy drive is to the right, probably covered with a smaller metal shield. Both shields have to

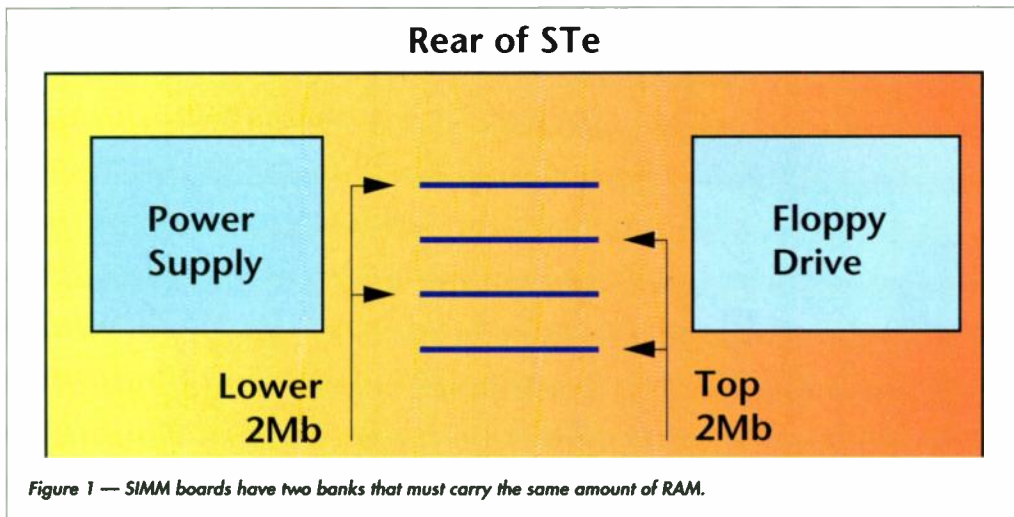


Figure 1 — SIMM boards have two banks that must carry the same amount of RAM.

of 1985 origin, anyway), the ST is robust and generally cheap to repair and upgrade. For instance, a replacement internal floppy drive costs less than £40; one of the powered versions for a Mac will set you back almost four times this figure.

Back in 1985, it was inconceivable that any computer program would require more than 1Mb of RAM, but this has

wouldn't sort out. So, let's look at the available upgrade options...

OLDER AND BOLDER

If you own an old STF or STFM, you may well only have 0.5Mb of memory. After all, this is fine for running a sequencer such as *Concerto*. There are two ways to upgrade: easy or hard! Yes, you could strip your machine down and solder 16 RAM chips and 16 capacitors into the blank part of the memory board to bring your machine up to 1Mb, but this has two drawbacks. Firstly, there is no way to further upgrade without adding another circuit board. Secondly, do you really want the hassle of soldering that little lot and finding that your work of art is pretty to look at, but little



be removed, followed by the floppy drive (another three screws on the rear) and the power supply (two screws on the top). Finally, the all-in-one metal shield for the ST has to be removed by releasing

THANKS FOR THE MEMORY: ST MEMORY CONFIGURATIONS	
TOTAL RAM	REQUIRED SIMM CONFIGURATION
0.5	2 x 0.25Mb
1	4 x 0.25Mb
2	2 x 1Mb
2.5	2 x 1Mb + 2 x 0.25Mb*
4	4 x 1Mb

* requires a small AUTO folder program.

on the net

For any technical enquiries, help, advice or quotes or just plane silliness - get us on the net.

Blue@Bluesys.demon.co.uk

Want to get on the net? Need a modem? Give us a call and we'll give you all the information you need. Modems from £85 PC/MAC

**SALES
SERVICING
INSTALLATIONS
MANUFACTURING**

Part-ex your NS10M's in any condition for Tannoy PBM6.5MkII's

**PRO - AUDIO
BLUE
SYSTEMS
PRO - AUDIO**

Add a touch of Rupert's Excellence to your mix **AMEK9098 EQ**



Designed by Rupert Neve, a truly outstanding EQ. Probably the best in the world. Get a Neve in your studio.

SAMPLERS

Akai S2800 £1050
Akai S3000 10MB £2190
Akai S3200 8MB £2650
Roland S760 10MB £1599
Akai S3000, SCSI, 16MB, DIGITAL I/O £2750
Akai S3200 16MB £2899
Internal hard disks can be added to the S30/3200's From £150

COMPUTERS

Power Mac 6100/60 8/250 & 15" & keybrd+monitor £1400
Power Mac 7100/66 8/350 & 15" & keybrd+monitor £1870
Power Mac 8100/80 16/500CD & 17" & keybrd+monitor £3520
Mac Proforma 475 8/250 inc 14" monitor & keyboard £860
Power Mac 7100/80 8/350 £1899
Power Mac 8100/100 8/700 £2650

Digital Dec 433 LPV - 486sx2/50 8/345 & 15" monitor £925
Digital Venturis 466 - 486dx2/66 8/270 & 15" monitor £1139

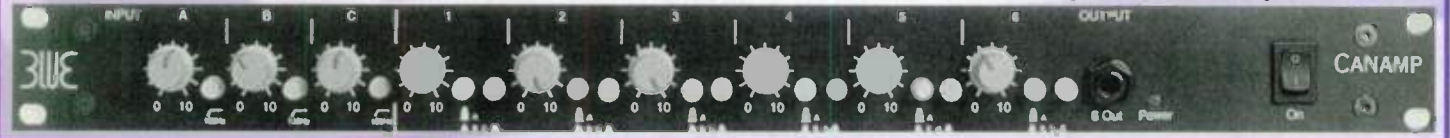
Power Mac 7100/66 8/350 14" monitor + kybrd 1Gig external drive, Cubase Audio, Audiomedia II & Opcode studio 4 £4199

DESKS

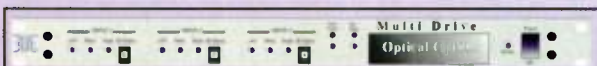
Soundtracs TOPAZ 24:8 £2250 ** AUTOMATION now available **
Allen & Heath GS3 16:8 £1949
Mackie 16:4 £780
Studiomaster P7 16:8 £1610
Kurzweil K2000 V3 + Sampler brd, 16MB, 345MB hard disk £2950
Tascam DA30 MkII £1015
Panasonic SV3700 £1289
Genelec 1030A - A4 sized. Active monitors £999
NEW! Genelec 1092A Subwoofer unit £1999
SPL Vitalizer £425
Tannoy PBM6.5MkII's Excellent reference speakers £245
Tannoy NFM8's £499
A&R HI-FI's - Tape deck, CD, Tuner, Amp & speakers from £850
Denon DRM740 3head cassette deck £175
Denon DCD715 18 Bit CD player £149
Denon PMA715 100watt intregated amp (low distortion only 0.007%) £195
Lexicon PCM80 £1599
Cubase Audio & Audiomedia II £1105
TLA 2 channel Value EQ £675
TLA 2 channel Compressor £789
NEW - KRK K-Rok nearfield monitor speakers £369

N E W - C A N A M P

A Headphone routing system with **POWER**. Designed by our in house engineers for studios of any size. Check the Spec: 3 Stereo inputs routable to any 6 outputs. Individual level controls on all inputs & outputs, with a 150Hz roll off switch. Drives all headphones. Balanced inputs. £212



B L U E D I S K D I R E C T T O D I S K



Holds up to 3 drives. 2 fixed drives & 1 removable. ID select for each

NEW! BLUE MULTI DRIVE

INTERNAL:SCSI EXTERNAL:SCSI

290MB £150
345MB £175
535MB £230
1.0GIG £485
1.6GIG £610
2.1GIG £799

290MB £275
345MB £299
535MB £348
1.0GIG £575
1.6GIG £762
2.1GIG £975

OPTICAL:
INT128MB £525
INT230MB £560
EXT128MB £590
EXT230MB £625



M E M O R Y & A C C E S S O R I E S

SIMMS

30 PIN:
1MB £35
2MB £69
4MB £115
16MB £495

SIMMS

72 PIN:
1MB £72
4MB £120
8MB £240
16MB £499

AKAI

\$1000/S1100 8MB £280
\$28/30/3200 8MB £340
\$10/1100DIGITAL I/O £155
\$3000 DIGITAL I/O £215
SCSI BOARDS £65

AKAI

HARD CARD 290-535MB
INTERNAL CARD FOR AKAI'S
BOARD INCLUDES SCSI
CONTROLLER + EXTERNAL
SCSI OUTPUT.



DAT ERROR BOARD

BLUE SYSTEMS DAT ERROR board fits all SONY machines giving an indication if the tape is faulty or a problem with the machine. When playing back a DAT, simply glance at the indicators to see if the tape is faulty. £99 Fitted.
£70 Fitted While having a service.

S C M S STRIPPER

Digital I/O on both optical & coaxial allowing simultaneous copying. £120.
Optical Leads £14.50

B L U E S Y S T E M S

Tel: 01799 584095

Fax: 01799 584094

PRICES CORRECT AT TIME OF PRESS.
ALL PRICES EXCLUDE VAT @ 17.5%



The Old School House, Church End, Ashdon, Saffron Walden, Essex CB10 2HG

▶ the numerous metal twists and removing various screws. Result: a naked ST (ooh-er...).

Most upgrades have two small boards — one which has to be plugged on top of the Memory Management Unit (MMU) chip, and another which goes into the Video Shifter socket, normally hidden away in a silver box at the centre of the main board. Both of these can cause problems. Sometimes, the socket in which the MMU sits is such that a great deal of force has to be exerted



on the square 'plug-over' board — far more than you probably feel happy with! Additionally, the MMU or Video Shifter chips may be surface-mounted — in other words, soldered. In the case of the MMU, a clip-on socket can be provided for a square chip, but a rectangular chip will need expert attention, as will a soldered-in Video Shifter.

THE STe-ASY OPTION...

Once the SIMM board has been installed in an STF or STFM, you're in the same position as an STe owner. A SIMM board has four slots, each of which can accept a single SIMM of 0.25Mb or 1Mb capacity.

A little understanding of the ST's memory configuration is needed at this point. Essentially, an ST has two banks of RAM; a 1Mb machine has half a meg

of memory allocated to each bank, for example. Of the four SIMM slots, two are assigned to the 'top' bank and two to the 'lower' bank (see Figure 1). Both banks *must* have the same amount

of RAM — you can't use a single 1Mb SIMM to get 1Mb of memory. For this, you would have to use four 0.25Mb SIMMs (for further possible memory configurations, see the box elsewhere on this page).

So how does an STe owner upgrade from 1Mb? To get to the SIMM slots, you only need to remove the seven screws as detailed above, remove the top cover and the shield over the power supply. With 1Mb of total RAM, you'll find that all four slots are inhabited by 0.25Mb SIMMs. An upgrade to 2Mb requires two 1Mb SIMMs. However, your existing four 0.25Mb SIMMs needn't be thrown away — you can use two of these along with the two 1Mb SIMMs to get a 2.5Mb configuration, but you will need a 'patch' — a small AUTO folder program that accesses the extra 0.5Mb.

Does the extra half meg make much difference? It certainly can if you're running something like *Cubase Score v.2.0* with all of the modules and a detailed score. That half meg can be the difference



between finishing your work and getting an 'out of memory' message. And it's effectively free; most ST upgrade suppliers will provide you with the 2.5Mb patch



free of charge, as the program itself is either PD or shareware.

MEGA TIME

The Mega ST is identical to a standard STFM, except that it has the distinct advantage of space. Fitting a SIMM board is very easy, especially as the Video Shifter chip is always in a socket. Upgrading a MegaSTe is even easier. Like the STe, it already takes standard SIMMs, so a memory upgrade is simply a matter of plugging in SIMMs of the necessary value.

PROBLEMS

Some Atari computers do not lend themselves easily to upgrades. Falcons, for instance, use a memory module of 1, 4 or 14Mb. An 'upgrade' is a matter of purchasing a higher-value module and plugging it in — and while you may be happy for a couple of 0.25Mb SIMMs to hit the bottom of the bin, you'll certainly feel the pinch with a 4Mb Falcon module! As I said last month, the trick is to buy a Falcon with a memory configuration appropriate for your needs to start with. If you intend to work with *Cubase Audio* or *Logic Audio*, save yourself a great deal of headache by investing in a 14Mb machine.

As for TTs and STaceys, these are best left to the experts. The TT is quite different from the rest of the range in the way it accesses memory, while the STacey is a pig to take apart.

In recent years, it has never ceased to amaze me how many people praise their 'new' ST after a memory upgrade. You can take almost any ST up to 4Mb for less than £100 — and use some of that extra memory to install a RAM disk, so that file saves are instantaneous...

SOS

ABOUT THE AUTHOR

Vic Lennard has been an Atari enthusiast since 1987. He runs Club Cubase UK along with Ofir Gal, and is author of the *MIDI Survival Guide*, available from the SOS Bookshop. Rumour has it that he's about to launch a new Atari mag...

ACTIVE SOUND UK LTD

See us at MEMS '95

- A GREAT STORE SPECIALISING IN ALL ASPECTS OF MUSIC EQUIPMENT/COMPUTER MUSIC/PC SYSTEMS
- B AUTHORISED SERVICE CENTRE FOR MOST EQUIPMENT
- C 3500 SQ FT LUXURY REHEARSAL FACILITIES AMPLE PARKING, CAFE BAR
- D SPECIALISTS IN SUPERB MAIL ORDER SERVICE

VERY SPECIAL BARGAINS

Selection of Washburn high quality guitars £199
 Selection of 1/4" jack leads & MIDI leads From £4.99
 Mike leads etc From £8.99
 SM58 Equivalent microphone £69
 Unbreakable mike stands £14.99
 Selection of bass strings & Guitar strings From £4.99
 Big powerful PA packages From £499

Drum Machines & Triga Percussion
 Pearl Session Elite Inc all stand & hardware & Zildjian platinum cymbals £1499

Multimedia Package (The Best We've Heard)!!

1. SC6000 (16 Bit CD quality) sound card
2. A pair of fantastic powerful speakers
3. MIDI interface to connect to your keyboards etc
4. Double speed CD ROM drive
5. x2 CD Titles
6. Sequencing software

£299 inc



KEYBOARDS/SYNTHS SAMPLERS & MODULES EFFECTS & SIGNAL PROCESSING

ROLAND JV1000	£1599	AKAI S01	S/H & EX DEM	PHONE!!	ROLAND VG8 INCL GK2A (NEW)	£1949	DISTORTION	£39
ROLAND JV35	£779	AKAI S3000	S/H & EX DEM	PHONE!!	BOSS HARMONIST	£155	TUBO DISTORTION	£54
ROLAND JV50	£949	AKAI S2800	S/H & EX DEM	PHONE!!	BOSS TURBO OVERDRIVE	£69	ENHANCER	£54
ROLAND JV90	£1069	AKAI CD3000	S/H & EX DEM	PHONE!!	BOSS BASS OVERDRIVE	£75	HYPERMETAL	£49
ROLAND DJ70	£1240	AKAI S3200	S/H & EX DEM	PHONE!!	BOSS BLUES DRIVER	£68	TUBO OVERDRIVE	£49
ROLAND E86	£1199	ROLAND SC55 MK II			ART MR1 (PERSONAL PROCESSOR) NEW	£159	SUPER PHONER	£64
ROLAND W50	£1299	ROLAND S760			ART FXR (MULTI FX) NEW	£189	DIGITAL PITCH SHIFT/DELAY	£119
FULL RANGE OF EXPANDED JV IN STOCK							DIGITAL REVERB/DELAY	£119
ROLAND E66	£799	ROLAND DM80-8			ART ALPHA SE (MULTI FX) NEW	£389	BASS FLANGER	£69
ROLAND E36	£489	ROLAND DM80-4			ART ECC (10 FX AT ONCE) NEW	£389	BASS 7 BAND CO	£56
ROLAND E16	£339	AKAI DR4D			ART X15 & X12 NOW IN STOCK	CALL	ALESIS MICROVERB	CALL
ROLAND RD500	£1549	AKAI DR8D			BOSS SC50	£339	ALESIS MIDIVERB	CALL
ROLAND EP9a	£670	YAMAHA TG300			BOSS SC70	£499	ALESIS QUADRAVERB	CALL
ROLAND EP7II	£529	YAMAHA TG500			DIGITECH DSP XL	£249	ZOOM 500 DRIVE	CALL
ROLAND XP50 (NEW)	£1349	EMU MORTHEUS		CALL (UKS BEST)	DIGITECH VOCALIST II	£699	ZOOM 2020	LAST 1 CALL
FULL RANGE OF WEIGHTED DIGITAL PIANOS INCLUDING THE NEW ROLAND HP1600E								EX DEMO/PHONE
KORG X5	£789	EMU PROTEUS		CALL (UKS BEST)	YAMAHA GW10	SPECIAL DEAL!	* HUGE SELECTION OF RADIO MIKES & MICROPHONES WIRELESS SYSTEMS *	
KORG O1W/FD	S/HAND	EMU PRO PERFORMER		CALL (UKS BEST)	YAMAHA GW50	SPECIAL DEAL!	* FULL RANGE OF DOD EFFECTS *	
KORG X3	EX. DEMO	EMU VINTAGE KEYS		CALL (UKS BEST)	YAMAHA SPX990	SPECIAL DEAL!	* RANGE OF TUNERS FROM £29 *	
KORG I3	S/HAND	PEAVEY OPM3		CALL (UKS BEST)	ZOOM 900Z	SPECIAL DEAL!	* NEW ROLAND RV70 £299	
KORG OSRW	EX. DEMO	ROLAND JV1080		CALL (UKS BEST)	ZOOM 2020	SPECIAL DEAL!	* 1/2 PRICE HIGH QUALITY HEADPHONES!! *	
KORG i4S	CALL	ROLAND JV880		CHEAPEST AVAILABLE!	ROLAND GR1	£949	P.A. • MIXERS • ACCESSORIES • AMPS	
KORG X3R	CALL	ROLAND P55		£369	ROLAND GK2A	£109	SOUNDTECH 2500W PA COMPLETE WITH 24 TRACK MIXER & CROSSOVERS ETC. £3995	
KURZWEIL MK5	£2199	ROLAND S855		£349	ROLAND GR EXPANSION	£119	RANGE OF S/H PA'S (TOA, H, H, MARSHALL) FROM £199	
KURZWEIL MK10	£3099	ROLAND SC7		£229	ROLAND GR9	£630	ROLAND JCI 20 £549	
KURZWEIL MK150	CALL	ROLAND SC33		£349	ROLAND SDR330	£615	ROLAND JC85 £399	
KURZWEIL RG100	£1199	ROLAND SC50		£425	ROLAND SDX 330	£575	ROLAND JCI20 £159	
KURZWEIL PC88	CALL	ROLAND SC88		£649	ROLAND SRV 330	£615	ROLAND AC100 CALL	
KURZWEIL MICRO PIANO	£469	ROLAND MT120		£599	ROLAND PK5	£249	PHONIC MIXERS FULL RANGE/BEST PRICES	
ENSONIQ TS10	CALL NOW	ROLAND SD35		£589	BOSS CL50	£139	* STUDIO MASTER SELECTION *	
ENSONIQ S01+32	CALL NOW	ROLAND MT200		CALL	BOSS NS50	£139	* SELECTION OF CLASSIC REISSUE BOSSES & GUITARS BY FENDER *	
ENSONIQ SOR PLUS 32	CALL NOW	ROLAND MC50 II		£629	BOSS GE21	CALL	ROLAND BX4 £99	
ENSONIQ ASR10-R	CALL	ROLAND ASC10		£649	BOSS ME10	£249	ROLAND BX80 £299	
ENSONIQ TS12	UK BEST	ROLAND MT200		£649	BOSS ME6E	£249	ROLAND MX10 £239	
ENSONIQ DP4	UK BEST	ROLAND MT120X		£729	BOSS MEG6	£249		
YAMAHA SY35	EX DEMO AVAILABLE, CALL	ROLAND J530		£755	BOSS MEX	£449		
YAMAHA SY85	EX DEMO AVAILABLE, CALL	ROLAND DA400		£359	DIGITECH TSR 12	£741		
YAMAHA SY99	EX DEMO AVAILABLE, CALL	ROLAND JS30 (NEW)		£849	DIGITECH TSR 14	£899		
YAMAHA SY77	EX DEMO AVAILABLE, CALL	ROLAND MS1 (NEW)		£420	DIGITECH TSR 33	£659		
ROLAND E56	£549	ROLAND DM800 (NEW)		CALL	DIGITECH DHP 55	£1049		
ROLAND D70	£899	ROLAND RA30 (NEW)		£479	DIGITECH THE VOCALIST	£699		
KORG SG10	CALL/BEST	ROLAND RA95 (NEW)		£859	AUTO WAH	£59		
ALESIS QUADRASYNTH	CALL/BEST	AKAI DR8D INCL MIDI BOARD & SMPT		£4195	FLANGER	£59		
* CALL IF YOU CAN'T SEE THE KEYBOARD REQUIRED *		& BOARD & TGIG			DIGIHALDELD	£89		
ROLAND SK50	£549	* FULL RANGE OF BRAND NEW ROLAND STANDARD MIDI FILES IN STOCK *						

TO ALL SOUNDBLASTER/GALAXY OWNERS READ THIS!!!!

1. 100's of fantastic Roland Instrument sounds
2. Concert hall digital reverberations & various effects
3. Juke box™ software (playback up to 8 smfs, perfect!!)
4. Do Remix™ software (over 600 music sections, Pic & Paste)

Roland SCD10 - £149 =
 Roland SCD15 - £199 =
 Roland SCD16 & Roland MP401 new midi in £289

*** Phone now for details ***

*** SPECIAL THIS MONTH - ROLAND S760 SAMPLER INC CD ROM DRIVE £1699 (ALL UPGRADES AVAILABLE)**

*** PACKAGE DETAILS FOR BEST DEALS - ROLAND JD800 MEGA DEAL INC FREE CARD SET £1**9 (PHONE)**

VISIT OUR SHOWROOM, OR JUST COME IN FOR A CHAT & COFFEE, WE'RE JUST 20 MINS FROM LONDON, 60 MINS FROM BIRMINGHAM

ACTIVE SOUND SPECIALISE IN COMPUTER MUSIC/SOFTWARE/SOUNDCARDS & PCs

DRUM MACHINES & TRIGGER PERCUSSION	SOUNDCARDS & MODULES	CONTROL KEYBOARDS & SPEAKERS	COMPUTER SOFTWARE	SIMMS CHIPS (Compatible to most products, S760, Roland etc.)			
BOSS DS330	£325	ROLAND SCC1	£299	COMMANDER	£84	4 MEG	£139
BOSS DR550II	£229	ROLAND ATW10	£329	(88 note weighted)	£199	8 MEG	£279
BOSS DR660	£339	TURTLE MULTISOUND	£469	SAMICK KKT - 76 NOTE	£329	16 MEG	£514
BOSS DR5	£269	TURTLE MONTEREY	3359	88 NOTE	£799	32 MEG	£999 (X2 16 MEG)
ROLAND SPD11	£269	TURTLE TAHITI	£275	STUDIO 49	£104	ATARI 1040 INC. MONITOR	£299
ROLAND TD4	£469	TURTLE RIO	£139	STUDIO 61	£179	NEW! PHONE	
ROLAND AT11 TRIGA	£459	TURTLE MAUI	£169	STUDIO 610	CALL	FINALE PC	£549
ROLAND R8	£66	WAVE	£109	CMS 61	£275	FINALE ACADEMIC	£299
ROLAND RBII	£449	FULL GRAVIS RANGE	CALL	STUDIO 90+	£629	MUSICPRO SE	£159
ALESIS D4	£699	FULL SOUND BLASTER RANGE	CALL	STUDIO 2001	£989	CAKENZA WIN	CALL
EMU PRO-CUSSION	£299	THE CARD D+	CALL	STUDIO 900	£589	MAXPAK VR	£219
YAMAHA RMS0	CALL	ROLAND SC7 BUNDLE	GIVEN AWAY	* ALL MEMORY CARDS AVAILABLE *	£169	MUSICATOR	£245
YAMAHA TMX	CALL	DREAM GMX1 SYNTH		ROLAND PC200II	£329	BAND IN A BOX	£79
ZILDGIAN DK10	CALL	MODULE		* FULL RANGE OF LOW PRICE PHONIC MOTHER KEYBOARDS *	£199	PIANIST	£45
ALESIS SR16	£225			ROLAND SK50	£539	MUSIC TIME	£199
				COMPUTER SPEAKERS		ENCORE	£389
				FROM "£29"		TRAX	£96
				SOUNDWAVE 20 SPEAKERS	£49	MASTER TRAC PRO	£189
				SOUNDWAVE 40 SPEAKERS	£219	CAKEWALK PRO	£259
				THE RANGE	£89	CAKEWALK HOME	£219
				ROLAND MARC	£89	SAW EFFECTS	£429
				ROLAND MA7	£119	HELLO MUSIC STATION	£279
				ROLAND CS10	£69	* FULL RANGE OF DESKTOP/CARDS & PLOTTING EQUIPMENT AVAILABLE *	
				ROLAND CS30	£99		
				ROLAND MA20	£89		

*** SPECIAL DEAL ***

ROLAND TD5 FULL BIT INCLUDING ALL ACCESSORIES

£1*99

ROLAND TD5 FULL BIT INCLUDING ALL ACCESSORIES

£*99

*** VERY IMPORTANT ***

PLEASE READ!

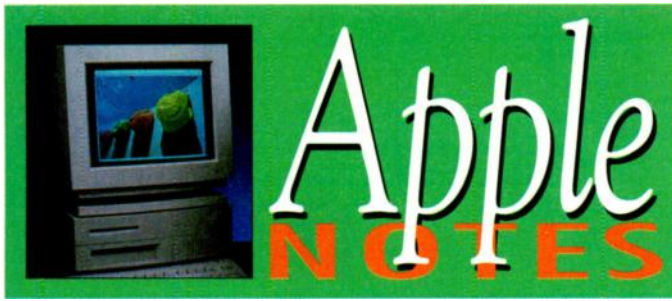
WE GUARANTEE:-

1. UK'S BEST PRICES ON ALL ABOVE GEAR PHONE IF WE ARE DEAPER! (YOU'LL BE SURPRISED)
2. NEXT DAY DELIVERY SERVICE
3. FANTASTIC EXPORT FACILITY
4. ACCOUNTS WELCOMED

ACTIVE SOUND UK LTD,
 PARK HOUSE,
 15-19 GREENHILL CRES,
 WATFORD BUSINESS PARK,
 WATFORD, HERTS WD1 8QU

TEL: 0923 246282
FAX: 0923 246669

All prices include carriage + VAT @ 17.5%

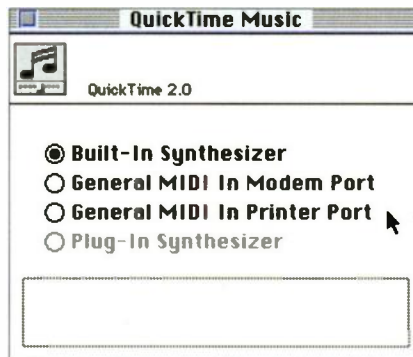


After a couple of weeks spent trying to decipher the inner mysteries of QuickTime 2.0, MARTIN RUSS devotes this month's Apple Notes to revealing the results...

Since Apple Notes first got hold of QuickTime 2.0, the Developer's Kit has been on the 'must see' list, but it has only been very recently that we actually managed to see an early beta release of it, thanks to a friendly Apple developer. Alongside the usual plethora of C code examples, there was the all-important QuickTime Music Control Panel, which is the missing link between QuickTime and MIDI. The QuickTime 2.0 that comes as part of System 7.5 does not include this vital piece of software, and many MIDI users have been waiting to see how much functionality it provides (AppleLink had several desperate requests for it). Which is where the fun started.

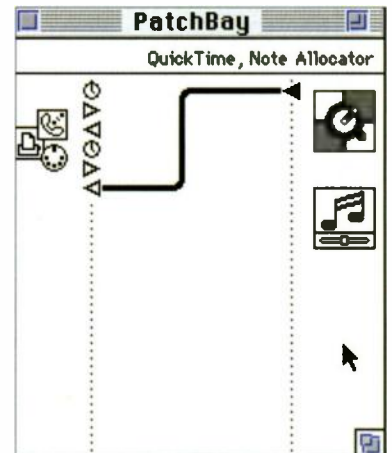
Dropping the QuickTime Music

Control Panel into the System Folder and rebooting finally gave access to the MIDI Controls, which initially proved to be a major disappointment. The dialogue box provides choices of Built-in Synthesizer or two MIDI In ports. Selecting the built-in internal synthesizer makes sense, since it allows the Roland set of samples to be used, as expected, but why MIDI In ports?



Since the Developer's Kit also includes the latest version of the MoviePlayer application, I launched that, so that I could investigate things further. The only reason that I could see for using the MIDI In ports was if you

could drive the Mac's built-in internal synthesizer from a MIDI source, but this seemed unlikely, since no previous sound synth plug-in from Apple had allowed MIDI control, and anyway, QuickTime 2.0 is supposed to drive MIDI, not vice-versa. With MIDI Manager running in the background, I opened the Patchbay to see what that said about the connection possibilities. On the left-hand side, the usual Apple MIDI Driver icon showed the Printer and Modem ports, whilst on the right-hand side, a QuickTime icon had one output, and the QuickTime Music Control Panel appeared but provided no input or output ports. A few clicks quickly revealed that the labelling in the Control Panel is wrong — it should say MIDI Out, not In.



So the QuickTime Music Control Panel does exactly what you would expect: it allows you to select either the Mac's Built-in internal sound synthesizer, which uses the Roland General MIDI (GM) sound sample set, or an external GM module. Connecting my GM module to the standard MIDI Interface on the Mac's modem port was easy — but what to play? The Developer's Kit does not include any sample QuickTime Music 'movies', so I had to make my own...

DIY MOVIE SOUNDTRACKS

It's easier than it might sound, and this is where things start to get interesting for musicians who

INSTRUMENT SELECTION

Having opened a MIDI File via the 'Convert...' option, the instrumentation can be chosen by selecting the track and clicking on the 'Instrument' button.

Best Synthesizer

Macintosh Built In

If the QuickTime Music Control Panel is set to use the Mac's own built-in internal Roland sample sounds, the 'synthesizer' pop-up looks like this. The Mac automatically chooses the highest quality synthesizer — although the Control Panel only lets you choose one synthesizer at present.

This is the Instrument Selection dialogue box. This enables the instrument to be selected from any available synthesizer, and is organised around the General MIDI categories.

Best Synthesizer

General MIDI

If the QuickTime Music Control Panel is set to use a General MIDI module via the MIDI Manager and the Mac's serial ports, then the 'synthesizer' pop-up looks like this. Again, the Control Panel only allows one selection at once, so this pop-up is somewhat superfluous.

No Instrument

Piano

Chromatic Percussion

Organ

Guitar

Bass

Strings & Orchestra Ensemble

Brass

Reed

Pipe

Synth Lead

Synth Pad

Synth Effect

Ethnic

Percussive

Sound Effects

Drum Kits

The 'category' pop-up allows rapid selection of the type of sound required for the chosen instrument.

MULTI MEDIA MUSIC

Tel: **01623 422668**

- Suppliers of PC, Atari & Macintosh hardware.
- Full range of software for all platforms in stock.
- Special Discounts for academic and educational orders*

- Hard Disk Recording Specialists.
- Complete running systems of hardware / software and expander packages our speciality.
- Prompt delivery service.

Cash
Switch
 Finance available subject to status, written quotations available upon request



Check these out...

- Summit Card (K2000 Sounds!) £399
- Goldstar GMK49 Controller Keyboard (velocity sensitive, modulation & pitch wheels)£159
- Korg O5/R Sound Module..... £ Lowest
- Micropolis Hard Drives - large range available..... £ Call for best price

TURTLE BEACH

- MAUI sample card.....£179
- MONTEREY 16 bit sound card£349

TROPEZ - New

Midi card / Sound card / Sample Card. Features: digital audio sampling (upto 48kHz, 8/16 bit, CD Rom interface, 32 voice Wavetable Synthesizer, Sample Store, stereo FM synthesizer, Windows software includes Stratos, Wave SE and more...



FOR AN INCREDIBLE **£249.00**

MIDI Music Shop Pro CD

- Powertrax • 100+ Midi Files • Band in a Box • Pianist
- MPC midi play **£29.00** inc vat

Midi Recording

UPTO £100 OFF

ON **STEINBERG CUBASE** SOFTWARE FOR P.C. AND **APPLE MACINTOSH™** - Call Us First...
 BEST U.K. PRICES ON • **MUSIC STATION**
 • **RECYCLE** • **FREESTYLE** and many more....

CAKEWALK V3.0

New features include • Groove Quantise • Swing Quantise • Expanded Faders View • Custom Instrument Definitions • MIDI Machine Control • Lyric Score and much more...
 PLUS we have managed to secure another batch of this amazing programme and can bring it to you at what must be the lowest possible price in the U.K.

ONLY £199

inc. VAT

THE ANSWER TO YOUR SCOREWRITING PROBLEMS!

PERSONAL COMPOSER

Very powerful music notation programme which allows you to reposition individual elements, resize measures, plays back exactly what is written, reads SMFs and has human touch playback!

- 10 staff version£99.00 inc VAT
- 16 staff version ...£169.00 inc VAT



YAMAHA CBX-D5

Digital Recorder

16 bit digital hard disk recorder for PC or Atari Falcon platforms. Features: 4 channels, 16bit A/D conversion, 18 bit D/A conversion 4 band parametric EQ for each channel, 2 channel simultaneous record, 4 channel playback, 82 digital effects, 48, 44.1, 32, 22.05kHz (22.05 khz analogue only input) sample rates, SCSI, digital I/O, 12 segment level meters and loads more.

INCLUDES **STEINBERG CUBASE AUDIO**
£1599 inc. vat



complete Digital Recording PACKAGES

Package One

- 486DX2 - 66 mHz with 8Mb RAM • 420Mb Hard Disk • 1Mb Vesa Graphics Card (24bit) • Monitor / software • 1Gb SCSI 3 Ext. Hard Disk (fast) • Adapter SCSI Interface • 2 in - 2 out Midi Interface • Yamaha CBX-D5 Digital Recorder • Steinberg Cubase Audio

PACKAGE PRICE £2995 INCLUDING VAT

Package Two

- 486DX2 - 66 mHz with 8Mb RAM • 420Mb Hard Disk • 1Mb Vesa Graphics Card (24bit) • Monitor / software • 1Gb Hard Disk (3.5 hours recording @ 44.1kHz) • Voyetra V22 2 in - 2 out

Midi Interface • Soundscape Hardware + software

PACKAGE PRICE £3995 INCLUDING VAT

Package Three

- Power Macintosh 7100 16/350 • Keyboard • Mouse • Monitor • 1Gb SCSI Hard Disk • Digidesign Audio Media II • Digidesign Sound Designer II • E Magic Logic and Logic Audio

PACKAGE PRICE £3695 EX VAT (£4341.63 inc. VAT)

Package Four

- Power Macintosh 7100 16/350 • Keyboard • Mouse • Monitor • 1Gb SCSI Hard Disk • Digidesign Session 8 software • Digidesign Session 882 Interface

- E Magic Logic and Logic Audio
- Midi Interface

PACKAGE PRICE £5295 EX VAT (£6221.62 inc. VAT)



Soundscape

DIGITAL TECHNOLOGY LTD
Best Deals in the U.K. - Call

Midi Interfaces

- MAC MIDI INTERFACES .from **£49.00**
- MUSIC QUEST MQX 32M£219
- VOYETRA V22 2in 2out **£79**

Full range of Voyetra Midi Interfaces now available call us now for details!

All prices include V.A.T unless otherwise stated. **Multi Media Music** is a division of Carlsbro Retail Ltd. 182-184, Chesterfield Road North, Mansfield Notts NG19 7JD
 * Educational and academic discounts are only available when accompanied by an official written order.
 Prices correct at time of going to press and are subject to availability

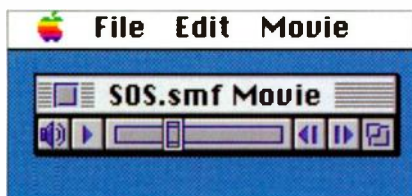
SAW S.A.W. 8 TRK HARD DISK RECORDING
 • Use automated non destructive editing
 • Variable • Non destructive delay effects
ONLY £399 INC VAT

Authorised Reseller

Apple NOTES

might like to add music to QuickTime movies. Using the 'Open' menu option in MoviePlayer 2.0, I found my folder of GM MIDI Files, and the highlighted button changed to 'Convert...' which showed that the MIDI Files had been recognised, and that the conversion routines to QuickTime Music format were present.

A QuickTime Music 'movie' need not have any picture associated with it. Despite this, you can select portions of a music 'movie', cut and paste them, and treat it just as if it were film or tape.



After selecting a MIDI File, the conversion process took a few seconds to process the file, and then the usual QuickTime play window opened, except that it had just the title bar and controls — no graphic content means no window, of course. Playing the 'movie' produced music from the GM module, whilst using the QuickTime Music Control Panel to change over to the built-in internal synthesizer then gave a similar output from the Mac's own audio system.

CUSTOM GM FILES

In order to produce customised General MIDI compatible MIDI Files which are suitable for QuickTime Music Files, you need to do two things: restrict the polyphony to eight notes or less, and use only those GM sounds which are available in the Mac's Roland samples. Although the sounds which aren't present in the sample set still make a sound, they are remapped from existing samples, which means that your music will sound very different on the Mac and GM module. By using the 'same' named sounds you should minimise the differences.

Trying to produce low-polyphony music can be quite a challenge. Complex drum parts are one obvious place to edit: hi-hat, bass and snare are probably all you can allow yourself. This leaves five notes for everything else, so doubled block chords are definitely out! With one note for melody and another for bass, this leaves three for accompaniment, which is probably wisest used as two-note chords with one extra note for decoration.

The instrument sounds present in the Roland sample set are:

- 1 Acoustic Grand Piano
- 7 Harpsichord
- 12 Vibraphone
- 17 Hammond Organ
- 25 Nylon String Guitar
- 34 Electric Bass Fingered
- 41 Solo Violin
- 49 String Ensemble 1
- 56 Orchestra Hit
- 61 French Horn
- 69 Oboe
- 74 Flute
- 79 Whistle
- 87 Synth Lead 7 (fifths)
- 90 Synth Pad 2 (warm)
- 105 Sitar
- 114 Agogo
- 118 Melodic Tom
- 123 Sea Shore
- 125 Telephone
- 127 Applause
- 5 Rhodes.Piano
- 8 Clavinet
- 13 Marimba
- 21 Reed Organ
- 31 Distortion
- 37 Slap Bass 1
- 48 Timpani
- 53 Aah Choir
- 57 Trumpet
- 66 Alto Sax
- 72 Clarinet
- 76 Pan Flute
- 82 Synth Lead 2 (sawtooth)
- 89 Synth Pad 1 (fantasy)
- 91 Synth Pad 3 (polysynth)
- 106 Banjo
- 115 Steel Drum
- 120 Reverse Cymbal
- 124 Bird Tweet
- 126 Helicopter
- 128 Gun Shot

(The numbers are the General MIDI Program Change numbers.)

There are two drum kits: Standard and Room, with the remaining eight GM kits mapped to them. 24 drum sounds are provided in the Standard Kit, although the Room Kit only provides 15 sounds.

Firstly, the sound quality is definitely 8-bit in character, with quite a lot of quantisation noise. Secondly, the polyphony is very limited. The documentation in the Kit suggested that QuickTime Music could produce up to eight audio channels, which normally

means 8-note polyphonic, but I have seen claims that the main limitation is processor speed and/or RAM size. On my humble Mac IIsi, the polyphony did seem to be eight notes, which resulted in lots of note-stealing for most GM files. Even so, producing multitimbral sampled sounds from a MIDI File played back as part of a QuickTime movie is impressive, especially since the playback instrument samples are provided with QuickTime 2.0.

This effectively means that you can write a GM tune (bearing in mind the limited polyphony of the Mac's internal GM sound source) and import it as a MIDI File into the QuickTime environment, and then use it as the music track for a QuickTime movie, certain that it will sound much the same if it



I say 'similar' here because the Mac does have some limitations in comparison to a GM module.

TIP OF THE MONTH

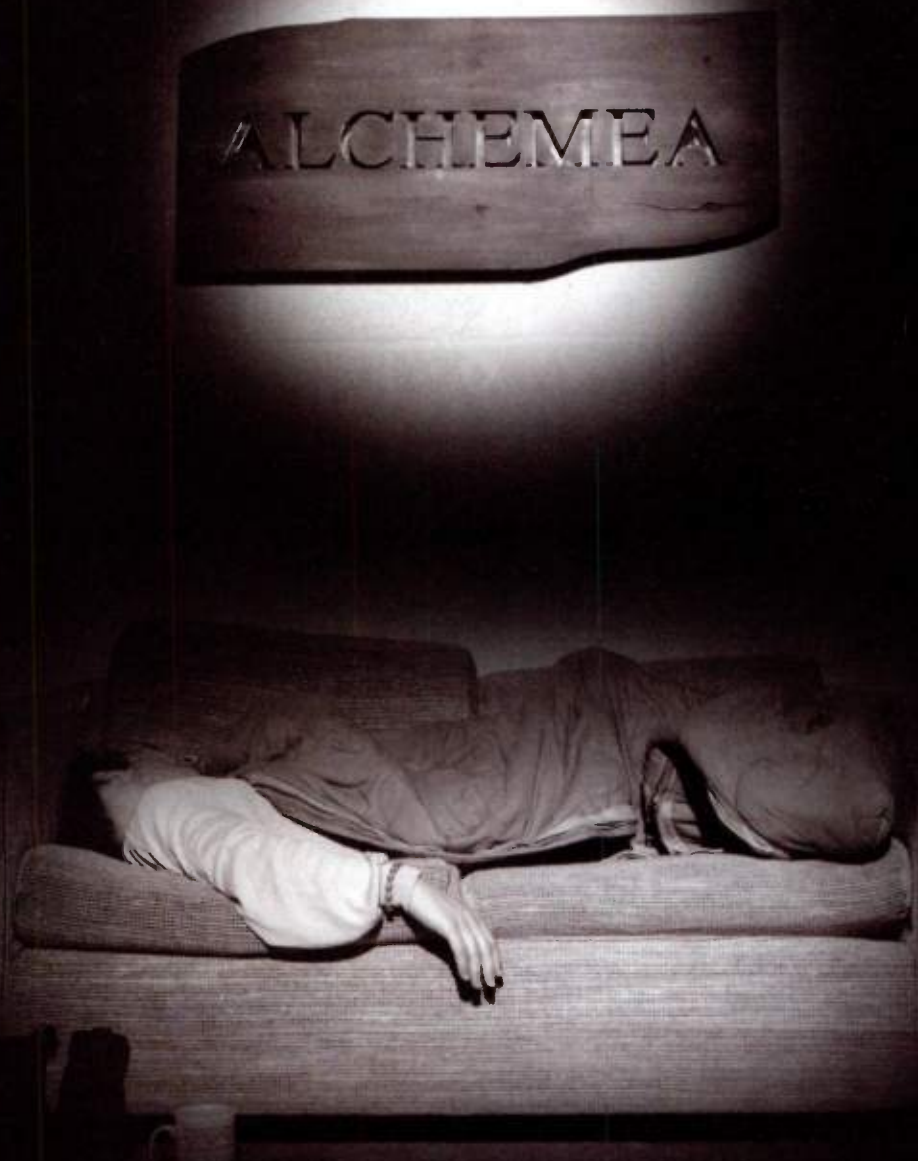
Tidying applications away into neat folders certainly keeps them under control — so much so that getting to a double-clickable icon can become a chore! I have always been a devotee of labour-saving gadgets, and the Alias is an excellent example of an under-utilised widget that can actually make the Mac easier to use.

As the screenshot shows, I create aliases of the most frequently-used application programs, and then drag the alias onto the Desktop. If you drop the icons near the main hard disk icon, they are relatively easy to get to — although I know of people who use the bottom of the screen rather than the top. If you're using System 7.5, the Launcher gives you the same sort of functionality, but in a separate window with larger icons — I prefer to save space and windows...



One hard disk, served with four applications: ready to use.

Professionals are made not born



Ashley Sheinwald. Alchemea student. 2 hours sleep between two recording sessions and digital editing session.
Total duration: 49 hours (not including the two hours sleep).

ALCHEMEA
Perfectum opus emptores invenit



2-18, Britannia Row, The Angel, London N1 8QH. Tel: 071 359 4035. Fax: 071 359 4027.

Apple NOTES

is played back via the Mac's own speaker, or a GM module connected via MIDI. Compared to the high data rate that conventional audio tracks require, this is amazing. It means that there are going to be a lot of Mac graphics and video producers who will want suitably customised MIDI Files. Incorporating a MIDI File as the music track for a QuickTime movie is quick and relatively easy — for a musician with a sequencer, a GM module, and a Mac to try it out on.

SOUNDS

So what about the sounds themselves? Considering that the entire set of samples is squashed

into 436Kb of 8-bit storage, the quality is remarkably good. The special effects sounds are samples rather than the synthesized sounds that you find on some hardware GM modules. The mapping of the sounds is rather strange in places, with the 34 'Electric Bass Fingered' sound being used almost as a default. The 43 sounds chosen do cover most of the available timbres without leaving any gaping holes, though providing very little room for variation in sound. The developer's kit has several utilities which enable you to rework the GM sounds, so there may be scope for a little individuality. Of course, to anyone who has worked with the older 8-bit computers from the '80s, like the Sinclair Spectrum or Commodore C64, QuickTime Music will sound wonderful!

MIXDOWN

The reason that I have concentrated here on preparing a MIDI File for importing into a QuickTime Movie

INFORMATION



Choosing 'Info...' on a movie can provide details of its data structure. Here the Music Track instrumentation is shown.

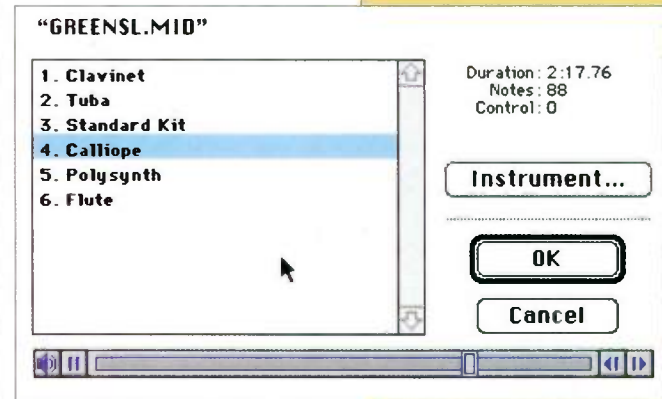


QuickTime Music tracks are very compact in comparison to conventional digitised audio. This 17.1 Kilobyte file produces just over two minutes of music with a data rate of 127 bytes per second. Digital audio with eight bits per sample and a comparable audio bandwidth would require more than 100 times the storage and data rate.

MAPPING

Here's the complete mapping of GM sounds and QuickTime 2.0 Instruments.

GM	QUICKTIME	GM	QUICKTIME
1 Acoustic Grand Piano	1 Acoustic Grand Piano	65 Soprano Sax	66 Alto Sax
2 Bright Piano	1 Acoustic Grand Piano	66 Alto Sax	66 Alto Sax
3 Electric Grand Piano	1 Acoustic Grand Piano	67 Tenor Sax	66 Alto Sax
4 Honky-Tonk Piano	1 Acoustic Grand Piano	68 Baritone Sax	66 Alto Sax
5 Elec Piano	5 Elec Piano	69 Oboe	69 Oboe
6 Elec Piano (chorus)	5 Elec Piano	70 English Horn	69 Oboe
7 Harpsichord	7 Harpsichord	71 Bassoon	69 Oboe
8 Clavinet	8 Clavinet	72 Clarinet	72 Clarinet
9 Celeste	12 Vibraphone	73 Piccolo	74 Flute
10 Glockenspiel	12 Vibraphone	74 Flute	74 Flute
11 Music Box	12 Vibraphone	75 Recorder	74 Flute
12 Vibraphone	12 Vibraphone	76 Pan Flute	76 Pan Flute
13 Marimba	13 Marimba	77 Bottle Blow	76 Pan Flute
14 Xylophone	13 Marimba	78 Shakuhachi	76 Pan Flute
15 Tubular Bells	13 Marimba	79 Whistle	79 Whistle
16 Dulcimer	13 Marimba	80 Ocarina	79 Whistle
17 Drawbar Organ	17 Drawbar Organ	81 Syn Lead 1 (square)	72 Clarinet
18 Percussive Organ	17 Drawbar Organ	82 Syn Lead 2 (saw)	82 Syn Lead 2 (saw)
19 Rock Organ	17 Drawbar Organ	83 Syn Lead 3 (calliope)	76 Pan Flute
20 Church Organ	17 Drawbar Organ	84 Syn Lead 4 (chiff)	76 Pan Flute
21 Reed Organ	21 Reed Organ	85 Syn Lead 5 (charang)	31 Distortion
22 Accordion	21 Reed Organ	86 Syn Lead 6 (voice)	53 Choir Aahs
23 Harmonica	21 Reed Organ	87 Syn Lead 7 (5ths)	34 Elec Bass (finger)
24 Tango Accordion	21 Reed Organ	88 Syn Lead 8 (bass/Lead)	34 Elec Bass (finger)
25 Nylon Str Guitar	25 Nylon Str Guitar	89 Syn Pad 1 (fantasy)	89 Syn Pad 1 (fantasy)
26 Steel Str Guitar	25 Nylon Str Guitar	90 Syn Pad 2 (warm)	90 Syn Pad 2 (warm)
27 Elec Guitar (jazz)	25 Nylon Str Guitar	91 Syn Pad 3 (polysyn)	91 Syn Pad 3 (polysyn)
28 Elec Guitar (clean)	25 Nylon Str Guitar	92 Syn Pad 4 (choir)	53 Choir Aahs
29 Elec Guitar (muted)	25 Nylon Str Guitar	93 Syn Pad 5 (bowed)	34 Elec Bass (finger)
30 Overdrive	31 Distortion	94 Syn Pad 6 (metallic)	34 Elec Bass (finger)
31 Distortion	31 Distortion	95 Syn Pad 7 (halo)	90 Syn Pad 2 (warm)
32 Harmonics	31 Distortion	96 Syn Pad 8 (sweep)	90 Syn Pad 2 (warm)
33 Acoust Bass	34 Elec Bass (finger)	97 SFX 1 (ice rain)	90 Syn Pad 2 (warm)
34 Elec Bass (finger)	34 Elec Bass (finger)	98 SFX 2 (soundtrack)	90 Synth Pad 2 (warm)
35 Electric Bass (pick)	34 Elec Bass (finger)	99 SFX 3 (crystal)	89 Syn Pad 1 (fantasy)
36 FretlessBass	34 Elec Bass (finger)	100 SFX 4 (atmosphere)	34 Elec Bass (finger)
37 Slap Bass 1	37 Slap Bass 1	101 SFX 5 (brightness)	89 Syn Pad 1 (fantasy)
38 Slap Bass 2	37 Slap Bass 1	102SFX 6 (goblins)	90 Syn Pad 2 (warm)
39 Synth Bass 1	37 Slap Bass 1	103 SFX 7 (echoes)	53 Choir Aahs
40 Synth Bass 2	37 Slap Bass 1	104 SFX 8 (space)	90 Syn Pad 2 (warm)
41 Solo Violin	41 Solo Violin	105 Sitar	105 Sitar
42 Solo Viola	41 Solo Violin	106 Banjo	106 Banjo
43 Solo Cello	41 Solo Violin	107 Shamisen	107 Shamisen
44 Contrabass	41 Solo Violin	108 Koto	13 Marimba
45 Trem Strings	49 Str Ensemble 1	109 Kalimba	21 Reed Organ
46 Pizz Strings	25 Nylon Str Guitar	110 Bagpipes	34 Elec Bass (finger)
47 Orch Harp	25 Nylon Str Guitar	111 Fiddle	69 Oboe
48 Timpani	48 Timpani	112 Shani	12 Vibraphone
49 Str Ensemble 1	49 Str Ensemble 1	113 Tinklebell	114 Agogo
50 Str Ensemble 2	49 Str Ensemble 1	114 Agogo	115 Steel Drum
51 Syn Strings 1	49 Str Ensemble 1	115 Steel Drum	116 Woodblock
52 Syn Strings 2	49 Str Ensemble 1	116 Woodblock	117 Taiko Drum
53 Choir Aahs	53 Choir Aahs	117 Taiko Drum	48 Timpani
54 Voice Oahs	53 Choir Aahs	118 Melodic Tom	118 Melodic Tom
55 Syn Voice	90 Syn Pad 2 (warm)	119 Syn Drum	118 Melodic Tom
56 Orchestra Hit	56 Orchestra Hit	120 Reverse Cymbal	120 Reverse Cymbal
57 Trumpet	57 Trumpet	34 Elec Bass (finger)	34 Elec Bass (finger)
58 Trombone	57 Trumpet	76 Pan Flute	76 Pan Flute
59 Tuba	57 Trumpet	123 Sea Shore	123 Sea Shore
60 MutedTrumpet	57 Trumpet	124 Bird Tweet	124 Bird Tweet
61 French Horn	61 French Horn	125 Telephone	125 Telephone
62 BrassSection	57 Trumpet	126 Helicopter	126 Helicopter
63 SynthBass	57 Trumpet	127 Applause	127 Applause
64 SynthBass 2	61 French Horn	128 Gun Shot	128 Gun Shot



via MoviePlayer 2.0 is that once it's converted, you don't have much scope for editing. I suspect that the conversion process merely takes the time-stamped MIDI events in the MIDI File and re-stamps them with the QuickTime internal timing system. Certainly, apart from re-assigning instruments to tracks, and setting the overall volume, there are no other 'mixdown' type controls in MoviePlayer 2.0 — you

Limited individual information on tracks is available. In this example, the fourth track contains 88 Note On/Off events and no MIDI Controller events. Note that the music can be played from the instrument selection dialogue box.

can't even do basic things like mute a track or change its volume, for example. This means that you need to get the MIDI File correct

QUICKTIME TIMES

The QuickTime 2.0 Developer's Kit comes with some examples of the sort of frame rates that you can expect on specific Macintosh models. Movies which are 320 x 240 pixels in size can be played back in 256 colours or thousands of colours at 15fps on a Mac IIcx, whilst on an LC475, the same Movie can play at 30fps. Any Quadra or PowerMac should be capable of playing the same Movie at 30fps at any colour depth (8, 16 or 24 bit)

before you convert it, because after that, it's playback only. More sophisticated editing controls may become available in future QuickTime Music applications, but I suspect that the 'Get the MIDI File right first' approach will be very popular.

GOODIES

There's more to QuickTime 2.0 than just GM playback. Apart from Video, Audio and Music (MIDI) tracks, you can have

Timecode tracks too, which can make identifying the location of individual frames much easier, and allow you to refer back to the original source videotape. Text tracks allow annotation and sub-titling. MPEG tracks allow you to use movies encoded using the MPEG video compression scheme.

MoviePlayer 2.0 is rather more than just a player utility. By cutting and pasting bits of other movies together, you can assemble your own movies. It also supports System 7.5's Drag and Drop, which enables you to drag text, pictures or movies from one window to another — just as if you had used the Clipboard. And when you're adding in a music track to an existing video track, you can use the 'Add Scaled' option to tweak the timing of the music so that it fits the length of the video — great for rushes.

QuickTime 2.0 provides many of the features that you associate with film or video production, and puts them onto your Mac's screen.

APPLE NEWS IN BRIEF

• STATIC MOTION PICTURES

Whilst the rest of the computing world goes rushing along an MPEG video roller-coaster, the Mac remains MPEG card-less. Rumours of an impending release by Radius seem to have evaporated, and Apple are still due to launch soon (of course, by the time you read this, the Apple card may well be out). MPEG conversion facilities are built into QuickTime 2.0, but the hardware for Macs seems to have stalled. With MPEG-based VideoCD, CD-I FMV, and several other contenders for the 'full-screen video on a computer' market all fighting it out on PCs, CDIs and other hardware platforms, the 'home multimedia' purchaser may well come to regard the Mac as a very minor platform.

• THE NEED FOR SPEED

After producing last year's 'must have' product with *RAM Doubler*, Connectix may have another winner waiting in the wings. Rumoured to be called *Speed Doubler*, it is designed to double the speed at which 68000 code is emulated on a PowerPC by looking for loops and frequently used sections of code, and then translating them into native PowerPC code and caching them.

Playing around with video can be a great way to learn about editing, as well as testing how music works with pictures. Because QuickTime is also available for Windows, the resulting Movies can be shown on any personal computer: Mac or PC. If you've always thought that working with moving pictures was too expensive, think again.

SOS

ON THE NET

World Wide Web addresses aren't always as inaccessible as you might think. Try 'http'ing to apple.com or claris.com. There again, the Internet Underground Music Archive at http://iuma.southern.com/IUMA/index_graphic.html might make you think otherwise!

Quick Score Professional



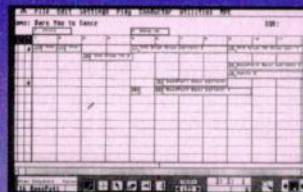
QuickScore Professional is a Windows 3.1 application incorporating advanced features with ease of use and speed. It contains all of the most requested sequencer features, as well as superior notation transcription and printing. This is a quality program, at an exceptional price!

Features

- 16 Track Recording and Playback.
- Display and interactively edit in full score, single track, or piano roll formats as the music plays.
- Realtime graphic controller editing.
- MIDI faders control and respond to all MIDI controllers, including volume and velocity.
- Multiple time signature and key signature transcription and entry.
- Symbols include groupings, fingerings, articulations, slurs, guitar chord grids, repeat endings, crescendos, decrescendos, dynamics and line and box drawing.
- Super high-quality printout on all windows supported printers.
- Import and export MIDI files.
- System requirements: Windows 3.1, IBM PC Compatible computer (386 or above strongly recommended) Windows appropriate. MIDI interface or sound card, VGA monitor, 2MB free memory, Hard Disk.

OMEGA II

for Atari ST or Falcon Computer



Song Editor



Integrated MIDI Mixer

£129

- 48 Track sequencer with up to 64 MIDI channels
- Powerful interactive Graphic Song Editor for object Oriented composition
- Many interactive editing, algorithmic, composition and performance tools from simple quantize to complex fill operations
- MIDI Machine Control and MIDI Time Code Sync
- Integrated MIDI Mixer with groups and crossfades
- Fully interactive multi track graphic editor
- Lightning fast Piano Roll and Drum Grid editing with velocity stems

For Further Information on Quick Score Professional & Omega II please contact:
Off Planet Media at: 1 Hurts Yard Nottingham NG1 6JD
 or call **(0115) 953 1131**. Dealer Enquiries Welcome



Dr. T's[®]
 Music Software



BRIAN HEYWOOD
brings you the latest PC
news, and offers a
handy tip to net surfers
who may be getting
lost...

A few months ago, I was rather fulsome about the idea of integrating digital audio with MIDI in applications such as *Cubase Audio*. While the 'all-in-one' approach does have certain advantages, there is also an argument for keeping the two types of music processing separate (ie. digital audio and MIDI). The problem with having a single application to cover a number of different tasks is that you have to 'buy' the whole package. So if you don't like the way the software performs a particular task, you can't do anything about it without scrapping the entire package.

Another problem with this kind of software application is that it tends to become 'bloated', ie. very resource-hungry, requiring a powerful PC to handle facilities that you may never, or only rarely, use. Also, the larger and more complicated an application becomes, the more liable it is to be 'bugged'.

So, what's the alternative? Well, if you are a Windows user, you can take advantage of the Windows multitasking facilities to run a number of smaller, dedicated applications to perform the same task as one integrated package. The big advantage of using separate applications is that you get a much wider choice of software and hardware. So you can mix and match software and

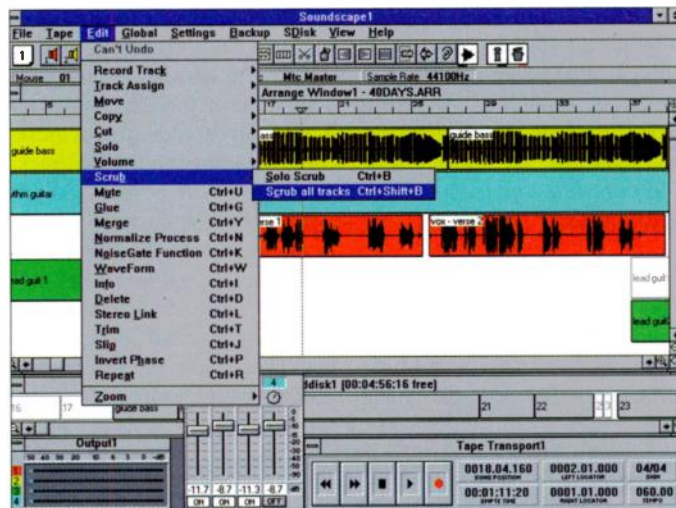
systems to suit your personal taste (and budget). As individual software packages are more tightly focused, they should be 'leaner and fitter', and, thus, should perform better and have less in the way of bugs.

For instance, if your favourite sequencer is *Cakewalk*, you could combine it with either the Soundscape SSHDR system or Digidesign's *Session 8* to get a hybrid digital-audio/MIDI system.

screen', making them visible only when you need to use them.

SPRING IS SPRUNG

The change in the season seems to have woken up the various purveyors of PC-based digital audio systems, who have obviously been whiling away the winter months adding features to their systems. In fact, it looks like there might be some interesting developments in the PC-based



The new version of the Soundscape SSHDR software offers a whole host of new facilities, with more in the pipeline.

The two applications would be synchronised via MIDI (internally in the case of *Session 8*, externally for the SSHDR), with the transport controls of the hard disk recorder controlling the operation of both pieces of software. External synchronisation — say to an analogue multitrack — can get slightly complicated, depending on your MIDI setup, but once you've got it sorted, you can virtually forget it's there.

The biggest problem I've had with this kind of setup is that the PC's screen gets very cluttered. One way around this is to use a virtual desktop like Borland's *Dashboard* or Microsoft's *Topview*, which let you have a 'virtual' Windows desktop larger than your VDU screen. Think of the VDU as a window on to the virtual desktop, which you can move around to see the various areas of the desktop's work area. You can place any applications that you don't happen to be using at the moment 'off the

hard disk recorder world over the coming months, with loads of new features, and prices (as ever) coming down. Watch this space.

SOUNDSCAPE NEWS

Soundscape Technology have just released version 1.6 of the control software for their SSHDR hard disk recording system. The new version has a whole host of new features, including intelligent de-glitching, improvements to the 'volume' tool and display options, 999 locators and improvements to the DAT backup and hard disk maintenance operations. Soundscape have also added audio 'scrub' tools that can be controlled either by the mouse or from an external controller such as the JL Cooper CS10.

One interesting enhancement is the inclusion of a 'noise gate' function; this tool scans the selected audio clips and performs automatic edits to remove any section of the take that falls below a certain threshold. The

CYBERSPACE CORNER

One of the problems of the World Wide Web (WWW) is its size. It's so immense that it can be a bit of a chore to find anything of interest — it's difficult to know where to start. Of course, if you know the URL (Uniform Resource Locator) of the page you want, you can usually go straight to it, but this doesn't help if you just want to browse the net (sometimes known as cybersurfing or net surfing). Luckily, there are people on the net who selflessly maintain indexes to other pages that pertain to a particular topic. For instance, if you point your WWW browser at... <http://hanksville.phost.umass.edu/~bdejong/music/bands/index.html> ...you get an index of bands and music-related services that are available via the WWW, usually with graphics, sound samples and other multimedia goodies available for download.

digital noise gate is non-destructive (ie. it doesn't remove the audio from the hard disk) and has quite a number of user-configurable parameters allowing you to optimise its use for various applications.

Another very interesting Soundscape development is a version of the SSHDR with removable hard disks. This configuration incorporates two removable IDE disk drives, so that you can switch between projects without having to backup to DAT during valuable studio time. The new unit costs £2850, and existing users can upgrade their units for £135. For more information about both these products, contact Nick Owen at Soundscape on 01222 450120.

TRIPLEDAT

One of my big gripes with MPC Windows digital audio is the lack of soundcards that can interface with a DAT machine using a digital interface. It seems a bit silly to edit the sound in the digital domain, using an advanced waveform editor, and then 'strain' the audio back through an analogue interface. Apart from the quality of the converters, you are held ransom by the quality of your PC's power supply, which was undoubtedly never designed for audio work. It's bit like producing a masterpiece in oils and then photocopying the result.

I've heard a number of good reports about the TripleDAT system, a Windows-compatible soundcard which is reputed to be the basis of the most popular audio PC workstation in the German broadcasting industry. But until recently it wasn't available in the UK, so I never pursued it. However, it is now being imported by the UK subsidiary of Koch Media, so it is worth taking a closer look at. The most interesting feature of the card is the digital interface, which is available as either a set of optical connectors or as an S/PDIF signal via a multi-pin connector on the card's back plate.

The TripleDAT has a number of unique features — it can control your DAT machine using

I'M YOUR NUMBER ONE FAN

Desktop and tower PCs, on the whole, are pretty reliable animals, mainly due to the fact that they have few moving parts. The most vulnerable parts of the PC are the hard and floppy disks, which can be swapped for new units if they fail (have you backed up recently?).

One other component that whizzes around and is thus liable to wear out is the cooling fan in the power supply. If this fails, or gets very noisy due to becoming worn out, you can swap the entire power supply for a new module, but this seems a bit wasteful to my mind.

If your PC is out of guarantee, or you can't persuade your dealer to replace your power supply unit (PSU) at a nominal

cost, it's a fairly simple to process to replace the PSU fan. This is usually an 80mm axial 12V DC unit, with a brushless motor drawing in the region of 200mA. Maplin do a replacement (YP40T) that costs just under £10. Before ordering a new component, make sure that your fan is of this type, by taking the PSU out of the PC and checking the label on the fan. This will tell you whether you have a standard fan type, and also whether it is possible to replace the unit easily.

The actual replacement process involves removing the PSU from the PC's case (do please make sure that the power lead is disconnected), opening the PSU, and then snipping the red and black wires that lead to the fan. When connecting the new fan, make sure that the joins are well-insulated from each other and from the rest of the PSU circuitry. It's not good enough to use insulating tape, as it can get quite hot inside the power unit. Either use plastic 'wire joint' protectors like the Maplin JH91Y (36p each), or use a small insulated connector or connector block.

IMPORTANT. After unplugging the PC, leave it to discharge the PSU for at least five minutes before starting repair work on the PC. This is because some capacitors in the PSU are charged to quite high voltages, and can take a while to discharge.

the built-in infra-red remote transmitter, for example. It also allows you to use your audio DAT as a backup medium for your DOS files — over a gigabyte's worth. As the cost of a DAT tape streamer is around the £1000 mark, you could even ignore the card's audio side, and simply use it as a cheap backup system!

On the software side, the TripleDAT comes with a Windows application called TripleMAGIC!, which is a non-destructive real-time non-linear digital editor. The software offers a number of advanced features such as real-time crossfades, a multitrack editing interface and modular filters and effects. The software can synchronise with either external devices (such as tape machines), or internally to a Windows MIDI sequencer, using the supplied device driver software. The modular effects include a dynamics module (stereo compressor, and expander, gate), 4-band parametric equalisation, a pitch shifter, a delay and a room simulator (echo and reverb).

The performance of the system will depend a lot on the specification of your PC, so a 486DX-33 with 8Mb of RAM will only give three or four mono (or two stereo) tracks, while a 90MHz Pentium with 16Mb of RAM and a PCI or SCSI hard disk controller will give between 10 and 12 mono (or eight stereo) tracks. The number of tracks available will also depend on how much extra work the PC has to

do (for example, if you don't use real-time crossfades, you'll get more tracks, and so on). The system should cost under £950 — for more information contact Colin Harvey at Koch Media on 01252 714340.




TripleDAT is one of the cheaper ways to go completely 'digital' using the PC.

I TOLD YOU SO...

As one of an occasional series of items on 'things I got right', I see that the price of recordable CD drives has started to crash, with the JVC double-speed drive and the Archiver software being reduced to just over £2000. While this seems a lot of money, the price is considerably less than it was last year. Hopefully, by this time next year, everybody will be able to record their own CDs. For more information about the JVC CD-R system, contact Nick Fletcher at JVC Professional Products on 0181 896 6000.





AMIGA NOTES

PAUL OVERAA advises on how to improve your sequencer's notation facilities, gives some more tracker tips, and rounds up some current Amiga news...

Like most people, I firmly believe that it doesn't pay to chop and change your sequencing software at the drop of a hat as new products arrive. In the long run it's far more important to acquire an in-depth understanding of, a sympathy with, your favourite sequencer than it is to have, say, three or four different packages around, none of which you have any real familiarity with.

about the *Notator-X* score editor, namely that it is essentially a totally separate program which can be used with other sequencers!

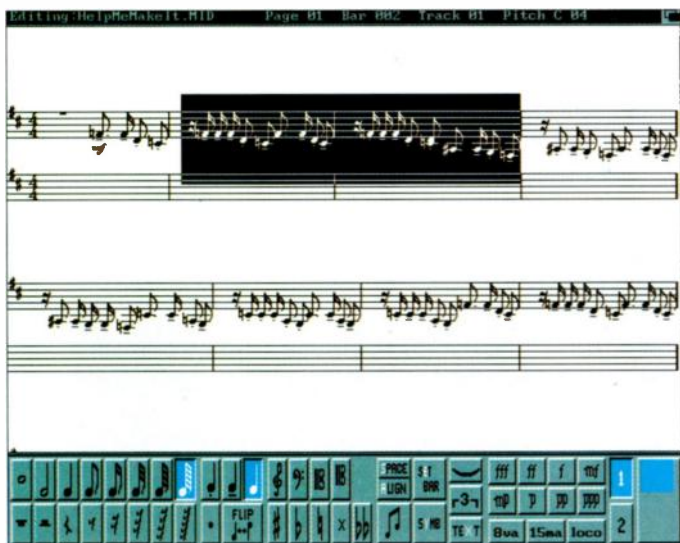
X MARKS THE SPOT

Notator-X was in fact programmed by Desert software (a company who, you may remember, entered the Amiga's music scene a few years ago with a notation based sequencer called *Overture*). The important thing about *Notator-X* is that it is capable of saving and loading files in one of three ways. Firstly, it has its own *Notator-X* file format; secondly, it can save data as *Music-X* performance files; and lastly, it supports MIDI file import and export. Needless to say it's the MIDI file connection which is the important one, because this means that *Notator-X* can be used with any sequencer that provides MIDI file import and export facilities. For example, I use it with Dr T's *KCS* because the *QuickScore* notation module supplied with the *KCS* package does not allow score editing. In my opinion *Notator-X* is rather easier to use than the perhaps more established Dr T's *Copyist* program, and the print quality obtainable, even on what might be called mediocre matrix printers, is surprisingly good.

If you have not yet seen *Notator-X* in action, you should. Right from the moment it loads, the program makes a good impression because the display is excellent. Scores can be displayed in one of three sizes, with the smallest useful for viewing of the overall current page contents

and the largest handy for detailed editing. Four clefs are available (treble, bass, alto and tenor), and you should, incidentally, set the required clefs before entering any note data. The program supports all common symbols, such as repeats, first, second and third time endings, dynamics, accidentals, beams, trills, pedals, octave, Segno and Coda marks, and so on, and in the main the score editing and printing facilities are straightforward to understand and use. There is a very flexible 'transcribe requester' used when loading a *Music-X* or MIDI file to determine the destination tracks, clef, key signature, and quantise value. You can also define split points for splitting track data onto two staves and filter out specific MIDI channels from tracks containing multi-channel data. During score editing, you move around the page using either the cursor keys or a large two-dimensional scroll button located in the right-hand corner of the palette window. It's easy and effective, and likewise there are two ways (Amiga keyboard or mouse) of entering notes into the score.

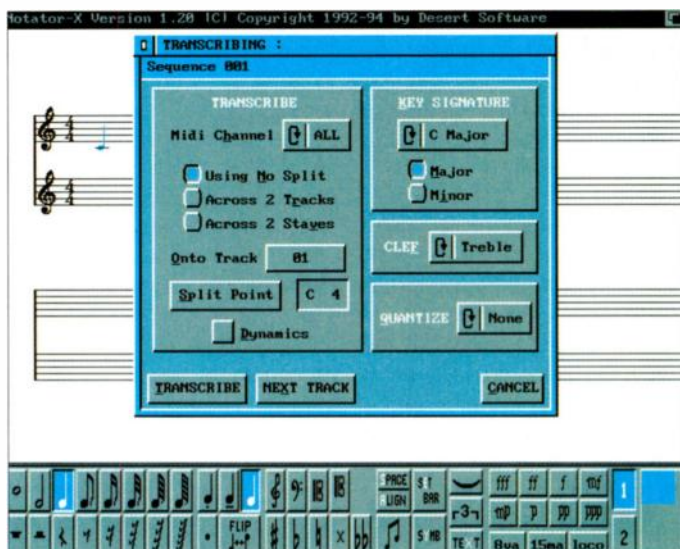
I'll be the first to agree that the *Notator-X* arrangements aren't perfect. You cannot, for example, directly enter notes into *Notator-X* using a MIDI keyboard (which would make entering both chords and fast, evenly spaced, note passages much easier). Another obvious potential difficulty is that when you are editing scores you usually want to be able to play the corresponding sequence whilst you're in the process of



Notator-X offers an easy-to-use score editing interface.

All sequencers have their good and bad points but, as you gain experience in using a particular piece of software, it is inevitable that you'll discover tricks that allow you to do things that might initially have seemed impossible.

As far as one specific sequencer is concerned (*Music-X*), I'm pretty certain that those of you who were already users of this package would have taken quite an interest in the reviews of the new *Music-X2/Notator-X* version that arrived last summer. Understandably, those of you who use other sequencers, such as Dr T's *KCS*, Software Technology's *Sequencer One Plus* and so on, might have taken slightly less interest. The reason I'm mentioning this is that it is just possible that some of you missed an important point



Notator-X's transcription requester allows you to select which channels are transcribed.

editing it. Having to explicitly copy data between your sequencer and *Notator-X* in order to do this might seem an irritatingly slow way of doing things.

In actual fact, because the software is running on a multitasking Amiga, these things are considerably less of a problem than they would be on other machines. *Notator-X* and *Music-X*, or a sequencer like Dr T's *KCS* or Software Technology's *Sequencer One Plus*, for example, will run perfectly happily together, and in practice you can easily switch between screens very quickly, using either the left-Amiga-M left-Amiga-N key shortcuts or by pulling the *Notator-X* screen down to reveal the sequencer display.

It's becoming increasingly clear

sampled chords, rather than building up chords using individual notes. This is particularly effective for string-synth style backing tracks, for example, and in many cases you may only need to sample two, three or four beats of a C major and a C minor chord in order to produce all major and minor chords required for the whole track.

Obviously, it helps to get the sample length and loop characteristics right, and usually a little sample editing is needed. Nevertheless the benefit is that you can built up the associated chord track by inserting single notes — if, for example, you want a C//Am//Dm//G progression and you have chord samples that



Various score magnification sizes make detailed editing very easy with *Notator-X*.

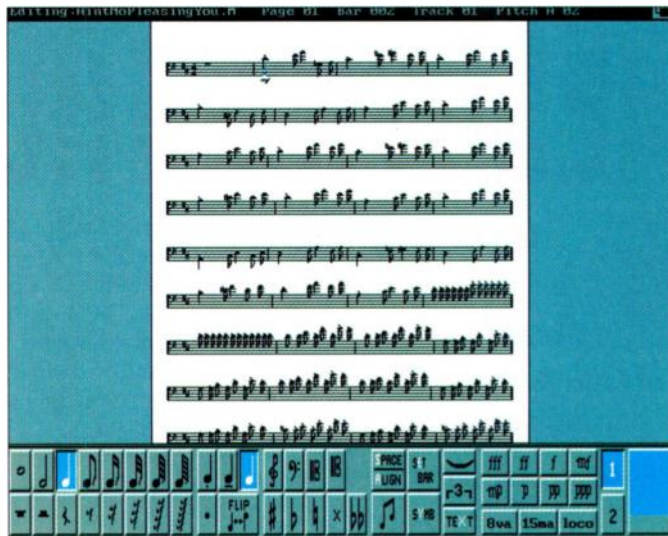
that quite a few non-*Music-X* users have now purchased the full *Music-X2/Notator-X* package just in order to get the score editing facilities, and that fact does, of course, say quite a lot about *Notator-X* in itself. Another thing that might also have boosted sales is some recent price cuts — the original price of the package was £149 but Silica (0181 309 1111) for example, are currently selling it for just £99.99!

EASY LIFE

Whilst talking about tracker programs in last month's column, I probably ought to have mentioned that there are a variety of tricks that can be used to make song module creation a little easier. One particular favourite shortcut of mine involves using

last for one bar then you only have to enter the four notes C, A, D, and G in conjunction with the respective C major and C minor sample voices in order to do it. Depending on how much sample space you're planning to use, there is, of course, nothing to stop you being more adventurous and throwing in more complex chord samples. Track creation would still use exactly the same 'one note per chord' approach.

OK £ it may be a little restrictive musically, as far as choice of chord inversions and so on is concerned, but this method has two distinct advantages: firstly, it keeps the number of samples required to a reasonable size (which saves both memory and disk space), and it also makes the creation of the chord track very quick and easy, because



Selectively extracting a bass part like this from a multi-channel MIDI file arrangement is easy with *Notator-X*!

you only have to enter the root note of any chord you want to play.

You can, incidentally, do a similar thing with percussion patterns sampled from a drum machine. The interesting point here is that if you sample one bar of a drum part and use that sample in your tracker module, altering the note value used in the track will alter the tempo of the drum sample. The bad news with this sort of application is that it is not quite so straightforward and a bit of experimentation is normally required to match the tempo of your sampled drums to the tracker song's tempo settings. Nevertheless, it's something worth experimenting with because, coupled with the above-mentioned sampled chords trick, you can, with practice, add full percussion and chord backing to an arrangement by using just two tracker tracks containing one or two notes per bar!

SOS

AMIGA NEWS IN BRIEF

• AMIGA LIVES!

As the sale of Commodore reaches its closing stages, it now appears to be common knowledge that the bid by Amiga International (ie. the Commodore UK management buy-out bid) has been accepted by the creditors' committee. All that is needed now is the final seal of approval by the liquidator appointed by the Bahamian Court and this is expected to come quite quickly. One thing is certain now — the Amiga is going to survive and this is good news for all concerned. Doubtless there are many developers, retailers and end-users breathing huge sighs of relief that this particular saga is now coming to an end!

• IntOS JOINS AMOS

This new Intuition extension for AMOS has just been announced. The package features over 120 commands for utilising the Amiga's Intuition library facilities, and these give AMOS coders access to the same gadgets, windows, screens, menus and so on that C and assembler coders use. IntOS needs Kickstart 2 or greater, 1Mb of memory, and of course you also need to have AMOS or AMOS Professional. The price of the new IntOS offering is £29.95 and this includes manual and example programs. Further details from OTM Publications and Promotions on 01827 312302.

DELAYING TACTICS

Digital delay tends to be taken very much for granted, but the majority of today's studio effects would be impossible without it.

PAUL WHITE describes how to set up your own DDL effects from scratch.

Though we have come to accept digital reverberation as perhaps the most important of all studio effects, it's probably still true to say that the simple digital delay, or DDL, is the most versatile. The majority of multi-effects units offer digital delay as part of their repertoire, but all the most common delay-based effects can be produced using any digital delay line, manual or programmable, that has modulation facilities and control over delay time and feedback. The range of effects that can be coaxed out of a DDL includes: delay, repeat echo, slap-back delay, chorus, vibrato, flanging, phasing and resonant 'tunnel' echo.

In the early days of digital delay, the units

were all controlled by knobs and were non-programmable. This meant that you had to learn to use the machine, because there were no presets — but because there was a dedicated knob for each function, it was easy to fiddle around until you got what you wanted. With a modern programmable unit, setting the parameters is less intuitive, so it helps if you know how the effects are created in the first place.

sound but slightly delayed. For those of you who remember tape-loop echo machines, the DDL does the same job but with no moving parts. But, because the DDL has a much wider range of delay times than a typical tape echo unit, and because it has delay modulation facilities, it can be used to create a far wider range of effects. As well as having the option to vary delay time from a few milliseconds to around one second or more on a typical DDL, we can vary the feedback to produce more than one repeat from a single sound. All the feedback control does is to send some of the delayed output back to the input so it gets delayed again; the more feedback, the more repeats. But if you set the feedback too high, the level of the repeats builds up rather than dying away, until the result is an uncontrollable howl. This feedback effect was often used with tape echo machines to create sci-fi effects, but with a DDL, the distortion caused by level overload when feedback occurs usually results in a pretty unpleasant noise.

MODULATION

The modulation section is based around a low-frequency oscillator, rather like the LFO on a synth, which modulates the delay time in much the same way as rapidly turning the delay knob up and down would do. The available controls

usually caused by less than perfectly round capstans, or squashed pinch rollers, served to add a little natural pitch variation to the echo — an effect that was quite pleasing in moderation. Of course, you could simulate this using a digital delay unit, simply by adding a very mild modulation (at between 4 and 8Hz) to the basic delay setting.

Every DDL has a mix control allowing you to balance the original and delayed sounds, and some may have a feedback phase invert switch, which I'll look at in more detail a little later.

CREATING DELAY EFFECTS

■ The simplest effect is a straight, single delay. For this you set the modulation depth to zero, the feedback to zero, and the mix control to around halfway. What you get is a single repeat that occurs after whatever delay you have set on the delay time control. Short delays of between 30 and 100ms are used to create slap-back echo effects, which are quite effective on vocals and rock guitar, while longer delays can be tweaked to fall in with the tempo of your song, to achieve rhythmic effects, particularly when applied to percussion instruments. A timed delay with a percussive synth sound can also help produce a mechanically sequenced or arpeggiated effect.

■ Multiple delays are easily obtained by increasing the feedback control, but the subjective result is very different depending on whether a long or short delay time is being used. At delay times in excess of 100ms, you'll get the familiar tape echo type of sound, and this is a valuable effect for warming up vocals and guitar. On clean electric guitar, this type of echo helps recreate the



were all controlled by knobs and were non-programmable. This meant that you had to learn to use the machine, because there were no presets — but because there was a dedicated knob for each function, it was easy to fiddle around until you got what you wanted. With a modern programmable unit, setting the parameters is less intuitive, so it helps if you know how the effects are created in the first place.

The DDL is fairly simple in principle; a sound is digitised, stored in RAM memory, then, after a short time, it is read out, converted back to an analogue signal and sent to the output socket. The result is a copy of the original

are speed and depth, which determine how the sound is modulated; modulating the delay time causes the pitch to waver both sharp and flat at the rate set by the speed control. The depth control sets how far sharp or flat the sound goes, but it should be noted that the longer the delay time you have set, the more pitch variation for the same depth setting.

With the old tape echo units, pitch modulation could be achieved manually by turning the tape speed knob back and forth, but to my knowledge, none of the units had a device for automatically modulating the capstan motor speed. Even so, many were so badly built that the inherent wow and flutter,

old (and once again popular) Shadows guitar sound. To some extent, digital reverb has replaced echo as a vocal treatment, but repeat echo is still worth exploring, especially if you're after vintage sounds. Most of the early rock singers used liberal amounts of vocal echo, and the famous John Lennon 'trippy' vocal sound relied heavily on short, 'slap-back' delay.

■ At very short delay times, (1 to 50ms) increasing feedback will give a resonant cardboard tube or tunnel echo sound, the pitch of the resonance being set by the delay time. This effect is useful in creating new sounds or modifying existing ones beyond recognition; used with a synth, it can create the illusion of ring modulation or phase sync.

MODULATING THE DELAY

■ VIBRATO

The modulation section is what makes the DDL so versatile. Probably the simplest modulation effect is pitch vibrato, and for that we need to set the mix control (or parameter) fully up, so that only the delayed sound is heard, with none of the original added. Obviously the output will be delayed slightly relative to the input, but if the delay time is set to less than 10mS, the delay will be too short to notice. If you then set a modulation rate of 4 or 5Hz and turn the depth control up slowly, you should end up with a pleasing pitch vibrato. Turn the depth up too far and the result will cease to become musically useful, though it might still work as a special effect.

■ PHASING

Early phasing on records was done with two tape machines playing almost in sync. Nowadays, we tend to refer to this effect as tape flanging, but in the days when it was actually used, everyone knew it as phasing.

It's a simple matter to convert the earlier vibrato effect to phasing by setting the mix control to exactly half way; the best effects are obtained with delay times of between 1 and 10mS. With such a short delay time, the individual harmonics that make up your sound are moved in and out of phase with each other so that some cancel while others add. This has the effect of filtering the sound in a very dynamic and complex way — you'll recognise the effect as being similar to that produced by guitar phaser pedals. Try changing the rate control from a slow sweep to a fast modulation and you'll see that the range of effects is quite wide. A very slow modulation rate generates a nice, evolving sweep which can sound great on pad keyboard sounds, while faster rates can sound similar to a rotary speaker cabinet.

You can also 'tune' 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. A delay time of between 1 and 3mS gives a thin, whining phase sound, whereas longer times sound fatter or smoother.

■ FLANGING

Electronic phasing never achieved the depth of tape phasing, but when electronic delay chips were invented, Flangers soon followed, in a bid to recreate this most spectacular effect (well, we thought it was spectacular in 1972!). The original phasing effect was created by running two tape machines carrying copies of the same music, side by side. When the two machines were in time with each other, the two signals added up to a more or less normal sound, but if one or other of the machines was slowed down slightly by touching the tape supply reel, the resulting delay would create a phasing effect. By slowing one machine and then the other, the phasing effect could be maintained without the machines getting too far out of time with each other.

Electronic flanging involves the use of feedback to make the effect even stronger.

USEFUL INITIAL SETTINGS

Slap-Back Delay	20-80mS delay, no feedback.
Tunnel Echo/ Resonator	2-10mS, feedback as high as possible without going unstable.
Tempo Delay	60/bpm gives you the delay time of 1 bar in seconds. Divide this delay time by four to give you the delay time per quarter note.
Echo	100-300mS with feedback. The higher the feedback level, the more repeat echoes.
Vibrato	3-10mS, dry signal off, modulation rate 3-8Hz, depth set by ear.
Phasing	3-10mS, mix control 50/50, modulation rate 3-8Hz, depth set by ear. Try Feedback Invert if you have it.
Flanging	5-50mS, mix control 50/50, modulation rate 3-8Hz, depth set by ear. Increase feedback to make effect more dramatic. Try Feedback Invert if you have it.
Chorus	30-100mS, mix control 50/50, modulation rate 3-8Hz, depth set by ear. Little or no feedback. Increasing feedback creates a rotary speaker effect.

Essentially flanging is similar to phasing, though it may use slightly longer delay times — say up to 50mS — and the feedback control is advanced to give a dramatic, swirling effect. In general terms, the slower the modulation rate, the more depth you can get away with using. The higher the feedback setting, the more 'whooshy' the sound, and on digital units, you may have to turn the input level down a touch to prevent overload when high feedback settings are used. Instead of using the modulation controls, you can try changing the delay time manually, which produces a closer approximation to tape phasing/flanging.

■ PHASE INVERT

And now that mysterious phase invert button or parameter that your unit may or may not have; the effect of this is most noticeable on effects that use a very short delay time, particularly flanging. By inverting the phase of the signal fed back to the input, it allows different harmonics to be accentuated by the filtering process, and so gives a choice of two types of tonal coloration, one usually sounding thinner than the other; which one you use is entirely a matter of personal choice. On longer delay times, the invert facility will produce little or no subjective change to the sound.

Effective though the above processes are, they don't exactly duplicate the tape flanging effect, because the delay can never pass through the zero-delay point as it did when one tape machine overtook the other. Some people have attempted to get closer to the original sound by adding a short delay of 5mS or so to the dry part of the signal (which allows the relative delay between the dry and modulated signals to pass through zero), but this doesn't seem to be entirely convincing either.

■ CHORUS

Chorus is so-called because it goes some way

towards imitating the sound of two or more instruments or voices playing the same part together. No two singers or players will have exactly the same pitch or timing, so by adding a delayed, modulated version of the original, you can create the illusion of multiple performers. By setting a delay time of between 30 and 100mS and adding a little gentle modulation with no feedback, you get the classic chorus effect which works so well on electric guitars and string synth patches, and normally, the mix control should be set centrally so that you hear an equal amount of dry and modulated sound. The modulation speed is normally set in the range 2Hz to 6Hz and the depth set by ear so as not to sound too out-of-tune. Fast chorus can also be used in place of rotary speaker effects.

Because of the regular modulation, the electric chorus effect isn't entirely authentic compared with real life, but has gained acceptance as an effect in its own right. You can also use very gentle modulation on longer delays to create a combined chorus and echo effect.

Chorus effects can be made to sound more dramatic in stereo by panning the original, untreated sound to one side and the modulated delay to the other. Flanging and phasing, on the other hand, only work properly when the original and delayed sounds are heard from the same speaker and mixed in roughly equal proportions.

SUMMARY

Versatile though DDLs are, they can't be used to create natural sounding reverberation effects. In nature, reverberation is created when sound bounces around inside a confined space such as a hall or cavern, and the complexity of these echo patterns defies mathematical analyses. In order to fool the human ear into believing electronic reverberation is real, it is necessary to generate several thousand, randomly-spaced echoes every second which, if done digitally, requires a great deal of complicated processing.

DDL-based effects are usually connected into the effects send system of a mixer so that more than one tape track or mixer channel can be treated with the same effect. In this case, the mix control on the effects unit would normally be set to give the 'effect only' signal at the output and the mixer controls would be used to set the balance of direct and processed sound. However, for phasing and flanging effects, where the dry/effect balance is fairly critical, it may be better to patch in the effect via channel or group insert points and use the unit's own mix control to set the required balance.

All the techniques described in this article can be explored using either a manual or programmable delay unit, though the manual ones are far quicker to set up. The box shows a table of DDL settings that may be used as starting points to set up your own delay-based effects, and by evaluating the effects on different material, you'll soon get an idea of what can be achieved and may find yourself looking at your DDL in a new light.

SOS

100 NOT OUT!

Roland System 100M Modular Synth

At a time when a modular synth could cost as much as an average house, Roland's System 100M was an affordable dream. CHRIS CARTER gets patched in...

It may be showing my age, but it was with the release of Walter Carlos' *Switched On Bach* (1968) and *The Well Tempered Synthesizer* (1969) that I really became aware of the synthesizer as an instrument — the sound, the look, knobs, switches, patch cords... I was hooked.

So began my quest for a modular synth. To begin with I wanted a Moog, although systems by Roland, ARP, Korg and EMS were all contenders. Then I discovered that the price of even a medium-sized Moog system could literally be as much as a semi-detached house. This may have been fine for Walter Carlos, Keith Emerson or Tomita, but for struggling semi-pros with a day job, buying one was about as likely as winning the pools.

I had been building electronic circuits since I was at school, so I decided to try my hand at some audio circuits. I searched electronics hobby magazines for circuits, and based my first attempt on designs by Tim Orr (of EMS) published in *Wireless World*, plus some from *Practical Electronics*. It had a keyboard, three VCOs, a VCF, VCA, EG, LFO, white noise and reverb — the works. It was temperamental, the VCOs were unstable, the VCFs were weak, and the keyboard tracking was abysmal. But it worked (just).

By the time I had built my sixth or seventh synth, I was using dozens of different circuits connected by yards of wiring. It was built into a four-foot sloping cabinet and included two pin-matrix patch boards (like the EMS

VCS3), a 16-step analogue sequencer, a ribbon controller, a joystick, and a separate 5-octave keyboard. It could even be run off a car battery if needed. By this time I was regularly performing live, and the synth, although versatile, just wasn't reliable or robust enough — it had to be totally returned and often rebuilt after a gig.

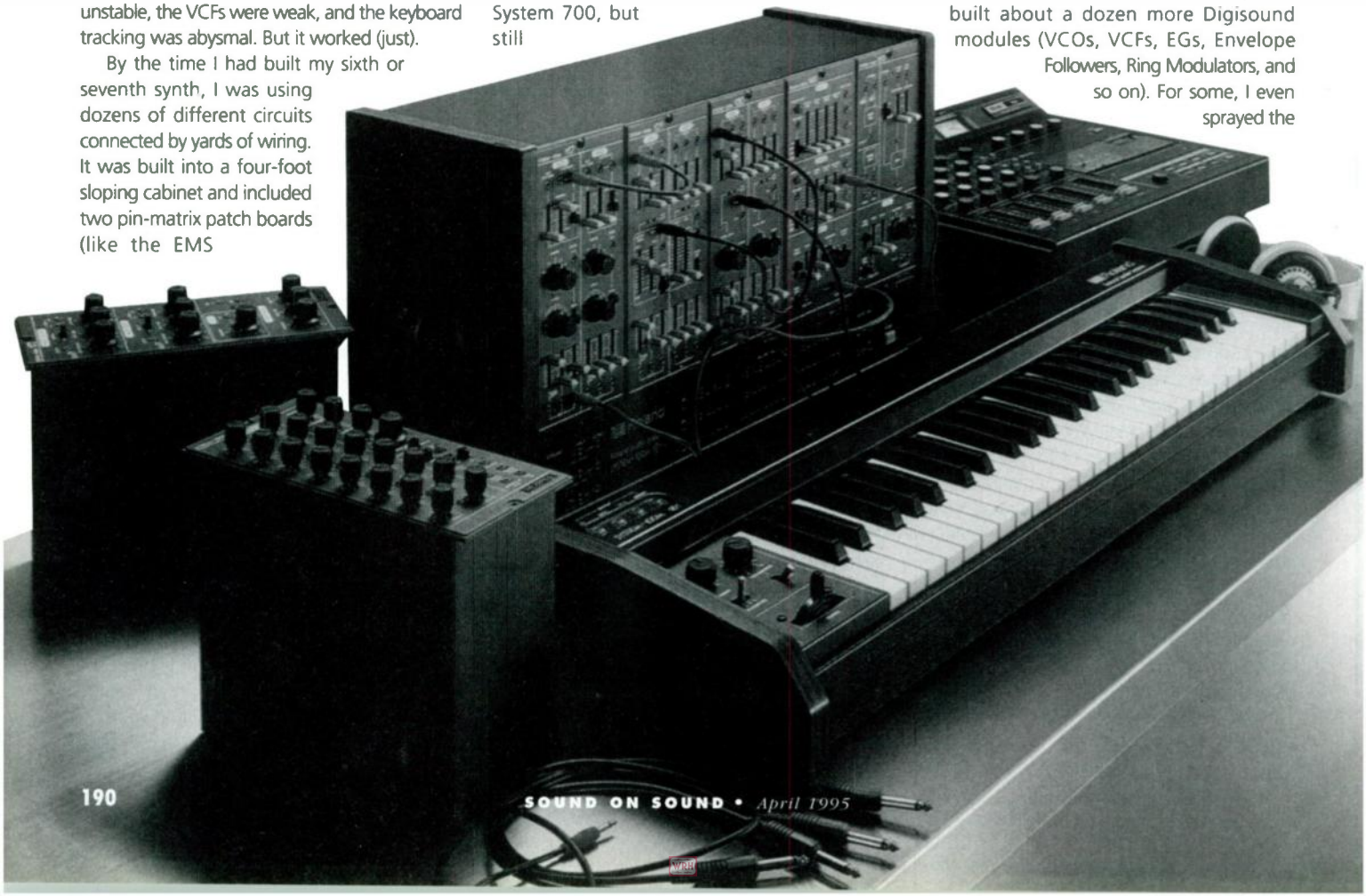
An encounter in 1978 with a reliable and relatively stable EMS VCS3 led me to the conclusion that, after building (or rebuilding) dozens of synths, I needed to buy an 'off the shelf' synth if I wanted a dependable, decent-sounding instrument. I started with a little Korg 700. Although it sounded fine, I was soon frustrated by the lack of controls and upgraded to a Roland SH3A and a Roland 104 analogue sequencer to control my DIY synth. Over the years I worked my way through the Roland SH series of synths: SH3A, SH1, the magnificent SH5, the duophonic Roland SH7, SH2 and finally an SH101.

These various combinations worked fine until I discovered Roland's System 100M. I had already tried the System 700; the 100M sounded just as good to me, and offered great build quality, beautiful filters and damn fine oscillators. It was much cheaper than the System 700, but still

quite an investment for a basic two-VCO, two-VCF, two-VCA setup. But two things persuaded me to go for the 100M: first of all, the modules were available separately, so I could build a system gradually as finances allowed. Secondly, I had discovered a range of very high-spec kits utilising SSM chips (as used in Sequential's Prophet 5) from a new UK company called Digisound. To begin with, they had just a few kits available, but the inputs, outputs, CV specs and power requirements were all identical to the 100M. In theory, Digisound kits could be used alongside the System 100M without any problems, at a tenth of the cost of the Roland equivalents. I devised a cunning plan.

MIX 'N' MATCH

I began by getting two racks, but only four modules — a 112 Dual VCO, a 110 VCO/VCF/VCA, a 140 Dual EG/LFO, a 182 Analogue Sequencer, and the Model 181 4-octave keyboard. I then mounted a few Digisound kits onto thick aluminium panels, cut to the same dimensions as the 100M modules. This mix 'n' match setup worked perfectly and sounded great. Over the next couple of years I built about a dozen more Digisound modules (VCOs, VCFs, EGs, Envelope Followers, Ring Modulators, and so on). For some, I even sprayed the



front panels the same colour as the 100M to fool myself into thinking they were Roland — sad man. Eventually I added three more Roland racks and five more Roland modules: another 182 Sequencer, a 172 Phase/Delay, a 121 Dual VCF, a 130 Dual VCA and a 131 Mixer.

I've been using my hybrid System 100M/Digisound system for about 14 years, live and in the studio. Fingers crossed, none of the modules has ever given up on me. Some of the sockets and controls on both the Roland and Digisound modules are beginning to show their age, which can make tuning a little problematic, but they couldn't really be described as unstable, just touchy. Some of the LEDs have died and the Roland DIN-to-DIN cables have a tendency to spontaneously self-destruct, but so far nothing has been beyond repair. And the beauty of a modular system is that if one module develops a problem I can fix it without the rest of the system coming to a standstill.

I used to control my 100M with a clunky 181 keyboard, but sold it with the intention of buying the 184 polyphonic version — though I had so much trouble getting hold of one, or any other 100M modules for that matter, that I eventually gave up looking. Luckily, I still had an ageing Roland SH101 that I modified by fitting a Roland-style 6-pin DIN socket to connect to the 100M rack; the socket supplied CV and gate signals to the rack, and the rack fed power to the SH101. Sadly, the 101's keyboard recently ceased working and seems almost impossible to get fixed. Sequencers I've used for controlling the System 100M are the Roland 104, Roland CSQ100 and CSQ600 digital sequencers, and currently the MC8 Microcomposer and TB303 Bassline, both sync'd to a TR808.

Summing up, I have to say that I find the Roland 100M to be as versatile, expandable and affordable a system as you can get without going the DIY route. (Although building your own modules is a great way of cheaply expanding a system.) Given the space and the cash, you can build any combination imaginable — and believe me, there are some big 100M systems out there, with upwards of eight racks and 40 modules. Well, I suppose I'll just have to keep buying those lottery tickets.

THE MODULES

Between 1978 and 1985, Roland produced 13 modules, two racks and three keyboards for the System 100M, although they had plans

EXPERIMENTAL CORNER

• 'BOWING' THE RM

'Bowing' is a little-known ring modulator effect that I first came across in the 1970s. A constantly variable voltage source, such as the CV from a pitch bend, joystick, foot pedal, slow ADSR or slow LFO, is fed into one input of the RM and any audible signal is fed into the other input. Depending on how well the RM is calibrated, there should be no output until the voltage source begins moving — similar to a VCA, but with the difference that the output level varies with the speed of change, not the voltage level. Adding a VCF to the output of the RM and using different combinations of audio and CV sources for the RM produces unusual 'bowing' and 'blown' effects. Alternately it could come in handy as a substitute VCA.

• LFO as EG

If you have the 182 sequencer and are running short of EGs, an extra EG can be found lurking in the LFO. The key to this trick is matching the sequencer and LFO speeds — if the sequencer rate is 6, set the LFO rate to 6. Plug the sequencer gate output into the keyboard trigger input, set the LFO delay to zero and the keyboard sync to 'on'. For a standard EG attack/decay type output select a falling ramp waveform, or a rising ramp for a reversed effect. Selecting a triangle or sine wave output is equivalent to a slow attack/slow decay EG output. You can now use the LFO output as if it were an EG. By setting the LFO rate slightly higher than the sequencer rate, you can also achieve some nice polyrhythmic effects.

• SNAPSHOT

It can be impractical to make notes of every connection and setting of a really complex modular synth patch. A quick and reliable solution is to take a series of photos of the setup. If you make sure that everything

is well lit, it's even possible to use something like a Polaroid.

• SHOOT THE DAT

When working on new patches, I often find that I just keep on adjusting and re-patching, hoping to refine the sound a little more and eventually realise that I've lost a fab sound that I had 10 minutes ago. If you have a DAT machine and a sampler, it's worth connecting up the DAT to your mixer before you start programming. Load it with a 2-hour tape and keep the DAT machine remote control handy. When you start programming hit record, and shoot index points at your DAT machine every time you produce a good sound. Afterwards you can go back to the index points on the tape and sample the sounds. Not an ideal solution, but at least you have something to show for all that knob twiddling.

• BY THE BAR

On the subject of sampling, it's often said that samples of analogue gear are no substitute for the real thing. Well, they probably aren't, but a lot of people (and a lot of sample CDs) get it wrong by sampling individual notes. Even multisampling doesn't always sound right. One of the things that makes analogue sound so good is the movement and fluctuations in the sound, and you only really get this 'feel' over a period of time. I've found that the best way to capture analogue feel more authentically is to sample whole bars of sequences or keyboard parts. If you have the sample RAM, then it's worth trying at least two whole bars (the more the better) and also sampling subtly different versions of the same part, alternating each one on playback. If you want to go all the way, you could run your original analogue sequences alongside the sampled versions for a really rich effect.

for at least five more modules. The 100M racks have an internal buss network that carries CV, gate, trigger and power to all the modules via 8-pin DIN leads. All the VCO and VCF modules have their first CV modulation slider wired to the keyboard CV buss. The EGs also take their gate and trigger signals from the keyboard gate and trigger busses, and all LFOs have their switchable phase sync wired to the trigger buss. All of these connections can be overridden by inserting a jack into a module's relevant socket.

When a keyboard is plugged into the front 6-pin DIN socket or if any CV, gate or trigger signals are plugged into the front-panel mini-jacks, they are fed through the rack's internal buss system. By linking more racks with the rear 6-pin sockets, a lot of unnecessary rack-to-rack patching can be eliminated. However, the front and rear 6-pin DIN sockets aren't exactly the

same as each other: the front carries two power lines, which the rear version omits, allowing the 100M rear 6-pin DIN sockets to directly connect to the Roland System 700 and to the MC8 Microcomposer's 6-pin CV/gate output sockets.

For those of you new to the System 100M, here's a description of each module, with its 1985 list price.

• 110 VCO/VCF/VCA £210

This module contains all the elements of a single synth voice. The audio signal paths from the VCO to VCF to VCA are all made internally, as are the keyboard and EG inputs to the VCF and VCA. These connections can be overridden by inserting a jack into the relevant socket. A few features are missing, but that's not surprising, considering the module's 4X9-inch size.

• 112 Dual VCO £220

This module contains two independent VCOs with expanded features; both have a range from 32' to 2', three modulation inputs, and a sync input and output. Three waveforms are available, as is Pulse Width Modulation. These VCOs are pretty stable, with a very wide range. If they are cross-synced at their higher ranges, they make a nice impersonation of FM synthesis.

• 121 Dual VCF £190

Each VCF is a -24dB/octave low pass type with a built-in, fixed, high-pass filter that's switchable between three cut-off frequencies. Each VCF has cut-off frequency resonance sliders that can send them into oscillation. With

BUYING SECOND HAND

Until a couple of years ago there was a regular market for the Roland 100M, with partial and complete systems making regular appearances in the music press classifieds. But for about a year or so the only systems I've seen for sale have been at shops or specialist retro dealers, a privilege for which you usually pay a premium. (A trawl through the dealers revealed that a highly useable five module setup comprising dual VCO, dual VCF, Dual VCA, Dual EG and S&H could cost in the region of £1500, but don't quote us! — Assistant Ed.), which isn't actually a lot more, per module, than when

they were new. But all is not lost: the occasional single module turns up in the most unlikely places, for ridiculous prices. How about a Roland 150 Ring Mod/Noise/S&H/LFO module for a tenner? True, at a boot sale last year. I've heard similar stories about finds in old music shops — but never seems to happen to me. Last year, in Belgium, I found a 172 sellotaped into a cardboard box; as soon as I showed an interest, the guy decided it was worth £250. But seriously, keep your eyes peeled: you never know what could be under that pile of old plates and socks.

ROLAND SYSTEM 100M

► a beautiful high end and a gut-rumbling low end, these VCFs sound incredibly rich and musical compared to most digitally generated filters. Use two in series, set to a different cut-off frequency, for an even deeper effect.

• 130 Dual VCA £175

Each VCA can be switched between linear and exponential modes for different amplitude curves and percussive effects when used with the EG. Each has an initial gain control, which also allows the VCAs to be used without a modulation input and as 3-channel audio mixers.

• 131 Output mixer/oscillator/Headphone Amp £175

This is a basic, 4-input audio mixer with a level and pan control for each channel. The separate stereo headphone output has its own level control. The tuning oscillator provides 22Hz, 440Hz, and 880Hz tones.

• 132 Dual CV/Audio Mixer & Voltage Processor £160

This useful module can be used for summing CVs from various sources and/or for audio mixing. Each half includes four sliders for level and an inverted output. Separate sliders are included for providing variable positive and negative voltage sources.

MAKING DO

Should you manage to get hold of a module but haven't a rack to power it, there is a solution. If you can handle a soldering iron, then something like the Maplin +/-15v (100ma) PSU should suffice (part number LP88V). You need to make up a lead with an 8-pin DIN plug (part number FJ91Y — see connections list below) at one end to supply the module. Warning! Don't attempt to connect a 100M module to anything other than a Roland rack unless you are confident that you won't damage the module with an incorrectly wired plug or PSU. Mistakes can be expensive.

System 100M 8-pin DIN plug connections are as follows:

- Pin 1 PSU +5v
- Pin 2 gate
- Pin 3 no pin
- Pin 4 LED +
- Pin 5 Trigger
- Pin 6 PSU -15v
- Pin 7 PSU ground
- Pin 8 CV
- Pin 9 LED ground

While we're on the subject, here are the connections for the 6-pin leads that link 100M racks to other racks or keyboards; use Maplin part number HH29G for the 6-pin plug. If you're linking racks, don't connect pins 1 and 2, but use all pins when connecting a 100M keyboard.

- Pin 1 PSU -15v
- Pin 2 PSU +15v
- Pin 3 gate
- Pin 4 trigger
- Pin 5 PSU ground
- Pin 6 CV

BRIEF GLOSSARY OF ACRONYMS

VCO: Voltage Controlled Oscillator	Release	dB: Decibels
VCF: Voltage Controlled Filter	S+H: Sample and Hold	DC: Direct Current
VCA: Voltage Controlled Amplifier	PWM: Pulse Width Modulation	V: Volts
CV: Control Voltage	HPF: High Pass Filter	Hz/kHz: Hertz and Kilohertz
RM: Ring Modulator	LED: Light Emitting Diode	EQ: Equaliser
EG: Envelope Generator	PSU: Power Supply Unit	EMS: UK Synth manufacturer
ADSR: Attack, Decay, Sustain,	DIN: Small multi-pin connector	ARP: US Synth manufacturer

• 140 Dual EG & LFO £180

This module provides two ADSR EGs and a single LFO (with five selectable waveforms). Add this module to the 110 module and a CV keyboard and you have all the elements of a basic synthesizer.

• 150 Ring Mod/Noise/S&H/LFO £180

A versatile module that provides full ring modulation and sample & hold facilities, white and pink noise generation, and an LFO (the same as featured in the 140 module). The 150 is great for random sequences or controlling the VCF cut-off frequency while synced to the 182 sequencer module, and the Ring Modulator is the obvious choice for making a racket.

• 165 Dual Portamento Controller £155

This is a basic module with two independent portamento (glide) control sections. Apart from CV control inputs, an MPX input is included for switching the portamento on/off from an MC8 or MC4 Microcomposer.

• 172 Audio Delay/Phaser/LFO/Gate Delay £210

Another versatile module that features a five-step phaser (with resonance control), 512-step 'bucket brigade' delay (also with resonance, for flanger effects), a gate delay (doubles as a pulse shifter) and an LFO. The gate delay can accept most types of signal (audio, gate or trigger pulses within a wide frequency range), which it reshapes and outputs as a 0-15V gate.

• 173 Signal Gate & Multiple Jacks £125

There are a total of 38 sockets on this module; it allows you to turn on or off audio or control signals patched between other modules, automating certain patch alterations.

• 174 Parametric EQ £155

This is a single-channel, four-band parametric EQ. Each band has level, bandwidth and frequency controls, plus a bypass switch.

• 182 Analogue Sequencer £200

This nifty little sequencer offers single-channel/16-step or dual channel/8-step operation. Add modules to increase the number of steps. A full range of controls make the 182 surprisingly versatile.

• 180 32-key Controller Keyboard, £210

• 181 49-key Controller Keyboard £275

• 184 4-note Polyphonic Keyboard £490

The basic 180 keyboard offers tuning and portamento knobs and a position transpose

switch. Connect directly to the 100M via a 6-pin DIN socket, or mini or standard jacks. The 181 adds an extra 17 keys, plus a centre-sprung bender control and a portamento on/off switch. The 184 is the best specified of the 100M keyboards, with an improved action. It has all the features of the 181 except for the 6-pin DIN socket, and adds an arpeggiator.

• 190 Three-Module Rack £155

• 191J Five-Module Rack £230

Originally, the racks came as self-assembly units. The only differences between the two racks, which contain power supplies and all the connectors, are the number of modules they hold and the 191J's front-panel 36-jack

THE M WORD

With the proliferation of MIDI-to-CV converters, from cheap single-channel units to sophisticated multi-channel types, it has never been easier to control older equipment over MIDI [for the lowdown on MIDI-CV conversion, see Tom Carpenter's article in SOS last month]. Models like Kenton's Pro 4 are ideal for use with modular systems. An alternative, but less sophisticated, route is to use a Roland TR626, TR707, TR727 or TR909 drum machine. All have a MIDI input and a trigger output that could be used to trigger a sequencer or EG.

patchbay. The front panel also featured two pairs of lined mini and standard jack sockets that are connected to two phono sockets at the rear. The sockets on the rear of the racks often get overlooked but can be very useful for linking signals to other racks and saving on patch cords.

MASTER PLAN

Looking through Roland catalogues, manuals and press releases over the years, I've uncovered various references to modules that, to my knowledge, never made it past the drawing board. Has anyone ever come across any of these modules, or prototypes?

111 VCO and VCF.

120 VCF and VCA.

141 Dual Envelope/Gate Delay/Inverter-Adder.

160 Computer Interface.

170 Pitch to Voltage Converter/Envelope Follower/Amp.

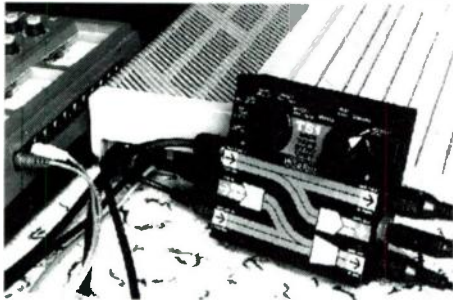
I'd really be interested to know if anyone has!

SOS

Talented tape sync unit

You can use the **TS1** to sync your MIDI sequencer to any decent tape machine. When you start, stop or shuttle your tape back and forth, **TS1** tells your sequencer to play in time, just as if your MIDI voices were extra tracks on the tape.

The **TS1** can generate and recognise the usual four SMPTE formats. The **TS1** will convert SMPTE to MIDI Time Code (MTC). Alternatively, you can use the **TS1** by way of Song Position Pointer/SRT format.



The **TS1** merges MIDI data received with its own sync data. You won't need to swap around the MIDI wiring, as **TS1** has four MIDI ports and automatic signal routing.

The **TS1** has a built-in mains power supply.

TS1 MIDI Tape Sync Unit £99.00

Amazing MIDI to CV



For an amazingly low price, the **Little MCV** lets your MIDI system control your analogue synths with their great sounds and friendly knobs.

This versatile interface unit can generate control voltages for the 'one volt per octave' (logarithmic) or the so-called 'volts per hertz' (linear) systems.

The gate output can be set to five volts positive, ten volts positive or S-trig.

High resolution sixteen-bit conversion allows accurate pitch across the full 128 note MIDI range with smooth modulation, pitchbend and portamento. The CV output also has a wide bipolar voltage swing and a tuning preset is provided.

The MIDI sustain commands are all correctly implemented. MIDI reception can be set to any channel, using the straightforward front panel rotary control.

There are MIDI IN, CV OUT and GATE OUT sockets. The mains power supply is built-in.

Little MCV MIDI to CV Converter.. £89.95

Smarter merge units

You can't combine MIDI signals by joining wires together, so you may need a merge unit - we make the best! The **2M** merges two sources, while the **3M** merges three.



These units both have built-in mains power supplies. They can handle all types of MIDI data, including Time Code and SysEx. Many automatic features enhance performance and convenience.

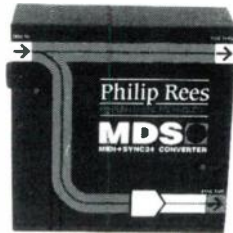
2M MIDI Merge Unit £69.95

3M MIDI Merge Unit £99.00

MIDI to DIN Sync box

When connected up via **MDS**, slave devices equipped with Sync24 ("DIN Sync") inputs should start, play in time, and stop automatically by remote control from your MIDI master equipment.

The unit is compact and contains an integral mains power supply.

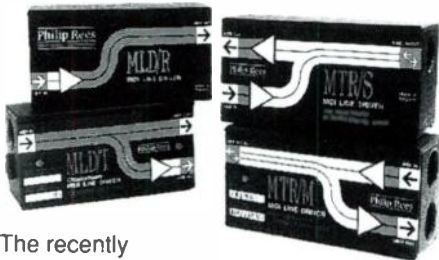


MDS MIDI to Sync24 Converter.. £69.95

MIDI line driver choice

Our MIDI line drivers overcome the 15m limit of standard MIDI hardware, by converting the signal to a differential (balanced) format.

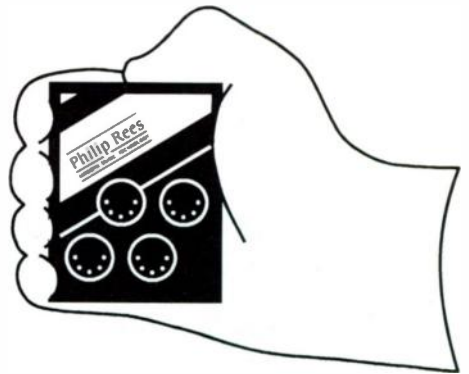
MLD has a range of 1km and consists of a pair of compact units. The mains-powered transmitter includes waveform restitution and has a Thru socket. The receiver is powered via the line and features a noise filter.



The recently introduced bidirectional **MTR** system has a range of 150m. It too consists of a pair of units. The first unit is the mains-powered master transceiver. The second unit is the phantom-powered slave transceiver.

MLD MIDI Line Driver £89.95

MTR MIDI Line Driver £99.00



Functional simplicity

Select a selector

These handy low cost switch-in-a-box gadgets solve many MIDI routing problems and avoid the inconvenience of recabling.



The **3B** is a novel changeover switch, which will let you bypass your computer or sequencer without moving cables.

2S MIDI Selector £11.95

5S MIDI Selector £29.95

3B MIDI Selector £29.95

9S MIDI Selector £39.95

Low cost thru units

Some MIDI gear may lack thru sockets. Chains of more than three MIDI devices can suffer from data corruption. You can solve these problems at low cost with Philip Rees' MIDI thru units.

The **V3** is a battery powered 1-into-3 thru box.

The **V4** has four outputs and is powered via its MIDI input.

The **V8**, which has two inputs and eight outputs, requires an external power source. The **V10** is a mains-powered 1-into-10 unit.

The mains-powered **W5** has independent source selection for each of its 5 outputs.

V3 MIDI Thru Unit £11.95

V4 MIDI Thru Unit £19.95

V8 MIDI Thru Unit £27.95

V10 MIDI Thru Unit £39.95

W5 Dual Input Thru Unit £55.95

Philip Rees
MODERN MUSIC TECHNOLOGY

All these products are made in England by Philip Rees. Prices are manufacturer's suggested selling prices including 17½% VAT, valid at the time of going to press.

All our products carry a credible UK manufacturer's five-year parts and labour guarantee.

Charlbury (01608) 811215
Fax (01608) 811227

Philip Rees, Unit 2, Clarendon Court
Park Street, Charlbury, OXFORD OX7 3PT



Pro 2 & Pro 4 MIDI-CV Interfaces

An unavoidable side-effect of the current vogue for pre-MIDI synths and drum machines is that all but the most Luddite amongst us will need some way to interface these instruments with the modern world. If there is one name that stands out in this field, it's Kenton Electronics. One of the longest-standing companies specialising in MIDI retrofits for pre-MIDI gear, Kenton also make a pair of popular stand-alone MIDI-CV interfaces, the 4-channel Pro 4 and the 2-channel Pro 2. These are just the thing if you want to quickly interface that Minimoog, Roland SH101 or Sequential Pro 1, for example — and SOS readers are in with a chance of doing just that, as both these interfaces are up for grabs in this month's exclusive competition.

The first prize winner will score a rack-mounting Pro 4. Take a look at the SOS review in September 1994, and you'll see that this unit offers much more than four channels of MIDI-CV conversion. Not only does each basic MIDI-CV channel offer Gate and Control Voltage, plus an additional trigger output, the unit also has eight assignable auxiliary CV outputs, controllable from virtually any MIDI controller, plus four freely assignable LFOs; add to that a Wasp interface, DCB interface, Sync 24 output, and a programmable trigger output, and you're looking at a comprehensively specified unit. In fact, it has the potential to control up to 10 antique



machines at once — not bad for a retail price of £446.50.

For another lucky reader, there's also a Kenton Pro 2 2-channel MIDI-CV interface to be won. This was Kenton's original model, offering a CV, Gate, S-Trig and two auxiliary CV outputs per channel, plus Sync 24 and a programmable clock output. It's compact, easy to use and at under £200 offers great value if you've only got one or two old synths hiding unused under your bed.

Kenton have also offered a Kenton Electronics T-shirt for an additional runner-up, so you have three chances to win. The only catch is answering a few simple questions and composing an entertaining tie-breaker — and make sure your entry reaches us no later than 12th May 1995.

Prizes kindly donated by Kenton Electronics (081 337 0333)

1. Only one entry per person is permitted.
2. Employees of SOS Publications Ltd, Kenton Electronics, 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 prizes 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 organizers wish to make a personal presentation.

the small print

QUESTIONS

1. How many built-in LFOs does the Pro 4 have?
 - a. 0
 - b. 1
 - c. 2
 - d. 4
2. Which of the following will the Pro 4 not interface with?
 - a. Internet
 - b. Moog
 - c. Roland
 - d. Sequential
3. What does CV stand for?
 - a. Constant Velocity
 - b. Constant Voltage
 - c. Control Voltage
 - d. Crazy Vegetables
4. What is a Gate signal for?
 - a. To tell the synth when to play
 - b. To tell the synth what note to play
 - c. To control a synth's filter cut-off level
 - d. To fill the hole in your fence at the bottom of your garden

(Tip: see the article all about MIDI-CV conversion in last month's SOS for some help with this if you need it.)

Name

Address

Daytime tel. no

TIE-BREAKER

If you can, try and amuse us with your reasons for deserving one of these most excellent prizes — no more than 20 words, please...

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Post your entry to: SOS Kenton Competition, Sound On Sound, Media House, Burrell Road, St Ives, Cambridgeshire PE17 4LE.

For further information
contact SCV London
6-24 Southgate Road
London N1 3JJ
Tel: 0171 923 1892
Fax: 0171 241 3644

FOSTEX

F

ostex. The name synonymous with high quality audio recording. Be it 4 track cassette, timecode-linked digital multitrack, analogue multitrack or professional DAT.

All have the level of design, understanding and manufacturing integrity required to be the market leader.

Take for example the G24S 24 track analogue multitrack. Equipped with Dolby S and utilising a 1" format, this high-spec machine delivers a sound so pure, yet so warm it's found its home in many a professional studio; often replacing an outdated 2" and complementing a digital set-up.

Or the RD-8 timecode ADAT. The 2nd generation ADAT that has all the sync options built-in.

Both, along with the D-30 broadcast DAT player and a multitracker range headed by the award winning 380S, represent the finest recording audio in the business.

Recording Audio



Exclusively distributed
by SCV London

DACS

OUR TOP PERFORMERS

Easy, reliable interconnection of MIDI devices. Virtually silent gain to optimum levels. Crystal clear, adaptable and loud headphone monitoring systems. All at the right price. These were our targets. We have reached them. Optimise your studio, or stage rig with DACS' Top Performers

For further information on these and our full range of products and services please call us on
(44 191) 0191 438 5585,
fax us on
(44 191) 0191 438 5585,
or write to us at
Stonebills, Shields Road, Pelaw,
Gateshead,
Tyne and Wear.
NE10 0HW. ENGLAND

The MIDI Patch Bay: 10 MIDI Devices interconnected

This unique product has been actively solving musicians' MIDI interconnection problems for years. Drawing its power from MIDI, the bay features full and half normalising and a very fast MIDI THRU.

Direct Injection Units

8 channel Professional Unit: A mains powered, 1U rack mount unit, it gives a line level balanced output on XLR connectors (rear panel). Variable gain inputs, which can be from guitars, keyboards, line level or speaker level outputs, are on the front panel. Suitable for studio and stage.

2 channel unbalanced unit: This has two channels with variable gain up to 20dB. Each has one input and two outputs. It will accept inputs as above.

Interface

A modular system offering interfacing between -10dBV and +4dBm, balanced or unbalanced, this unit will interface low level multi-track tape recorders to line level desks and outboard equipment

HeadMaster Headphone Monitoring Systems

A complete headphone monitoring solution, from the simple to the sophisticated. Let us supply you with a system to match your requirements and your budget. Call or fax now.

Digital Processing & Direct to Disk Recording System for Mac and PC

Among others, we can offer GRM Tools for the Mac from the Institut National de l'Audivisuel, as well as Digital Music's Dream Machine™ and the Composers Desktop Project for the PC. Call us for details of what's happening at the forefront of software audio processing.

OTHER PRODUCTS
We specialise in custom built items to your specification, because of this specialisation our prices are highly competitive. All the above can be customised, and we also make microphone pre-amplifiers, distribution amplifiers, intercoms, audio and digital audio switching and routing, ring modulators

SUBSCRIBE & SAVE MONEY!

Subscribe to Sound On Sound now and beat the price rise!!!

This month you can save 15% on the UK newsagent price of your favourite hi-tech magazine and avoid that gruelling trek to the shops



An annual subscription to *Sound On Sound* will ensure you never miss a single copy of your favourite hi-tech music recording monthly when your local newsagent sells out (and they regularly do!). For less than the price of 12 issues of the magazine, UK subscribers can now have *Sound On Sound* delivered to the door — post free.



SPECIAL OFFERS

As a valued subscriber to *Sound On Sound*, you will become eligible for the many Special Offers and Prize Draws we have planned for 1995/96. Just fill out the subscription form below, include your Cheque, Postal Order, Credit Card or Switch Card details and post it to us. Your unique subscription number will then be automatically entered into all future Subscription Prize Draws and you will receive a **10% discount** off any books purchased from SOS Mail Order during your subscription period (always quote your sub number when ordering).

SUBSCRIPTION RATES

UK	12 issues	£ 30.00
Europe (airmail)	12 issues	£ 45.00
World (airmail)	12 issues	£ 55.00

NAME: _____  

ADDRESS: _____  

(UK subscribers must include their full postcode)
POSTCODE: _____ Switch Issue No. _____

SIGNATURE: _____ Card Expiry Date _____ Card No. _____

Post to: **SOS Subscriptions Offer, Media House, Burrell Road, St. Ives, Cambridgeshire, PE17 4LE, England.**

MEMS '95

THE MIDI, ELECTRONIC MUSIC & RECORDING SHOW

21st-23rd April 1995

Olympia 2, London

Sponsored by
FUTUREMUSIC

NEW VENUE!
MEMS now
at Olympia 2
London

SEMINAR PROGRAMME - FREE ENTRY FOR ALL SHOW VISITORS

Top industry gurus will be giving the low down on new products and offering tips and advice about recording, mixing, sampling and much more.

KIT OUT!

- Find out how to seriously upgrade your set-up. World of MIDI session musicians Peter Stone **Keyboards**, Gary O'Toole **Electronic percussion** and Nick Cooper **Guitar** will be showing off some of the very latest technology.
- Keyboards - Long hard looks at the Yamaha W7, Roland XP50 and Korg's latest products.
- The hit of NAMM Show - the VG-8 V-Guitar - gets its own programming workshop.

HAVE YOUR SAY

- You get to grill the hardware manufacturers and software writers.
- Daily Q&A session for Steinberg users.
- Music technology in the classroom with Alistair Jones.

- Everything you could possibly need to know about sampling with Nick Magnus **producer/composer** and Alex Hazzard **DJ**.

RECORDING BUFFS

- Chas Smith demonstrating the power of 48 channel recording & digital mixing with Pro Tools
- Chas will also be looking at CD mastering with Jim Corbett.
- Live recording forum covering acoustics to mic-ing - recording media to producing a demo.

PLUS

- Daily doses of synth mania featuring artists from AMP Records.
- Jo Ortiz gives the low down on how to produce a great MIDI File.
- Sara Raybould demos the E-Series Intelligent Keyboards.
- Making music on the PC, Apple Mac and Atari.

Try out the
LATEST KIT
from
the **TOP**
COMPANIES

BUY YOUR
FIRST SET-UP

Upgrade or replace
your kit from the
many dealers at
the show.

Priority Order Form

Please specify the day you are most likely to attend

Friday 21st April Saturday 22nd April Sunday 23rd April

Please reserve the following tickets for me:

Ticket Prices	On the door	In advance	Number Rqr	Total £
Adult	£8	£5	<input type="text"/>	<input type="text"/>
GROUP BOOKING OFFER (10 or more people - £4.50 each)				<input type="text"/>

TOTAL £

Tick method of payment:

- Cheque (Please make payable to "MEMS")
 Postal order Visa Access
(payment not banked until tickets are dispatched)

Credit card number

Expiry date

Please fill in this coupon in block capitals

Name

Address

Post code

Telephone

Signature

Date

Please tick if you do not wish to receive direct mail from other companies

CODE: SoS

Please return form and your payment to:

MEMS, PO Box 9, Dunoon, Argyll, PA23 8QQ

Please note that your tickets will be sent to you eight weeks before the show.

TICKET **H**OTLINE
01369 707888

READER ADS



HOW TO BOOK YOUR READER ADS

Fill in the form below, up to 28 words (one per box) and post to:

Reader Ads, Sound On Sound, Media House, Burrel Road, St Ives, Cambs PE17 4LE
Your ad will appear in the next available issue after receipt.

PLEASE NOTE

We are inundated with Reader 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 Hotline on 0480 461786 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 Reader Ads. This costs a mere 65 pence per word (inc. VAT), and the minimum number of words is 12 (£7.80 in total). Please specify which magazine(s) you wish your advertisement to appear in (ie. *Sound On Sound* or *Audio Media*).

 0480 461244 (office hours) 0480 461786 (24 hr answerphone) 

READER ADS PHONE LINE

0891 424024

Call in your Reader Ads on our special telephone line. It's quick, convenient and easy to use; all you need do is follow these simple instructions:

- Fill in the form below so that you know what to say and don't waste time on the phone line.
- Dial our Reader Ads number **0891 424024**
- You'll be asked for your name, address, and telephone number.
- Then you'll be asked which Classification you want for your ad — from the same categories as printed on our form below.
- Wait for the prompt, then read out your ad, as clearly as you can, spelling any technical words.
- Your details will be played back to you and you'll have the opportunity to correct any mistakes.

Your advertisement will then appear in the next available issue of *Sound On Sound*. Calls are charged at 39p per minute cheap rate, 49p per minute standard rate.

Livewire Communications Ltd CB2 5LR

If you prefer, you may post us your Reader Ad. Fill in the form below (up to 28 words, one per box) and send to:
Reader Ads, Sound On Sound, Media House, Burrel Road, St Ives, Cambs PE17 4LE.

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.

PLEASE NOTE

Please indicate which one classification you would like your ad to appear in.

- KEYBOARDS SAMPLERS DRUM MACHINES WANTED MISCELLANEOUS
 SEQUENCERS RECORDING PERSONNEL COMPUTERS/SOFTWARE

NAME _____ ADDRESS _____

Reader Ads will only be accepted if the name and address details are completed.

KEYBOARDS

AKAI MX1000 master keyboard, 4 zones, weighted keys, 6 weeks old, full warranty, £950; Emu Performance piano, £185, may p/ex T1 or 01W Pro-X. 01332 841719.

ALESIS QUADRASYNTH boxed, mint, £750. 01787 281925.

ARP AXXE £150; Roland TB303, £400; SH101, £200; MC202, £250; MKS30 inc PG200, £400; MGS1, £40; Korg KMS30, £100; Kenton Pro2, £130; Cubase V3 (ST), £200. 01226 206767.

ARP ODYSSEY MKI grey/white case, model 2800 (1972), factory gate/CV fitted (kit no 68001C1), regularly serviced and in vgc, recently calibrated, full owners manual and service notes, offers over £500. Contact: Paul Mahoney, 61 Hebden Rd., Haworth, BD22 8RQ.

BARRATT & ROBINSON upright acoustic piano. Pre-MIDI, 1-part multitimbral, 88-note polyphonic, hammer action weighted keys, £650. Martin 01223 562150 (eves); 01223 845588 (days).

BECHSTEIN GRAND PIANO, rosewood case, elegant twin legs, superb tone, musicians dream, £3995. 01702 466991, days (Brighton area).

CARLSBRO COBRA 90 keyboard amp, 100 watt combination amp and speaker, 3 channels, 2 inputs per channel, reverb, FX send/return, FX footswitch, £150. 0121 449 8433.

CASIO CS10P MIDI piano module, excellent condition, genuine bargain, £45. 0121 554 4441.

CASIO CZ1000 plus cart and manuals, £99, bargain; Gem S2, reads S1000 disks, £1000; QR10 music accompaniment, £95; Pro 24 software, £20. 01628 785460.

CASIO CZ3000 multitimbral synth, fat analogue sounds, with portamento, glide and stereo chorus, vgc with patch books, £200 or swap for 101, 202, Pro-one, or similar. 0171 241 3028.

CASIO CZ3000 and Roland D110, home use only, manuals included, £195 each or £375 for both. 0181 304 9673.

CASIO CZ3000 multitimbral synth, bargain at £100. 01708 458785 or 01585 204875.

CASIO CZ3000, 16-note poly, MIDI, multitimbral, 32 presets, 32 programmable, stereo chorus. Superb non-standard sounds, £210. Vgc, boxed, with manuals. 01223 845588 (days).

CASIO CZ5000 MIDI synth, 61 keys, 16 note poly, 8-track sequencer plus disk, £235. 01787 351230 after 6pm.

CASIO CZ5000, manual, ST editor/voices, £225; Yamaha DD11 8 MIDI pads with drumsticks, manual, PSU, £80; RX21, £50; D50 ROM £25. 0181 644 9745.

CHEETAH MS6 and Jen SX1000, both most definitely produce analogue sounds, offers around £160 and £90. 01203 641666.

CONTROL SYNTHESIS DEEP BASS 9 less than 2 months old, £375; Roland RS09, £50. 0113 263 3179.

CRUMAR TRILOGY organ/strings, synth needs attention, offers. 01767 627341.

EMU PROTEUS 2 £350; Moog Liberation, £350; Akai 2Mb board for 3000 series, £80. 01902 744632.

EMU PROTEUS FX synth module,

new, boxed, £495. 01227 361466 (Kent).

EMU VINTAGE KEYS fitted with expander, £800 ono; Ensoniq ESQ1 synth, £500 ono Both in excellent condition. 01424 732322.

ENSONIQ ESQ1 polyphonic synthesizer with 28000-note sequencer, comes with metal flight case, £325 ono, buyer collects. 0171 486 3854 eves. (Sutton area).

ENSONIQ ESQ1, in excellent condition with manual and flightcase, £400 ono, EVS1 with editor, £150; wanted: Jupiter 6, library for S760 or S3 Turbo. 01302 864877 (will divert to pager).

ENSONIQ SQ1+ workstation, 16-track sequencer, including pedal and manual, home use only, excellent condition, £500. 01532 631210.

ENSONIQ SQR+ module, hundreds of very usable keyboard and drum sounds, immaculate condition, £499 ono. 0181 958 7642 days or 0850 062010.

ENSONIQ TS12 keyboard, 6 months old, home use only, excellent condition, £1400 ono. 0902 603957 after 6pm.

ENSONIQ VFX SD, superb condition, £650 ono Organic Sounds? This is the one for you! 0131 346 2342.

ENSONIQ VFX SDII, includes mega piano waves, manuals, pedal, lots of sounds on disk, as new, £700. 01902 723606 (Midlands).

ENSONIQ VFX SDII expressive synth, 24-track sequencer, excellent condition, boxed, offers. 01223 350281.

ENSONIQ VFX SDII workstation, excellent condition, all manuals and disks, £550; Sequential Prophet 2000 digital sampling keyboard, resonant filters, original 256K version, manual, £250. 01483 66106 (Guildford).

GEM WS2 Keyboard, £500; Yamaha EMT10, £90; Atari 1040STE, mouse and monitor, £150; Formula sound system 2000 11 channel mixer, £2200, vgc. 0181 881 7663.

GEM WS2 keyboard, £500; Yamaha EMT10 module, £90; Atari 1040STE, mouse and monitor, £150; Formula sound system 2000 11-channel mixer, £2200, vgc. 0181 881 7663.

KAWAI K1, excellent condition with manuals and PSU, £250. 01308 456 945 eves.

KAWAI K1 MK II synthesizer, immaculate, still boxed, with Cheetah mother keyboard and 2-tier stand and leads, £275 ono. 01222 540121.

KORG DELTA 1982 polyphonic string synthesizer with good sounds combinations, £175 ono. 01242 574060 (Gloucs).

KORG M1 with manual, flight case, immac., £725; Roland TR505, boxed, manual, £85. 01473 692875.

KORG M1 workstation, with box and manual, excellent condition, £600; £ 01255 837379.

KORG M1, boxed with manuals, excellent condition, nerver gigged, £650 ono. 01788 537558 after 6pm (Rugby).

KORG M1 with manual, flight case, immaculate, £725; Roland TR505, boxed, manual, £85. 01473 692875.

KORG M1 plus Patchmeister universal librarian, hundreds of extra voices, editing/programming books by Alexander Publishing, hard case, manual, £695. 01752 401914 (Plymouth).

KORG M1 plus card sets, £650; Korg S3 drum machine plus cards,

£150; Yamaha QY20, £250, all manuals, home use only, Mac interface 1/3, £25. **▀** Steven 0131 337 6158.

KORG M1R EX rack module of famous M1 keyboard but with 8Mb of samples, double the normal M1. Must Sell, offers **▀** 01273 462423 (Brighton).

KORG M3R, superb sound module in excellent condition and including piano and orchestral expansion cards, £325. **▀** 0181 505 8864.

KORG M3R rackmount synthesizer with RE1 remote editor, mint, £400 ono. **▀** Matt 0121 449 6593.

KORG MS10 analogue synth, with patch leads, in very good condition, £160. **▀** 0181 543 2027.

KORG MS20 monosynth, immaculate condition, £300; Steinberg Avalon V2, never used, £100. **▀** Tony 01207 590994.

KORG POLY80vgc, £140 ono. **▀** 0371 870516.

KORG 01/W, immaculate condition, never gigged, £800 ono. **▀** Nick 0242 672058.

KORG 01/W FD the ultimate in workstations, home use only, absolutely brand new condition, boxed with all manuals, £1050 ono. **▀** 01952 260064 (Telford).

KORG 01/W FD music workstation, 200 presets, 200 combinations, 16-part multitimbral, new disk drive and software upgrade fitted by Korg 2 months ago, very good condition, £1100. **▀** Jason 01394 271771.

KORG 01/W FD, Roland JD800 and JD990, pristine condition, boxed and manuals. Serious offers please. **▀** Steve 01274 618911 days, 01909 561169 eves.

KORG 01/W FD loaded with 400 progs/400 combis, extra sounds on disk, supports SMF, home use only, boxed, manual, £950, no offers. **▀** 01299 404977 anytime.

KORG 05R/W with editor and manager, 3000 sounds, £350 or swaps. **▀** 01246 822613.

KORG 05R/W as new, reluctant sale, £500 no offers, or swap for similar priced sampler. **▀** Guy 01374 802500 anytime.

KORG POLY 80, vgc, £140 ono. **▀** 01371 870516.

KORG T3 EX, reads samples, built-in sample option + case, sounds, sustain, stand, home use only with manuals, £1000 ono. **▀** 0171 4316733 after 5pm.

KORG WAVESTATION with 2 RAM cards and PCM & data card set with manuals, £750. **▀** 01773 745275.

KORG WAVESTATION SR, excellent condition, boxed, £575; Korg 01R/W, excellent condition, boxed, £700; Oktava condenser microphone, hardly used, £200; nearly new studio monitors, 240W per channel, £275. **▀** Nick 01273 208099.

KORG WAVESTATION with 2 RAM cards and PCM & data card set with manuals, £750. **▀** 01773 745275.

KORG WAVESTATION, immaculate with box and manuals, plus two-tier Quicklok stand, £750 ono. **▀** Malcolm 0191 5654334.

KORG WAVESTATION EX, immaculate condition, home use only, complete with 4 program cards and stand, boxed with all manuals, the ultimate keyboard, only £999 ovo. **▀** 01952 260064 (Telford).

KORG WAVESTATION SR plus Atari editor and 20 sound banks, £700; Korg RE1 remote editor, works with M3R, O3R, Wavedrum, etc, £120, Microwave ROM cards, £25 each. **▀** 0151 526 2178.

KORG X3, 5 months old, £900 with extra sounds. **▀** Paul 0380 830828.

MELLOTRON 400D, Ex-Wakeman, needs extensive service, two tape banks (cased). Offers, cash, exchange considered, stored in England. Write to Mike Stone, Edificio L'Acacia 5k, La Massana, Principality of Andorra.

MEMORYMOOG PLUS analogue synthesizer with Kenton MIDI kit fitted for velocity/aftertouch control, pedals, manuals, circuit diagrams and flightcase, immaculate, very rare, £1750. **▀** Simon 0161 761 7165.

MOOG ROGUE, good condition, £150. **▀** Marcus 01733 342771.

NOVATION BASS STATION, as new, hardly used, boxed, manuals, PSU, MIDI and audio leads, £290 ono. **▀** James 01243 532256.

OCTAVE CAT rare analogue synth, great condition, more knobs than the houses of parliament, collector's item, reluctant sale, £350 ono. **▀** Sean 01371 876625.

PEAVEY DPMC8 MIDI keyboard controller, 88 key piano action, disk drive, plus stand, home use only, £900. **▀** John 0191 272 0155 (Newcastle).

RHODES 660 keyboard, £200; Kawai PHM module, £100; Roland PR100 sequencer, £100; Yamaha TG55 tone generator, £200; AKG D160 studio microphone, £40; Cards for above, £20 each. **▀** 01903 753893.

ROLAND ANALOGUE OLDIES: 909, 303, 106, MKS80 plus programmer, SH2, Korg MS20. Also Elll plus sounds. **▀** Mark 0171 221 7118.

ROLAND CM64 sound module. A U110 and an MT32 all in one unit, with editing software, £260. **▀** 01702 616961.

ROLAND D5 £300, Roland U110 plus 4 cards, £300; Fostex X28 four-track recorder, £225; Hohner professional guitar, £225. All in very good condition. **▀** Jonathan 01978 757233 eves.

ROLAND D10, over 500 dance/techno sounds, excellent condition, £375; CheetaH SX16 sampler, excellent condition, £400. **▀** Colin 01733 578531 (Cams).

ROLAND D20, superb workstation, fully editable sounds, using LA synthesis, owned from new, not a scratch, immaculate condition, manuals, disks, excellent sequencer, drive etc, only £600 ono. **▀** 0121 421 5095.

ROLAND D20 workstation, immaculate condition, never been gigged, complete with all manuals, £450 ono. **▀** Andrew 01874 625451.

ROLAND D50 synth, Atari editor, ROM, manual, £500; M-EX multitimbral board for D50, £150; Yamaha QY10, boxed, £100; Roland RS09 analogue strings organ, £100. **▀** 01296 81379.

ROLAND D50, 4 sound cards, as new, £550; Oberheim Matrix 6R analogue expander, fully programmable, MIDI, as new, £525; Roland Jupiter 6, £650; Yamaha QY10, £80. **▀** 01268 525347.

ROLAND D50 with 'best of' card, £450, CheetaH MS6 analogue module, £200; Tascam MM1 20:2 mixer, £450; Graphic EQ, 15-band stereo, £100. **▀** 01639 899461 (South Wales).

ROLAND D70 LA synth, 76-note keyboard, mint condition, box, manuals; Roland JX10 super synth, 76-note keyboard, mint condition, box, manuals, sensible offers. **▀** Dave 01626 873709 (Devon).

ROLAND D110 with manual, £195; Roland JV80 with PCM card, £695, no offers. **▀** 01773 745275.

ROLAND D110 multitimbral keyboard expander, includes loads

of extra sounds plus editors, mint, £250 ono. **▀** 0113 2787180 (Leeds), can deliver.

ROLAND D110 with RAM card, £250. **▀** Zio 01923 461097.

ROLAND D110 module with manuals, £277; Roland U220 module with manuals, £281. **▀** Rob 0403 268187 (Horsham, Sussex).

ROLAND DIGITAL keyboard, 76 unweighted keys, 8 quality voices including piano, strings, with built-in monitor speakers and stand, Kawai drum machine, both, £600 ono. **▀** 01332 297434 (Derby).

ROLAND E5 multitimbral LA synth with automatic backing, vgc, £200. No offers. **▀** 01923 770357 (Watford).

ROLAND JD990 £800, Kurzweil Pro 76, £800; Alessis Quadraverb+, £240; Alessis Midiverb III, £220, 16U flightcased Pro rack, £150. **▀** Paul 01480 391613.

ROLAND JUNO 60, great analogue sounds, hardly ever used, in great condition, and with original manuals, £350 ono. **▀** Pat 01534 30822 after 5pm.

ROLAND JUNO 60 great analogue sounds, hardly used, in great condition, with original manuals, £350 ono. **▀** Pat 0534 30822 after 5pm.

ROLAND JUNO 60, Roland MD8 converts Juno to MIDI, TR606 drum machine, Juno 6, SH101, SH09, MC202, Jen SX1000, Siel mono synth, YAMC55 for sale. **▀** 051 449 1855.

ROLAND JUNO 60 keyboard, excellent condition, with case, £350 ono. **▀** Dave or Steve 01228 23451 or 01228 37525.

ROLAND JUNO 60, mint, £280, swap for Roland R8, R70, TR909, Bass Station, DX7, Oscar. Other swaps considered. Contact Keith, Flat 2, 20 Alhambra Road, Southsea, Hants. PO4 0RL.

ROLAND JUNO 106 de luxe (HS60), with amp and speakers built in, full MIDI, excellent condition, comes with f/case and manual, £375. **▀** 01202 741653 or 765841 (Bournemouth).

ROLAND JUNO 106, excellent condition, complete with manuals, £350 ono. **▀** Carl 01443 755195 eves; 01222 866555.

ROLAND JV80, mint condition, £750; Korg M3R with Atari editor, £325, both with manuals and box. **▀** 01302 832420.

ROLAND JV880 boxed, manuals, home use only, £400 ono. **▀** Phil 01245 267572.

ROLAND JV880, multitimbral synth module, quality sounds, 28-voice polyphonic, £375. **▀** 0151 734 0016.

ROLAND JV1080 £950; Yamaha SY85, £790, Tascam 488, £780, Sony DTC690 DAT, £435; Boss SE70, £425; Phonic PCL3200, £160. All excellent condition. **▀** Paul 01255 424665.

ROLAND JX1 synth, as new, excellent controller keyboard, sale due to cashflow problem, £200. **▀** Gary 0428 684843.

ROLAND JX3P, 6-note poly, MIDI, 2 oscillators, 32 presets, 32 programmable, stereo chorus. Great for huge pads and scary basslines, £270; hi-fi amp and speakers, great for keyboards, £50 (£300 the lot). **▀** Martin 01223 562150 (eves); 01223 845588 (days).

ROLAND JX10 SUPER JX, a classic, Roland's last true analogue synth, capable of thundering deep bass, rich analogue strings and acid bleeps. 76-note keyboard, 12 oscillators, MIDI equipped, with manual, very good condition, £625 Rare PG800 hardware programmer for JX10 (also

programs JX8P/MKS70), £300. Both for £800. **▀** 01354 695239. Buyer collects.

ROLAND MKS70 module with PG800 editor, three RAMs, three ROMs, £800 as new; Yamaha TG500 module as new, £575. **▀** Steve 01207 270759 (Answerphone).

ROLAND MKS7 4-part MIDI rackmount analogue sound module, £350. **▀** 01243 830697.

ROLAND MT32 multitimbral sound module, good condition with psu and Dr T editor for ST, £150 ono. **▀** Roy 01788 537558 after 6pm (Rugby).

ROLAND PC150 MIDI keyboard controller, good condition, hardly used, boxed, manuals, £60, Akai S01 sampler, brilliant condition, upgraded with manuals and box, £550. **▀** 081 904 1835.

ROLAND PRO-E Intelligent Arranger, 37-note polyphonic keyboard plus sound effects. Immaculate condition, boxed with manuals, £450 ono. **▀** John 01473 741504.

ROLAND RHODES VK1000 Drawbar keyboard, GM-MIDI controller, 6-octave organ synth, vibes, electric piano, Leslie, compact "B3" sound, inc case, mint. £550. **▀** 0322 430880 (Erith).

ROLAND S10 sampler, disks, manual, PSU, immaculate, £285; Casio CZ5000, little used, £245; Neither gigged. Mordant Short MS5 10 (Positech) speakers, perfect, £75. Wanted: Philips NA520 reel to reel. **▀** 0825 712221.

ROLAND SH101 analogue synth, £190; Yamaha TG100 tone module, £230; Kawai K1 keyboard, £220. All in vgc, boxed with manuals. **▀** 01268 492740.

ROLAND SH101, £250. **▀** Robin 01703 330442.

ROLAND SH101 plus Kenton Pro 2 MIDI/CV converter, £350 or swap for Novation bass station. **▀** Colin 01733 578531 (Cams).

ROLAND SH101, classic analogue monosynth, serviced and in mint condition, power supply, owner's manual and service notes, £200. Contact: Paul Mahoney, 61 Hebden Road, Haworth, W. Yorks. BD22 8RQ.

ROLAND SH101, mint condition, boxed with manual, £200; Roland MC202 Microcomposer/sequencer and analogue synth in one, mint condition, boxed with manual, £200. **▀** Stephen 01355 238991.

ROLAND SH101, boxed, manuals, excellent condition, £190 ono; Roland R5 drum machine, excellent condition, £140 ono. Both home use only. **▀** 0161 445 2474.

ROLAND SH09 classic monosynth, mint, £200 or swap for CheetaH MS6, Korg MS20, Steinberg PC1 and Voyetra V22 PC MIDI Cards, swap for Cubase V2 (Atari) or why. **▀** Chris 01235 534152.

ROLAND U20, excellent condition, with manuals, RAM card & 5 Star case, offers? Chipe Bit 1, replacement Curtis chip required. Anyone know of spares? Wanted; Matrix 1000. **▀** John 01843 228038.

ROLAND U110 multitimbral sample player, includes 4 extra sound cards, hundreds of sounds/samples, mint. **▀** 0113 2787180 (Leeds) can deliver.

ROLAND U110 with 1 sound card, good condition, £225, possibly delivered. **▀** David 01708 458785 or 01585 204875.

ROLAND U220 £300; Yamaha TX7 £180; Alessis D4, £225. **▀** 01923 461097.

ROLAND U220 sound module, boxed, manuals, £300 or GM swap; MQuest PC interface card, £40. **▀**

Jon 01522 750846.

ROLAND U220 sample-based module plus 2 cards, Roland Octapad, DEP3 multi effects, Yamaha TX802, plus RAM5 cartridge and 1000 sounds on disk, all mint, offers. **▀** 01202 581141.

SEQUENTIAL PRO 1, £250, Roland U20, with sound card, £375; Roland MT32, £100 with extra sounds, Cubase lite (Atari), £50 (Brand new) all vgc. **▀** Geoff 01702 78224.

SEQUENTIAL PROPHET 5 V1, no MIDI, mint, £900, Atari 1040 ST plus monitor, £280, Jupiter 6, mint, £850; Korg piano PCM card and ROM. **▀** Steve 0181 868 9527.

SEQUENTIAL PROPHET 5 Rev2, in excellent condition, analogue keyboard, £850. **▀** Gary 01942 261194/670038.

SEQUENTIAL PROPHET 10, equivalent to two Prophet 5s, two keyboards, analogue sequencer, loads of knobs, excellent condition, flightcased, very rare, serious offers only. **▀** 0113 274 5026.

SIEL CRUISE classic poly mono keyboard, some great '80s style sounds, £180. **▀** Den 01484 643160.

SOLINA STRING ENSEMBLE, the best string synth ever, £125, Simmons TM1 MIDI trigger unit, boxed, excellent condition, £60. **▀** 0202 741653 or 765841.

SWAP EV51 synth, Roland MPU401 Interface, Trax 2.0 software, all IBM compatible, complete kit for some keyboard, VHF computing or other electronics. What have you? **▀** 01330 822110.

TECHNICS KN2000 keyboard, as new, boxed with manuals, £1500 ono. **▀** 01327 71568.

YAMAHA CP80 electric grand plus powered speakers, £700; Yamaha KM802 mixer, £55; Yamaha F801, £90, Notator Logic for ST, £200; CheetaH drum machine, £120; TEAC CX310 cassette deck, £140; Tascam Porta 05, £165. All prices ono. **▀** Andy 01933 50491.

YAMAHA CS01 analogue synth, full breath control support, plus pitch bend and modulation wheels, £50. **▀** 01392 51552.

YAMAHA C55 analogue synthesiser, perfect working order, excellent condition, original manual, no more timewasters please (why bother?) for this genuine bargain at £125. **▀** Jon 01952 260064 (Telford).

YAMAHA DX1, rare collectors item, never gigged. Flightcase, ROMs and manuals, excellent condition, £1200, though may part ex or swap something interesting. **▀** John 0252 723553 eves and weekends.

YAMAHA DX7 1 RAM, 3 ROMs, Atari editor/librarian, 2000 sounds, classic FM, vgc. £280 ono; Yamaha mixer + patchbay, £50; Steinberg Pro24 V3 sequencer and manual, £25 ono. **▀** Steve 01270 820393.

YAMAHA DX11, £250; Soundtech ST500CL compressor, £140. All vgc. **▀** Mark 01747 854406 or 0113 2753999.

YAMAHA DX7II D with voice carts, £400; TX81Z FM synth module, £150. **▀** Gary 01904 784353 (York).

YAMAHA KX88 master keyboard, 88 fully weighted keys, pedal and manual, excellent condition, with or without flight case, £700. **▀** 01204 365543.

YAMAHA PFP100 Clavinova piano, excellent sounds, MIDI keyboard, split facility, internal effects, excellent condition, full flightcase, £1400. **▀** Charles 0181 675 4204.

YAMAHA PRR510 as new, £399, Yamaha PSS51, as new, £140. **▀**

EUROPE'S LOWEST



turnkey

We are authorized agents for every major brand, and as such, we can offer an unbiased and objective assessment of products from an end users point of view having worked with the product ourselves. Our breadth of product coverage from MIDI to tape makes us the number one package specialist and our system based approach pleases us to supplying you with a working solution to include all the necessary accessories and peripherals right down to installation and training in your studio if you wish.

Although our product range is probably Europe's widest under one roof - having fifteen full time demonstrators enables us to train them in depth on particular products. You've probably dealt with stores who know little about what they sell but we're confident that if you have a question or a problem with your equipment, we will have someone 'in house' who will have the answer. We will never tell you to 'ring the manufacturer'.

We are now the U.K.'s largest music dealer for most of the products we sell (ask the manufacturers). In practice this means that our prices are the cheapest, often by a substantial margin. More importantly our products are backed up by a staff of over 25 experienced engineers, on hand long hours to provide a quality of after sales service that stems from almost 40 years serving Britain's leading music professionals. Put simply we understand that the equipment you purchase from us is used to produce music, often in a commercial situation, and our first priority is to keep you working at all times.

PART EXCHANGE
We realise that it is often necessary to sell your old gear before buying new gear. At Turnkey, we aim to make this process as trouble-free as possible. Our trade-in prices are around the best you'll get from a music store and we operate a "nothing legal refused" policy in store. For a no nonsense offer, simply bring in your equipment and we'll do the rest!

OUR UNIQUE SERVICES
24 HOUR COURIER NEW PRODUCTS FIRST
0% FINANCE £ PRICE SMASH™
VAT FREE EXPORTS @ INTERNET LINK-UP

The UK 4 TRACK Centre

It is fair to say that Turnkey is the birth place of personal multitrack, indeed the company and its founders were instrumental in the development of the first Japanese products of the early 80s. The philosophy was always to use innovative technology to bring multitrack within the realms of the musician. Our current catalog is still the definitive guide to the subject - comparing all the current machines. Call us for a copy

Our famous 4 track pack includes everything you need to start making music. Auto Tachtra headphones, microphone with cable, chrome tapes, cables, head-cleaning kit and the best book we've yet seen on multitrack recording, making you through basic track laying, midweek 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 £50.95) absolutely free with the units featured herein

NEW Fostex X28H + 4 track pack £419
NEW Fostex 380S + 4 track pack £469
NEW Tascam 424 + 4 track pack £999
NEW Tascam 488 + 4 track pack £1029
NEW Yamaha MT8X + 4 track pack

FOSTEX 280
NEW BOXED £619
8 inputs, 3 band mid-sweep EQ, Dolby C, 2 auxiliaries, digital counter with 2 programmable locate points, controllable from Cubase etc. via MT-C1 +MMC. RRP £629

EFFECTS

APHEX TYPE C2 £199

EX DEMO - 2ND HAND - 1ST SECOND	EX DEMO - 2ND HAND - 1ST SECOND	EX DEMO - 2ND HAND - 1ST SECOND	
ART Alpha 28E £290	Digitech VHM51 POA	ART Multiverb LT £136	Digitech TSR24 stock
Alesis Quadverb GT £385	Digitech T8R12 stock	Alesis Quadverb £275	Drawmer LX20new £209
Alesis Quadverb2 £749	Drawmer DS201 £299	Alesis 3830 £199	Ensoniq DP14 £989
Alesis MEQ230 £219	Lexicon LXP1 & 5 £349	Alesis Microverb3 £199	Lexicon PCM480 POA
Alesis MIDverb3 £199	Phone Comp new £199	Aphex C II new £248	Roland SRV330 POA
BEHRINGER AT LOW- £129	Roland SRV500 £399	EST PRICES -	Roland SRV500 £399
Behringer Composer £289	Sony HR-GP5 new £299	Behringer Uralite £215	SPL Vitalizer Clas £780
Behringer Dualize £129	SPL Vitalizer Ster. £585	Behringer Denoiser £149	Symmetrix 425 £349
Boss SE70 £425	Yam SPX990 new £349	dbx 163comp £125	Yam FX70 new £349
dbx 289 new £259	Zoom 9120 £249		

SONY HR-GP5 £299
NEW BOXED
Acclaimed quality multi-effects unit from Sony, brother of the HR-MP5. Features up to 7 effects at once with a fantastic range of reverbs, delays and more 'off the wall' effects, plus a superb pre-amp section making it ideal for both studio use and guitarists RRP £499. At this bargain price, stocks won't last long, get your order in now!

PHONIC PCL3200 £199
NEW BOXED
If you're in the market for a budget compressor, look no further than the Phonic PCL3200. It features a separate compressor and gate with hard or soft knee compression, peak or RMS detection, side-chain, frequency conscious gating, LED displays for every function and level. From the makers of a leading American compressor 1. Why spend more?!

QUADRAVERB+ £299
MIDIVERB 4 POA

FOSTEX XR5

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

NEW BOXED £379

TASCAM Porta 03
NEW BOXED £199
Tascam reintroduces the ideal entry-level 4 track multitrack. Limited stocks

YAMAHA MT50
NEW BOXED £379
Great new budget 4 track from Yamaha features double-speed noise reduction, 2-band EQ on all 4 inputs, records all 4 tracks at once, renowned Yamaha built quality, sync input / output, aux send and dedicated stereo return. Footswitch drop in/out etc...

TASCAM Porta 07
NEW BOXED £349
A fantastic new machine from the makers of the Portastudio. Double speed, EQ on each channel, built-in dbx, 4 channel mixing system, 40% OFF + SECOND HAND & EX DEMO + END

Tascam 488 £289	Tascam 464 new £699	Tascam 424 £319	Teac V370 2 trk new £99
Tas Portastudio £319	Teac V370 2 trk new £99	Tascam 424 £319	Teac V370 2 trk new £99

ZOOM 1202 new £179

VISCOUNT STUDIO MULTI-EFFECTS
These have to be the best value for money multi-effects units on the market pound for pound. Buying direct from the manufacturer brings you a feature-laden quality product at a down to earth price.

EFX1
16 bit stereo in/out, large display, 95 dB dynamic range, MIDI control. Excellent sound quality, shimmering reverb, fully editable, 9 effects at once. Reverb, chorus, phasing, flange, delay, distortion, pitch-shift, autoeffects, compressor, noise suppressor.

EFX2
Same processor as EFX1. 49 presets made from 7 banks of 7 sounds: reverb, delay, chorus/flange, phaser/pitch-shift, multi, guitar1, guitar2. Mean parameter editable. Footswitch control, 95 dB dynamic range.

LEXICON ALEX £299
LEXICON REFLEX £349

ZOOM 9010 £549
NEW BOXED
This is probably the best effects unit available under £1000 let alone the price. Zoom's flagship processor features astonishing reverb quality together with a multitude of other effects and highly flexible programming facilities. 4 individual inputs and outputs are fully routable allowing incredible effects such as 4 pitch shifters feeding each other! We have secured a STRICTLY LIMITED QUANTITY at a huge discount. Endless features, the highest quality all in a 1U rack. RRP £1599

QUADRAVERB+ £299
MIDIVERB 4 POA

8 & 16 Track

In true Turnkey 'Hands On' tradition, all the popular desks and recorders are on permanent demo. Don't take the so-called 'advice' of the cardboard box shifters; - Chilled as these items is highly personal. Please come and listen for yourself.

TASCAM M-1508 + 238S
NEW BOXED £1499
This incredible deal gives you a top quality complete 8 track recording package for considerably less than the price of the cheapest 8 track reel-to-reel machine alone. The 238S is based on the famous of the £1000 plus 122 pro mastering machine and with the addition of the ground breaking Dolby S noise reduction gives superb recordings time after time. Other features include record all 8 tracks at once, shuttle control, optional MIDI machine control, large bar-graph meters, digital counters, auto punch in/out. The M-1508 mixer features up to 22 inputs at midweek, 3 band mid sweep EQ, 3 x aux sends, insert points and the clean signal path makes it an ideal partner for the 238S. Yes, the price does include 2 x 8 'mily' footers! Huge reduction from a total RRP of £2897. Hurry these will sell out very fast.

Allen & Heath Range in Stock £LOW

XRI systems XR300 £159

Long the synchroniser of choice in professional studios we now exclusively bring you this industry standard unit at an unheard-of price. Features include true SMPTE at all standard stripe-rates, MIDI clocks / Song Pointers or LTC for compatibility with all MIDI sequencers. Large LED line-code display. Merged MIDI input. Straightforward operating system. Full 19" rack unit. RRP £259

SOUND CRAFT RIT STUDIO £LOW
STOP PRESS! Fantastic new deals secured on the SPIRIT Studio and Auto range. Studio 16 - £1499, Studio 24 - £1999, Studio 32 - £2649, 16-auto + software - £2299, 24-auto + software - £3299, 32-auto + software - £3999.

DIGITAL 8 TRACKS. We will not be beaten on price.

PRO DAT Digital Audio Tape

Turnkey The Ultimate DAT store

SONY DTC690 + ADS16 pro mod.
NEW BOXED £549
We have secured large quantities of the last ever DTC690s, retaining a sub-£500 machine on the market. For only £549, we supply the machine fitted with the ADS16 44.1 kHz modification, and for another £50 also with the 'Destroyer' internal SCMS stripper (normal price £99). Unbelievable value for a pro-featured DAT machine.

DTC690 only £485
* free tape with every DAT machine

DTC690 + ADS16 + Destroyer - £599
DESTROYER (for DTC690 & DTC60) internal SCMS stripper £99
NEW BOXED
DTC690 + Destroyer £335

DTC60 Plus free Destroyer £799
PRO DATS PCM2300 only £1195
DA30 Mk2 in stock! POA

PHILIPS DCC176 £249

DCC now has 18 bit sampling at 48 kHz with advanced data reduction techniques. Features include full indexing & location facilities. 'SPIND' in and out, full remote, plays analog cassettes with Dolby noise reduction. Unbelievable deal exclusive to Turnkey Sound-on-Sound say "Digital compression makes infact or no subjective difference to the recorded result. In fact recordings sound frighteningly similar to DAT ... Check one out today!"

Alex XDS1100 £749
TCD-07 £429
Sony DTC280 £475
Sony DTC280 POA
Sony PCM2300 £1185
Fostex D6 new POA
Tascam DA30 Mk II POA

DIGICON SCMS stripper £129
or only £99 if bought with any new DAT machine. Remove the SCMS code from a digital signal - you to make as many digital copies as you like. Co-axial and optical connections - can also be used to transfer from one to the other, in your machine with only an optical out can now have a co-axial out etc... LEDs indicate the current signal status and also show any digital errors off tape. 9v battery allows use with portable machines.

DIGITOOL £199
Super SCMS stripper
or only £149 if bought with any new DAT machine. All the features of the Digicon SCMS Stripper, plus a huge range of other analytic displays - Professional / consumer mode, lock status, sampling frequency, audio data present, emphasis status, original / later generation, copy-bit present, hard-wearing metal case. Optical leads only £24.95

E-mu ESI32 £1199

Featuring 32 note polyphony, 4 x polyphonic +4 dB outputs, 10 octave distortionless pitch-shifting, G-trip resonant filters, the largest and best quality library (also Akai & Emulax compatible). Super-assy Professional-style operating system. Huge range of DSP functions including time-stretch, doppler FX, parametric EQ, exciter... Both come with free access to our enormous sample library (we have all the E-mu EMI library on CD-ROM) and excellent technical support (many staff are owners!) Ask about our bundle deals with extra memory and other options.

Sample CDs
Did you know that we have the full range of Time and Space sample CDs on demo and in stock at the store? With around 100 to choose from, and prices ranging from £30 upwards, there has to be something to suit everybody's taste. Come in now for a listen!

PA Systems

SOUND CRAFT SPIRIT POWERSTATION £1299
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 Alesis. Check out these amazing package deals:
Powerstation + 2 x JBL MR25 £1749
Powerstation + 2 x JBL M300 £1089
Powerstation + 2 x JBL M300 £1999
Powerstation + 2 x Bose 802 £2299
Add 4 S4565 + stands, spider stands and cables for £460!

GEMINI GM40
RRP £199 £99
Massive saving on this pro-mixer featuring including 2 long-throw pro line faders. Repeatables cross-fader. LED channel displays for left and right signals. Inputs switchable from line/CD to phone levels. Balanced microphone input with separate fader. Also include variable echo for the mic signal. DJ STARTER PACKAGE £399. GM40 mixer, 2 x B11800 decks, free Stanton carts & audio technica £50 headphones.

SOHO SOUNDHOUSE/TURNKEY
0171-379 5148

Fax 0171 379 0093
114-116 Charing Cross Road, London WC2H 0DT (Opposite Foyles and 100 yards from Tottenham Ct Rd tube)
A Division of ARBITER Group PLC
E-mail: 100322.1563@compuserve.com



Sound On Sound

readers' tape exchange

A DROP IN THE OCEAN by The Craft Brothers. Debut CD album containing 12 original songs.

Diverse styles, rock pop, new age. £12 (inc p&p within UK), £13 (inc overseas postage). Cheques/info: *Kevan R Craft, 12 Mount Road, Halton, Runcorn, Cheshire WA7 2BH.*

BASELINES OF OPTICAL INFEROMETERS by Esoterik. Journey into psychic aerobics. 9 tracks of ambient meditation, 60 mins on dolby CrO2. Radio 1 and Kiss airplay, NME techno charts. £4 to: *D Jones, Leucarum House, Four Roads, Kidwelly, Dyfed SA17 4SF.*



CLARITY by The Fire Thieves. The third LP from TFT contains 12 songs, 60 minutes of music and an indication of the quality available when recording from home. Songs in the Gabriel, REM, Dolby vein.

CD £10 (inc p&p). Also available, 'Skelmersdale', a compilation of the first two Fire Thieves albums on cassette for £5. Cheques to: *Stephen Bennett, 55 Gipsy Lane, Norwich NR5 8AX.*



WALK AWAY by Kyle 'Taff' Harris. Ballads, blues, and songs in the romantic vein. 55 mins long, 12 tracks, £4 (inc p&p). Cheques to: *Kyle Harris, 19 Earlswood, Skelmersdale, Lancashire WN8 6AT.*

RUBYCON LUNA by CX2000. '80s free jazz meets '90s ab mix (ambient to you, mate!). 2 tracks, CrO2 tape. Only £4.99 (inc p&p). Cheques payable to: *Martin Howard Naylor, 34 Bassingham Road, Wembley, Middx.*

THE WALLED GARDEN OF TRUTH by Secret Archives Of The Vatican. Music for the enhancement of visions: electronic medieval eastern strange world music. Colour cover, 13 tracks, C60 cassette. Cheques £5 to: *Vince*

Millett, 3 Royal Circus, West Norwood, London SE27 0LT.



MUGWUMP by Mugwump. Ambient synths, samples, and heavy guitar mishmash. 42 mins, 6 tracks on CrO2 tape. All original, and quite strange. £3.50 (inc p&p) Cheques/POs to: *DW Griffiths, 18 Church Road, Henton Norris, Stockport SK4 1L.*

DISC 1.0 by Disc Psycho. Spatial techno/funk/rock made in space for aliens, now available on Earth. Free skins. 33 mins, 7 tunes, CrO2 tape, £3 from: *Huw Bowen, 106a Warwick St, Leamington Spa, CV32 4QP.*



WOLFGANG AMADEUS MOZART RIP by Club X. Mozart with kicking beats, sputnik squeaks and lotsa pizzaz! 12.5

mins, 4-track CD or 12-inch white label. £2.25 (inc p&p), payable to: *S Metcalf, 37 Westminster Road, Wellingborough, Northants, NN8 5YS.*



AN ESCAPE FROM THE RELENTLESS TRIVIA OF EXISTENCE by The Details. 14 tracks, 56 minutes, CrO2 tape. Jazz ballads to heavy metal guitar solos. Something for all the family. £5.99 (inc p&p) from: *D. Somerville, 12*

Aspen Court, Emley, Huddersfield, HD8 9RW.

EP by Squish. Debut innovative electronic dance ambient techno trance. 4 tracks for £2 on cassette, or £4.50 for 10 tracks on CrO2 cassette. Free to record companies. Specify Dolby B/C. Original, exciting, all styles of dance, suit everyone's taste. Limited stocks, Cheques or POs to: *DTA Cleare, 34 Millwrights, Tiptree, Essex CO5 0LQ.* Artistes also wanted to start record label.

readers' tape exchange phone line service

Now you can listen to selected entries to the Tape Exchange before you consider purchasing them, with the aid of our new phone line service. It's quick and easy to use — just follow these instructions:

- Decide which tape you'd like to hear play through, and note which number (from 1-10) has been allocated to it.
- Dial the SOS Tape Exchange phone line number: **0891 424028.**
- You'll be asked to press the button marked with a star on your telephone. This will tell the phone line whether you have a touch-tone telephone or not.
- If you have a touch-tone phone, you will be able to select the tape you wish to hear simply by pressing the number on your telephone which is allocated to that tape on the Tape Exchange page. You may interrupt the tape at any stage by pressing any other key on your phone; you will then be returned to the main menu to make another selection if you so wish.
- If you do not have a touch-tone phone, you will hear the ten entries listed in sequence. Remain absolutely silent until the one you wish to hear is mentioned, then simply say "Yes". The track will then play through, after which you will be returned to the main menu to make a further selection if you wish.

Although all entries to the Tape Exchange must now be made on the new redesigned entry form, entries can still appear in the magazine without appearing on the phone lines — there's a box to tick on the form if that's what you'd prefer.

Calls are charged at 39p per minute cheap rate, 49p per minute standard rate. LiveWire Communications Ltd CB2 5LR.

1 **BUD** by N-Tropic. 56 mins of deep space organic techno/trance. 7 tracks, CrO2 cassette, professionally duplicated in real time from DAT master. Dreamy atmospheres and crystalline melodies ride high over blasting analogue grooves to create uplifting intelligent dance music. £5.50 (inc p&p) from: *Steve Clarke, 15 Newcombe St, Heavtree, Exeter, EX1 2TG.*

- The Orbital influences shine through clearly on this trance tape. Nevertheless, this is a well-produced and melodic collection of dance music. Check out 'Blue Ball' now!



2 **NEPTUNE** by Emerald Transmission. Soft, melodic female vocals over electronic synth lines with ambient/industrial samples and processed guitars. Contains vintage analogue equipment. 40 mins, 9-track CD. £8 (inc p&p) to: *Derek Gee, PO Box 40014, Berkeley, CA 94704-4014.*

- An interesting mix of early '80s-style synth pop and heavily processed guitar, overlaid with strange loops and samples. The thin, wispy female vocals are occasionally imitating, but on the whole, this is worth a listen, especially 'Into The Future.'

3 **VENEZUELA** by Kevin McCarthy. 40 mins, 10 tracks, on CrO2 cassette. Superb synthesizer music, especially strong on melody, with excellent sounds and rhythms. Professionally recorded and duplicated. Cheques £4 (inc p&p) to: *Kevin McCarthy, 10 Littleworth Road, Downley, Bucks HP13 5LR.*

- Lush, evocative incidental music designed to accompany a slide show about Venezuela. The featured track is 'Savannah'.

4 **EVERYTHING ALL AT ONCE** by the Lovecars and Sugarush. Compilation album of strange pop from Red Weather Records. Extensive radio play and cult following. 45 mins, Fe cassette, 10 tracks,



£6.50 (inc p&p) to: *Irfan Shah c/o Red Weather, PO Box 14, Earl Shilton, Leicestershire LE9 7ZT.*

- Al Sargent's Peter Gabriel-esque voice graces some neatly-crafted pop songs by The Lovecars. The production's OK, but the

tape reproduction isn't so hot — a real shame, as the material is really strong, with good arrangements.

5 **ANDY'S THEME** by Andy McLean. Sax/soul jazz street grooves. 10-tracks, CD album. Influences Kenny G, George Howard, Najee. "Excellent, absolutely gorgeous" — PCRL. £10 cheque to: *Frank O'Donnell, 6 Cottesmore House, Browns Green, Handsworth Wood, Birmingham B20 1DW.*



6 **THE STUFF** by Mrs Cakehead. Reggae/dub and ragga/dub. Lancashire-style toasting! Recorded on an 8-track using MIDI. CrO2 tape, DAT copy, 25 mins. £2 (inc p&p) to: *T Winstanley, 8 Cowfoot Lane, Bacup, Lancs OL13 8ED.*

- Extremely silly. Ragga toasting and crazed electro delivered by a man with an outrageous Lancashire accent. It's a good laugh though, and it's actually extremely accomplished in terms of getting the right feel and production.



7 **MAGIC MALVERN** by Paul White and Mike Simmons (The Lentils Of Delirium). Guitar and synth instrumentals (trash metal-influenced new age). 58 mins, 12 tracks CrO2 cassette,

professionally duplicated with printed sleeve. All proceeds in benefit of local community care (via Malvern Arts Workshop). £5.75 (inc p&p). Cheques to: *Jan McGuffie, Malvern Arts Workshop, Worcester Road, Malvern, Worcs WR14 1NY.* Production details included.

8 **BREED** by Corporation. A blend of ambient techno rhythms and Kraftwerk-style electronics, with sci-fi samples. 62 minutes playing time, 11 tracks, £12. Cheques and credit cards to: *Midas, 3-4 Strand Arcade, Derby DE1 1BQ.*

- Excellent production and superb programming go hand in hand on this well-packaged instrumental CD. I notice Ian Boddy has a hand in the production.

9 **VICTIMISED** by Small Bo. A distinctive blend of jazz, Reggae, Rock, Funk, and Afro-Cuban, from Pandemonium Records. 3 tracks, 20 mins. £3.99 (inc p&p) payable to: *Jamie McCombe, 29 Farm Avenue, London NW2 2BJ.*

• Trumpets. South-African style guitar, tumbling drums, fluid bass, and smooth vocals combine on a well-produced 3-track CD single. The opening song ('Ordinary Madness') gels really well, and is tremendously catchy.



10 **ANTENNA 3 AND 4** compilation tapes now available. Each compilation features a variety of techno/trance/ambient tracks by several different artists. C60 CrO2 cassettes, price £3 each (inc p&p). Payable to: *Antenna, PO Box 22, Cleckheaton, West Yorks, England, BD19 5YZ.*

- Another couple of interesting compilations, featuring dance music ranging from breakneck acid to funky techno and dubby ambient. The track on the Phone Line is 'Loop Net' by OS — just one of the many artists featured.

OUT OF TIME by David Allan. 10 Original synth/sampler arrangements of striking quality. Plunge into this meticulously crafted vortex of sound and hear the promised land. Professionally packaged. CrO2 tape, 46 mins, £4 to: *David Allan, PO Box 1385, Glasgow, G32 6HT.*

• Catchy, melodic, filmic instrumentals, strongly reminiscent of 'Blade Runner'-period Vangelis. The arrangements are excellent, and the tape is well-presented, with a full-colour cover. David has asked for this tape to be re-run in Tape Exchange following the excellent response he received as a result of having his tape on the SOS Phone Line from September to November last year. •

CONCERT ONE and Concert Two by Andrew Blyth. Classical orchestral works realised on computer, from Australia. Six and eight movements, 46 mins and 48 mins respectively. Professionally duplicated cassettes, £5 (inc p&p) each. Cheques to: *Andrew Blyth, New Classic Recordings, PO Box 278, Mont Albert, Victoria, 3127 Australia.*



ENDLESS LONGING by Elegant Simplicity. New album of Electronic prog-rock and MIDI-guitar-based instrumentals, 45 mins, Fe tape, colour cover, digitally mastered. Other albums available. £2 to: *Steven McCabe, 27 John's Avenue, Lofthouse, Wakefield WF3 3LX.*

EUROTIC EP by Martin Burrows. Four totally unique and diverse tracks of dance music. One of the many projects spearheaded by Martin Burrows, vocals by Kathy. 20 mins, CrO2 tape, just £2. Cheques to: *Martin Burrows, 12 Fernworthy Close, Torquay TQ2 7JQ.*

THE DREAM by White. New age synth music, 60 mins, 8 tracks, great tunes, £4.49. Cheques to: *DJ White, 53 Listowel Road, King's Heath, Birmingham B14 6HH.*



NEW FRONTIERS by Martyn Green. Jazz funk, relaxing instrumentals, sequenced on Korg O1W/FD. 40 mins, direct-to-DAT-mastered on quality cassette. £3.95 (inc p&p) to: *Martyn Green, 7 Tinkersfield Leigh, Lancashire WN7 5LB.*

THE RUNAWAY TRAIN And Other Children's Favourites, by Phil Rhoden. Children's tales from the darkside. If you liked the Residents circa Goosebump, try this. Six tracks, 56 mins, CrO2 tape. £2.50 (inc p&p) from: *Phil Rhoden, 132 Amblecote Road, Brierley Hill, Dudley, West Midlands DY5 2YE.*

YESTERDAY'S GONE by Citizen X. Three tracks of ambient pop. 'Tuning In', 'Love and Religion', and 'Yesterday's Gone'. £1 (inc p&p) from: *29 Victoria Road, Workington CA14 2QT.*

HARDER AND FASTER and Zero-G EP by Ground Level Zero. 5-track techno tape and 4-track pop vinyl respectively. Cheques to: *N Parker, 7 Railway Terrace, Redcar, Cleveland TS10 3UD.*

DUCK by LRI. Depeche Mode meet Cure meet Sisters Of Mercy. Guitars, synths and vocals, on 40-minute CrO2 cassette. Cheques for £4 (inc p&p) to: *RP Hanson, 28 Albany Road, Chatham, Kent, ME4 5DL.*

BLUES FOR KIRSTY by LAF. The pop song returns. 11 tracks in different styles. Rediscover an art-form believed extinct. 50 mins on CrO2 tape. £3.50 to: *Phil Matthews, 8 Stanstead Road, Micheldever, Derby DE3 5PP.*



SIGNATURES by Sphere. Progressive rock meets jazz/funk. Experimental, atmospheric, weird time signatures. 4 tracks, 31 mins, CrO2 tape, £3.50 payable to Steve Anderson. Write to: *Neil Durant, 155 Park Road, Teddington, Middlesex TW11 0BP.*

SAUCY by Various. CD Compilation of 16 artists. 20 saucy tracks in various styles from pop to indie to grunge to metal to blues to goth etc etc. 78 mins. £5 (inc p&p) Cheques/POs to: *Purge Records, 38 Chancery Lane, Nuneaton CV10 0PD.*

BRECKLANDS DAWN CHORUS produced by Andrew Flintham. Ambient wildlife recording. Beautifully relaxing, as featured on Radio 1's Mark Radcliffe show. CD £10.95, cassette £6.95. The most stunning wildlife recording you will ever hear. 70 mins. Cheques to: *Richard Atkins, 23 Tudor Avenue, Roydon, Diss, Norfolk IP22 3SQ.*

SWINGIN TIME by John Wayne Army. Lounge lizard hillbilly and garage trash. 4 tracks, 12 mins only, CrO2 tape, £2 from: *Calavera Records, PO Box 664, London E3 4QR.*

PAST AND PRESENT by Isa Darby. Ambient music, jazz and Gaelic melodies. Digital recording on CD, for £11. £3 from each sale donated to local school. Send cheques and orders to: *Isa Darby, PO Box 3, Waterlooville, Hants PO8 9YA.*



PROJECT ONE by Warwick Mason. 5 tracks of melodic rock guitar. Hooky and innovative melodies with tracks repeated minus lead guitar on B-side. CrO2 tape. Send £3 to: *Oasis Technology, Tudor Cottage, Eastern Green Road, Coventry CV5 7LH.*

HOBBITS AND SPACESHIPS by Bjørn A Lynne. CD of dynamic electronic space-rock and progressive new age music. £15 (inc p&p throughout Europe), payable by IMO or Eurocheque.



Catalogue of older material also available. Cheques payable to/further info from: *Bjørn A Lynne, Schleppegrells gate 0556 Oslo, Norway.*

O SEVCIK TEMA AND 40 VARIATIONS by Aidrian Kitchen. 42 mins of keyboard and bohemian music for weddings, funerals, barn dances and other social events. 20th century accompaniments on CrO2 or Fe C44. £6 from: *RA Kitchen, Rowans, 14 Roydon Road, Diss, Norfolk, IP22 3LW.*

DREAM JUNGLE by Rabbit. 13 track, 45-minute CD £9.99, CrO2 tape £5.99. Also new Rabbit CD 'Same Old Story'. 14 tracks, 60 mins. £10. Both CDs recorded at Pete Townshend Studios. Great music! Orders to: *Geoff Webb, 5 The Drift, Harlaxton, Grantham, Lincs NG32 1AE. Cheques to John Bundrick.*

The SOS Readers' Tape Exchange provides an enormously successful service for readers, allowing them to advertise tapes, CDs, or records of their own music in their favourite hi-tech recording magazine. Every month we devote a section of the Reader Classified pages to the Tape Exchange. Here, you can advertise your own material to other readers, free of charge. Not only can you discover what others are up to, the service opens up a whole world of new music that you certainly can't find in local record shops. Furthermore, the service provides a source of new material for the attention of producers and record companies. With the aid of the Phone Line service, you will now also be able to hear a selection of the tapes featured on the pages before you commit yourself to a purchase.

Ads are usually run for three months before re-application is necessary, but this may change at the discretion of the magazine publishers. SOS makes no guarantee as to the quality of the music sold through it. Material will normally also be run on the Phone Lines for a three-month period, but this is subject to demand for the service, and is at the discretion of the Publishers.

It would be appreciated if anyone wishing to use the Tape Exchange page and Phone Line service could send a copy of their material to the SOS offices. Space permitting, we run mini-reviews of tapes that we find of particular interest. If you would like us to advertise your material, please bear in mind that:

1. Tapes should be recorded to the best possible standard and duplicated on good-quality cassettes.
2. Although pricing is up to the individual, your work is more likely to sell if realistically priced.
3. Cost-effective duplication can be undertaken by many companies, the more astute of which advertise in SOS's Classified pages!
4. Unless your tapes contain all-original material, in order to sell your tapes legally to others, you must obtain copyright clearance for any cover versions recorded. This costs a lot less than you might think, and can be arranged through the Mechanical Copyright Protection Society (081 769 4400). SOS cannot be held responsible for any violation of Copyright law. Note also that MCPS-protected material (for example, cover versions) cannot be aired on the SOS phone lines. The Phone Line service is strictly for the use of amateur musicians, and material will only be placed on the phone lines if the musicians who have sent it are the owners of both the song copyright and the sound recording copyright.
5. If possible, include a sheet with your tape giving recording and equipment details, as other readers are sure to be interested.
6. If you're concerned about the security of your studio (because of publishing your address), use a Post Office box number, or sell via a relative or friend's address.
7. Use the form provided on the Tape Exchange pages or a photocopy. See the sample entry for the format to follow. Please keep your entries to a maximum of 40 words, and include the following information: Tape title and artist name; style/type of music; playing time; number of tracks; tape type, e.g. Chrome (Type II) or Fe; price; address. Send to SOS Tape Exchange at the Free Classifieds address. **TAPE EXCHANGE ADS WILL ONLY BE ACCEPTED IF THE TAPE EXCHANGE FORM IS COMPLETED IN FULL.**

SAMPLE ENTRY: *The Lentils Of Delirium* by Paul White and Mike Simmons. Hybrid ambient synthesizer and thrash metal guitar music. 56 mins playing time. 10 tracks. CrO2 tape. £4.95. Cheques to: *Dept PW1, PO Box 30, St Ives, Cambs PE17 4XQ.*

If you wish to have your material included both in the Tape Exchange and on the Phone Lines, please read and fill in the declaration carefully, and, if you are in agreement, sign and date in the space provided.

DECLARATION

I, the below-named, hereby give my permission for SOS Publications to use a track/tracks from my submitted tape/CD

for transmission on their Phone Line service operated by Livewire Communications Ltd, over a period of up to six months. I hereby waive any royalties that might be due to me for the use of my music on this service during the above-stated period of time. I hereby also confirm and state that I am the owner of both the song copyright and the sound recording copyright of the above-named piece of music, and that the Mechanical Copyright Protection Society do not administer either the song copyright or the sound recording copyright of the above-named piece of music on my or any third-party publisher's behalf.

SIGNED.....DATE.....

If you require your material to be included on the Tape Exchange page but NOT on the Phone Line service, please tick this box:

SOS READERS' TAPE EXCHANGE FORM

Name.....

Address.....

Telephone.....

OVERNIGHT DELIVERY OPTION: ONLY £5.00! See Order Form for details.

STUDIO MUSICIAN'S JARGONBUSTER

by Godric Wilkie
The latest offering from the people who brought you 'Music In Sequence'. 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 will soon be worth its weight in gold.

CODE MX30045 £12.95
Postage: UK £2.50, Overseas £0.00

KEYFAX 4

by Julian Colbeck
The new Keyfax book (1993) is the most comprehensive guide to professional keyboards yet compiled. Keyfax 4 spotlights synthesizers and expander, and MIDI keyboard controllers. From classic analogue machines right up to the latest synth/sampler hybrids. Reviews include technical tour on a practical, need-to-know basis. Everything you need to decide which instrument is best for you.

B201 £12.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

SOUND FOR PICTURE - An Inside Look at Audio Production for Film and TV



Edited by Jeff Fortenza and Terri Stone
Covers all aspects of film and TV sound, dialogue, music, effects recording, and editing and assembling the result into a final soundtrack. Technical and creative aspects are all covered, and a comprehensive glossary is provided. A good proportion of the book is also taken up with a selection of case studies (including Malcolm X, The Abyss, Northern Exposure and Twin Peaks) that provide hands on information.

CODE B237 £9.95
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

CABARET VOLTAIRE - THE ART OF THE SIXTH SENSE

by Mick Fish & D Hallberg
This revised second edition offers a comprehensive overview of the career (to 1989) of one of the UK's most influential and pioneering electro-music outfits. It features a wealth of first-hand material, and is almost one long interview with Richard H Kirk and Stephen Mallinder. A great disc/videography is also featured. 224 pages, 50+ photos.

CODE B207 £6.95
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

TAPE DELAY

by Charles Neal
A look at the experimental, electronic, industrial underground, as of 1987, featuring interviews with: Marc Almond, Dave Ball, Cabaret Voltaire, Nick Cave, Chris & Cosey, Coil, Einstürzende Neubauten, The Fall, Diamanda Galas, Genesis P Orridge, Michale Gira, The Haffler Trio, Matt Johnson, Laibach, Lydia Lunch, New Order, Psychic TV, Boyd Rice, Henry Rollins, Clint Ruin, Silverstar Amoeba, Sonic Youth, Stevo, Mark Stewart, Swans, Test Dept, David Tibet and Touch. If anything makes the 'underground' accessible, it's this book. As NME said, "A virtual Who's Who of people who've done the most in the past decade to drag music out of commercial confinement." 256 pages, 60+ photos.

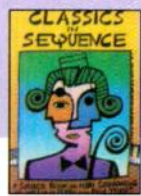
CODE B208 £11.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

THE ART OF DIGITAL AUDIO

This second edition of John Watkinson's classic text has been completely rewritten to reflect recent advances in this field, now covering new digital recording formats such as DCC and MiniDisc and including new treatments of subjects such as oversampling, data reduction, noise shaping, dither and Digital Audio Broadcasting. An introductory theory, applications and reference book all in one.

CODE B248 £49.50
Postage: UK £3.95, Europe £7.50, R.O.W. £14.50

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

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

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 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.

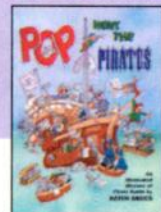
CODE B297 £18.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

PROFESSIONAL COMPOSING

A useful little booklet produced by the Association of Professional Composers that aims to give readers an insight into the different fields of music in which the APC is involved. Its 36 pages manage to convey a great deal of useful information regarding the preparation of music and, most importantly, getting paid for it.

CODE B298 £3.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

POP WENT THE PIRATES

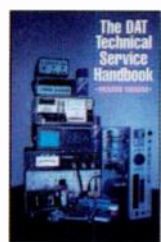


by Keith Skues

Published to coincide with the 30th anniversary of Radio Caroline, this book is as comprehensive a history of pirate radio in the UK as you could want. Much of the book was actually written in the 60s, when the author was himself a Caroline DJ himself, and has only recently been completed. The history of pirate radio is covered from the 30s up to the 90s, and potted biographies are given of DJs concerned with off-shore radio. The book runs to a whopping 568 pages and includes 230 black and white photos.

CODE B249 £14.99
Postage: UK £8.95, Europe £7.50, R.O.W. £14.50

THE DAT TECHNICAL SERVICE HANDBOOK



by Richard Maddox

A reference providing a wealth of information on DAT service and repair for engineers and technicians, including: step by step instructions for regular maintenance and repair; detailed techniques for maintaining and adjusting tape transport and head alignment; complete how-to instructions of replacing the record/play head drum; specific service notes, by make and model.

CODE B229 £43.00
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

KRAFTWERK - MAN, MACHINE AND MUSIC

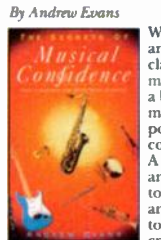


by Pascal Bussy

Everything you'd ever want to know about Kraftwerk has been squeezed from the guys themselves and various other sources by M. Bussy. Laid out chronologically, the book features a discography and a comprehensive list of sources of quotes used. Especially worthwhile are exclusive (if guarded) interviews with Ralf Hütter and Florian Schneider. 200 pages, 8 pages of photos.

CODE B206 £11.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

THE SECRETS OF MUSICAL CONFIDENCE - How to Maximise Your Performance Potential



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

1000 KEYBOARD TIPS



by J Dreksler & Q Harle

The high-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 £2.50, Europe £6.95, R.O.W. £9.50

MUSIC & NEW TECHNOLOGY

by Gabriel Jacobs & Panicos Georghiadis
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 UNOFFICIAL JEAN-MICHEL JARRE BIOGRAPHY

This is more like a fat magazine than a book. It feels and often reads like a superior fanzine, with a dizzying amount of information that no true fan can be without.

CODE B220 £7.75
Postage: UK £1.50, Europe £4.95, R.O.W. £7.50

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

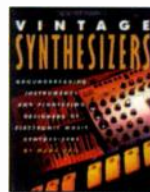
Playing Techniques & Music

COMPLETE KEYBOARD CHORDS

by Warren Nunes & Steve Doherty
A handy guide to all the keyboard chords you wish you could play - from simple to complex! Includes exercises designed to help their use. Explains chord symbols and music notation.

CODE B161 £7.95
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

VINTAGE SYNTHESIZERS



By Mark Vail
This profusely-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 £16.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

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 rhythmic music in popular styles will find this book invaluable.

CODE B172 £11.50
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

Recording

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 techniques; musical arranging for recording; 4-track recording; the mixer; preparing for an running a session; recording drums; recording vocals; integrating MIDI; using effects and 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!

CODE B198 £9.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

PLEASE REMEMBER: POSTAGE IS PAYABLE ON ALL MERCHANDISE.

SOS Book Shop

Recording continued

THE COMPACT DISC HANDBOOK

SECOND EDITION

by Ken C. Pohlmann, Prominent American audio engineer and writer on digital audio

'Here is an interesting, timely, well-written book in which everything you ever wanted to know about the compact disc and more is explained.'

Computer Music Journal, 'compelling and fascinating reading, written by an expert with the knack of making complex explanations understandable. **Image Technology**.

This is a new edition, in paperback, of Ken Pohlmann's classic survey of the compact disc world. *The Compact Disc: A Handbook of Theory and Use*, and celebrates the tenth birthday of possibly the most successful consumer electronics product ever introduced. The text of this new edition has been thoroughly overhauled to update the user on the latest technological advances and gives insights into new formats and applications. It remains a comprehensive and authoritative handbook by an acknowledged expert on digital audio and related topics.

Computer Music and Digital Audio Series
364 Pages, numerous line figures, tables 1992 0-19-816327-4 Paper covers.

CODE B217 £19.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

THE MASTER TAPE BOOK



Alan Parsons, Bill Foster & Chris Holmboe

The definitive guide to the creation and management of audio master tapes. With 'Master Tapes' literally flying around the world being copied,

cloned or re-cut for seemingly endless variations of compilation albums, it is terrifying to think that there is no standard set of procedures for labelling and maintaining master tapes. Until now, that is.

CODE B194 £15.00
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

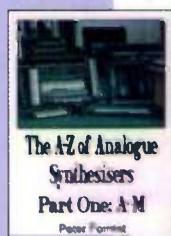
HOW TO SET UP A HOME RECORDING STUDIO

By David Mellor

This 112-page book expands upon the popular SOS series with additional text, pictures and a handy reference section. Excellent guide to help you sort out the design, layout and wiring of your equipment.

CODE B116 £6.95
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

THE A-Z OF ANALOGUE SYNTHS PART ONE: A-M



by Peter Forrest

The author has aimed to make his book a complete rundown of all the major analogue synths and keyboards ever made, and on the evidence of this first volume, he seems to have succeeded. The book is useful and detailed, and shows evidence of

the massive amount of research and effort put in by Peter. He gives pocket company histories and detailed data on the instruments produced - but note that a few entries for a few particularly obscure instruments and companies are limited due to lack of data. The book also 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. The A-Z of Analogue Part One, which is limited to 8000 copies worldwide, also features 96 colour picture of classic instruments.

CODE B294 £14.00
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

MIDI

MIDI SYSTEMS AND CONTROL

By Francis Rumsey

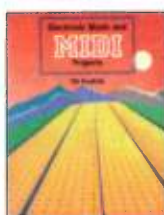


This revised edition has been expanded in an number of topic areas, to provide even more comprehensive coverage of every area of MIDI. Contents include: an introduction to principles and terminology; MIDI timecode; librarians and editors; different approaches to

sequencer software design; practical systems design.

CODE B007AM £19.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

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

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

THE MIDI COMPANION



By Jeffrey Rona

A breeze run through MIDI that would suit the absolute beginner, this book is well-illustrated, clearly expressed and explains the technical bits in as close to non-technical language as the subject matter allows.

CODE B234 £9.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

MIDI FOR THE PROFESSIONAL



by Paul D Lehman and Tim Tully

Cos-written by SOS contributor Paul D Lehman, 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 £11.95
Postage: UK £3.95, Europe £7.50, R.O.W. £14.50

MIDI PROJECTS

by R A Penfold

A comprehensive collection of simple MIDI projects, including CV and gate converters and a MIDI Thru box. A lot of the book is taken up with interface various obsolete computers to MIDI (Spectrum, CPC464, Commodore 64, BBC B, ZX81 and so on), but the general information is basically sound. Could prove a boon to musicians who are really broke!

CODE B278 £2.95
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

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 £6.95
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

MIDI: A COMPREHENSIVE INTRODUCTION

by Joseph Rothstein, Product Review Editor,

Computer Music Journal

Series Editor: John Strawn

MIDI - Musical Instrument Digital Interface - is the data communications system which enables music equipment, computers and software from many different manufacturers to exchange information. Since its introduction in 1983 the impact of MIDI on the design and operation of synthesizers has been dramatic, yet to date, information about it has been scattered, but this book fills that gap, providing a practical guide for readers seeking a thorough discussion of the basic principles of MIDI.

Computer Music and Digital Audio Series

238 Pages, numerous figures 1992

0-19-816293-6 Hardback.

CODE B215 £25.00
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

PRACTICAL MIDI HANDBOOK



(3rd Edition)

by RA 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 £8.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

Drum Machines

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

DRUM PROGRAMMING - A Complete Guide to Program and Think Like a Drummer



By Ray F Badnes

Coming from a publisher that has a good range of real drum texts, we'd expect this book to be a little different. And it is: it gives plenty of insights into how real drummers approach their job, and there are plenty of example patterns to help translate these ideas to a drum machine.

CODE B235 £6.95
Postage: UK £1.50, Europe £4.95, R.O.W. £7.50

DRUM MACHINE RHYTHM DICTIONARY

By Sandy Foldstein

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 £1.95, 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

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 £1.95, Europe £5.50, R.O.W. £8.50

PRICE MASSACRE! BEST SELLER

THE COMPLETE GUIDE TO ALESIS HR-16 & MM-8



by Craig Anderton

The 182 pages of this book more than live up to the term 'complete'. Covers the operation and application of both these units far more straightforwardly, and in much greater depth than any manual ever could. So, if you've just bought a used

MMT-8 or HR16 without a manual, don't worry because we've just reduced the price of this great book yet again! Even if you have a manual and think you know all there is to know about your machine, you'll be surprised what tips and tricks you can pick up. If you own a different make of drum machine or sequencer, altogether, you'll still learn a lot about the peculiarities of MIDI-to-Tape Sync, integrating drum machines and sequencers into your MIDI system, and how to inject feel into sequenced music. This is an essential addition to any MIDI enthusiasts bookshelf - buy it today before stocks are completely exhausted.

CODE: B108S2 RRP: £14.95
WAS: £9.95 OFFER PRICE: £5.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

Electronic Projects

ELECTRONIC PROJECTS FOR MUSICIANS

By Craig Anderson
How to build 22 electronic sound projects - ring modulator, phase shifter, etc.

CODE B068 £10.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

PRACTICAL ELECTRONIC MUSIC PROJECTS

By R A Penfold
A variety of music and MIDI projects, including guitar distortion, headphone amp, metronome, mixers, MIDI tester, MIDI noise gate and MIDI control pedal, amongst others. No projects require test equipment, but only a few are suitable for absolute beginners.

CODE B289 £4.95
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

ELECTRONIC PROJECTS FOR THE GUITAR

By R A Penfold
How to make your own effects units at a fraction of the cost. Complete instructions on assembly of a guitar tuner, a distortion unit, a headphone amplifier, and a whole range of others. Assumes no previous knowledge of electronics.

CODE B179 £8.95
Postage: UK £1.50, Europe £4.95, R.O.W. £7.50

ELECTRONIC MUSIC LEARNING PROJECTS

By R Bebbington
A collection of musical electronics projects to give musicians experience of electronics construction and electronics buffs some experience of music. The projects, which all include strip board layouts, are suitable for construction in schools and use no more

power than a 9V battery.
CODE B286 £4.95
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

HIGH POWER AUDIO AMPLIFIER CONSTRUCTION

By R A Penfold
Much useful background to amplifier design, speaker matching and more is included in the first couple of chapters, while the last section contains a selection of high power amp circuits plus suitable PSU circuits. Copper track patterns are also provided to allow you to make your own PCBs. While the circuits aren't too difficult as such, those with limited constructional experience should note that due to the high supply currents and voltages involved, even minor mistakes could be extremely dangerous.

CODE B282 £3.95
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

ELECTRONIC MUSIC PROJECTS

By R A Penfold
A collection of relatively simple circuits that even the near beginner should be able to construct. The book is divided into four sections: Guitar Effects Units, General Effects Units, Sound Generator Projects and Accessories. Specific projects include fuzz box,

phaser, envelope shaper, white noise generator, metronome, automatic fader and many more.

CODE B276 £2.95
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

PRACTICAL ELECTRONIC MUSIC EFFECTS UNITS

By R A Penfold
Another selection of musical effects, with more of a guitar angle. Projects include distortion, sustain, parametric EQ, graphic EQ, treble and bass booster, envelope modifier, wah wah effects and more.

CODE B290 £4.95
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

Guitars

THE HISTORY OF MARSHALL

By Michael Doyle
Everything you'd ever want to know about Marshall amplification is in this book. Hundreds of pictures and 64 colour plates including catalogue reprints illustrate the book, and the reader is provided with complete listings of every Marshall product

ever made. Look out for the cross-section of circuit diagrams at the end of the book.

CODE B242 £25.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

THE GIBSON LES PAUL BOOK

Tony Bacon & Paul Day
Want to delve into the history of the Gibson Les Paul family of guitars? This is the book for you. A history of the guitar is provided, along with many pictures of significant instruments, instrument details and ephemera. A comprehensive reference section documents every Gibson Les Paul model from 1952 to the present day.

CODE B243 £10.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

THE FENDER BOOK

Tony Bacon & Paul Day
Fender produced the first commercially successful solid-bodied electric guitars and this book tells their story. A comprehensive history is related at all points to the guitars themselves, and there are many photos. A meticulously researched reference section provides details of all Fender guitars from 1950 to the present day.

CODE B244 £10.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

THE STEVE HOWE GUITAR COLLECTION

By Steve Howe with Tony Bacon
During his career, Steve Howe has amassed an enviable collection of guitars, and this large format book shows 125 examples from this collection in full colour. Everything from 18th century antiques through to contemporary solid body electrics is in the collection, and the text is by Steve himself.

CODE B241 £14.95
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

EASY ROCK BASS

By Dieter Petercic
Deals with various bass techniques in depth. Contains musical pieces in tab and notes in the style of blues, reggae, rock, soul and funk. Includes flexi record of all the exercises, played by Dieter Petercic

CODE B176 £9.95
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

Computers & Music

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 £1.95, Europe £4.95, R.O.W. £7.50

SEQUENCER SECRETS

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 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 £6.95
Postage: UK £1.50, Europe £4.50, R.O.W. £6.50

MUSICAL APPLICATIONS OF THE ATARI ST'S

By R A Penfold
Although an ageing machine, the Atari ST has had such popularity that it will probably be quite some time before it disappears for good - a situation helped by the inclusion of a built-in MIDI port. This book 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 £1.50, Europe £4.95, R.O.W. £7.50

COMPUTERS AND MUSICAL STYLE

By David Cope, Professor of Music, University of California, Santa Cruz
Series Editor: John Straum
Professor Cope provides a step-by-step description of the way in which he analyses and replicates musical style by computer. He demonstrates his results in the style of composers such as Bach, Mozart, and Prokofiev with compositions which sound entirely new and yet somehow familiar. Musicologists, theorists, and composers will find this work to be both ground breaking in its quality and thoroughness, and composers may also find a method to assist them with their own compositional processes.

Computer Music and Digital Audio Series
262 Pages, music examples 1992
0-19-816274-X Hardback.

CODE B216 £30.00
Postage: UK £3.95, Europe £7.50, R.O.W. £14.50

A DICTIONARY OF ELECTRONIC AND COMPUTER MUSIC TECHNOLOGY

INSTRUMENTS, TERMS, TECHNIQUES
by Richard Dobson, Flute teacher, Bath College of Education; freelance flute-maker and player
'the dictionary has a great deal of useful information. It is clear and easy to read.'

Classical Music.

The rapid pace of technological development in electronic music has led to a plethora of instruments and systems, yet these, and the technology behind them, are often only imperfectly understood. There has been an increasing need for a reference book which surveys the whole field objectively and with insight.

Richard Dobson assumes no prior knowledge on the part of the reader, and presents technical information in clear, comprehensive entries dealing with common principles and techniques, such as those on the computer, electronic components and synthesis. The book can be used both as a reference work and as a tutorial text. There are entries on major commercial instruments, many of which are also illustrated. Much historical information is included in these, and also on those companies and individuals whose work has been central to the development of electronic instruments and their music. The Appendices provide tables on binary and hexadecimal conversion, MIDI commands, and scale and frequency. There is a general index and one of instruments and manufacturers.

Computer Music and Digital Audio Series
234 Pages, line figures Clarendon Press 1992
0-19-311344-9 Hardback.

CODE B226 £25.00
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

MULTIMEDIA, CD ROM & COMPACT DISK - a guide for users and developers (2nd Edition)

by Francis Botto
This is a practical guide to CD ROM and interactive multimedia and is aimed at both users and developers. Virtually all platforms and technologies are covered in this book - CD-I, CD ROM, CDTV, Macs, PC clones and so on - and a comprehensive range of appendices include a glossary, and lists of development tools, manufacturers and existing CD ROM titles. All aspects of system development - for example image capture and sound - are covered, along with much valuable general information.

CODE B295 £14.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

COMPUTERS AND MUSIC

By R 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 £1.50, Europe £4.95, R.O.W. £7.50

MULTIMEDIA ON YOUR PC

by Francis Botto
A practical guide to multimedia specifically on the PC. Botto's book is once aimed at users, educators and developers, and comprehensively discusses the hardware required to take advantage of multimedia in a PC environment as well as the hardware and software necessary in a multimedia authoring situation. The book is provided

with comprehensive appendices covering a glossary and comprehensive product and manufacturer lists.

CODE B296 £10.95
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.
CODE B104 £4.50
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

THE SAMPLING BOOK

By Steve De Furia & Joe Scacciarro
How to achieve better samples - this book explains the technical issues involved, clearly and simply. Good advice on what to look for when buying a sampler.
CODE B025 £11.95
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

Music Business

COPYRIGHT THEFT

By John Gurnsey **< NEW**
A book that discusses the problems of copyright of audio, video and electronics products is long overdue. The book aims to provide readers with a better understanding of copyright theft in all areas: book, electronic, database, audio, video, games and multimedia publishing are all considered along with the question of whether existing laws can effectively serve such a rapidly changing industry. An expensive book, to be sure, but one that contains information unlikely to be found elsewhere.
CODE B293 £28.50
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

THE WHITE BOOK INTERNATIONAL PRODUCTION DIRECTORY 1994

< NEW
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 complementary 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 £43.00
Postage: UK £4.75, Europe £8.50, R.O.W. £16.95

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 £1.90, Europe £4.95, R.O.W. £7.50

HOW TO PITCH AND PROMOTE YOUR SONGS

By Fred Koller
The title is self-explanatory: if you've got the songs, and you want someone to hear, publish and/or record them, then this book could save you a lot of grief. There's a lot of sensible information about the music biz in general, plus a few (American-biased) words about setting up your own publishing business.
CODE B257 £8.95
Postage: UK £1.50, Europe £4.95, R.O.W. £7.50

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

SONGWriters IDEA BOOK

by Sheila Davis **< NEW**
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

SHOWCASE/KEMPS INTERNATIONAL MUSIC BOOK 1995

< NEW
Nearly 500 pages crammed with all the latest information, including new phone and fax codes, record companies, recording studios, music publishers, equipment manufacturers, artist management, producers, PA and lighting hire, and more. The music industry equivalent of 'Yellow Pages'! Plus a new USA section.
CODE B192 £30.00
Postage: UK £2.50, Europe £6.95, R.O.W. £9.50

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 Barilla; 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 £15.59
Postage: UK £2.50, 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

Live Sound

CONCERT SOUND AND LIGHTING SYSTEMS

Written by John Vasey.
This book shows how to set up, maintain and operate sound and lighting equipment for the performance of amplified music or any kind of touring production.
CODE B247 £14.95
Postage: UK £1.95, Europe £4.95, R.O.W. £7.50

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 £3.95, Europe £7.50, R.O.W. £14.50

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

CONCERT SOUND - Tours, Techniques & Technology

Edited by David Trubitt
All aspects of concert sound are discussed: mic techniques, safety, acoustics, monitor mixing and more. The book also features a series of profiles of real artists laying live, cross-referenced with the techniques discussed. Genesis, U2, Van Halen, Suzanne Vega and Lou Reed are some of the artists featured, and a number of festivals are also discussed.
CODE B236 £20.95
Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

THE FOCAL GUIDE TO SAFETY IN LIVE PERFORMANCE

Edited by George Thompson
This book provides an authoritative look at safety matters for workers in the live entertainment industry. It is edited by the Standards Officer of PLASA (Professional Lighting and Sound Association), and provides good solid information in an easily digestible, well-illustrated form. Topics covered include audience and crowd control, fire safety precautions and engineering, electrical safety, laser safety, sound levels and noise control and much more.
CODE B271 £19.95
Postage: UK £2.50, Europe £5.50, R.O.W. £8.50

SOUND CHECK CD



Impeccably recorded and compiled by Alan Parsons and Stephen Court.
Sound Check CD contains 92 tracks of test signals and reference recordings made at Abbey Road that can be used to set up monitors, check room performance, faulty equipment etc, and overall recording quality. No studio should be without one! 20+ close-miked instruments/vocals/music extracts. SMPTE/EBU timecode tracks (25, 30, drop-frame). Pink noise test tones. Third octave tones. Sweep tones. Sine + Square wave tones.
CODE CD029 £19.50
Postage: UK £1.50, Europe £3.95, R.O.W. £5.50

PUBLIC ADDRESS LOUDSPEAKER SYSTEMS

by V Capel
All aspects of PA speaker systems are covered in this book, including low-impedance 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

Yamaha Books

SOS Bookshelf has obtained exclusive but limited stocks of a variety of Yamaha based 'how-to' books at a very special price to SOS readers. The books come from Alexander Publishing in the USA, and each guide offers tons of useful, easily-accessible information provided by experienced users. The list is as follows:

THE BROADWAY QY10

by Peter L. Alexander with Bobby Maestas
Charts and musical examples for re-creating Broadway songs with your QY10 using only the internal patterns. Includes useful set-up information. 77 pages.
CODE B263 £3.95
Postage: UK £1.50, Europe £4.95, R.O.W. £7.50

TG33 QUICK OPERATIONS GUIDE

by Bobby Maestas
Instant access to Yamaha's neat little Vector Synthesis sound module. Loads of examples, well illustrated. 115 pages.
CODE B264 £8.95
Postage: UK £1.50, Europe £4.95, R.O.W. £7.50

YAMAHA SY77 CHEATER'S GUIDE & COOKBOOK

by Peter L. Alexander, researched by James Mierkey
This weighty book offers an accessible and straightforward way into the SY77; sequencing is covered in depth followed by SY77-specific arranging tips and techniques - how to get the most out of the SY77's sounds and polyphony. 354 pages.
CODE B266 £28.95
Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

THE SONGWRITER'S YAMAHA RY30

by Dan Walker with Gregg Perry
A two-part work, the first part covering all operational aspects of the RY30 drum machine and the second uses the audio tape and musical examples to show what the RY30 is capable of, using the preset patterns to create a variety of classic tracks. 229 pages, two cassettes.
CODE B267 £19.95
Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

YAMAHA SY55 OPERATIONS & SEQUENCING GUIDE

by Bobby Maestas
A good helpful look at this arguably overlooked instrument; technicalities are explained in context of music throughout. 153 pages.
CODE B268 £9.95
Postage: UK £1.95, Europe £5.50, R.O.W. £8.50

We'll remind you once again that stocks are strictly limited, so act quickly to avoid disappointment. Postage extra.

SOS Videos

THE EMAGIC LOGIC TUTORIAL VIDEO



VOLUME 1

SOS can now bring you the long-awaited Emagic Logic training video. The tape is actually produced by Emagic themselves, and once again sees Tim Walter (as featured on the excellent Notator video manual) 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. And yes, this video is valid for all version 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. Here's a quick rundown of the contents of this straightforward and clear video:

- Tutorial 1: The Arrange window and basic sequencing
- Tutorial 2: Playback parameters and the 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: Getting environmentally friendly (using the Environment)
- Tutorial 12: The best of the rest (HyperEdit, Matrix Editor, Cycle Mode and more).

ORDER CODE V023 £29.99
Total running time 70 minutes *Format: VHS (PAL)*
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

YAMAHA PSR6000 ELECTRONIC 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.

ORDER CODE V029 £19.99
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

THE ART OF SEQUENCING



Presented by composer Don Muro, this American tape divided into six lessons that explain and demonstrate how to create a multitimbral sequence, how to correct wrong notes, how to correct rhythmic errors, how to correct dynamics, how to change synth programs and how to change tempos. One nice point is that the

tape is not dedicated to any one sequencing package - the information is valid no matter which sequencer you use.

ORDER CODE V030 £30.95
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

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 program

is hosted by none other than SOS contributor Julian Colbeck; other SOS contributors making an appearance, discussing favourite instruments, include Paul Wiffen and Nick Magnus - and we think we spotted the back of Martin Russ's head as well. The tape opens with Bob Moog making the inaugural speech and officially opening the museum, followed by a nostalgic run through one of his old modular systems. At a mere £15.95 (plus postage), 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 SOS Bookshop.

ORDER CODE V026 £15.95
Running time: 50 minutes *Format: VHS (PAL)*
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

KORG AX30G TONERWORKS VIDEO MANUAL



The Tonerworks series of guitar processors from Korg gets a real work out on this 55 minute tape. Korg's guitar demonstrator Steve Fairclough whizzes through the G1, G2, G3 and the flagship AX30G and provides clear explanations of how each unit works. And to put the units into context, there's lots of footage of Steve showing off the sonic capabilities of each processor (not to mention his prowess as a guitarist).

ORDER CODE V028 £19.99
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

ROLAND GR-1 GUITAR SYNTH VIDEO MANUALS



These two video manuals have been produced to help the user get the most out of Roland's sophisticated GR-1 guitar synth, the first covering all the basics from mounting the pickup and getting tuned up to selecting sounds and using the on-board sequencer. The whole approach is down to earth with no frills, each step patiently explained and demonstrated by Roland's guitar synth specialist, Jay Stapley.

Jay also presents the Advanced tape which takes the mystery out of sound editing, custom tuning, advanced sequencer applications, external sequencer hookups, using other MIDI sound modules, indeed virtually everything the GR-1 is capable of doing. These videos may not be as gripping as Terminator II, but if you own a GR-1 or are thinking of buying one, you'll be doing yourself a big favour by getting both these tapes these right away. Nice one Jay.

ORDER CODE V014 £29.99
FOR BOTH VIDEOS
Total Running time: 4 hours. *Format: VHS (PAL)*
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

KORG X3 VIDEO TRAINING MANUAL



The latest in Labyrinth's series of exceedingly useful video manuals features Korg UK product specialist Phil Macdonald running through Korg's X3 workstation synth. The X3 features 61-note keyboard, 32-note polyphony, a Standard MIDI File compatible sequencer, disk drive, General MIDI compatibility and more. This video offers an easy way in to a powerful instrument. 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 of the X3 Video Training Manual 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. The video costs a reasonable £19.95 plus postage, and is available from Sound On Sound Mail Order.

ORDER CODE V018 £19.99
Running time: 55 minutes *Format: VHS (PAL)*
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

KORG X5 SYNTH VIDEO MANUAL



Korg's new X5 synthesizer, reviewed in SOS' January 1995 issue, now has its own video manual. This 55 minute tape is 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 instrument before laying out your cash, this is the video for you.

ORDER CODE V027 £19.99
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

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. The instruction offered by this video is as comprehensive as you can get without inviting Tim to your studio!

Topics covered include: sequencing page, score editing, lyrics and text, graphic arranger mode, hyper edit, the printer page, using the part box.

ORDER 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

HOW TO GET THE MOST OUT OF HOME RECORDING

Julian Colbeck, probably the UK's leading keyboard expert and author, has written and presented this highly informative set of videos which no home recordist should be without. Have you got your set yet?!

SORRY, THIS SET OF VIDEOS ARE NOT AVAILABLE TO OVERSEAS READERS.

HOME RECORDING 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 - inputs, bases, auxiliaries, EQ etc - 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.

ORDER 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

HOME RECORDING 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.

ORDER 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

HOME RECORDING 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 (Erasme, London Beat) discusses modern recording techniques, and top programmer Paul

Wiffen 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.

ORDER 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

SOS Videos

HOW TO GET A RECORD DEAL



For the first time, the facts you need from the people who know. It takes more than talent to make it in today's music industry. It takes more than knowing what you want. It takes knowing how to get it. How To Get A Record Deal contains vital information and insight that you will not find anywhere else, from artists and executives who have made it

and know what it takes. On this video music industry professionals give you the straight facts on how to break into this extremely competitive business. Because sometimes the difference between success and failure is information.

Presented by the National Academy Of Songwriters

CODE V003 £14.95

Running time: 1 hour 7 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 instrument's features and operating procedures, helping you to greatly expand your dexterity and creativity across the whole range of this world-beating instrument.

Comes with a FREE exclusive custom library of fabulous new M1 sounds on Atari format floppy disk (100 Programs, 100 Combinations) created by ABWH/Yes programmer Chris Macleod.

CODE V002 £24.95

Running time: 1 hour 10 minutes
Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

STEINBERG CUBASE VIDEO TRAINING MANUAL



This manual, the first in a series, 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 until you can use Cubase like a 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.

ORDER CODE V011 £29.99

Running time: 1 hour 30 minutes
Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

BRIAN MAY: MASTER SESSION



One of rock's most innovative guitarists gives you 45 minutes of face-to-face, step-by-step instruction. Learn all his hottest licks and effects from such hits as 'Bohemian Rhapsody' and 'Crazy Little Thing Called Love'. Special section on harmony guitar soloing. Highly recommended.

CODE SK10003 £12.99

Running time: 45 Mins Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95



JIMI HENDRIX: MASTER SESSION

Uncovers the mysteries of the unique Hendrix guitar styles. His innovative techniques left a deep and lasting mark on the art of heavy rock guitar.

CODE SK10045 £12.99

Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95



BEGINNING ROCK KEYBOARD

Tom Gimbal, keyboardist for Aerosmith, teaches you the fundamentals of the rock keyboard. Takes you step-by-step through chords, scales, modes, soloing and much more.

CODE SK11360 £12.99

Running time: 30 Mins Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

YAMAHA QY20 MUSIC SEQUENCER VIDEO MANUAL



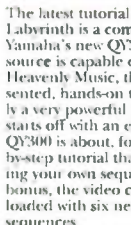
By Tom Robinson
Yamaha's popular QY20 portable sequencer/sound source is a deceptively simple device to use; if you think you might like some insight into getting that little bit extra out of the device, then look no further. Produced in co-operation with Yamaha, the 90 minute video features

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".

ORDER CODE V016 £19.99

Running time: 90 minutes
Format: VHS (PAL)
Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

YAMAHA QY300 VIDEO MANUAL



The latest tutorial video release from Labyrinth is a complete overview of what Yamaha's new QY300 sequencer/sound source is capable of. Presented by Joe Ortiz of Heavenly Music, the video offers a clearly presented, hands-on tutorial on what is potentially a very powerful piece of hardware. Joe starts off with an explanation of what the QY300 is about, followed up with 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 six new styles and six 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



1. 1m MIDI cable
2. 3m MIDI cable
3. 6m MIDI cable
4. 3m Right-angle MIDI cable
5. 7m jack to jack cable
6. 4m 16-way ELCO to jack for use with Alesis ADAT
7. 0.5m jack to jack patchbay cables, 8 per pack
8. 1m insert leads - stereo jack to two mono jacks
9. Stereo jack to 2X mono female socket adaptor
10. MIDI female - MIDI female adaptor (joins two MIDI cables)
11. Musician's Home Stereo Interface
12. 7m 8-way colour coded 5-pin DIN to 5-pin DIN MIDI snake
13. 3m 8-way phono to phono, phono to jack, or jack to jack

QUALITY CABLE

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.

3m 8-way phono to phono

Order Code CRA803 (Pic 13) £27.90

Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

3m 8-way phono to jack

Order Code CPR803 (Pic 13) £27.90

Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

3m 8-way jack to jack

Order Code CPP803 (Pic 13) £27.90

Postage: UK £2.50, Europe £5.95, R.O.W. £9.95

7m 8-way jack to jack

Order Code CPP807 £39.00

Postage: UK £5.00, Europe £9.95, R.O.W. £18.95

1m MIDI cable

Order Code HC1 (Pic 1) £3.30

Postage: UK £1.75, Europe £3.50, R.O.W. £3.75

3m MIDI cable

Order Code HC2 (Pic 2) £4.80

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

6m MIDI cable

Order Code HC3 (Pic 3) £6.70

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

3m right-angle MIDI cable

Order Code HC4 £4.69

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

7m Mic cable

Order Code HC5 £11.99

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

7m jack to jack cable

Order Code HC6 (Pic 5) £9.99

Postage: UK £1.75, Europe £4.50, R.O.W. £6.50

4m 16-way ELCO to jack for use with Alesis ADAT

Order Code HC7 (Pic 6) £99.95

Postage: UK £5.00, Europe £9.95, R.O.W. £18.95

0.5m jack to jack patchbay cables, 8 per pack

Order Code HC8 (Pic 7) £14.70

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

1m insert leads - stereo jack to two mono jacks

Order Code HC9 (Pic 8) £4.50

Postage: UK £1.75, Europe £3.50, R.O.W. £3.75

Stereo jack to 2X mono female socket adaptor

Order Code HC10 (Pic 9) £3.40

Postage: UK £1.75, Europe £3.50, R.O.W. £3.75

MIDI female - MIDI female adaptor (joins two MIDI cables)

Order Code HC12 (Pic 10) £3.49

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 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.

Order Code HC11 (Pic 11) £36.00

Postage: UK £1.75, Europe £3.50, R.O.W. £5.25

3.7m 8-way colour coded 5-pin DIN to 5-pin DIN MIDI snake

Order Code HC13 (Pic 12) £44.95

Postage: UK £4.00, Europe £9.95, R.O.W. £18.95

SOS CABLE MANAGEMENT KIT

Let's face it, cables are messy, inconvenient but very necessary - with no cables to interconnect your gear, there would be no sound. Sometimes, though, it's just too much trouble to try and keep cables tidy. But keeping them tidy is important: cables which can get stepped on, or which are subject to undue strain or twisting can develop faults or breakages. The result can be damaged jack plugs, damaged shielding or broken conductors that can add to noise, produce intermittent crackles or just go plain dead. To encourage you to take up the tidy cable habit, SOS have assembled a budget bumper pack of useful cable-related gizmos to get you under way. The SOS Cable Management Kit consists of the following:

- 4 six inch Velstraps. Sturdy velcro-equipped straps for keeping unused cables tidy - they come in highly visible red, with a metal buckle. Fasten the strap around a loosely looped cable for secure, kink-free storage of your leads.
- 10 clear adhesive cable labels. Especially on long cable runs or the exceedingly busy space behind mixers or patchbays, it can be tricky to figure out which cable goes where, especially when trouble-shooting during a session - if you're not labelling your cables yet, here's the perfect opportunity to start. Write the name of the gear on the label, and wind it around the cable, for long-lasting, instant identification.
- 10 six-inch releasable nylon ties. Perfect for keeping long runs of cables tidy, between mixer and multitrack, mixer and keyboard rig, or within the keyboard rig itself.
- 5 10-inch releasable nylon ties. A selection of even bigger ties, which could be used to secure cables to desk legs or keyboard stand supports.
- 5 self adhesive/screw fix tie mounts. Stick these little babies to walls, under tables or to the backs of mixers, and thread out six inch or 10 inch ties through them for stable, semi-permanent cable runs around your studio.
- 1 instruction booklet. How to use all the above and good tips on cables in general. All this can be yours for just £6.49 per kit.

ORDER CODE CMK1 £5.99

Postage: UK £1.50, Europe £3.50, R.O.W. £3.75

SOS CABLE MANAGEMENT CONVOLUTED TUBING

This looks like vacuum cleaner hose, but is a very sturdy and tidy way to snake cables from place to place. Our range is slit along one edge, allowing a cable to be brought out from the main stream at any location. The tubing has an internal dimension of 23.5mm (nearly an inch), and costs just £4.99 for 3 metres, and includes 12 sturdy releasable ties to keep the tube closed.



ORDER CODE CMCT1 £4.99 FOR 3 METRES

Postage: UK £1.50, Europe £3.50, R.O.W. £3.75

SOS Offers

Back Issues Profile

SOUND ON SOUND

JANUARY 1991

Include indepth reviews and features on:

- Ensoniq EPS16+ sampler
- * Yamaha TG77 expander
- * Martin Ware of BEF
- * Roland SPD8 pad controller



APRIL 1992

Include indepth reviews and features on:

- Roland JV30 & JV80 synths
- In the Studio With Soul II Soul
- Korg Soundlink digital audio workstation
- Zoom 9000 multieffects



FEBRUARY 1993

Include indepth reviews and features on:

- Emu E11xp sampler
- Dynacord DRP15 effects
- Steinberg Cubase for Windows
- Hands On: Roland TR808
- Klaus Schulze Interview
- Ministry Interview



RECORDING MUSICIAN



APRIL 1993

Includes in depth reviews and features on:

- Studiomaster P7 mixer
- Drawmer 1960 compressor
- The Producers: anecdotes from 18 of the world's leading producers.
- Effective Reverb part 2: Drums & Percussion

• Ring for availability of any back issues •

(Photocopies of articles available if issue sold out)

All of these issues can be ordered using the normal order form or the Mail Order Hotline 0480 461786.

November 89-November 90	£1.50
December 90/October 92	£2.00
November 92 onwards	£2.50

However, credit card orders must total more than £5.00.

THE EXCELLENT SOUND ON SOUND T-SHIRT

Painstakingly crafted from the finest quality, heavyweight 180g cotton, the primo quality *Sound On Sound* T-shirt is your essential buy. It's available in deepest black or dazzling white, size XL only, each sporting the famous *Sound On Sound 'S'* (two great designs, one with a large 'S', and one with a small 'S' printed on the breast). They are such great value why not buy two? At £7.95 + p&p each, the *SOS* T-shirt is your guarantee of musicianly credibility. Place your order now. Postage: UK £1.50, Europe £4.95, R.O.W. £7.50.

WHITE <i>SOS</i> T-SHIRT	} Small 'S'	ORDER CODE TWC1	£7.95 + P&P
BLACK <i>SOS</i> T-SHIRT		ORDER CODE TBC1	£7.95 + P&P
WHITE <i>SOS</i> T-SHIRT	} Large 'S'	ORDER CODE TWF1	£7.95 + P&P
BLACK <i>SOS</i> T-SHIRT		ORDER CODE TBF1	£7.95 + P&P



SPECIAL OFFERS

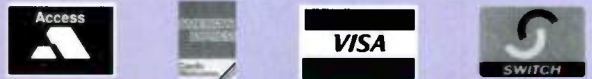
As a valued subscriber to *Sound On Sound* you will be entitled to a 10% discount on books you order from our Mail Order Department, to be sent to your registered address (please quote your sub's number when ordering). We will also make you aware of any special offers, and free prize draws eligible to subscribers. All new subscribers will be sent a free copy of the 3M Guide to Tapes, Terms & Formats.

SUBSCRIPTION RATES

UK	12 ISSUES	£30.00
EUROPE (AIRMAIL)	12 ISSUES	£45.00
WORLD (AIRMAIL)	12 ISSUES	£55.00

TO ORDER

To order your subscription to *Sound On Sound*, phone now on **Tel: 0480 461244** and ask for the Subscriptions Dept. (Visa, Access and Switch cards accepted.) Outside office hours call our Mail Order Hotline on **Tel: 0480 461786**, and leave the following details: your name, address and daytime telephone number, your credit card number, expiry date (and issue number if a Switch card), and ask for a 12 month subscription. Or send a cheque/postal order with one of the order forms in the magazine.



CALL NOW TO SUBSCRIBE

0480 461244
 (office hours: 9.00am - 5.30pm)
0480 461786
 (out of hours)

☎ Sally Thompson on 0480 461786, 9.00 to 5.30pm. to order. Outside office hours, please leave the following details on the answer phone: 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 (£5.00), please ring 0480 461244 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).

ORDER FORM

BLOCK LETTERS

Post to:

**SOS Publications Ltd., Media House,
 3 Burrell Road, St. Ives, Cambs. PE17 4LE**

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 FOR 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.

Name.....

Address.....

Post Code..... Tel (Daytime)

Do you currently subscribe to SOS? Y N Subscribers Ref. No.

AMERICAN EXPRESS/ACCESS/VISA/SWITCH accepted.

CARD No.

Expiry date..... Switch Issue No..... Signature.....

ORDER CODE	QTY.	DESCRIPTION	PRICE	POSTAGE	SUB-TOTAL
TOTAL					

ORDERS ARE DESPATCHED 10-14 DAYS FROM THE TIME WE RECEIVE THE ORDER. DEPENDING ON STOCK LEVELS AND CHEQUE CLEARANCE.

CLASSIFIEDS
 01480 461244
SOUND ON SOUND
 Fax 01480 492422
PATRICK SHELLEY

Classified Dept., SOUND ON SOUND,
 Media House, Burrell Rd, St Ives, Cambs PE17 4LE

RATES FOR ADVERTISING

DISPLAY BOX
 £25.00 + VAT per single column centimetre
 (3 column page). Discounts offered for series.

SITUATIONS VACANT
 £28.00 + VAT per single column centimetre.

Spot colour available on request.

LINEAGE
 75 pence per word including VAT (minimum of 12 words),
 or £1.25 pence per word including VAT for
 Sound On Sound and Audio Media.

Box Numbers available at an additional £20.00 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,
 therefore, should know whether an advertisement relates to a sale by a trader or
 a private individual.

FOR SALE

MULTITRACK SALES CENTRE

SOUNDCRAFT 600 24:8:2	£1999
SOUNDCRAFT SPIRIT 24	£1699
STUDIOMASTER MIXDOWN 24:8:16	£1299
ALLEN & HEATH S2 24:8:16	£1699
SONY TDC3 DAT	£350
AKAI S950	£699
SEQUENTIAL PRO I	£399
YAMAHA REV 5 as new	£899
SAMSON 22:4:2 as new	£550
APR QUADRA flightcased	£999
KORG TRIDENT	£699
KORG TRIDENT II	£799
YAMAHA CS 70M	£799
OCTAVE KITTEN	£299
MOOG SATELLITE	£199
ROLAND MKS 70 as new	£595
ROLAND MKS 50	£299
FOSTEX M80	£399
ROLAND JV80	£799
AKAI SO1 2 meg as new	£599
ROLAND JUPITER 4	£399
OVERHEIM MATRIX 6R	£499
YAMAHA TX802	£350
YAMAHA TG33	£199
YAMAHA FX900 pro multi fx	£299
YAMAHA YS200	£199
DRAWMER DF 320 as new	£299
YAMAHA RY30	£299
AKAI AX80	£250
YAMAHA SY77	£799

★ PART EXCHANGE WELCOME ★

WANTED FOR CASH TODAY!
 ALL RECORDING/STUDIO/MUSIC EQUIPMENT
 ☎ ASCOT (01344) 891110 or (0831) 882666

RETRO SECTION

Roland TR606 £100
 Roland TR707 £125
 Roland TR808 £399
 Roland TR909 £Call
 Roland SH101 £215
 Roland MC808 £225
 Roland TB303 £449
 Roland MKS70 £Call
 Roland MKS80 £Call
 Roland Juno106 £459
 Roland Juno60 £375
 Moog Optus3 £200
 Korg DW8000 £350
 Sci Pro One £Call
 Sci Drumsticks £135
 + LOADS LOADS
 MORE!

AMIGA SOFTWARE

Introducing a new affordable
 librarian systems available
 for Amigas
MIDIComm Lite®
 It works with all non-hand-
 shaking MIDI Keyboards &
 Modules. All your system-
 exclusive files can be put
 neatly on to disk for future
 use. Works with hundreds of
 MIDI devices including
 Junos, TX's, Kawai K's +
 loads loads more.
 Call for details
Introductory price £22.95
 (includes Program, Manuals &
 Registration for upgrade to
 forthcoming releases of
 MIDIComm Lite and
 MIDIComm®)

Phuture Sounds

1 Elm Croft, Datchet, Berks. SL3 9DS.
 Sales Hotline : (01753) 543772
 VISITORS BY APPOINTMENT ONLY

An editor for everyone!

Sound Quest have the widest range of editing
 software available on the widest range of
 platforms - Windows 3.1, DOS, Atari ST, Mac
 and Amiga. MIDIQuest 4.0 supports 190
 different MIDI products including JV80,
 Vintage Keys, K11, 05R/W, i2 & i3, Wavestrn
 SR, Digitech DSP128 & 256, all Roland GS
 instruments, SY85 and loads more

MIDIQuest 4.0 - £219*

Or if you require an editor for only one synth,
SoloQuest - £79*

another great product from Arbiter Pro MIDI
 *Windows versions are £20 extra

ARBITER PRO MIDI Tel: (081) 202 1199, or check out
 our dealer list on page 151

DO YOU HAVE YEARS OF TIME TO WASTE? NO? THEN THIS IS FOR YOU!

NOTE TRACKER THE MUSIC CALCULATOR

"Musicians need a photographic memory... or a Note Tracker" *Kevin Pawsey, Atari ST Review.*
 "All the scales and harmonic possibilities are available at a glance" *Derek Johnson, Sound On Sound.*
 "Allows access to huge amounts of information..." *Steve Fairclough, The Guitar Academy.*

HANDLE INTERVALS, CHORDS, SCALES AND MODES EASILY and RAPIDLY! Use them
CONFIDENTLY! This device displays as many as you'll ever need, in any key you want with all the notes written
 out! You don't have to read music to use it! Comes with a handbook and wallet, the complete course to **DE-**
MYSTIFY MUSIC THEORY, for keyboards, guitar, bass, workstations, in fact any instrument that plays notes!
 Only **£24.95 inc. P&P** from:
C-Thru Music, 6 Pleasant Row, Woodford, Kettering, Northants, NN14 4HP
Tel: 01832 733214.

Dealer enquiries welcome. Overseas add £2.

"HANDS ON" MIDI SOFTWARE LTD.

OVER 2000 TITLES TO CHOOSE FROM
 Prices start from £3.95 each. All main computer and hardware formats supported.

<p>1000's OF CUSTOMERS WORLDWIDE Choose our files again and again Why do they keep coming back to us? SIMPLE Our sequences are the most professional and have a back up service to match. We now sell to 15 countries worldwide. See the review on Pages 62, 64, 66 & 67, April issue, Sound On Sound</p> <p>★ "STARLITE" MIDI LIGHTING CONTROLLER £175.00 rrp inc VAT Over 3.5 kW of lights on 8 independent channels.</p> <p>PRO 24 GEN FOR ATARI ST. Creates Pro24 Song files from Midi Files. Only £9.95 inc VAT.</p>	<p>"BACKBEATS" RHYTHM TRACKS Three great volumes of rhythm patterns: Rockbeats, Ravebeats and contemporary with over 1000 patterns on each disk only £9.95 each inc VAT.</p> <p>"ROOVE MACHINE" Jam Along Files: Onl - £9.95 inc VAT</p> <p>"16+" Midi Expander Cartridge for Atari ST Only £32.50 inc VAT. (MROS upgrade included) "Lyrics" for IBM pc Karaoke</p> <p>"ON STAGE SOFT" The software version of our Midi File Playing Software. Special £34.95 "On Stage" with Live Play Hardware £75.00 ind.</p>	<p>NEW SONG COLLECTION PACKS 10 songs on a disk for a special price of £14.95. ONLY available from your local music shops.</p> <p>"LYRICS" FOR IBM / PC KARAOKE Software plays MIDI files while displaying the lyrics on screen in time with the music Only £49.95 inc VAT</p> <p>ZERO GEN FOR IBMPC: ONLY £14.95 Type 1 MIDI files to type O</p> <p>SC-55 & TG100 EDITORS FOR ATARI ST: NEW LOW PRICE! Only £19.95 each inc VAT.</p> <p>SC 55 DISPLAY EDITOR For Atari ST. Only £9.95 inc. VAT</p>
---	--	---

Hands On Sweet 16 ST Sequencer. See the review on pages No 110, 112, 114 Feb Issue of Sound On Sound
 32 MIDI channels. Supports 16+MIDI expander only **£49.95**

FOR SALE



MIDI SONG FILES
ANOTHER AMAZING OFFER!!!
DUE TO THE OUTSTANDING SUCCESS OF LAST
MONTHS SPECIAL OFFER - WE ARE PLEASED
TO
ANNOUNCE ANOTHER AMAZING OFFER.

10 CHART TOPPING HITS

ALL FILES ARE GM/GS COMPATIBLE

TITLES UNAVAILABLE AT TIME OF PRESS - PLEASE TELEPHONE FOR FULL DETAILS

TOP VALUE FOR MONEY - MIDI NATION FILES ARE UNRIVALLED ANYWHERE IN THE UK!

ALL OUR MIDI-FILES ARE PRODUCED 100% "IN HOUSE"

MIDI NATION, 29 KESTREL ROAD, WALTHAM ABBEY, ESSEX. EN9 3NB
TEL: 01992 651797

Future Music PLATINUM AWARD WINNERS (94%) on all products reviewed - "Impossible to fault - it's difficult to imagine that they can be bettered" - Jon Bates FM

HEAVENLY MUSIC PRODUCTIONS

*** SPECIAL OFFER ***

For a limited time only

Dr. BEAT Drum / Percussion Disks Vols 1-6
 normally £16.99 - £10.99 each vol III
Beat n Bass normally 16.99 - £10.99!!

MPC / Multimedia Compliant
 Roland, Yamaha, BCK approved
 Education Friendly
 GM/GS Compatible
 HM Standard

Check out our lower prices below
 - you have no excuse cause now
 you can afford the genuine article
 direct from the innovators of the
 'building block disks'

NEW - Head Hunters Jungle Beats £16.99
NEW - QY300 Phrase Disks 1 & 2 £19.95 each
NEW - Lite Tech Midi light show presets £8.99
NEW - MEGATRAK

Backing Tracks on audio cassettes or DAT in ANY Key £Phone
BYTES n PIECES Song Construction / Enhancement Disk **£24.99**
The JAM Files Vols 1 & 2 *£13.99 each
Dr. RAVE Grooves Vols 1 & 2 *£15.99 ea
Techno Files Groove Disk *£15.99
Hit Shot Groove Disk *£16.99
Mixer Maps & GS Editors (Atari) from £7.00
WaveLib2 Wavestation Librarian £15
Cubase On Line Help Disk £12.99
One 2 One day long Midi tutorials *£Phone

Please add £1.00 UK p&p - £2.00 for overseas

To order or for more info - PHONE / FAX 01255 434217

Or send cheque or postal order to 39 Garden Rd, West Clacton, Essex CO15 2RT England

Q. Why did STEINBERG choose HEAVENLY?

A. Hear us at the MEMS 95 (stand 318)



Control SCMS

with

Audio Design's



COPY-RITE

Box



£170 inc. VAT

Post Free

AUDIO DESIGN



0734-844545

241

AARONSOUND

JUPITER 8	£850
MATRIX 12	£1950
MPIG 80 -AMS 80	£1650
MIDI/G GRAPHIC EQ	£250
OSBERNERA 2 VOICE - 2 SEMI/REG	£495
JUNO 60 AND INCH MIDI 2751	£450
RHOIDS CHROMA - MIDI	£1000
ROLAND CS3-400 SEQ	£95
ROLAND MSQ 700	£125
ROLAND TX 808 MIDI (INCH MIDI £275)	£450
ROLAND D550 / FC1000	£595
KAWA K3M	£345
MIDI/G ORPUS 3	£125
MIDI/G PRODIGY	£245
KAWA 1000 MONO	£95
HAMMOND 1100 3 WAVE LESLIE	£550
SEQUENTIAL PROPHET 5	£850
YAMAHA TR802	£395
ROLAND U20	£445
ROLAND JUNO 106	From £395
SOULSCRAFT SPIRIT FOLD SI 18-2	£345
ROLAND D50	£445
YAMAHA TG 55	£250
RANE MPE 28 MIDI GRAPHIC	£280
ALPHA JUNO 2	£345
KORG EX800	£145
YAMAHA SPX 1000 MULTI FX	£325
KORG MS 10	£150
ALLEN HEATH SPECTRUM 16/8/16 MIDI	£1750
BASICAM MS0 - LOOKMS - STAND	£695
REVOX A77 MK1	£130
STEINBERG TIMELOCK SMPTE UNIT	£95
H MEG BOARD 51000 / 51100	£265
YAMAHA SPX 90	£215

PX WELCOME CALL US AND HAGGLE!

SAME DAY COLLECTION / NEXT DAY DELIVERY

WE ARE CURRENTLY LOOKING OUT FOR - ANY ONBOARD

+ FX JUNO 106, \$1000, JD800, DISKS UP TO £2000,

WE WILL SELL YOUR EQUIPMENT ON BROKERAGE

FAX / TEL: 0161-442-8616 MOBILE 0831-1066-85795



Labyrinth Midi Music (A Labyrinth International Company)

Labyrinth House • 11 Albert Place • Lower Darwen • Blackburn • Lancs • BB3 0OE
 Telephone: 01254 678915 • Fax: 01254 678917

(Licensed by M.C.P.S.)



A LABYRINTH INTERNATIONAL COMPANY

QUARTZ
 multimedia
 IS COMING YOUR WAY?

NEW!

Albums

LABYRINTH are now able to offer a selection of albums compatible with all the formats that we support. Each album consists of ten songs and are categorised as follows:

- *Easy Listening
- *Sinatra
- *Elvis
- *80's Hits

Each album is priced at an incredibly low price of 14.99 each. We will be adding more albums to the list very soon, phone for more information.

XTRA SPECIAL OFFER

DANCE CLASSICS:
 10 recent dance/rave songs for only 10.00 on any format we support.

Korg i-series styles

LABYRINTH now have four styles disks available for ALL Korg i-series instruments. The disks have been categorised as:

- *Big Band volume 1
- *Big Band volume 2
- *Pop
- *Rock

The price of the disks is £14.95 each plus £1.50 postage and packing.

More styles will be coming soon from Labyrinth so please phone for more information.

STOP PRESS!

Synth Sounds

In conjunction with the UK distributor of Sound Source, LABYRINTH are pleased to be able to offer a huge range of sounds for most synths. Sound Source are one of America's leading companies in producing new sounds for almost every synth past and present. We have far too many sound cards/disks to list here but here is a list of instruments that we can now offer sounds for:

KORG: Wavestation/Wavestation A/D./01W Series/M1 & M1R/T-Series/X2, X3 & X3R/S3.

YAMAHA: SY99/SY77/SY55/SY22/SY85/TG55/TG500/TG33/V50.

ROLAND: JD800/D50/D550/D70/JV80/U20/SC55/D110/MT32.

ENSONIQ: EPS 16+ (Sample Sets)

E-MU: Proteus 1/XR/Proteus MPS/Plus we can supply EMAX sample packs.

CASIO: VZ Series/CZ Series/PG380.

We must stress that these are only a few of the instruments that we are able to supply sounds for so please call us for our full list of sounds.

Formats

LABYRINTH MIDI MUSIC support the following sequencer formats:

- *Super MRC
- *Alesis DataDisk SQ
- *IBM (and compatibles)
- *Korg 01/W series
- *Korg i2 and i3 music workstations
- *Standard Midi File Format 0 and 1

20% Discount

LABYRINTH midi files are priced as follows:

- All midi files = £6.00 (per song)
- Medleys = £10.00 (per medley)
- Albums = £14.95 (each)
- Styles Disks = £14.95 (each)
- Sounds = Phone for details
- Postage and Packing = £1.50 (for your entire order)

If you buy 10 or more songs then you get a 20% discount on the whole order.

(Offer does not apply to Albums, Style Disks or Sounds)

Catalogue

PHONE NOW! For your copy of the 1995 Labyrinth catalogue and demo disk (see the list of formats). The catalogue is packed with over 1000 titles available for all listed formats. Please send £1.50 for your demo disk and catalogue.

802

Westec Midi-Market

Low cost software - hardware - midifiles

Atari PD and Shareware

EDITORS for all makes
CUB1 Cubase Midi managers
MU1 Midi Utills
MU2 Scoring progs
MU4 Studio facilities
MU6 Sysex utills
PDS2 quality 16trk Sequencer
PDS8 Backing track creator
Full list available

£3.95
per disk

BEAT THE
HYPE!!

over **500**
Professional
Backing Tracks
GM Midifile
5 for £15
10 for £25
25 for £50

Roland LA essentials

for D5 D10 D20 D110 MT32
CM32 CM64 etc

GENERAL MIDI Emulator -
instant GM patch set-up and
six new GM drumkits

GETDUMPS capture all your
setups and sounds to disk
with no fuss

QUALITY SOUNDS

128 superb voices per disk
RPS1 - replacement presets
RPS2 - Drum sounds and kits
RPS3 - Analogue sounds
RPS4 - Vintage keys
RPS5 - Guitar sounds

£9.95
per disk

Atari/PC
DSDD disks -
state model/
software
with order.

Need more Midi channels.

The **STM Adaptor** plugs straight into your
serial port. Works as a **SECOND MIDI OUT** with Cubase,
Creator, Notator, Dr.T or any program that can
access the serial port.

£12.95
why pay more

also Midi switcher boxes

2 way £7.95 3 way £8.95
4 way £9.95

Westec Sound Services

30 Fish Street - Goldhanger
Maldon - Essex - CM9 8AT
0621 - 788466

**SEND
FOR OUR
FREE
MIDI
GUIDE**

ALL PRICES FULLY INCLUSIVE

MIG Music 081 641 6808 55 Angel Hill, Sutton, Surrey SM1 3EH

ST & PC EDITORS CZ, D110, DX7, DX7II, DW8000, JUN01/2, **ST EDITORS** D10/20, DS8, DX21/100, FB01, K1, K4, M1, TX802/81Z, U110, VZ1, XE8, YS200/100. **PC EDITORS** D4, FZ1, JX8P, Matrix 6, MT32, Sound Canvas, TG55. **VOICES (ST, PC OR AMIGA DISK)** 320.D5/10/110/20, 128 D50, 960DX7, 560 ESQ1, 575FB01, 320K1, 64K4, 128CZ, 200 Matrix 1000/6, 240M3R, 400MT32, 64 Proteus 1, 640 TX81Z/21/100, 128VZ1. **VOICES (ST ONLY)** 192 DW8000, 240K5, 100M1, 100 MPS, 256TX802.

EDITORS & VOICE DISKS £9.75 EACH, 3 FOR £26, 4 FOR £30.

SAMPLE CD CLASSIC SYNTHS PLUS 30 synths/808/909 £24. **MIDI THRU** £14. **MIDI SWITCH** £14.

CZ 64 VOICE RAM Blank £39, with voices £44. **POLY 800/EX800** 64 voice datatape £10.

Books, Librarians, Mixer Maps, SMF Sets, Videos.

Send £1 in stamps for catalogue. P&P £1. Sent same day, 1st class.



NEW PRODUCTS FOR '95!

INTERNATIONAL

20 MYSYDD TCE. SWANSEA SA1 2PZ UK

No Hype Needed!

Tel/Fax: (01792) 642381

FOR FREE CATALOGUE

100's of MIDI SONG FILES - THE BEST COLLECTION IS EXPANDING! NOW INCORPORATING 'BANDTRAX' - THE BEST MIDI FILES IN AUSTRALIA ARE NOW AVAILABLE IN THE U.K. - THROUGH US!

MIX'n'MATCH \$24.95 - the ultimate song-construction software! Over 350 phrases of drums, bass, rhythm guitar, keyboards, strings, fills & pads in one package! Mix'n'Match a complete 7-part backing style in just seconds from any one of 11 different files. With literally thousands of possible configurations, programming has never been so much fun! Available as a collection of Cubase w/ 'Arrangement' files (Atari version 2.0 on, any Mac version except 1.83, any PC version) or as a collection of type 1 midifiles for sequencers with at least 42-track capability.

MIX'n'MATCH Lite, \$14.95 - unique rhythm-construction package. Over 200 patterns of drums, bass, keyboards & guitar complete rhythm styles in next to no time! Supplied as type 1 midifiles for sequencers with at least 20-track capability, or as a collection of Cubase w/ 'Arrangement' files (compatibility as above). Coming soon: **MIX'n'MATCH Volume 2!**

SHORT CUTS! \$14.95 - the easy way round those 'sticky bits'! Over 200 separate phrases including bass fills & slides, rhythm & lead guitars, drum fills & rolls, pitch bend effects and much more... Plus... innovative mix'n'match drum-pattern creation system! The indispensable package for rock & pop programmers

AT LAST - A 'MIDI' CHORD AND SCALE DICTIONARY \$14.99 CHORDS / SCALES / MODES / ARPEGGIOS / PRACTICE PATTERNS. A must for education and reference, the scales are universal, the chords are for guitar, brilliant for understanding guitar voicings - with a nice twist for the guitarists. REMEMBER - WE DID IT FIRST!

THE COMPOSER \$9.95 - setting a new standard in MIDI Jam-Fest! Complete song arrangements ideal for jamming on any instrument; or compose and record your own melodies. Volume 1 'Blue Moods' out now. 10 files of classic funk, latin-rock and ballad styles guaranteed to get your fingers itching! Volume 2 rock styles coming soon!

BASS LINES \$10 TONS OF BASS RIFFS AND LICKS. PLAYED IN FROM A MIDI GUITAR - LIKE ALL BASS LINES OUGHT TO BE. GET A GROOVE IN YOUR BOTTOM END!

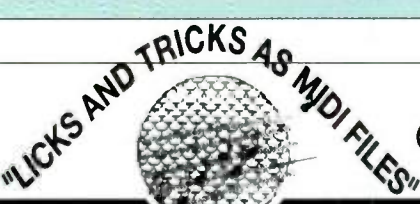
THE RHYTHM GUITARIST \$10 GENUINE RHYTHM PATTERNS INPUT FROM A MIDI GUITAR! REVIEWED IN 'FUTURE MUSIC' ISSUE 24: 'The CD drama... This is a total feat - a lush, rhythmic and lead guitar with the lead playing some pretty mean blues followed by some country picking'. The review: 'Play of sound pretty convincing and are laid out in a logical fashion'. The verdict: 'If you work with music which is light, clean and middle-of-the-road, this is worth a tenner of your money'.

DRUMBEATS ... VOLUMES 1 AND 2, \$10 EACH DRUMMING PATTERNS WITH FEEL, the answer to your drum programming problems. 100's of patterns and all totally usable - NO C-LEVER BUT USELESS STUFF HERE!

SR16 'GM' MIDI CONVERTER \$10 Set's up your SR16 DRUM MACHINE to play the 'GM' drum kit. SAY NO MORE!

ALL PRODUCTS BY MIDI MAGIC AND 'MAGNIFIC' ARE SOLD UNDER LICENSE ONLY FOR BE USED BY THE PURCHASER AND NOT FOR REUSE, DOWNGRADE OR DISTRIBUTION IN ANY FORM.

twiddly.bits



drums & percussion

VOLUME FOUR - Drums & Percussion

IF YOU ARE SERIOUS ABOUT DRUMS AND PERCUSSION - LOOK NO FURTHER!

KEYFAX SOFTWARE combines with some of the best professional drummers and percussionists available to bring you the ultimate drum and percussion patterns. **Hugo Dagenherdt, Gavin Harrison and Bill Brutord** are just some of the top instrumentalists featured on this new disk. With artists such as **Incognito, Level 42, Earthworks** and many more to their credit this is surely one **Twiddly Bits** disk not to be without. In keeping with all our previous volumes data has been painstakingly recorded using the appropriate MIDI controllers (Drum Kat, SDX etc.) to give you the feel and sensibility of real players. No pale imitations here - Matey!

CATEGORIES INCLUDE:

DRUMS: Power Kit Patterns & Fills, Brush Patterns & Fills, Funk Patterns & Fills, Country Patterns & Fills, 6/8 Patterns & Fills, 7/8 Patterns & Fills, Snare Rolls, Cymbal Work and much more.

PERCUSSION: Conga, Timbale, Tambourine, Triangle and Shaker are just a few of the many examples of the patterns and motifs included that just cry out to be imported into your latest compositions.

The applications and creative possibilities for this exhaustive product are endless. The access inexpensive and instant.

- "Their feel has no equal. Inspiring to say the least" (SOS)
- "Stuffed full of goodies" (Future Music)
- "A brilliant utility" (Keys, Germany)
- "Invaluable. There's currently nothing like it on the market." (Atari ST Review)
- "Stunning pushing the fluency of MIDI to a new high" (Vol. 3, F.M. Issue 24)

VOLUME ONE - GENERAL INSTRUMENTS: Recorded on a variety of MIDI controllers this comprehensive collection of instruments provides unbelievable access to a wealth of licks, riffs, slides, trills etc. Categories such as: Bass, Brass, Drums, Organ, Woodwind are just a few of the instruments featured here.

VOLUME TWO - GATE EFFECTS: The classic studio trick as MIDI data. Why buy a separate noise gate and drum machine to achieve this hypnotic effect?

VOLUME THREE - ELECTRIC & ACOUSTIC GUITARS: This is without doubt the best guitar disk available. Over 300 strums, licks, bends and flurries etc. played by world renown guitarists. 92 percent in F.M. issue 24. Platinum Award.

TWIDDLY BEATS - VOL. 1 BRAZILIAN RHYTHMS: Recorded in Rio de Janeiro, this stunning collection of rhythms is totally non quantised and comprises both rare and classic Brazilian grooves as constantly evolving 16 bar patterns. From Olodum to Samba, Baiao to Xote, you will have heard nothing like this before.

KEYFAX SOFTWARE, PO BOX 4408, HENLEY-ON-THAMES, OXON RG9 1FS.
PHONE 0734-471382 U.S.A. OFFICE NOW OPEN TEL: (408) 688 4505

To order: send cheque or P/O to Keyfax Software. Tick and cut out, or just take note of and add up.	Please add £2.00 for UK P & P, and don't forget to include a return address!
VOLUME ONE - General Instruments	■ £19.95
VOLUME TWO - Gate Effects	■ £12.95
VOLUME THREE - Electric & Acoustic Guitar	■ £19.95
twiddly.beats VOLUME ONE - Brazilian Rhythms	■ £19.95
twiddly.beats Akai S-3000/S-1000 samples	■ £16.95
twiddly.beats Roland S-750/760 samples	■ £16.95

Analogic Computers (U.K.) Ltd

Unit 6, Ashway Centre,
Elm Crescent,
Kingston-Upon-Thames,
Surrey KT2 6HH

Mon - Fri. 9am to 6.30pm Sat 9am to 5pm

TEL: 0181-546 9575

FAX/TEL: 0181-541-4671

ANALOGIC
ANALOGIC
ANALOGIC

OFFICIAL ATARI REPAIR CENTRE

COMPUTERS MONITORS REPAIRS WITHOUT DIAGNOSTIC FEES

520/1040 ST/STM/STF/STFM/STE

Monochrome, Colour Monitors excluding CRT, LO. PT. £59.95

including delivery back by courier service

★ We pick up computers for repairs and memory upgrades for Next Day delivery to us by Courier Service for only £6.00 + VAT

MEMORY UPGRADES

MARPET DEVELOPMENTS OFFICIAL XTRA-RAM DELUXE INSTALLERS

520 STF/STFM to 1 Meg	£34.95
520 /1040 ST/STFM to 2.5 Meg	£59.95
520 /1040 STF/STFM to 4 Meg	£99.00
520 STE to 1 Meg	£9.95
520 1040 STE to 2 Meg	£49.95
520 1040 STE to 4 Meg	£99.00

PLEASE CALL FOR FALCON MEMORY PRICES



PROTAR PROFILE SERIES II HARD DRIVES QUANTUM/MAXTOR MECHANISM WITH CACHE

Compatible with all ST/STF/STFM/STE/Mega ST/Mega STE/Falcon

Profile 170DC	£279.95	Profile 365DC	£389.95
Profile 270DC	£299.95	Profile 540DC	£429.95

• POA for Higher Range of Profile Series II and SCSI Bare Drive

GOLD AWARD WINNER PROTAR PROFILE SERIES II HARD DRIVES have features such as:

- Auto-Booting • Auto Parking • Read/Write Access • Password Privileges • Selectable Boot Partition
- DMA Thru Port • Quiet Fan • Device Number Switch • Hard Disk Management Software Package
- Full Utilities package and De-bugging Software • 45 Watt PSU and all necessary wiring in place to mount another Bare Hard Drive in elegant housing.

SCSI BARE QUANTUM HARD DRIVES with Cache

170Mb	£179.95	365Mb	£289.95
270Mb	£199.95	540Mb	£P

STE, STFM, FALCON 030 COMPUTERS.....P.O.A.

STE/STFM 2.06 TOS-SWITCHERS

with Hardware Switch

The only Solderless DIY Kits available

STE TOS 2.06 Roms	£39.95	STE/STFM/STF/ST TOS Switcher	£59.95
STE TOS Switcher	£39.95	inc 2 06 Roms	

MONITORS

AMITAR £129.95
High Resolution Monochrome Monitor

ACCESSORIES

STE/STFM Start Lead	14.95	Blittrchip + socket	£44.95
STE/STFM Lead to Philips CM0833 11E14	9.95	Mouse Mat	£4.95
Twin Joystick/Mouse Port extension lead	£5.95	10 Blank Branded Disks	£9.95
290 Dpi mouse	£14.95	10 Blank Unbranded Disks	£5.95
Dust Cover	£4.95	Forget Me Clock	£21.95

POWER SUPPLIES

STFM/STE Power Supplies (Service Exchange)	£29.95
New STFM/STE Power supplies	£49.95

DISK DRIVES

1 Meg 3.5" Internal Drive	£39.95
High Density 3.5" Internal Drive	£44.95

PRINTERS — HP310 / 510 / 550 COLOUR - POA



- All prices include VAT and NEXT DAY DELIVERY subject to availability
- Fixed charge for repair does not include Disk Drive Replacement & Keyboard
- All prices subject to change without notice • We reserve the right to refuse any ST Repair
- Please allow 5 working days for cheque clearance

VISA

The only leading repair centre in the UK providing a professional, high quality, while-u-wait repair & upgrade service on Atari computers without any surcharges

NEW LOW PRICE FOR LIMITED PERIOD
High Density 3.5" Internal Drive + Module.....£59.95

FREE TOS 2.06 SWITCHER FITTING WITH ANY
REPAIR/MEMORY UPGRADE

Professional Service with no surcharge

WHILE - U - WAIT!!!

MEMORY UPGRADES • TOS UPGRADES • DISK DRIVE UPGRADES • EMULATORS • many REPAIRS

FOR SALE

DJK Music MIDI SONG FILES

- Extensive Catalogue ● Medleys ●
- Compilation Disks ●
- Songs Programmed To Order ●
- Bulk Buying Discounts ●

Telephone or write for free demo disk and catalogue:
DJK Music, Malgat, Thorpe Road, Tendring, Essex CO16 0HW.
Phone (01255) 830185 (Mon-Fri 9-5); 861949 (anytime); Fax 861190.
We can also supply songs on DAT or cassette 776

Put a Real Drummer in your computer with Realfeel Grooves

Our Grooves are played directly into a sequencer using Midi Drum Pads by the vastly experienced and perfectly formed drummer Colin Woolway. Colin has been a Professional performer and teacher for over 15 years.

Volume 1. It's still the business!

99 Crucial grooves including Dance, Rock, Funk, Jazz, Latin, Reggae, Indie & much more. With fills, solos and percussion.

Volume 2. It's the business tool!

30 Double-Grooves. That's 2 grooves in 1, talks, each with intros and 3 alternate fills. Funky, Dancy, Rocky and, er... Groovy!

15 Mini-songs, Intro, Verse, Chorus, Middle 8 and ending all in one pattern. Including Slow ballad, Rock, Blues, Jazz, and more.

Each volume is available on Atari or PC disc in Midfile Formats 1 or 0. (GM/GS Compatible)

Price is just £14.95 each Volume inclusive of P&P.

To order send cheques or PO payable to **Realfeel** to: 8 Highview House, 1 Highview Road, London SE19 3SS or Telephone **0171 241 0621** for further details.

NEW EQ JIPMATT

Behringer Euro Desk	£1.750
Soundtracs Topaz 24:8:2	£3.000
Soundtracs Solo Lite 16:4:2	£999
Behringer Ultraflex 2	£220
Behringer Composer	£289
Behringer Dualflex II	£129
Art Multiverb II SE	£299
Art FXR	£179
Didgitech Vocalist II	£550
Didgitech TSR24	£750
Dod Dual Comp/lim	£229

Best prices on AKG, Beyer, Audio Technica, Shure & Sennheiser.

USED or EX Demo Equipment

Fostex M80	£600
AKG C1000's	£140
Sony D7 DAT (ex demo)	£420
DBX overseas comp	£80
Soundtracs 16:8:16 + Loom & Flightcase	£900
Korg M1	£699
Roland Drumpads	£60

MUSICAL PROJECTS

Unit 5, 112 High Street, Redcar, Cleveland, TS10 1SD. Tel: (01642) 488082

Tel 061 483 8551 24hrs 7 days

ROW AUDIO SALES

We have a large amount of analogue and digital recording gear - both new and used - for sale at great prices. Telephone now for complete up to date list. We open 7 days a week and can deliver.

WANTED!

We are currently looking for adats, samplers, multitracks, mixers, keyboards, f/x units - infact complete home or pro studios.

We pay best prices and collect nationwide same day (open 7 days).

We also hire 8 or 16 track digital or analogue packages

Tel 061 483 8551 or
0860 105111 24hrs.

347

BIG TIME PRODUCTIONS

GOOD VALUE ALL ROUND

● MIDI ACCESSORIES

THE CLOCK II SYNC:

MIDI TO SYNC UNIT (8WAY MIDI THRU BOX great for 101's, 202's, 303's, 808's etc) ONLY £89.99

THE MIDI "Y" SWITCH:

ALLOWS ONE MIDI IN/OUT TO SWITCH BETWEEN SEVERAL MIDI OUT/IN'S

2-WAY VERSION: £13.00 5-WAY VERSION £23.00

WE NOW SELL A SMALL SELECTION OF QUALITY LEADS

● SYNTH PATCHES

CASIO C2 - PRINTOUT OR ST DISK £8.00 (192 PATCHES)

AKAI AX-80 - DATA CASSETTE £8.00 (64 PATCHES)

ROLAND MT32 - ST OR PC DISK £8.00 (64 PATCHES)

KORG DW8000 / EX8000: ST DISK £8.00 (64 PATCHES)

★★ WE NOW SELL BOOKS - CALL FOR DETAILS ★★

● SAMPLE LIBRARIES

● AKAI S900/950/1000/SO1/SX16/K2000

● FZ1 / 10M / 20M / HS1 / 10

EPS / EPS 16+ / ASR 10 / TS 10

YAMAHA SY 85 / SY 99 / TX 16W

ATARI ST AVALON / SOUND DES. / GEM S2

PC / COMP "WAV" AND G.U.S. (16 or 8 bit)

100's OF DISKS AVAILABLE. PRICES FROM £2.50 PER DISK.

● SAMPLING

ASTRO GLIDE 202 CD: £15.00

ECSTATIC ACID BYTES CD: £24.95

SAMPLE D.A.T.S : £5.00.95

SAMPLE TAPES : £5.00 CHROME

FREE P + P ON ALL ORDERS

628

WRITE OR CALL FOR FREE CATALOGUE FOR ANY OF THE ABOVE. P.O. BOX 520, BURSLEM, STOKE ON TRENT, STAFFS ST6 5UR. TEL: (0782) 810611

ADVANCED SOUNDS LTD

(New and Used Equipment Sales)

Selection of current used stock

(Telephone for new equipment prices)

Akai S3000(3 months)	£2899	J.L. Cooper Data Card (ADAT)	£150
AKG C3000	£265	Kurzweil PC88	£1799
Alesis ADAT(3 months)	£1999	LA 4X4 Comp/Gate	£285
Aphex B Exciter	£95	Lexicon PCM80 (4 months)	£1799
Atari SPM124 Monitor	£120	Mackie 32:8:2 (3 months)	£3299
Behringer Eurodesk (new)	£1999	Mackie 8 bus Mixer Stand	£125
Carlsbro Colt Keyboard amp	£175	Sony DTC750 DAT	£445
Drawmer DF320 Noise Filter	£350	Soundcraft Spirit 16:8:2	£1575
EMU FS132 + 553i	£1025	SPL Stereo Classic Vitalizer	£499
EV Sentry 100A Monitors	£499	Tascam 488	£899
Fostex RB(exc cond)	£950	Tascam 246 (exc cond)	£399
Fostex E16(exc cond)	£1795	Tascam DA30 MkII (3 months)	£1099
Fostex 3045 16ch Dolby C	£550	Yamaha Promix 01 (3 months)	£1599
J.L. Cooper CU Point	£450	Yamaha PFP100 Clavinova	£1335

* 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: 081 462 8621 (OR 6261)

DO YOU HAVE A PC?

YOU

will get the best advice and prices from us

We stock all the Turtle Beach products plus Saw, Quad, Cakewalk and much more.

New Procyon Pro & Samplitude sequencer + 8 track of digital audio for under £350!!!!!!

1000 samples FREE with every soundcard purchased.

Call: John at Music Maker

Tel: 01309 676008

Evenings and weekend calls welcome

760

PROFILE PROFESSIONAL MUSIC PRODUCTS

New Products for 1995

Professional power GM Song Files • Twiddly Bits • Lighting Rigs and Light Controllers ready wired to your specifications and your budget/Diachroic Lights and much more.

Savage Speaker Systems • High Quality • Realistic Prices

See us soon at Mems and Frankfurt

What Atari Users have been waiting for **AT LAST**

MIDI Hacker Converts any type & MIDI files to type 1

Explodes and splits all instrument Drum Tracks

it even names all the tracks for you automatically. Only £9.95 inc.

NEW FOR '95

Ask for our Free 64 page catalogue crammed choc bang full of goodies !

Call us first 01159 633117 (5 Lines) Fax: 01159 633908

Ya Snooze Ya Looze Cos we won't be beaten on price or quality



732

FOR SALE

Some of the finest M1 sounds on ST/PC disk

M1 HYPERBASS The original 100 analogue / sub-bass / 303 / synth bass sounds. All feature REAL TIME and MIDI FILTER CONTROL for realistic emulation of analogue knob twiddling "As close as the M1 will ever get to a bassline" (Future Music)

M1 TOOLKIT Essential pianos / organs / vintage / synth / bass / pads / kits / etc. Everything you need for original top class productions.

GENERAL M1 Give your M1 a GM specification second to none with this bank of all new patches.

£15 each, £35 for all 3
Name cheque/PO
Payable to 'Azimuth Software'
PO Box 63, Southampton SO15 4BB
01703 557290 Mobile: 0589 245530



AARONSOUND

2ND USER HI-TEC MUSIC & RECORDING EQUIPMENT SALES & PURCHASES

Call for up-to-date lists
P.X. welcome
FAX/TEL: 061 - 442 - 8616
Mobile 0831 - 1066 - 85 7 days

WANTED

All Gear & Studios for Cash
Overnight delivery — same day collection

8 Meg memory boards for S1000/S1100 (Free Mod) £285
8 Meg for S2800/S3000/S3200 £300
S1000 DIGI interface £175
SCMS DAT code strippers £99
User lifetime guaranteed

Watford 01923 267733 Mobile: 0850 373964

Dig up your old analogue synths and get them working with.....

THE MISSING LINK

Single Channel MIDI to CV Converter

£89.50
+£3 p+p



The Missing Link is one of the best value MIDI to CV converters on the market today. It's easy to setup and use, providing the features you need to play your analogue mono synth from a MIDI keyboard or sequencer. The unit is compatible with synths which respond to the 4 bit per octave standard. SH181, Pro One, SH20 etc.

For information please write or phone, (mail order only please)!

C.P. Technology
Red Lion Yard, Market Place,
BLANFORD, Dorset DT11 7EB
information Hotline 0202 885592

CALLING ALL SY85 OWNERS!

"CONTEMPORARY KEYS" - New! Modern day Synth Emulations. inc. JD's, JV's, OIW's etc.

"TECHNO/DANCE" - Stunning sounds that will take your SY85 to even greater heights.

"TECHNO/DANCE 2" Comes packed with another selection of sensational sounds.

"VINTAGE SYNTHS" - Inc Moog, ARP, Mellotron Emulations etc.

"VINTAGE SYNTHS 2" - More great sounds from yesteryear.

"SOUNDESIGNS" - A universal sound collection.
1255 voices - 128 performances per volume
ONLY £24.95 each, Any Two for £39.95
Three for £54.95, or Four for £69.95

Cheques/Postal orders payable to:
MEDIA SONIC
Dept. 2, 26 Gilsland Avenue,
High Howden, Tyne & Wear,
NE 28 0NQ
Tel: 0 589 608472

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

Put your band on the Internet

How? Why? When? and of course How much?..... or even better, how little?

FOR THE ANSWERS PICK UP A FREE INFORMATION PACK BY CALLING
ANS/FAX: 01977 677420
MOBILE: 0374 210009
OR EMAIL: PHIL @ INSIDEIN.DEMON.CO.UK

ALL STUDIO & MUSIC EQUIPMENT WANTED FOR CASH TODAY!

★ SALE BARGAINS ★

FOSTEX M 201/4" mastering	£150
ROLAND U110	£199
BOSS DR660 as new	£299
YAMAHA YS200	£199
TEAC X1000M 1/4" mastering	£150
TASCAM 234 4track	£150
FOSTEX M80	£399
YAMAHA EMT 10	£69
REVOX B77 MKII	£299
VESTAFIRE REVERB RV2	£99
AKAI S612/MD280 sampler	£199
AXXEMAN	£69
TIME MATRIX multi tap delay	£299
AKAI ME10D midi digital delay	£69
SIMMONS TMI midi trigger	£69

PART EXCHANGE WELCOME
ASCOT (0344) 891110 or (0831) 882666

KEYSOFT

QUALITY KEYBOARD SOFTWARE

KEYCHORD for WINDOWS

Exclusive to Keysoft this windows based keyboard chord finder, covers 12 major chord types inc. Maj, Min, 7th, Dim, Aug, 9th, 11th, 13th etc. (3 inversions)
Also displays all Maj & Min scales.
Great Value at **£18.00**.

TUNE 1000 MIDI FILES

50 titles available inc. Elton John, Nashville, Led Zeppelin, M Jackson, McCartney, etc.
Full details & list on request.
£9.99 per disk (10 tracks)

20 Hogarth Drive, Hinckley, Leics. LE10 0JG
Tel: 01455 238156 or Fax: 01455 637827

New European MIDI USER

For your FREE information pack Phone, Fax or Write to

EUROPEAN MIDI USER

TEL: +44 (0) 1227 742780
FAX: +44 (0) 1227 742781

46 HAMPTON CLOSE,
HERNE BAY, KENT CT6 8BZ
ENGLAND

See MIDI data flash before your very eyes...

MIDI BrightEye

£3.45 inclusive



Dept J RTPS Systems PO Box 81
Bicester OX6 9YY (01869) 278470

DO YOU BUY MIDIFILES? 10 POINTS TO CONSIDER.....DO YOU REQUIRE

1. Top Quality, superb arrangement GM & GS files?	6. All midi formats supported and supplied?
2. Technical support & Help line for all customers?	7. A maximum price of £3.95 each?
3. Same day despatch?	8. Demos made to order?
4. Bona fide company, licensed by MCPS and ANIP?	9. All major credit cards taken?
5. Information and lyric files supplied if required?	10. Free Catalogue and Information Pack?

Then phone the **best value for money** Midi Sequencing Company

baktrax **AMP** **01329 834692**

TRACK EXPANSION

Never run out of tracks!
Cats you get...

- 28 pure audio tracks from a 4 track and keep them all!
- 300 tracks from an 8 track and keep them all!
- Can you use one effects unit several times over on the same recording with different settings?
- If you use a MIDI sequencer, can you use just one MIDI sound module repeatedly on the same recording and never run out of MIDI notes?
- Can all of this be achieved for just £59?

The answer is yes! It works on any multi-track from a 4-track upwards and it's **GUARANTEED TO WORK OR YOUR MONEY BACK**. If you don't believe it, send for our free leaflet on TRACK EXPANSION.

Spectrum Sound Studios (Dept. SS 1)
31 Westborough Road, Westcliff, Essex SS0 9DR
01702 354045

COMING SOON

New 19" rack unit modules giving you total analogue control for Synthesizers or drum machines

Technical Leisure, Unit 10, 98 Goldstone Villas, Hove, East Sussex BN3 3RU.
Tel: (01273) 822342 Fax: (01273) 412634

See feature on pages 76, 78 & 80 March '95 issue Sound on Sound

NEW

The KORG PALETTE Sample CD

produced by **SYNTHETIX**

Sounds with byte!

OVER 600 professionally programmed samples
SPANNING 25 years of KORG SYNTHESISERS

"I could certainly see myself dipping into this collection for many years to come, in the knowledge that I'd rarely come up empty-handed." Paul Ward (SOS) Jan '95.

"For Korg fans like me, this is an ideal way to get hold of some wonderfully powerful and varied sounds that are full of individual character". Future Music Jan '95

**To order: SEND CHEQUE OR P/O FOR £45 inc p+p TO:
SYNTHETIX PO Box 42 North PDO, Nottingham NG5 1AX.
OR PHONE OUR CREDIT CARD HOTLINE ON 0162 342 2352**



PC/ATARI PUBLIC DOMAIN music software and midi files, 50p each. Three 25p stamps for catalogue and FREE midifiles. Music-Domain, Beaufort, Glenclepe, Dumfries, DG1 4RD.

ATARI STACEY 4 + manual, £450. Tel: 0181 950 9663.

YAMAHA TG500 tone generator, good condition, boxed, manuals, £375. Tel: 015 242 61793.

ROLAND JUNO 106 £345 or px for K4. Kawai K4 rack, £230; Yamaha TG77, £520; Yamaha EMT 10, £65. Will post. Tel: 0261 812751.

ROLAND U20 + manual, immaculate condition, brought new December '93, home use only, £500 ono. Tel: 0527 870200 (day/work) or 0905 796998 (home).

HAMMOND B200 portable + Leslie 822. Excellent condition, £600. Tel: 0653 693574

YAMAHA CLP670 electronic piano, immaculate condition, £1000. Technics KN650 keyboard, excellent condition, £480 ono. Roland Pad 5 as new, £65 ono. U220 Editor Librarian + 2 pcm soundcards, £55 ono., all boxed. Tel: 0933 227943.

KAWAI K1 11 16 part multi timbral, built in effects, drums, extra sound card, manual £275; Atari 1040ST with Breakthru sequencer, £200. Tel: Derek 0171 721 3579 (office) or 01787 223992 (Home).

TASCAM 644 £450; Yamaha TG100, £180; Roland CR78, £80; JL Cooper PPS 100, £100; Digitech IPS33, £150. Phone/Fax Andy Jones 01256 702602 (nr. Basingstoke).

KORG WAVESTATION EX + 1 sound card £775. GemS3 Turbo + full Akai library boxed as new £1100, Roland U110 £200, Proteus Procussion with man £375. Fostex M80 + Seck 12/8/2 desk £1350 (may split). Seck 18/8/2 MK11 £700 meter bridge for 18/8/2 £150 Roland DEP5 £275, Yamaha SPX90 MK1 £250 Tel: 061 483 8551 or 0860 105111.

ROLAND U20 + manual, immaculate condition, brought new December '93, home use only, £500 ono. Tel: 0527 870200 (day/work) or 0905 796998 (home).

KORG 01WFD Workstation with large sound library, boxed with manual, excellent condition, £1050. Tel: Paul 0203 372319. 0653 693574 (evenings).

YAMAHA QX5 FD 8 track digital sequencer recorder 3.5 disc drive plus manuals, £275. Tel: 0656 743404 (South Wales)



PRO-MIDI B.F.P.

CAXTON HOUSE, CAXTON AVE, BLACKPOOL. FY2 9AP

TEL: 01253 345386 DAY 591169 NIGHT

FAX: 01253 406899



RD70 Midifile player
at only £300 inclusive

Licensed by MCPS

SPECIAL OFFERS

Songs Programmed To Order
from £35 00

Country Hits (30 Songs Only £40.00)

Singalong
(12 Songs Only £15)

Dance Class
12 Songs £15.00

Special Occasions £15.00

Stand by Your Man
On The Road Again
Achy Breaky Heart
Lady
Ruby
She Believes In Me
Your Cheatin Heart
The Gambler
One Day At A Time
Crystal Chandeliers
Fort Worth
King Of The Road
Big Bad Leroy Brown
Brown Eyes Blue
Beautiful Body

Desperado
Blanket On The Ground
American Trilogy
Six Days On The Road
Rocky Top Tennessee
Help Me Make It
I Fall To Pieces
Eighteen Wheels
Dont Close Your Eyes
Annie's Song
Sing Me
Walking After Midnight
Always On My Mind
Four In The Morning
Crazy

12 Pub Singalongs
12 Classic Male Ballads
12 Classic Female Ballads
12 Dinner Dance Songs
ALL SPECIAL OFFER SONGS
ARE SUPPLIED IN ORIGINAL
KEY ONLY.
ADD £1.00 PER SONG FOR
ALTERATION TO KEY.
ADD £1.50 FOR POST
& PACKING

Sight For Sore Eyes
Its My Life
All That She Wants
I Saw The Sign
Moving On Up
We Are Family
Rhythm Is a Dancer
Saturday Night
Please Dont Go
Living On My Own
No Limit
Relax

Happy Birthday
Jolly Good Fellow
The Wedding
Anniversary Waltz
We Are Sailing
God Save The Queen

21 Today
Old Lang Syne
Old Wedding Ring
We'll Meet Again
We Are The Champions
Star Spangled Banner

Party Pack (12 Songs Only £15.00)

I Am The Music Man
Superman
The Hokey Cokey
Lambada
YMCA
Birdie Song

Agadoo
The Conga
The Can Can
The Time Warp
The Gay Gordons
The Twist

Professionally Sequenced To The Highest Standards. Suitable for all Systems.
We can Also Supply Songs on Dat, Cassette, or Minidisk.

Latest Additions

Stay Another Day
Were Having A Gang Bang
Baby I Love Your Way
Without You
Bedtime Story
Let Me Be Your Fantasy
Call It Love
Saturday Night
Hero
I Saw The Sign
No More I Love You's
Put Yourself In My Place
All I Wanna Do

OVER 2500 SONGS IN YOUR KEY!

ALL SUITABLE TOP 20 TRACKS

ARE BEING PROGRAMMED. HOWEVER

Due to changes in copyright law. Some songs have been withdrawn by the writers and others have to be approved before dispatch. This Applies To Midifiles Only.

RING OUR HOT LINE FOR FREE BROCHURE

Latest Additions

Lost In Music
Ain't No Man
Think Twice
Sweetness
Crocodile Shoes
Total Eclipse
I Have Nothing
Rhythm Of The Night
Baby Come Back
Hey Now
O Baby!
Somebody I'll Be Saturday Night

FOR SALE

RECORDING STUDIO - SONGWRITER STUDIO - 12 synth modules, 1 x S3000 sampler any sound, 3 drum modules, 8 track hard disk recording, 2 track digital mastering and edit (DAT) 80 midi channels on Cubase. Call for details. Tel: 0923 461097 or 0956 321056.

WANTED ROLAND TR909 and Roland TR808. Tel: 0273 694894.

WANTED FOSTEX R8/E16 Quadverb + Akai sampler 950/1000 console 24/8/2, any outboard etc will collect. Tel: 061 483 8551 or 0831 - 105111

WANTED - MIDI FILES

We buy good quality GM midi files.

Call (0204) 387410 and ask for JayBee.

MUSIC MACHINE

59 Bridgeman Place, Bolton BL2 1DE

NSR COMMUNICATION SERVICES	
Pair Road Stanmore Middlesex HA7 1PZ Phone 0181-951 0222 Fax 0181-951 0226	
DDA D Series 16 into 8 mixing desk	£3500 00
Struder A 80 - 8 track and trolley	£4100 00
Sluder B 67 - 2 track and trolley	£1400 00
Tascam 34 plus DX 40 in trolley	£775 00
Tascam 34 - 4 track	£575 00
AKG BX 15 Ecko unit	£1175 00
AKG 414 EB Microphones x 2	each £410 00
Studio dividers Sonaplan 4 + 2	each £320 00
Studio Acoustic table Hexagonal	£470 00
Tascam 133 - 4 rack mounted	each £530 00
Audio design scamp rack 5 effects "the lot"	£880 00
DBX 150's x 6	each £90 00
MXR Dual brand EQ unit	£235 00
JBL 4310 Speakers with wall brackets	each £110 00
KEF 105 Series II and stands	each £265 00
KEF 104 Loudspeakers and brackets	each £110 00
Adam Smith Zeta three	£1175 00
"Mickey" video edit with VO 9000 and 9500 etc	£5870 00
Audio Developments Dis Amp 8 way rack	£765 00
Stands, quad amps, patch bays, racks etc	Including VAT
NSR Ltd. 0181 951-0222	

AKAI MPC 60 Mk 2 Drum Machine/Sampler/Midi Sequencer, Expanded Memory. Boxed with Manual, VGC, £1100; Akai S950 Sampler, fully expanded memory, boxed s new, £750; Korg Wavestation SR Rackmount boxed with manuals, £650; Korg MIR Rackmount plus 2 pcm card sets and 3 program cards, boxed, £550; Roland MKS70 rackmount Analogue Synth + Ram cartridge and manuals, £500; Yamaha TX81Z, £100; Ensoniq Mirage Rackmount Sampler plus disks, £150 ono. Tel: 01856 874785 anytime.

STUDIO CLEAROUT - Yamaha RX11, £150; Yamaha TX7, £200; Carlisboro Cobra 90, £170; Midiverb, £70. Tel: 0344 24940.

JBL M360 PA cabinets, £900 pair; Yamaha P2700 power amp, £700 or £1600 both items. Tel: 0295 266328.

ALESIS ADAT 120 Hrs only £1775, Sountracs MR series 32/8/16/2 £2500, ovno, Akai S950 full upgrade manual, good condition £875. Wanted quad + will pay £170. Tel: 061 483 8551 or 0860 105111

HARD DISK AND ANALOGUE oldies studio clearout, Digidesign Session 8 for Mac, as new, £1800; Digidesign SMPTE slave driver, £500; Micropolis 1Gig, £500; Notator Logic and Audio, £250; Opcode Studio 4, £600; Roland 48 input line mixer, £700; Drawmer LX20 compressor, £225; Drawmer DS201 noise gate, £200; Lexicon PCM70, £1200; Alesis Quadverb, £225; Roland TR909, £450; TB303, £450; MPU101 interface, £350; MKS 80 + programmer, £1850; Juno 106, £400; SH2 monophonic, £300; Korg MIRX + cards, £650; Korg MS20 monophonic, £350; Yamaha TX81Z, £175; TX802, £350; Oberhelm 6R, £500; Emulator 3 8 Meg 16 separate outs, £2250; Sony Optical 650 meg + carts, £1000; E-Mu Ultra Proteus, £1200 as new; Akai ME30P Midl Bay, £100; Zimmerframe, £35; 16 wave jack looms, £35; midi and jack cables free.

Tel: Mark 071 221 7118.

ELECTRO VOICES S-200 PA speakers, excellent condition, £1100. Tel: Veronica 01865 375236 after 7pm.

MACKIE 12:2 mixer £240, Fostex mixtab and DCM 100 8 channel Midi mixer £230, Korg T1 £1300, Yamaha SY99 £1300, Yamaha MLA7 mic/line amp 8 channel £45, Steinberg SY77 Synthworks £30, Yamaha MCS2 keyboard Midi controller £40, P&R 40 way 1/4" jack patchbay x 2 £20 each, Roland MKS 70 £500, Korg ex 8000 synth module £250, Korg MEX 8000 memory expander £30, Ampex 1/4" tape unopened x 5 £4 each. Tel: 01227 731568 (evenings).

TASCAM 38 Professional quality 8 track 1/2" multitrack tape machine, includes remote control and tapes in excellent condition - £800.00. Sound bits D50 editor (original program) - £20.00. TG55 ram card - £10.00. Tel 01633 873118 (daytime) 01633 865758 (evenings) and ask for Brad.

ROLAND OWNERS



NEW for 1995

Courses & Seminars on a wide range of topics 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
- FREE use of Roland Sample Copying Centre
- Mail Order Sample copying service
- Contact Tony Eve on (01733) 233135

SOLICITOR

ABOUT TO BE SIGNED?
NEED LEGAL ADVICE?

CALL: ROSIE HOUGHTON
01432 - 274301

SOLICITOR

FOR HIRE

ADVANCED SOUNDS LTD
(Hire & Sales)

- Musical & Studio Equipment Hire
- Home Recording Packages Hire
- New & Used Equipment Sales - Part/Ex
- Delivery/Collection - Nationwide

LOW RATES / GOOD SERVICE

081 462 6261 (or 8621)

STUDIOHIRE

0171 - 431 - 0212
0171 - 431 - 0212

equipment - EXCELLENT!

expensive? - NOT!

MUSIC STORE

TUNE INN

WANTED

ANALOGUE & DIGITAL SYNTHS
SAMPLERS - SEQUENCERS
DRUM MACHINES - FX
HI-TECH - COMPUTERS
PA & RECORDING EQUIPMENT

081 - 698 4446

COMBOS GUITAR FX DRUMS
NEW & VINTAGE GUITARS
SAXES - CLARINETS - FLUTES

BUY! SELL! P/EX!

124-126 ST. MILDREDS RD LEE LONDON SE12 0RD
OPEN: MON - SAT 10.00 - 6.30

Audiohire

Hire of virtually any
recording and backline
equipment

Tel: 081-960 4466

DUPLICATION

CD MASTERING

Up to 74 min
from any format

£20

Mass duplication - ring for best prices

PQ encoding DAT duplication

A.T.H. 091 5210 780

or 0850 790613

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: 0252 792407

8AM-5PM MONDAY-FRIDAY

RMS cassette copying

DAT, 1/4", F1. Free colour labels.

Soundtools DAT editing.

081 653 4965

CASSETTES ONLY

Quality blank audio cassettes
wound to specific lengths with
on body printing if required

•Tele: 0181 310 3773

•Fax: 0181 311 3307

813

FOR THE BEST IN COMPACT DISCS

Minimum quantity 250

234

Replica

Unit 10,

Chadkirk Industrial Estate,

Romiley, Stockport SK6 3LE

Tel: 061-427-8608 Fax: 061-449-7600

FOR THE BEST IN MUSIC CASSETTES

Duplicated or Custom Wound Blanks

← CASSETTES →

Blank or Duplicated

- ◆ High Quality Chrome & Ferric Tape
- ◆ Cassettes to any length (C2 - C130)
- ◆ Minimum order 20 Cassettes
- ◆ White & Coloured Labels / Inlay Cards
- ◆ Standard, Crystal & Dble Library Cases
- ◆ Ampex reel Tapes / DAT Cassettes
- ◆ Video cassettes & Accessories
- ◆ Computer Disks / Technical books
- ◆ Same day despatch by Credit Card



Tel: (0372) 272422



Fax: (0372) 276122

FREE!

Catalogue and
sample cassette

DOWNSOFT LTD

Downsway House, Epsom Road
Ashted, Surrey KT21 1LD

76

* New! Hard disk editing/processing

- Real time cassettes (TDK, BASF)
- Copy masters and editing
- Laser printed labels + inlays
- CD prep and compilations
- Every copy individually checked
- Unparalleled service, best prices
- Excellent quality + presentation
- Fast turnaround - hours not days



**Magnetic Image
Mastering**

081 960 7222

402



THE CHOICE IS YOURS!

You want cassettes and CD's from the precious masters that you've spent so much time, effort and money on. Do you trust some bedroom operator who just passes the work out to someone else? Or would you rather deal with people who are APRS members, who do work for major independent labels, who have mastering and duplication in-house, and who know the business inside out? Make the right choice....



727

PHONE THE EXPERTS - SOUNDS GOOD (01734) 302600

COMPACT DISCS

(min 250)

CASSETTE DUPLICATION

FOR BEST PRICES TELEPHONE:

0222 777739



UNIT 5 WILLOWBROOK INDUSTRIAL ESTATE,
CRICKHOWELL ROAD, ST. MELLONS, CARDIFF CF3 0EF

A WORD IN YOUR EAR

TAPESTREAM

WITH A GAUSS HIGH SPEED LOOP BIN DUPLICATING SYSTEM, DOLBY HX-PRO MASTERING & ON-BODY PRINTING,
TAPESTREAM WILL GIVE YOU QUALITY. TAPE AFTER TAPE AFTER TAPE...

CD'S

YES TAPESTREAM ARE BROKERING FOR A MAJOR CD PLANT HERE IN ENGLAND,
NOW YOU CAN CONVENIENTLY ORDER ALL YOUR REQUIREMENTS UNDER ONE ROOF.

GIVE US A CALL ON:

01798 344108 FOR DETAILS

TAPEStream

"DUPLICATING SUCCESS"

THE Cassette duplicator
in the south

THE Cassette duplicator
in the south

Compact Discs

Pro-Mastering

Digibin Cassettes

Reprographics

Print

HILTONGROVE

where sound advice counts...

Telephone: 0181 521 2424

0181 503 6360

Facsimile: 0181 521

DUPLICATION

ONE-OFF CDs
 COMPLETE SONIC SOLUTIONS
 CD MASTERING DIGITAL EDITING
 NO-NOISE SOUND RESTORATION
SOUND CUTS LTD
081 964 4091

CD ROMS
MUSICIANS - FREE UP YOUR
OPTICAL AND HARD DRIVES
TRANSFER YOUR DATA, SAMPLES etc.
TO CD ROM
 (ROLAND & AKAI COMPATIBLE)
SOUND CUTS LTD 0181 964 4091

BEST VALUE IN LONDON
Service 24 hours, 7 days a week!
 24/16 track analogue / ADAT studios
 Spacious 'live' room/TV studio
 Full sound-to-picture lock-up
 controlled floating studios




Audio/Video cassette duplication
 Comprehensive voiceover facilities
 Digital editing and mastering. One-off CD's
High quality, fast service, fair prices
G.W.B.B. Audiovision Studios
071-746-2000 7110

CD DUPLICATION WITH NO HIDDEN
EXTRAS SUCH AS P&P OR V.A.T.
FREE P&Q CODING

REAL TIME CASSETTE DUPLICATING
LABEL & INLAY PRINTING.
BLANK CASSETTE SALES.
DAT & AMPEX REEL TAPES.
FRIENDLY, PROFESSIONAL SERVICE
TEL: 0252 794253 FAX: 0252 792642

keynote
CASSETTES



Pure
 music manufacturing

vinyl & compact disc pressing
 label sleeve & inlay print
 dub cutting one-off c.d. vinyl mastering

M A N C H E S T E R
 0 1 6 1 2 8 8 0 6 8 1

ATTENTION!! ATTENTION!!
CD DEMOS ARE NOW POSSIBLE!

Tired of wasting money on demo tapes that no-one ever listens to? Then get those tracks onto CD, the promotional media that no A&P man or radio station can ignore! We specialize in short run CD packages including printing and an 'in-house' reprographic service second to none. Not only are we extremely competitive (prices from as little as £799+VAT), we are able to offer a minimum order quantity of 300 units, ideal for all your promotional needs!

In addition, we are now able to offer over 30% discount off selected Hitachi goods with every order! For further details and a full price list call

HyperSONICS
 CD MAKERS

Matt Smith (0629) 636572 9am-7pm Mon-Sat
 or write to: HYPERSONICS, Roberts Court, Main Street, Stanton-in-Peak, Nr. Mallock, Derby's, DE4 2LX

FROM THE UK'S LARGEST INDEPENDENT...

CASSETTES
VINYL
CD'S

FOR ADVICE, QUOTES & INFO PHONE AVRIL OR KATE
071 924 1661

MAYKING RECORDS
 250 YORK ROAD, BATTERSEA, LONDON SW11 3JL

ATS

Cassette Duplication and CD Manufacture

We Do It All!

- ⊕ Large or small orders
- ⊕ Publishing ⊕ Print
- ⊕ Packaging & Distribution
- ⊕ CD-R ⊕ DAT
- ⊕ Blank Cassettes

AMPEX 3M **Best Prices**

Contact Mark Cocker or John Fairclough
Tel: 051 430 9001 Fax: 051 430 7441

MUSIC & SUITE
the alternative music company

High Quality, Low Cost, Realtime
 Cassette Duplication.
 Digital Editing.
 CD Manufacturing/Printing.

NEW > Music Suite North
 Digital Editing Suite II
 and for your Reprographic needs
 contact Kit on 0904 637038

Phone (0239) 711032 for Brochure,
 Catalogue and Free Cassette.

SOUND PERFORMANCE
 FOR QUALITY
 AUDIO MANUFACTURING
 EXCELLENT SERVICE
 COMPETITIVE RATES

Call: 081 853 3023 Fax: 081 853 0696
CD PRESSING - CASSETTE DUPLICATION
VINYL PRESSING - DESIGN
REPRO - PRINT - SLEEVES
BOOKLETS - INLAYS - LABELS
 or visit our offices at -
5 CHRISTCHURCH WAY, GREENWICH, LONDON SE10 9AJ

PRIME TEL 071-561-0400
 FAX 071-272-5393

CD PRODUCTION FROM:
100 CDs UPWARDS
 PACKAGE PRICES ON 100 300 500 1000+ CDS
FULL DESIGN & PRINT SERVICE
CASSETTES: 200+
DAT-TO-DAT COPYING
ONE-OFF CDS FROM £21

Make it with us . . .

Sound Recording TECHNOLOGY

• D • I • R • E • C • T •

MANUFACTURING

- COMPACT DISCS
- DIGITALLY DUPLICATED CASSETTES
- PRINT AND REPROGRAPHICS

HIGH END MASTERING

- FIVE STUDIOS
- LATEST 32 BIT TECHNOLOGY
- 1630 PCM UMATICS
- SUPER BIT MAPPING
- PQ ENCODING
- CEDAR
- 20 Hz MONITORING
- 20 BIT RECORDING
- 20 BIT EDITING
- ACCOMMODATION

MARKET LEADERS

- ☎ 081 446 3218 LONDON
- ☎ 0480 461880 CAMBRIDGE
- ☎ 0800 581166 FREEPHONE CD

DUPLICATION

MIRROR IMAGE

AUDIO CASSETTE DUPLICATION
50-50,000 COPIES
REAL TIME / HIGH SPEED
ON BODY PRINTING PRINTED LABELS
BLANK CASSETTES/COMPACT DISCS
TEL/FAX: 0161 228 1119

ONE OFF CDs

£27.00
Up to 60 mins
Telephone CRS
0424 436426 or 0378 285625

COPYTIME

- ★ REAL TIME DUPLICATION
- ★ SMALL ORDER SPECIALIST
- ★ LABEL AND INLAY CARD PRINTING
- ★ CASSETTE AND DAT MASTERS

RING FOR BROCHURE
081 421 1970

Thinking of producing
COMPACT DISC • CASSETTE
VINYL • PRINT • VIDEO
or MERCHANDISE ???

Then you only need one number (ours!)

0181 671 4431



for a copy of our current production brochure,
 please send an A5 SAE to:
PRIMARY RECORDING CO
PO BOX 3213
LONDON SW2 3QQ
 QUALITY WITHOUT COMPROMISE !!!

Panton Music

Audio Cassette & CD Duplication Services including
 Blanks • Compilation Editing • Printing etc.
Call Dave Panton
0121 558 8338
 between 10am-4pm Mon-Sat

WNE (Tamworth)

BLANK CASSETTES WOUND TO LENGTH

MINIMUM ORDER 50

CASSETTE DUPLICATION

LOCAL MINIMUM ORDER 250

ON-BODY PRINTING

DIGITAL EDITING

ALL FACILITIES IN HOUSE

01827 310052

CHRONOS

CD PRODUCTION

ONE OFF CDs UP TO 60 MINS £29

NEXT DAY SERVICE

!!! BEST VALUE IN LONDON !!!

TEL 081 889 3622

FAX 081 889 9566

DIGITAL EDITING

Pro Tools Editing & Hire

Contact: Digital Gratification

Tel: 071 483 3506

★ ★ ★

MUSIC MEDIA

MANUFACTURERS Ltd

Compact Discs

Records

CASSETTES

Call us first
 But call us last!
 We will beat
 anyone's
 prices

★ CD Booklets
 ★ Sleeves & Labels
 ★ Cassette Inlays

Typesetting, Artwork
 ▽ The BEST Prices!

071 916 4450 - 104 Harmond St, Camden Town, London NW1

One-Off CD Only £27 inc VAT



- Fast Turnaround
- No Minimum Order
- PQ Encoding to CD only £40
- Long Runs available
- Digital transfer at 44.1 KHz

EMUSIC CORPORATION

01425 470007

THE COMPLETE CASSETTE & CD PRODUCTION SERVICE

CASSETTE DUPLICATION & CUSTOM LENGTH BLANKS

COMPACT DISC MASTERING & REPLICATION

DIGITAL EDITING • ONE-OFF CD*

ARTWORK, DESIGN & PRINT



FOR A FREE
 BROCHURE & ALL THE
 ADVICE YOU NEED

(091) **495 2324**

(091) **495 2306**

INSURANCE



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

Sound Insurance

PHONE KEVIN OR DAVID FOR YOUR FREE QUOTATION

HENCILLA CANWORTH INSURANCE GROUP

081 686 5050

Insurance House,
 27/29 Brighton Road,
 Croydon CR2 6EB

COMPOSITION

Composers' DesktopProject



Specialists in Sound Transformation

- * PC 386+ / SGI Indigo or Indy / Atari Falcon 030/TT030
- * Direct-to-disk recording enables use of various sound sources
- * 100+ sound processing programs offer leading-edge facilities
- * analysis/re-synthesis, with 20+ programs to sculpt & mix sounds (as analysis data) in extraordinary ways
- * PC peripherals provide links to film, studio & multi-media work

Brochure from: Composers' Desktop Project

Rm 2, 11 Kilburn Road, York YO1 4DF

Tel: (01904) 613299

Hi-TECH STUDIO REPAIRS

DEAL DIRECT WITH US FOR AKAI & EMU WARRANTY & ANY NON-WARRANTY REPAIRS AND UPGRADES

AKAI
AUTHORISED
SERVICE
CENTRE



CIMPLE SOLUTIONS

Roland

KORG YAMAHA

Fostex TASCAM



INT' +44 181
904 4141

0 1 8 1 9 0 4 4 1 4 1

G u a r a n t e e d t h e s e s



CIMPLE Solutions • Unit 2.17.3 Wembley Commercial Centre • 80 East Lane • North Wembley • Middlesex • HA9 7UR
Mobile • 0956 224730 Fax • 0181 904 1200 200 Yards from N.Wembley Station • Bakerloo Line



Need more MIDI channels?
"EXTRAPORTS"
A TOTAL OF 64
MIDI CHANNELS
FOR YOUR
ATARI ST
(Steinberg or E-Magic)
CALL CIMPLE
SOLUTIONS
FOR MORE
DETAILS

THE STUDIO DOCTOR

INSTALLATIONS, DEBUGGING
TRAINING, ACOUSTICS
ADVICE, SYNCHRONIZATION
AND MIDI

PHONE IAN ON
0956 - 580352

ATTENTION!

Recording Studio/Rehearsal Room
Owners, Guitar and Gear Repairers,
Engineers, Teachers and Producers

- * Increase your income with a fantastic new state-of-the-art, portable gear alarm - Protects gear any time, anywhere.
- * Attaches to almost anything and emits an ear-piercing alarm if it or whatever it's attached to is moved! Secret disarm code.
- * Functions as an intruder alarm and panic button also.
- * Increasing wholesale discount scheme.
- * Do your clients a favour. Do yourself a favour!
- * Don't miss this genuine opportunity.

REGISTER AS A DISTRIBUTOR NOW! Call 01473 214615 or write to:
MULTIMEDIA SERVICES, (Unit 3), 11 Stevenson Road,
Ipswich, Suffolk, IP1 2EY.



Panic Music Services

AUTHORISED HI-TECH
SERVICE CENTRE

FOR:

Roland AKAI

TEAC SANSUI

REPAIRS TO ALL MAKES OF
KEYBOARDS - SYNTHS
MODULES - SAMPLERS AND AMPLIFICATION.
ALL VINTAGE SYNTHESISERS REPAIRED
COMPUTERS - ATARI - MACINTOSH - PC'S
ALL WORK TO BS750
QUALITY INSPECTED

CALL US ON 0954 231348



Technics YAMAHA Panasonic Roland

OFFICIAL **Roland & ROLAND**
OWNERS CLUB REPAIR CENTRE



REPAIRS and SERVICE for the MUSICIAN
All Amps, Samplers, Sequencers, Drum Machines, Expanders,
Mixers, Keyboards, FX Units and Tape Machines.

FREE Quotations! **FREE** pick-up service within the U.K.

THE AUTHORISED SERVICE CENTRE
THE PREFERRED SERVICE CENTRE
THE FRIENDLIEST SERVICE CENTRE IN THE U.K.
Tel/Fax 01 203 643 555 (anytime)

WE NEVER EVER CLOSE

£20 off

On all servicing
Valid until the end of April 1995

SERVICES

AKAI SERVICE
WARRANTY AND
NON-WARRANTY
AUTHORISED SERVICE
CENTRE

All Memory Upgrades
and Expansions
Courier Collection and
Delivery Anywhere in
Europe and Scandinavia

All Work to BS5750
Quality Inspected



Tel: 0954 231348
Int Tel: +44 954 231348



in-sync service limited
Unit 6, 43 Carol Street, Camden Town,
London NW1 0HT
Specialists in servicing
Revox / Teac / Tascam / Fostex tape machines
071 485 3447

ATLANTIC HIRE SERVICES LTD
RECORDING EQUIPMENT HIRE
Discounts — Best Rates
TEL: 081-209-1384/0025 (24HRS)

8 Track Packages, General Backline,
PA Systems, Guitars & Drums
GUITAR CENTRE
HIRE DEPARTMENT
Recording Sales & Part Exchange
126 Mearfield Road, Langley, Slough
Tel: 01753 542720
01753 549405

YAMAHA **REPAIRS** **TEAC**
JBL **FOSTEX** **DAT**
REVOX
TASCAM
KEYBOARDS MIXING DESKS
KEYBOARDS
MIXING DESKS
CUSTOM MADE LOOMS
071-482 1106 or 0374 646969

STUDIO CUSTOM PACKAGES
DESIGN & BUILD
VOICE OVER BOOTHS
INCL ALL SERVICES FROM £4,000

A.V. DESIGN

Mountbatten House, Fairacres, Windsor, Berks SL4 4LE
Tel: 0753 841800 Fax: 0753 840859

PRINTING



One design

Print design
POSTERS
CD Inserts
CASSETTE INSERTS
Album Covers



Band CV's
FLYERS
Packaging
MUSIC ADVERTISING
Direct Mail

When it hits the fan....for Wild African monkey's sake, call us !

Tel: 091 2668997 or Fax: 091 2669995

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!



40 Clarendon Rd West, Chorlton, Manchester, M21 0RL

Worried about your image?

Poor imaging is a common complaint even in some of
the most expensive control rooms.

The Early Sound Scattering control room from ESS
diffuses the early reflections, rendering it difficult to localize
the loudspeakers, and so masks the conflicting spatial
information which would otherwise corrupt the stereo
illusion.

It is also free from midrange fringing and comb filter effects,
providing unprecedented consistency of frequency response
and image stability throughout the room.

If you're serious about your new control room, you should be

Andrew J. Parry

on 0161 861 0857

ELECTROACOUSTIC SYSTEM SPECIALISTS

ACOUSTIC BASS END CONTROL

TOTALLY TOTALLY NEW, INNOVATIVE, SIMPLE, AND BRILLIANT

- ✓ LIGHT WEIGHT BASS TRAPS, JUST TWO SCREW FIX TO WALL OR CEILING ONLY 4" DEEP
- ✓ ADJUSTABLE FROM 70 HZ UP
- ✓ REMAIN ADJUSTABLE FOREVER — TAKE THEM WITH YOU WHEN YOU MOVE.
- ✓ A RIDICULOUS CONCEPT — "BUY ONCE ACOUSTICS".
- ✓ TREAT OVERNIGHT-NO NEED FOR BUILDING WORK.
- ✓ NO NEED FOR "DOWN TIME"
- ✓ COST EFFECTIVE.
- ✓ THE ONLY ALTERNATIVE TO TRADITIONAL METHODS.
- ✓ DESIGNED AND MANUFACTURED BY

absolute
audio

THE PEOPLE WHO KNOW ABOUT BOTTOM

PHONE 01295 273405 FOR DETAILS

COURSES

RIGHT TRACK STUDIOS

Engineering midi and arranging courses in Herefordshire, beginners to advanced.
Contact David Etheridge on
01432 880442
for details

134

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. 65
Established since 1989, working 16 track studio based in West London with easy access and free parking.

FOR PROSPECTUS : 081-743 2645

LIVE AUDIO TRAINING



Under real Concert environment
Practical experience in setting up, mixing Monitors and Front of House.
Tutorials take place at top London venues.

For a brochure
Tel: 071 700 3271

743



ISLINGTON MUSIC WORKSHOP DIPLOMA COURSES

IN 24 TRACK ENGINEERING AND MIDI PROGRAMMING

For free brochure and prospectus on intensive eight week courses —

CALL 071 608 0231

Big concessions for unwaged

297

SOUND ENGINEERING

6 Month full time Diploma course

Commencing June 95
Includes 3 months work experience in a selection of top London Studios!
(Subject to grade 1 Diploma pass)

Residential Option
Tuition on Neve & SSL consoles

If you're serious about a Career in Sound

call.. **01480 812201**

CAMPUS AV

673

The renowned WAVENDON COURSES are continuing their comprehensive 1994/95 SILVER JUBILEE education programme.



Weekends

**BEGINNERS IMPROVISATION 24-26 March
**SALSA Music and Dance 7-9 April
**RHYTHM SECTION 23-25 June

Long Courses

**SUMMER JAZZ COURSES
6-12 August & 13-19 August

Course Directors: Jeff Clyne & Trevor Tomkins

Day Series

** Jazz Vocalists **Blue Grass **Electric Guitar
**Steel Band **Music for All

Schools and Colleges Projects

**Composing Carols **Touring Jazz Workshops **Teachers Workshops

Education Shop

Masterclasses - workshops - services to education authorities - concerts - advice of all kinds!

Send for new brochure or for further information contact:

Dorothy Cooper ARCM

(Telephone: 0908 582522 Fax: 0908 281024)

or write to:

The Stables, Wavendon, Milton Keynes MK17 8LT

750

TWO DAY COURSE in SOUND ENGINEERING, RECORDING TECHNIQUES.

* * * * *

The Birdland course is held at a commercial recording studio and includes mastering, MIDI, keyboards, outboard, SMPTE code.

Plus useful advice on studio etiquette, how to get a job and most importantly how to keep it!

All the covered will then be combined in a mock session and students will take turns at various roles in production of a piece of music.

For further details and a free prospectus phone 0181 547 1118 or write to:

BIRDLAND STUDIOS LTD

71 SURBITON ROAD, KINGSTON, SURREY KT1 2HG



770



AUDIO VISUAL TRAINING

Bon Marche, Ferndale Road, London SW9 8EJ

The following courses are available.

One year full-time diploma course in:

Advanced Sound Recording and Production

Practically based tuition from internationally recognised specialists, supplemented with new technology from leading manufacturers.

Starting 1st May '95.

Three months full-time Certificate courses in:

Analogue Sound Recording and Production

Starting 1st May '95.

One week full-time course in:

Introduction to Sound Recording and Mixing

An entirely practical foundation course.

Starting 17th - 24th April '95.

**Telephone: 0171-737 7152
or 0171-274 4000 ext 338**

714

A CAREER IN MUSIC!

BTEC NATIONAL DIPLOMA IN MUSIC TECHNOLOGY

Do you want expert training in Music Production, Sound Recording, Musicianship, Performance, Keyboard Skills, Care & Maintenance and Sound Reinforcement? Then what are you waiting for? Apply now for September '95.

BTEC NATIONAL DIPLOMA IN MUSIC & MEDIA

(Subject to validation)

Before you buy a ticket to LA, New York, Tokyo or Berlin, you may want a passport that includes Music Production, Video Production, Sound Recording, Film Studies and Musicianship. Apply now for a world of opportunity.

Contact: Philip Greenwood (Course Leader)

BTEC NATIONAL DIPLOMA IN MUSICAL INSTRUMENT TECHNOLOGY (ELECTRONICS)

Receive expert tuition in electronics - the repair and maintenance of electronic musical instruments, amplifiers and effects devices, practical and theoretical experience of sound reinforcement, analogue and digital signals.

Contact: Ted Lee (Course Leader)

CLCM, Cookridge Street,
Leeds LS2 8BH. Telephone:
0113 243 2491 / 245 2069



COURSES



Courses At The Cutting Rooms

Diploma in Sound Engineering & Production
(NVQ ready, starts April):

40 weeks, modular, part-time. Recording, MIDI, P.A., digital editing, etc

Spring Weekends March '95 & Summer School
July 31 - August 4 '95

Taught by professionals, in the best equipped college studios in the UK.
For details and an application form call Jon or Paul on +44 (0)161 740 9438

The Cutting Rooms

650



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: 081-699 6945

LONDON BELFAST DUBLIN

OPEN THE DOORS TO A SOUND FUTURE

Since 1976



At SAE you can train with an international team of professionals in studios with the latest in audio and multimedia technology. Individual studio time is guaranteed. Our training will give you the practical experience to work in the audio or broadcast field and qualify you for a full university degree. Call for free SAE colour brochure.

LONDON

United House, North Road N7 9DP Tel: 0171 609 2653
SYDNEY PARIS GLASGOW MUNICH FRANKFURT MELBOURNE
ADELADE HAMBURG BRISBANE VIENNA PERTH SINGAPORE
KUALA LUMPUR AMSTERDAM BERLIN AUCKLAND

School of Audio Engineering

TUITION & PROGRAMMING

ATTENTION ALL C-LAB AND EMAGIC USERS!

Learn Creator • Notator • LOGIC (Mac/Atari/ PC) The Easy Way!
Call Now For One-to-One Tuition In Your Own Home Or Studio

ATARI/IBM/AMIGA ACCESSORIES

NVDI 2.5 The Essential Software For All ATARI Computers: Increases Screen Re-draws By Up-to 9 X	£29.95
Mega Mouse Mark II 260 Dpi Atari/Amiga	£12.95
As above: Includes Pad and Holder	£14.95
Optical Mouse 300 Dpi resolution: Atari/PC/Amiga	£34.95
Opto-Mech. Mouse 400 Dpi (Atari)	£14.95
1 MEG SIMMS (Ideal for Upgrading ATARI STE's)	£30.00 each
Other products: Mouse Pads, Scanners, Trackerballs, Pro Midi Leads, Falcon 030 Memory Boards, etc. Also Available.	

Tuition on ALL Aspects of ATARI Computers: Music, Graphics, Desktop Publishing, Hardware Improvements, etc.

For More Information Please Call:

MIDI WORLD

(Peter Dudley)

Tel: 0181-539 9729

VOCAL/TUITION

This best selling video is for singers of all styles and levels; it explains vocal technique clearly and effectively. Distributed by IMP Ltd, it's available at all good music and record stores **RRP £19.95**



Also available is the 'Voice Building' cassette (**£6.95**) which contains a wide range of challenging vocal exercises, aural tests, plus more. Thousands have been sold to singers ranging from beginners to professionals!

You may order direct from the producer, Sam West, and also save money. Both items for **£24.90** postage free.

Items may also be ordered individually. Cheques / PO's to:

Sam West Productions
143 Bathurst Gardens, London NW10 5JJ Tel/Fax: 081 964 0097
Credit Card orders welcome.



SOUTH EAST LONDON

The Music Room are relocating to larger premises in SE London. Providing a "Unique Opportunity" to purchase 2 Versatile Freehold Properties. Suit Project Studio, Musician, Producer / Production Company, Small Label, Tape Duplication or Allied Trades.

No. 26 Music Studio. Shop with Workroom & Storage. Living Accommodation 2 Bed Flat/or offices use. Separate Access.

No. 28 Delightful Spacious Victorian 3/4 Bed Cottage with lovely garden and pond for entertaining clients on those warm summer evenings.

8 mins London Bridge. Handy Tube, Bus & BR. Easy parking.

Sold in one lot **£155,000**

CALL GORDON GAPPER

0171 252 8271

PROGRAMMING

Mike Collins Music Technology Consultant

- Digital Audio Editing
- Audio & Music for Multimedia
- MIDI Programming and Sound Design
- Macintosh Studio Consultancy & Design, Setup & Training

Equipment: Pro Tools, Postview, Deck II, Logic Audio, Cubase Audio, Studio Vision, Digital Performer, Cue & Finale, ReCycle & Time Bandit, SampleCell & TurboSynth, HyperPrism, Infinity, MDT Tools, GRM Tools

Records: •Eurythmics •Chimes •Shamen •Virgin •Phonogram •Sony •EMI •

Consultancy: •Ryuchi Sakamoto •John Leckie •The Tape Gallery •

Multimedia: •Apple Computers •Mercury One-2-One •REMedia •ACT

Films: "The Little Buddha" "The Young Americans" "Wuthering Heights" "Stick With Me Kid"

Tel: 081 888 5318 Applelink: MIKECOLLINS
CompuServe ID: 100271, 2175

RECORDING STUDIOS

SOFT CASES & COVERS

LaZocka RECORDING & REHEARSALS
 Large Control Room • Two Live Areas
 Three professional Rehearsal rooms
 cassette copying 0181-348-2822

SABRE 44 Ch. Desk, E16, Sony DAT, Akai S1080 & Emax Samplers, Yamaha TX802, Roland D550, D110, MKS70 & Juno 60 Synths, DRUMS, AMPS, ORLA Piano Action keyboard, Eventide, Aphex, Bel, LEXICON PCM70 & LX1, SPX90 x2, DRAWMER Compressors x 8, Gates x6, NEUMANN, AKG, SHURE and ELECTROVOICE Mics.
8 HOURS RECORDING INCLUDING ENGINEER £79
 Fully equipped rehearsal room £4ph to £8ph.
 Phone for full equipment & price list or to arrange a visit.

EQ STUDIO
STUDIO BARGAIN

AFFORDABLE STUDIO, FOR HIGH STANDARD MASTER PRODUCTIONS AT 5.50PH.
 16 CHAN MIXER, R8, S1000, 18 MEG, C.LAB, LOADS OF OUTBOARD GEAR ETC. ETC.
 CALL JAYDEE/LARK ON:
0181 670-1189

15% OFF

CAPITAL MAMBA

CUSTOM MADE COVERS
 Made from Nylon Padded & P.V.C. Materials

Top quality hand made covers and cases for all equipment, Keyboards and Amps etc.

We are Official Manufacturers and Suppliers to:

novation **Roland**
Stamberg **KORG** **JBL**
FOSTEX **VOX** **YAMAHA**
 PRO MUSIC DIVISION

TRACE For free brochure and samples please write or phone:
BRAND TWIN TREES, MOOR LANE, WESTFIELD, WOKING GU22 9RB
 TELEPHONE 0483 757633

VISA

the Stable Digital Recording Studio

Purpose built music/control rooms
 16 Track Protocols Recording • Lexicon Effects, Sample Cell II • Roland synthesizers
 Engineer/programmer

Tel: 01256 701470

WOLF STUDIOS
 Best value 24/48 track in a comfortable and creative studio

24 track Studer A80, 24 track ADAT, Amek Angela desk automated, sync to video, AMS, Lexicon, Focusrite Tubetech, TC2290, Urei, Eventide H3000, Notator, Cubase Audio, Mac/Alan, PPG Wave, M1, D50, Kurzweil K2000, Akai S3000/S1000, Prophet 5, Vintage Keys, MPC60, Waldorf Microwave, Vocoder, Proteus 2, music to picture programming, remakes, SoundTools digital editing.
 Prices from £20 ph + Vat. Access/Visa welcome.
 For more information or to view the studio,
 call: **0171-733 8088**

THE MIDI BASEMENT

Engineering & Production
 Digital Editing
 Hard Disk Recording
 MIDI Sequencing
 Synth Programming
 Sampling
 One-to-One Tuition

Phone Paul: 01905 421383 (Worcester)

NEW AGE PRODUCTIONS STUDIO
 THE IDEAL STUDIO FOR DANCE AND AMBIENT MUSIC

£15.00 per hour - price includes - top programmer/engineer
 Akai and Roland samplers with sounds on CD-ROM and optical discs.
 Korg, Roland, Yamaha, Oberheim, Moog and Sequential synths.
 Atari computer with Cubase & Notator.
 Fostex 16 track tape machine, Soundcraft console, effects rack and DAT mastering.
 Professionally designed studio with over-dub booth.
 Call Alan on **0181 446 3098**

The Blue Room

Fostex E16, ADAT, Cubase Audio, Trident Desk, 2 x S1000 huge library, keyboards, modules, Simmons drum kits and octopads, Fender & Ovation guitars, live drums welcome, CD/DAT duplication and editing, 1 off CDs.
 Full production service available. Good vibe.
 From £14.00 per hour incl. engineer.
 Further info:
 Phone Steve **0181 964 3336**
 or **0171 581 7999**

Sound Advice RECORDING STUDIO

- 16 TRACK ANALOGUE
- MASTERING TO DAT
- SPECIALISTS IN LIVE BANDS
- INTRO OFFER FOR NEW CLIENTS
- LIVE RECORDING OR MIDI FACILITIES
- 3 LIVE ROOMS
- CAR PARK
- REHEARSAL STUDIOS ALSO AVAILABLE

FOR FURTHER INFO CALL **0181-694 9484**
 SE LONDON

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:
GROVSTREAM ENGINEERING SERVICES
 29 Silverdale Road, Tadley, Hants RG26 6JL
 PHONE / FAX: **01734 713309**

TUFFLITE
FLIGHT CASES
 SUPPLIED TO ENTERTAINMENTS & LEISURE INDUSTRIES
 CONTACT RICK 01255-432612
 FAX 01255-430699

TUFFLITE CASES & CABINETS
 11 LITTLESTONE COURT, CLACTON, ESSEX CO15 1NG

"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

LOOK HEAR!

19" Rack & Flight Cases to tour the world, or lightweight expandable-size 19" Rack Cases for home and studio.
 Standard size ranges.
 Off-the-shelf availability.

19" Microphone & Storage Drawers
 19" Keyboard & Laptop Trays
 19" Conversion Mounts
 Tour Briefcases

CP CASES - 21 Years On The Road
 Tel: 081-568 1881 Fax: 081-568 1141

FLIGHT CASES

TOP QUALITY **CUSTOM BUILT**

AUTOPIA TERAKAT **KIT-KASES**

FLIGHT CASES

Tel: 0633 873118 Fax: 0633 873051

SITS VACANT

Turnkey, the biggest supplier of PC music products in the UK invites applicants for the post of

PC MUSIC SPECIALIST

The successful candidate(s) will become involved in sales and demonstration of IBM PC compatible MIDI and digital audio products, both on the phone and on a busy shop floor. He or she may eventually help out in technical support and staff training. At least 3 months experience with Windows 3.1 is required, as well as a sound knowledge of at least one computer based sequencer (not necessarily PC).

The necessary product and sales training will be provided under the supervision and support of the PC department manager.

As part of Arbitrator Group plc we offer unrivalled salary, good prospects and real job security. Please send in your CV to PC Manager, Turnkey, 114 Charing Cross Road, London WC2H 0DT.

We are an equal opportunities employer.

SOHO SOUNDHOUSE/TURNKEY

Turnkey require a mature person (not necessarily in age!) for a full time spares/accessories assistant. You will be responsible for maintaining and developing the existing business, stocking, ordering, selling etc. A wide knowledge of recording & MIDI equipment is essential, lead making ability useful!

Please send a CV and covering note to:

Rupert Pfaff at 114, Charing Cross Road, London WC2H 0DT.

SOHO SOUNDHOUSE/TURNKEY

require SALES PERSONS/DEMONSTRATORS

We will require the successful applicants to demonstrate a good working knowledge of the current marketplace, and have developed a full understanding of whatever music/recording equipment they own, or have used. As a part of Arbitrator 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. Please send your CV, however short, with a note summarising the benefits you feel you could bring to our business to:

The Personnel Director, SohoSoundhouse/Turnkey
114-116 Charing Cross Road, London WC2H 0DT

We are an equal opportunity employer

119

ARTIST WANTED

A & R LIST

OVER 800 CONTACTS
FOR ONLY £6.00

Including

- Contact Name
- Address
- Phone number and Fax
- Style of Music

Also available

- Fanzine lists £3.00
- Recording, rehearsal and venue lists + FREE GIG GUIDE, 800 entries, £5.00
- Musical Services List, 700 entries, £5.00

All lists updated regularly

Payable to Mr. M. Bell
TMR c/o Mr. M. Bell,
PO Box 3775, London SE18 3QR

0181 316 4690

751

Hughes & Kettner
CLASSIC LINE
LINEAR PRO
CAD
CHIAYO
Rapco
marantz
SKB

LONDON AREA SALES MANAGER PRO-AUDIO PRODUCTS

The job is for you if you are an experienced, successful and well-connected salesperson with extensive knowledge of the requirements of the commercial pro-audio, installation, hire and disco' sides of the sound-reinforcement industry....

if you are technically sound in the appropriate fields....

if you know you can justify a good salary, bonus and fringe-benefit package.



If this is YOU, then include a current photograph and write now for an Application Form to:
John Hornby Skewes & Co. Ltd.,
Salem House, Parkinson Approach, Garforth,
Leeds LS25 2HR.

A1 Music	0161 236 0340	83	Micropolis UK	01734 751315	11
ABC Music	0181 974 5505	76 - 77	Millenium Music Software	0115 955 2206	17
Active Sound	01923 246282	177	Multi Media Music	01623 622688	179
Akai UK	0181 897 6388	97	Music Connections	01245 354777	50 - 51, 52 - 53
Alchimea School of Recording	0171 359 3986	181	Music Lab	0171 388 5392	Loose Insert
Andertons Music Company	01483 38212	31	Music Village	0181 598 9506	142 - 143
APRS (ATS '95)	01734 756 218	Loose Insert	Natural Audio	01438 861800	89
Arbitrator PLC	0181 202 1199	111, 141, 157	Off Planet Media	0115 953 1131	183
Audio-Technica	0113 277 1441	39	PC Services	0181 749 8222	135
Axis Audio Systems	0161 474 7626	125	Peavey Electronics Corporation UK	01536 205520	59
Babel Systems	0181 749 8222	169	Philip Rees	01608 811215	193
BCK Products	01992 524442	29	Pro Music	01284 765765	161
Behringer UK	01483 458877	149	Realworld	0181 227 6060	158 - 159
Beyer Dynamic GB	01273 479411	IBC	Roland UK	01792 310247	23
Blue Systems	01799 584095	175	SCV Electronics	0171 923 1892	173, 195
Carlsbro Retail	01623 645501	90 - 91	Soho Soundhouse	0171 379 5148	109, 200 - 201
D-Zone Records	0181 657 3633	129	Sound & Vision Supplies	01276 22946	61
DACS	0191 438 5585	196	Sound Business Studio Sales	0181 559 0373	113
Dawsons	01925 32591	99	Sound Control	0800 525260	61, 63, 65
Digital Awareness	0181 597 2513	Loose Insert	Sounds Live	0191 230 3422	61
Digital Village	0181 440 3440	169	Sounds OK	01276 22946	143
E-mu Systems UK	0131 653 6556	33, 177	Sound Technology PLC	01462 480 000	5, 123
Eddie Moors Music	01202 395135	162 - 163	Spirit by Soundcraft	01707 665000	19, 87, 107, 133
Emis	0117 956 1855	101	Stirling Audio Systems	0171 624 6000	130-131
Eric Lindsey	0181 690 8621	37	Studiopares	0171 482 1692	45
Gateway School of Recording	0181 549 0014	161	Sutekina Music	0171 836 0127	138-139
Gig Sounds	0181 769 6496	171	Sycos Systems	0171 625 6070	114-115
Harman Int. Industries (Steinberg)	0181 207 5050	67	Systems Workshop	01691 658550	65
HNB Communications	0181 960 2144	Loose Insert	Tascam UK	01923 819630	152-153
HW International	0181 808 2222	119	Tech-mate UK	01206 769176	167
Isotrack	01202 747 191	157	The Music Corporation	01425 480569	68-69, 70-71, 73
Key Audio Systems	01245 344001	9, 81, 145, 171	The Synthesizer Company	0171 258 3454	1, 2, 3, 173
Key Audio Systems (Quasar)	01245 344001	43	The Way Out West Music Company	0181 948 8795	25
Kenton Electronics	0181 337 0333	57	Time & Space (Zero-G)	01442 870681	102-103
Klemm Music Technology	01462 733310	IFC	Tony Larking Audio	01462 490600	47
Korg UK	0181 427 5377	OBC	Turnkey Studio Systems	0171 240 2041	20 - 21
Marks Music	01473 287872	121	Washburn UK	01462 462466	49
MCMXCIX Distribution	0171 258 3454	147	Yamaha-Kembie Music	01908 366700	27 75
MEMS '95	01369 707800	197			

**TO PROMOTE YOUR COMPANY IN EUROPE'S NO.1 HI-TECH MUSIC & RECORDING PUBLICATION:
CALL ROBERT COTTEE ON 01480 461244. NEXT COPY DEADLINE FRIDAY 17TH MARCH 1995.**

By Sue Sillitoe



STUART EPPS

I have always loved live music, and when I'm producing I like the excitement of trying to capture that live emotion on tape. It doesn't have to be a rock band — it could

just as easily be an artist with a great voice or a guitar player — but in my opinion, there is nothing better than being in a studio when everyone is getting fired up about the music and capturing that moment on tape for all time.

I suppose that's how I first became interested in recording. When I was eight, I

mixing nothing is missed, so you listen to an album which is technically perfect and has everything there in its starkest form, but it's boring because there is nothing quirky to listen out for.

I'm not really involved with computerised production techniques as the work I do tends to be more rock orientated and employs real instruments that you actually have to hit, bang or strum. I don't feel such instruments can be improved by using computers. Obviously, I have worked with computer

technology — I've even done a few dance projects — but I don't have a fascination for that type of sound. The argument in favour of technology is that it speeds up the recording process, but whenever I've been in a studio and worked in this way I've never found it quicker.

The one thing I would say in favour of computers is that they have opened up the business to a lot of people who can't play an instrument but have great ideas. In those circumstances I don't see using a computer as a cop-out, because they enable people to express themselves even when they don't have a raw talent.

What I do worry about, though, is that hi-tech equipment has made it hard for people to make rough demos without feeling insecure. When someone like Elton

a song, put it on tape and send it out. If people can't appreciate what you have in its rawest form, then it's probably not worth recording anyway. Some of the most successful records are made in a very short time, but usually by artists who have experience of making records. Good examples of this are Elton John's 'Song For Guy' and 'Nikita', both of which we recorded really fast but were huge hits.

Recently, I was recording a track with Kiki Dee at Real World using a string quartet, but it wasn't going well. So we ended up back in my tiny studio with just a guitarist and took it from there. We got a great guitar sound and then Kiki started singing — it was pure magic. She sang better than I had ever heard her and we had the song down in two takes. Those are the moments I live for in the studio, because they are so wonderful.

It certainly helps when you are working with artists who have masses of experience. I'm currently working with Bill Wyman, Georgie Fame and various other experienced musicians, and they work so fast it's amazing. At the other end of the scale I'm also working with a young, inexperienced band called Straw Dog, who had never been in a studio before. What's great is that they have all this raw talent and I can use my experience to help them be professional. I see that as my producer's role — to bring my experience to the production and make the track work without losing the raw energy.

Most of the work I do these days is in my own studio, which has an old MCI desk. I have definitely found that with a lot of new technology, particularly digital technology, you need to use old mics otherwise there's a brittleness in the sound that doesn't suit the sort of music I like to produce. I suppose it all comes down to personal taste, but I still think that no matter what equipment you use, you can't beat the feeling of capturing something really great and knowing that you have it there for all time and for everyone to enjoy.

SOS

Producer Stuart Epps began his music business career in 1967 at Dick James Music before going on to work with Gus Dudgeon, Elton John, Jimmy Page, Chris Rea and other top names. He now runs his own commercial studio, situated in the old Mill Studio complex, and is working on a number of projects, including one with Bill Wyman. Here he explains why he prefers 'live' music to almost anything else...

was given a tape recorder and used to go around recording anything and everything. It never ceased to fascinate me that whatever went into the machine could be played back just as I had heard it. It was quite magical.

Magic music, or great music, is often the result of high points and low points in a performance. This same process carries right through to the recording and into the mixing. The magic is in the mistakes, the things that get missed. Unfortunately, with computer

John or Chris Rea has an idea for a song, they sit down and strum it or sing it, or pick it out on a piano and get it down on tape as quickly as they can. Now it seems people feel inadequate if they don't have thousands of pounds worth of technology to play with. I often speak to songwriters who say they are working on some demos and will probably have them finished in three months. My reaction is: "Three months? What the hell are you doing?" If you've got

Stuart Epps began his music business career in 1967 as an office boy at Dick James Music. There he met Elton John — at the time a humble session player — and started recording demos in DJM's small studio. After stints as A&R man with various record companies, he toured with a number of bands and ended up at The Mill, working firstly with Gus Dudgeon and later Jimmy Page. He now runs his own commercial studio, situated in part of the now defunct Mill Studio complex, and is currently working on a number of projects, including one with Bill Wyman and Georgie Fame.

NOT JUST A PROMISE

SOUNDTRACS



Some console manufacturers promise automation. Some cannot even offer that. Soundtracs, however, delivers.

A comprehensive VCA fader and mute automation package to compliment the immensely popular Topaz Project Studio. No add-on fader bays and no insert points used. Just a simple, elegant and seamless installation incorporating a IU rack interface (TACU), controlled by intuitive, easy to master software running under Windows 3.1 on a conventional (386 or higher) PC.

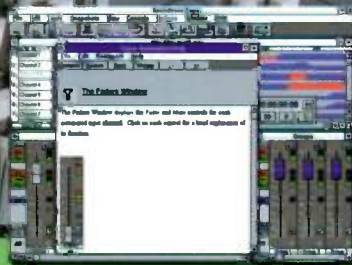
It's all there; dynamic frame accurate fader & 1/4 frame accurate mute automation, MIDI Time Code sync to 4 rates, custom 'zipper noise eliminating' algorithms, 8 software VCA groups, interactive HELP, snapshot record/recall, mute/event nudge, extensive off-line mix editing, extensive software zoom facilities, plus MIDI machine control.

And that's only the half of it.

To obtain full details, contact your local Soundtracs Dealer or call Soundtracs direct.

We know you'll be impressed.

And that is a promise.



Intuitive on-line HELP is available for all aspects of the software

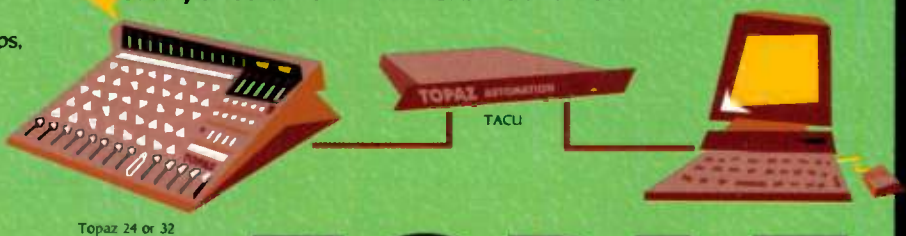


Software gives complete graphic editing of faders, mutes & VCA groups



No external fader bays, no insert points used, a completely seamless installation with the Topaz Automation Controller Unit, (TACU), interfacing between console and PC.

TOPAZ, TACU & PC - THE ELEGANT SOLUTION



Topaz 24 or 32

Windows PC

TOPAZ

beyerdynamic))) AUTOMATED PROJECT CONSOLE

Distributed in the UK by: beyerdynamic Unit 14, Cliffe Industrial Estate, Lewes, Sussex BN8 6JL. Tel: (0273) 479411. Fax: (0273) 471825

POWER SOUNDS

The latest powerful range of Korg products share the same award winning sound quality. Now Korg have collected *ONE THOUSAND* additional sounds from around the world, and will supply them free of charge when you buy the X5, X3 or the 05R/W.

- GM Compatibility.
- 32 Voice Polyphony.
- 16 Part Multitimbral.
- 47 Digital Multi-Effects.
- 16 Track Sequencer. **
- Built in Floppy Disk Drive. **
- Built in Computer Interface. *

* X5 and 05R/W only

** X3 only.

If you would like more information on the X5, 05R/W and X3, please complete the following and send to:

**KORG UK LTD., FREEPOST HA 44 55,
Harrow, Middlesex. HA1 2BR**

Simply return the fully completed warranty card and we will send you the sounds. The X5 and 05R/W sounds will be on PC Compatible / Atari format and the X3 on X3 format disks.

KORG

