

# SOUND ON SOUND

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

SOUND ON SOUND

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*Yamaha REV100 Digital Reverb*

*How To Get Your Music Heard*

*Emu Systems e64 Digital Sampler*

*Why Patchbays Make Life Easier*

*Spirit ProTracker Mixer*

*Analogue Systems Filter Bank*

*KAT TrapKat Percussion Controller*

*Home Studio Soundproofing Tips*

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RD800**  
**Active MIDI  
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VOLUME 10 • ISSUE 9

JULY 95

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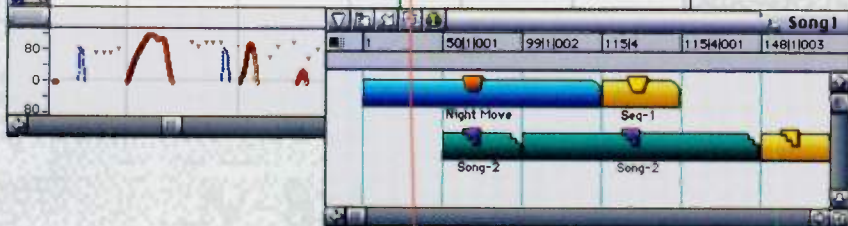
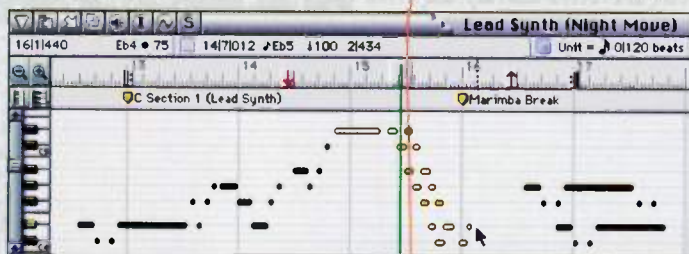
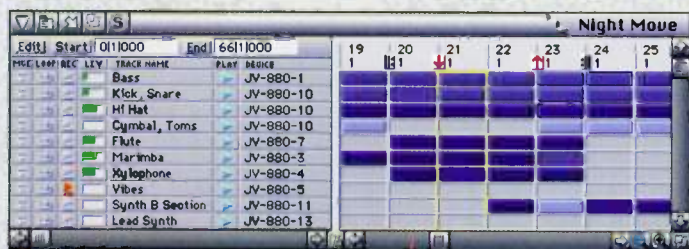
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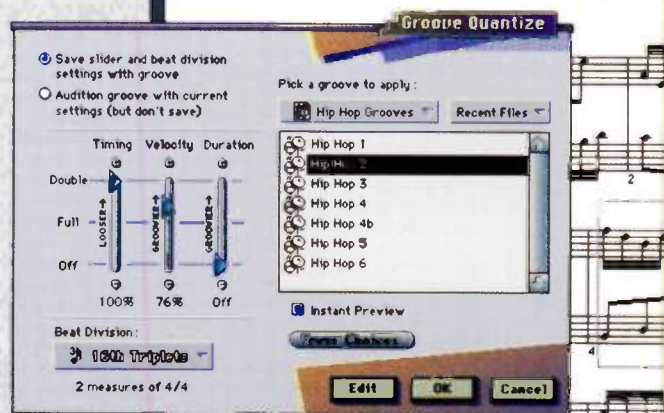


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Performer has earned an unprecedented four Mix TEC Awards and two MacWorld World Class Awards. Years of hit records, film scores and concert tours are reflected in the features and design of Performer 5.

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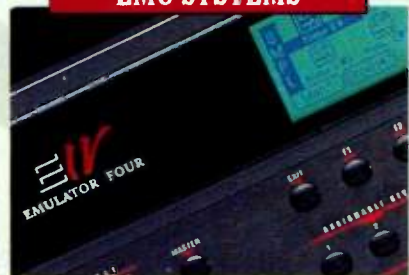
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- ▲ Full SMPTE support

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We invite you to come along to TSC and evaluate the analogue SE-1 & Oberheim OB-MX simultaneously and alongside modern classics such as the Roland JV-1080. Call 0171 258 3454 NOW to arrange a killer demo.

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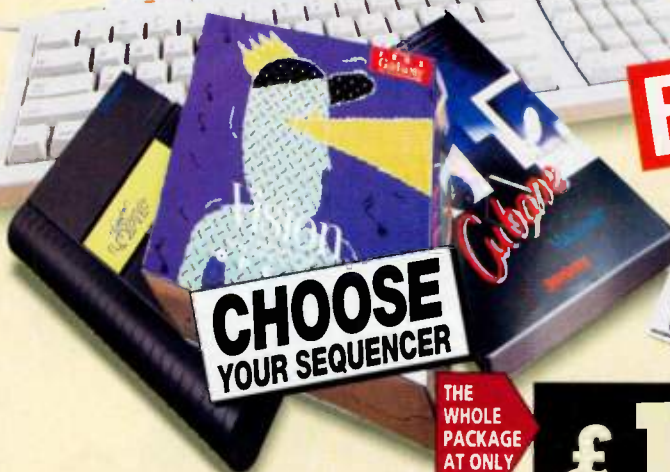
Continuing the Apple Centre AV's policy of offering complete solutions may we present this superb 'Quadra Speed' Macintosh, Sequencer, Midi Interface, Keyboard and Monitor bundle. In fact this super offering has everything you need for Midi recording.

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- ▲ 8Mb RAM - exp. to 64
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- ▲ Keyboard, Mouse & System software

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### POWER MACINTOSH 6200

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- ▲ Session 8 Core
- ▲ Digidesign 882 I/O

**ONLY £4995**

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## SAMPLE EDITING



**SAMPLECELL II - 8Mb**  
Sophisticated sample editing & playback for Mac or IBM PC. 32 dynamic voices, 8 poly outs + 2 FREE CD-ROMS!

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# Leader

**L**ast month's *Leader* (entitled *Fear Of Music*) took a sideways look at some of the less endearing aspects of technology, so this month I'm continuing the theme, in the hope that at least some of the designers out there will have mercy and build something we can actually use without getting a migraine. I've come to the conclusion that complexity isn't the real problem; it's a lack

## Fear Of Video

of consistency when designing operating systems that really screws things up.

Taking a non-musical piece of technology as an example, why hasn't anyone come up with a video recorder that a member of the *SOS* staff can programme yet? I have two VCRs at home, and while one gives me no trouble, my wife is the only person who can programme the other one — it just doesn't seem to have any kind of logic to it.



Apparently, it's not just me who has this problem; ex-*SOS* Editor (now Publisher) Ian Gilby has to stay in if he wants to video something, as he can't get his head

around setting his timer. Similarly, I spent last weekend with the head of one of the most famous recording schools in the UK (name and address withheld to avoid embarrassment — though they are celebrating 20 years in the business this year!), and while he could explain the finer points of SMPTE, hard

disk recording and MIDI to the lost tribes of the Amazon, both of us struggled with (and swore at) his video remote control for nearly an hour before my wife took it off us and figured it out.

There's a message here, and it's not that video remotes are difficult to programme — it's just that they all work in different ways. Whatever logic you apply to one doesn't necessarily apply to another, and the more logical you try to be, the

more easily you are defeated. On top of that, in a bid to make the things easier, the designers keep messing

around with the names of the function keys, so you can't find the programming button half the time.

In some areas of music and recording, MIDI and music software has at least given us a fairly standard set of parameters to work with, and the majority of synths and effects units follow a similar programming logic, regardless of their make. If you can use one, you can usually hack your way around another without too much trouble. Similarly, if you use a Mac computer, you know where to look for the menus and what the cut and paste buttons will be, regardless of the program you're running. Even so, there are still products out there that have interfaces which I find totally un-intuitive, and they're usually the ones that have been designed from the ground up to be *easier* to use! Again, this indicates that consistency may be more important than simplicity, though if we can have both, I won't complain. What we really need in the vexing world of the video recorder user interface, as *SOS* Assistant Editor Matt Bell has suggested, is a set of common video recorder standards, just like those in the world of MIDI — so how does the idea of General *VIDI* strike you...?

**Paul White Editor**

## SOUND ON SOUND

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# MidiVerb<sup>®</sup> 4



## Clean, Quiet, Rich

Forget what you know about digital multieffects processors, the new Alesis MidiVerb 4 has rewritten the book. While the competition has been chasing the standards set by three generations of MidiVerbs, our engineers were researching ways to integrate the form and function of digital reverb way beyond anybody else's imagination...or capabilities. It makes the MidiVerb 4 the cleanest, quietest, richest sounding and, yes, the smartest machine of its kind. Here's how...

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Alesis is the world leader in full custom VLSI design for audio applications, so MidiVerb 4's 20 Bit DSP engine is so advanced it eliminates massive quantities of discrete circuitry, making it a revolutionary blend of electronic design and functionality. And to insure state of the art performance, the input is sampled at the professional standard 48kHz sampling rate via 18 Bit, 128 times oversampling A/D converters.

### The Power of Great Sound

MidiVerb 4's superb reverb and effects algorithms are the direct result of our ten year mastery of the art and technology of sound. Dense, natural reverberation, and rich chorus, delay and pitch effects deliver unbeatable sonic performance. 20kHz bandwidth, 90dB signal to noise ratio, 18 Bit and 8 times oversampling D/A converters combine to make MidiVerb 4 perfect for even the most pristine digital recording.

### Fast, Fun, Flexible

But great sound is only the beginning. You get 32 full Stereo configurations, as well as powerful independent Dual Channel Parallel Processing. Plus, a special

Cascade mode allows the output of channel 1 to feed the input of channel 2 in any of 7 dual channel configurations. A large custom backlit LCD, data entry wheel and clearly labeled buttons comprise the front end of MidiVerb 4's fast, intuitive user interface. Four parameters are shown simultaneously and there's even screen help prompts to put you at ease if there's ever a programming question. You can tweak one of the superb 128 preset or 128 user programs, or start from scratch and get the sound you need in no time.

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No, this won't tell you if your car's on a hill. But, if you want to start mixing in a flash, or the drummer's starting the count and you just plugged in, our exclusive Auto Level Sensing feature automatically sets the input level for optimum use of MidiVerb 4's wide dynamic range, so you'll never have to trade off patience for excellent sound.

### It's a MidiVerb

Of course, because it's a MidiVerb, you can modulate effect parameters in real time via MIDI, select programs, and automate your effects during mixdown with a MIDI sequencer.

MidiVerb 4 is based on a classic theme, but it's new in every way. And as always with MidiVerb, the best part is the price. See your Alesis Dealer.

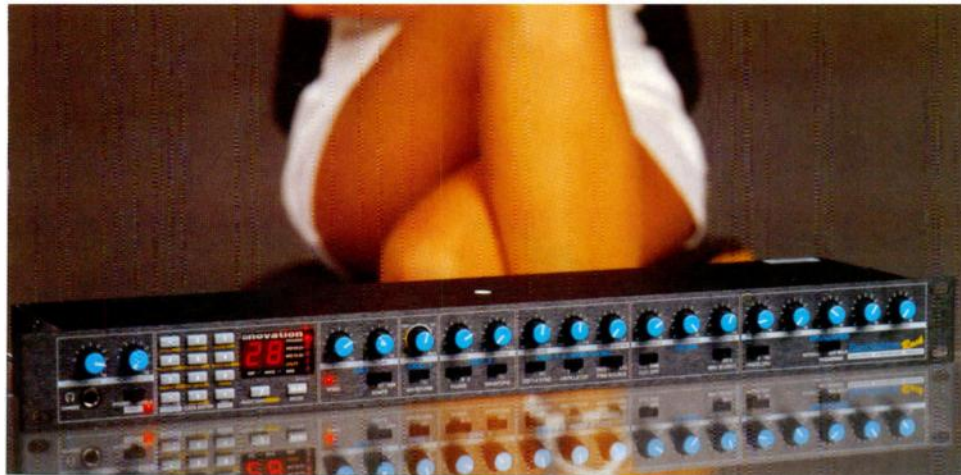
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**Novation BassStation Rack p84**  
 Novation have done what many users have been asking for — repackaged their analogue bass synthesizer into a useful 1U case, added several improvements, and thrown in a MIDI-CV convertor for good measure.

## REVIEWS

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**Spirit ProTracker Mixer p64**  
 Despite the misleading name, this is not a cassette multitracker. It's a high quality mixer for the digital age, that is ideal for live recording.

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#### Philips DCC730 Recorder p76

At £249 inc VAT, this third generation Digital Compact Cassette recorder looks set to become the digital mastering standard for the budget project studio. Read our review to find out how good it really is...

## regulars

### Crosstalk 8

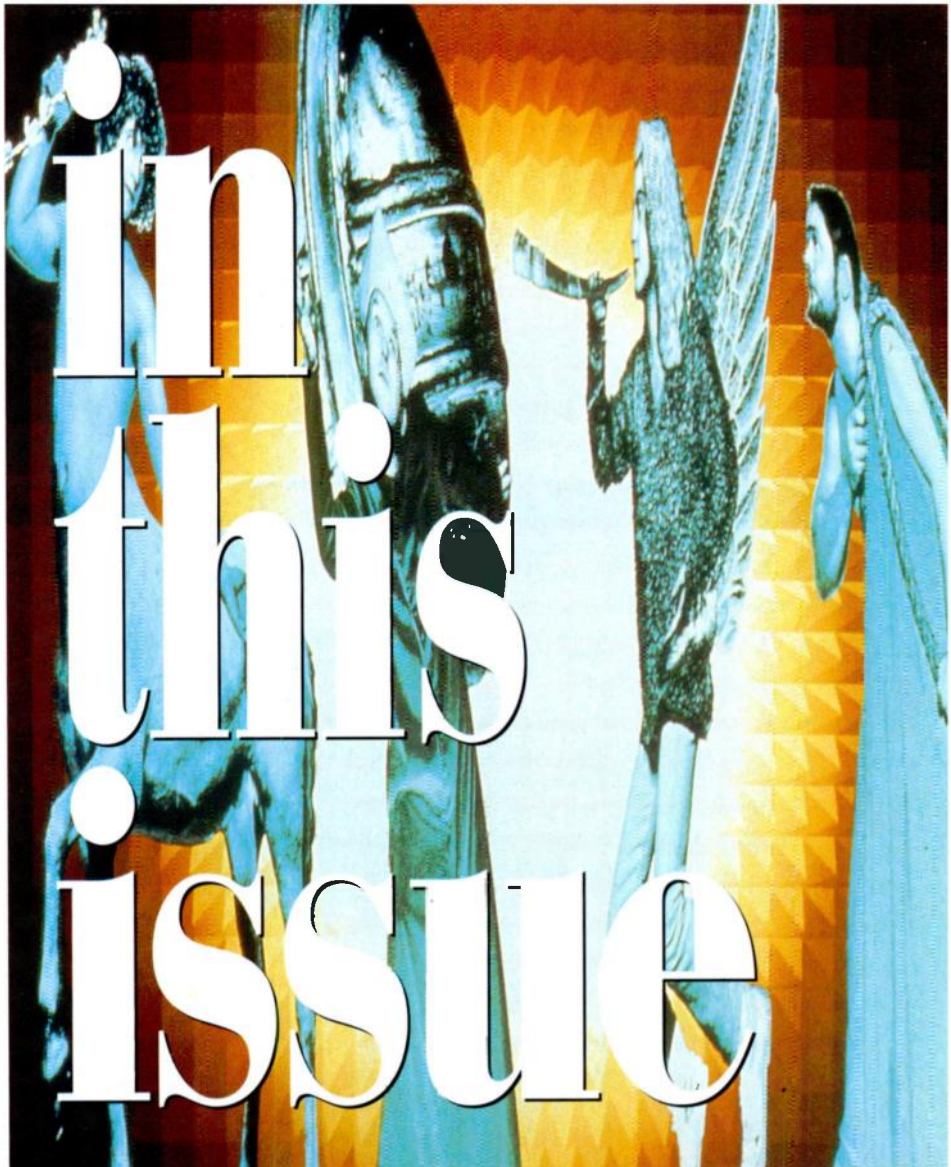
More of your problems solved by our experts.

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Jonathan Miller brings you news from the leading edge of the hi-tech music and recording scenes.

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John Harris dissects and diagnoses your demos.



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July 1995

### Sample Shop 150

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### Production Lines 208

Engineer/producer Pete Jones wonders how record companies match the 'right' producer with a band.

#### Michael Brook p90

Why does this Canadian musician/producer hope he never sees another piece of hi-tech gear again in his life? Read on to learn why...



Photo: Kevin Westenberg



# 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

## IT'S BUZZIN', MAN

Readers considering the purchase of an Emu ESi32 sampler may be interested in what I consider to be a problem with the machine. When arming the ESi32 prior to sampling, the operator is required to set the amount of input gain in order to extract the best analogue/digital conversion of the incoming signal. Emu have provided 56dB of gain on the analogue inputs, scaled from -16dB to +40dB.

The problem is that at the upper end of this amplification gain, the power circuit for the display screen backlight produces a hum or buzz (centred on 500Hz), which gets sampled along with incoming signals. Play back a sample that is infected in this manner, and the accompanying hum follows the sample all over the triggering keyboard. If the sound source being sampled produces only a low-level signal, you will need to pass the signal through a mixer to boost the signal up to a voltage level whereat the ESi's gain stage can be turned down below +20dB (and preferably much lower than that, if you want to be certain of losing the hum entirely).

Discovery of this problem led me to contact my supplier, who replaced my ESi32 with a second unit, but this behaved identically to the

thinking of buying this sampler. To check whether your ESi32 has the same fault, plug the outputs into an amplification system (you don't even need to have an input connected), enter the Sampling Management Setup page and turn up the gain and front-panel Volume control.

N Sackman  
Nottingham

**Editor Paul White replies:** *You didn't say what mic you were using or what type of sound you were sampling, but it would pay to check that the mic is of the correct type and impedance to work with the ESi32's input. A conventional dynamic mic should work fine, so if you're really having to turn the gain right up, that would imply one of two things:*

- *There's something wrong with the type of microphone you're using — maybe it has the wrong impedance, or the connection is not suitable for use with the ESi32.*
- *You could be sampling sounds that are too quiet or too distant.*

*If the latter is the case, you'll probably need the extra sensitivity of a capacitor mic. If you switch to using one of these, you'll need to plug the mic*

*gain of the ESi32. It would be easy for Emu to put restrictive limits on the flexibility of the ESi32 in this area, in order to protect an audio spec sheet, but we feel this would be a disservice to our many users, who wish to make this sort of choice for themselves. While the manufacturer should anticipate 'typical use', and ensure the instrument works well within these limits, we should not like to restrict user imagination and applications that fall outside the norm.*

*Nevertheless, we felt it important to evaluate the potential for problems in normal use, and so we conducted our own sampling tests, to check the information given by Mr Sackman. In doing this, we used numerous types of microphones, guitars, synths, and even headphones (used as a microphone of course!) to record our samples. To test the input gain, we created different samples at various levels, from -20dB all the way to 40dB. At gain settings from about 24dB upwards, we observed some noise being added to the sample, and as the input gain was increased further, the noise level also increased. However, at this point we were speaking extremely quietly into the microphone in order not to overload the signal, due to the enormous amount of gain being used. The results of our tests satisfied us completely that within the realms of normal use, there is absolutely no compromise to the high quality of the ESi32.*

*However, referring to our first statement, we do feel there may be some times when users could need to boost a signal with abnormally high input gain. In our opinion, though, these will be occasions when sound quality is not the priority, but gain is. It is with these situations in mind that we preferred to make such large amounts of gain available. In fact, the ESi32 is the only sampler in this price range that offers its users so much sample input gain.*

*We thank Mr Sackman for bringing this matter to our attention, and hope that this letter adequately answers his query. Naturally, we continually endeavour to improve the overall performance of all our products where possible, and feedback from our customers is a valuable source of information.*

*Under no circumstances do Emu advise anyone to disconnect the display panel backlight power supply. Any customers needing service for their Emu products should take them to an authorised service centre. □*



first. Emu's importers in Scotland contacted Emu in California, who acknowledged that they were aware of the situation, but suggested that "the ESi32 is not intended to be used in this type of application"! This response is curious, since the Operation Manual specifically refers to sampling via a microphone inserted directly into the input sockets on the back panel, and even, on page 46 of the manual, shows the display panel set up with +30dB of gain. Emu California further suggested that the solution could be obtained by "disconnecting the display panel backlight power supply". Not really satisfactory!

I advise all prospective ESi32 purchasers to be aware of this potential problem when

into the ESi32 via a preamp that can supply phantom power. As a rule, unless you're sampling fairly loud sounds, it's best to use a high-quality mic in conjunction with a good preamp/mixer if you're after the best possible quality.

*We passed your query on to Emu in California, and the response of their ESi32 Product Specialist, Sean Wilhelmsen, is reproduced here.*

**Sean Wilhelmsen remarks:** *In response to Mr Sackman, we believe that while his observations are precise and well-documented, he has focused on a particular area of operation that is beyond the bounds of 'normal' use regarding the input*



# REASONS TO CHOOSE THE MACKIE 8•BUS-PT 2 ㄣ

Lately, several big pro audio companies have gone out of their way to "mention" us in their own 8-bus console ads. Okay, we'll admit it, several consoles have at least one more thingamajig, dooflanger or whozabob than ours does.

If your sole criteria for buying an 8-bus console is the sheer amount of STUFF on it, there's always gonna be contenders.

But the Mackie 8•Bus console is founded on sound *quality* — ultra low noise, high headroom, premium mic preamps — rather than sheer quantity of knobs and buttons.

Not surprisingly, seasoned professionals share the same priorities. In competition with several of the very consoles that keep "mentioning" us in their ads, we recently won *MIX* magazine's highly coveted TEC Award for Small Consoles. As well as *LIVE! Sound* magazine's Best Front of House Mixer Award.

Call us toll-free for our 24-page 8•Bus brochure. It details more of the reasons that our 8•Bus Console series is the best recording or PA console values available today.

## An expandable console system.

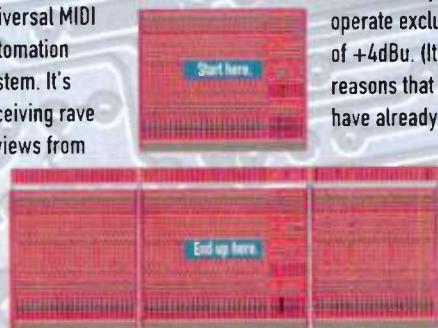


If you can successfully foretell the future, you might as well play the stock market, make a zillion bucks and buy a 128-channel SSL console.

However, because most of us are less clairvoyant and a lot poorer, we've designed a system that can grow with your needs and budget. Start with our 24•8 or 32•8 console. Then, when your tax refund comes back, add an optional meter bridge. When you land that Really Big Project That Pays Actual Money, add more input channels (and tape returns) in groups of twenty-four with our 24•E Expander console.

You can keep right on growing your Mackie 8•Bus console system up to 128 channels or more.

And, beginning this spring, you can automate the whole shebang with our OTTO-34/Ultramix™ Pro/OTTOpilot Universal MIDI Automation system. It's receiving rave reviews from



seasoned pros who are used to working with "big console" automation systems.

## +4dBu operation throughout.



This is a biggie in terms of overall noise and headroom. There are two current standards for console

operating levels:

–10dBV and +4dBu.

Without knocking our competition, let's just say that +4dBu is the only truly professional standard, used with all serious recording, SR and video production components.

This higher operating level effectively lowers the noise floor and increases dynamic range.

Naturally, our 8•Bus consoles operate exclusively at internal levels of +4dBu. (It's one of the many reasons that Mackie 24•8s and 32•8s have already been used to track top-charted albums such as Queensryche's new *Promised Land*, edit dialog for TV shows like *The Untouchables*<sup>1</sup>).

And, for those of you who still own

–10dBV gear, our 8•Bus console tape outputs and returns can be switched to accept this semi-pro/hobbyist standard.

## Built like tanks.



Our 8•Bus Series consoles have been in the field long enough to gain an almost legendary reputation

for durability. For example, several absorbed the impact of toppling monitor speakers during last year's Los Angeles earthquake with little more than a few broken knobs.

Others have survived drops off loading docks, power surges that wiped out whole racks of outboard gear, and beer baths, not to mention gazillions of air and semi trailer miles with major tours.

Read our 8•Bus tabloid/brochure to learn about the impact-absorbing knob/stand-off design, fiberglass circuit boards and steel monocoque chassis that make our consoles so rugged. And why we ship our consoles with a massive 220-watt power supply that can withstand high ambient temperatures and low line voltages.

Bottom line: You simply can't buy a more dependable console. Maybe that's why *LIVE! Sound* magazine readers voted us 1994 "Best Front of House Console."

<sup>1</sup> Mention in this ad denotes usage only, not official endorsement by the artists or production companies listed.

# MACKIE.

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## TO PC OR NOT PC, MAC IS THE QUESTION...

*We've had a great deal of comment about Stephen Bennett's article in last month's SOS, 'Changing To Hard Disk'. Here are a few of the most vocal letters, and Stephen's response to his critics.*

Stephen Bennett's article in the June issue is one of the least helpful, most biased and worst researched articles I have read on the subject of hard disk recording. Here are a few points I would like to make about the article.

- Most DAT machines don't actually put SCMS onto the tape if recorded digitally at 48kHz (common backup rate), and even if you have the dreaded SCMS on your backup, your hard disk recorder will ignore it, and you can digitally clone the DAT once again anyway.
- 16Mb is not the minimum

installing anything inside the computer is usually a much more difficult task than expected.

- "030 Macs are easily as powerful as the latest 486-based PCs" ... really? You could have got a new, much more powerful and upgradable PC for £700.
- "Crashes are a regular occurrence" — you bought the wrong system! Digidesign never intended the Session 8 to be expandable, so I wouldn't hold my breath waiting for any major enhancements. Also, if you had bothered to talk to Emagic, Steinberg or Opcode, you might have found out that they are all planning to support their audio packages on the PC. Soundscape and SADIe are probably the biggest threat to the Digidesign monopoly; SADIe is quickly becoming the new industry

would think from reading your piece that the only system worth getting was Mac-based. Not very objective.

Mark Stubbs  
CompuServe

It seems to me that given the problems that Stephen Bennett experienced, his conclusions were somewhat optimistic. Going from a machine with which 'in five years... I had not one problem' to one where 'crashes are a regular occurrence', and which is so noisy that he has to keep it in a wooden box in a separate room, is surely not a huge leap forward. Furthermore, I cannot see much evidence to support Stephen's argument that software reliability problems are being overcome by mainstream

Stephen Bennett spent quite a bit of money on his gear, and what did he get for his outlay? A system that he *thinks* he can live with, albeit one that crashes quite regularly. To be honest, I think this is a very sad state of affairs. When you consider the cost of an Apple Mac and any of the audio packages currently available, you would at least expect the damn system to work right. It seems to me that paying customers are acting as 'hands-on' R&D men, perfecting products at their own expense. I don't think we should be expected to put up with this, frankly. With technology and the cost of same as advanced as it is, we should expect products that work well from the outset in return for our investment.

All the features of any program have to be written in the first place, and are thus open to analysis and checking to see if they do their job. If they don't, it's because they haven't been checked thoroughly enough, and this is often because it means more to the manufacturer to have their product on the shelf or out in time for trade fairs. I can't believe for one second that there is no way of ironing out compatibility problems between bits of soft- and hardware. I think manufacturers have realised how gullible some people are, and cash in on it. And boy, do they.

I think the £10,000 or so I was going to spend on gear can sit in the bank a little longer, or take me to see the Rugby World Cup in South Africa. At least I can guarantee some sort of satisfaction for my outlay — and there's very little chance of it breaking down halfway through a good bit!

K Frazer  
Chatham

Stephen Bennett slipped up in paragraph three of his article with the statement "I wanted to impress my friends, and I had

Digidesign Session 8.



memory you need for hard disk recording. Soundscape runs with the Windows minimum requirement of 4Mb. Also, you don't need a powerful PC just to run Windows — a 486SX 25MHz with 4Mb of RAM is just fine.

- I'm sorry, but I don't understand the video 'bottleneck' reference at all.
- I use Macs and PCs, and

standard for digital editing and mastering, while Soundscape has completely overshadowed other 'project studio' systems in Europe in the past year — and with the constant flow of free upgrades, and the recent launch in North America, the package will probably continue to dominate.

The biggest problem with your article is that if I was considering the move from tape to disk, I

computer innovation. People will continue to get poorly written, unfinished software only for as long as they are willing to put up with it. In the meantime, retailers' assurances that the equipment is 'reliable' and 'quiet' should, it seems, not go unchallenged. Thanks for an interesting article.

Tim Orford  
Via Internet



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been looking for an excuse to get a Macintosh...". Oh dear! If Stephen wanted a Mac-based system at the outset, why go through all this rigmarole?

Stephen creates the impression of considering all the other options before dismissing them with the weakest of arguments. "Limited shelf life" is only a problem with a dedicated unit if you cannot bear to own last-year's model — I think it's more important that the unit keeps on doing what you bought it for in the first place. We have a number of discontinued items in our studio which we bought at knock-down prices — they're not very 'now', but they do keep on working extremely well, thank you very much!

I feel I must also ask Stephen whether £700 for a second-hand, 3-year-old Mac which kept crashing was really the best he could do? Ten times in a single session? No doubt a bit of a joke, but there would be a computer-shaped hole in the studio wall if my PC or Atari ST gave the slightest hint of behaving in this way! £700 (well, £703.83, to be precise) will buy you a brand new 486 DX266 PC with 4Mb of RAM, a 540Mb hard drive, and a very useful bundle of top-quality software. Also, as Session 8 is available for the PC, it seems a wasted opportunity that Stephen didn't try to compare the two systems running alongside each other.

Pay a little more and you

could have a SoundBlaster AWE32 soundcard fitted in your new 486. This would be more than enough to dip your toe into hard disk recording waters with a software-based package (except Software Audio Workshop, which needs 8Mb of RAM before it will load).

The AWE32 comes with enough software in the box to start DAT editing and compilation right away — I know, because this is what I use in my business, composing music and soundtracks for multimedia and video. Yes, I know there's no digital in/out, but hey — not so long ago *all* master tapes were copied several times on reel-to-reel tape machines before they ended up on a record, so why are we suddenly paranoid about copying in the analogue domain...?

**Rob Kirkwood**  
CompuServe

**Stephen Bennett replies:** *I seem to have stirred up the usual hornet's nest at the mention of a 'preferred' computer platform. When I first considered writing my article, I decided not to make it about the computer, as SOS had just run a couple of articles on buying different platforms for making music with. So I concentrated on the concepts and problems involved, and I think these came across well. I believe I made it clear that my conclusions were my own — I just wanted to pass on the problems and frustration I went through (and the useful experience I gained) when contemplating this major upgrade, and to explain why I, personally,*

*went for one system over another. I had no platform axe to grind — I used an Atari ST for MIDI stuff happily for years. I use PCs every day, run a PC network, and have extensive knowledge of upgrading and maintaining these machines. I really would have liked to use a PC — bulk discount and all — and I did point out the problems in getting a Mac for hard disk recording. But I did have to make a decision; this was my money, after all. I used the same criteria in computer purchasing as I did when I bought my first Atari — back then, I wanted to use Pro24, so it had to be an ST. The platform is unimportant, it's the software/hardware that counts — if the software I wanted ran on a ZX81, I'd get that.*

*I've already pointed out that I use PCs — namely a Dell DX2 66 with 8Mb of RAM, fitted with a SoundBlaster card and a Philips CDR, as well as a Viglen 486 DX2 66 with 4Mb of RAM, which is also fitted with a SoundBlaster. These systems have been much more of a pain to get right. I think I explored the reasons I didn't get a PC Session 8 system or Soundscape in the article — and I think 700 quid for a machine with 20Mb of RAM is good value!*

*On another note — Mark Stubbs complains that my article was badly researched. I spent four months discussing the pros and cons of systems on the Internet, phoning companies here and America, trying out systems in shops, and really annoying my friends by discussing it all. To answer some specific criticisms:*

- *DAT backup: I want to record my DAT backups at 44.1kHz. My audio files are at this rate. Audio DAT backup utilities record the data as actual audio with a 'digital' header. I don't want to keep converting from 48 to 44.1kHz, and my DAT didn't have the correct connections.*
- *Memory. Have you tried to run Soundscape and a sequencer on a PC with 4Mb of RAM? Even Windows itself has trouble running in 4Mb — the software would be continually swapping out to a disk*

*file. Just try a 4Mb Windows machine running Excel and Word to see what I mean (I do it every day!). Check out the traffic on the daw-mac Internet news list for opinions on running hard disk recording systems on PCs.*

- *By 'video bottleneck' I meant that most Windows systems are slowed down by the video card/driver combination rather than processing power. This is why Windows accelerator cards work wonders. My 030 Mac runs Word and Excel faster than my Viglen 66MHz 486 — probably because of the overheads caused by running Windows on top of DOS.*
- *Installation. To install a Mac peripheral, I plug it into the NuBus slot or hang it off the SCSI port, run the installation program that came with the hardware, and it works. A PC needs, usually, lots of fiddling with jumpers, IRQs, memory locations and low-memory managers before it will work. I have just spent two days getting a pair of SCSI cards to run on a Dell 486. It works now, finally — I just don't want this at home.*
- *I am in regular email contact with some people from major software companies, and know they are developing PC-based audio packages (and upgrading Mac/Falcon ones), but my article was aimed at someone who wants to buy a HD system now. The Mac has a mature HD lineage, and lots of extra goodies that PCs or the Falcon don't have, like Lexicon NuBus reverbs. The first releases of PC audio packages are bound to be very buggy too.*

*The comments on what we expect and put up with from software are really interesting. I feel it's important to know what to expect from a system — and this will be true from any computer. I think that any computer system will crash when it is doing the sort of work required of it in a hard disk recording system, and anyone who expects to have a computer-based HD system free of bugs and crashes is deluding themselves — but that's my opinion. Keep those letters and postcards coming! □*

### OOOPS!!

Eagle-eyed readers will notice that the second part of Simon Millward's piece on constructing an SY85 mixer map in Cubase is not present in this issue — although it was supposed to follow on from the first part last month! We apologise for this omission — it's one of those 'situation beyond our control' affairs, I'm afraid (who said all magazines should rely on the Internet as the perfect medium for delivering copy before deadline anyway? Internet, Schmineternet, that's what I say). Naturally, the second part of Simon's piece will follow next month. □

**Matt Bell**

Assistant Editor





## SOUND TECHNOLOGY PLUS ENSONIQ = DP/4+

**E**nsoniq have introduced an upgraded version of their highly respected DP/4 Parallel Effects Processor. Highlights of the new DP/4+ include:

- Quarter-inch balanced TRS inputs and outputs.

- Seamless switching of effects — a 'Smart Bypass' gate array switches the audio input to a dry path around each of the ESP(s) instead of ramping down the ESP output on effect change.

- New guitar effects.
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- Vocal 'remover' algorithm.
- Front panel headphone jack with output mute.
- LED indicators to show configuration.
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The DP/4+ is available now, priced at £1299.

**A** Sound Technology plc,  
Letchworth Point, Letchworth,  
Herts, SG6 1ND.  
**T** 01462 480000.  
**F** 01462 480800.

**T**he M Corporation have launched a new 'try before you buy' product loan service, enabling customers to audition equipment in their own studios for up to one week before making a decision. The

## TRY BEFORE YOU BUY AT M CORPORATION

service is entirely free of charge — the Music Corporation will even cover the cost of delivery and collection — and is aimed at assisting the busy professional who may well benefit from a different mic

or outboard unit, but does not have time to find out.

The service extends to a wide range of products, including the new Silver 5L monitors and the Yamaha ProMix 01. However, certain items — large mixing consoles and sample libraries, for example — are excluded, for obvious reasons. The service is available to all TMC account holders — and one of these can be arranged within 24 hours, subject to status.

**A** The M Corporation, The Market Place,  
Ringwood, Hants, BH24 1AP.  
**T** 01425 470007.  
**F** 01425 480569.

## DIGITAL MASTERING FOR UNDER £250!

**C**orporate giant Philips, creators of the Digital Compact Cassette (DCC) medium, look set to give their Digital Audio Tape (DAT) adversaries a run for their money with the introduction of a new range of staggeringly low-priced DCC systems. Both the full-size DCC730 and the portable DCC170 retail for £249 — great news for the recording musician!

Recording quality is reputedly in line with the units' 18-bit resolution, whilst sigma-delta A/D and bitstream D/A converters safeguard the integrity of the analogue line inputs and outputs.

Both machines feature direct digital recording via coaxial and optical inputs.

A third, replay-only machine, the portable DCC134, retails for a measly £149 — perfect for pairing with its recording brethren for making digital backup recordings, although it's worth bearing in mind that the recording machines are SCMS copy-protected, to prevent more than one digital clone being made. All three DCC machines come supplied with remote controllers.

With the mains-powered DCC730, you can record a 40-character title for each track, which scrolls into the deck's display

when the track starts to play — a very neat feature, liable to cause envy amongst DAT users! Of particular interest to many musicians should be the fact that conventionally-recorded analogue cassettes can be played back on all DCC systems.

DCC machines are now available directly from exclusive distributor SRTL Ltd, or their appointed retail agents.

**A** SRTL Ltd, Record House,  
Emsworth, PO10 7NS.  
**T** 01243 379834.  
**F** 01243 430639.

## Shape of THINGS TO COME

## OPCODE WITH A NEW VISION

**T**he digital audio market continues to heat up with the release of Opcode's latest upgrade to Studio Vision Pro, their Macintosh MIDI sequencing software with integrated digital audio recording and editing. New features in v3.0, priced at just under £799, include:

- Customisable mixer console with 256-channel capability.
- 'Audio To MIDI' function — converts a digital audio recording of a single musical voice into MIDI data, with accurate pitch bend and modulation information.
- 'MIDI To Audio' function — enables users to edit MIDI pitches and durations, then convert them back into the audio file they were derived from using 'Audio To MIDI'.
- Opcode DSP plug-ins, including time compression/expansion (without changing pitch) and pitch shift.
- 'Adjust To Tempo' — this feature reconfigures digital audio so that it follows ritard or accelerando commands inserted in a MIDI sequence running alongside the audio.
- 'Constrain Audio Tempo' — a nifty feature which fixes a wavering digital audio tempo to a set MIDI tempo.
- Compatibility with Pro Tools III and TDM.

**A** MCMXCIX, 9 Hutton Street,  
London, NW8 8PR.  
**T** 0171 723 7221.  
**F** 0171 723 8150



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



# Shape of THINGS TO COME

DIN Communications, those purveyors of analogue synths, have recently become the exclusive dealers of CP Technology's Missing Link range of MIDI/CV convertors. There are now three colour-coordinated single-channel units available. The MIDI/CV and MIDI/Hz units are both £105, whilst the MIDI/DIN Sync is £81.

**A** DIN Communications, Unit 5, Kings Place, 329 Chiswick High Road, London, W4 4HT.

**T** 0181 742 8425.

**F** 0181 742 8426.

Sound Performance Ltd have expanded their CD, vinyl and cassette manufacturing service. Their new contact address is below:

**A** Sound Performance Ltd, Unit C, 80 Blackheath Road, Greenwich, SE10 8DA.

**T** 0181 691 2121.

**F** 0181 691 3144.

With the classic tube sound making a comeback in recording circles, readers may be interested in Sound Technology plc's appointment as UK distributors of GT Electronics' Groove Tubes Pro Audio Products. The range includes valve microphones, valve studio processors and valve amplifiers.

**A** Sound Technology plc, Letchworth Point, Letchworth, Herts, SG6 1ND.

**T** 01462 480000.

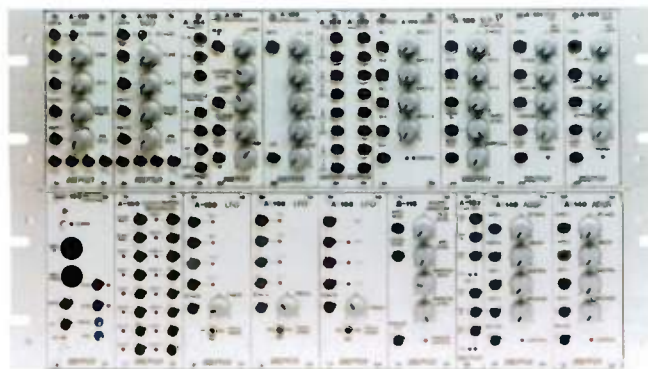
**F** 01462 480800.

A blunder of monumental proportions escaped our notice in last month's Portishead feature — 765,000 albums, to be precise. We inadvertently printed a sentence stating that the group's debut album *Dummy* has, to date, sold in excess of 850,00 copies. This should, of course, read 850,000 copies — apologies to those concerned. The person responsible has been sent into a darkened room with a loaded service revolver and a bottle of whiskey to 'do the honourable thing'.

## DOEPFER'S MODULAR MIRACLE

Those clever German chappies at Doepfer Musikelektronik GmbH have announced the impending arrival of their A100 Analogue Modular System, perfectly timed in an age where much-sort-after Moog modulators are reaching extortionate five-figure territory. Even Roland's discontinued System 100M, seen by many as the poor man's equivalent, fetches around £1500 for a basic five-module configuration. With this in mind, Doepfer's modular system looks set to be incredibly good value for money, as modules are expected to be priced below £100 — but this does depend on the ever-fluctuating Deutschmark exchange rate!

Judging from the accompanying photograph, the system is both attractively styled and clearly laid out. This is very important for the unwary who decide to dabble in the potentially confusing world of modular subtractive synthesis — even Doepfer themselves



recommend "a good theoretical grounding." The company will be issuing a binder for the instrument's manual, so that further manuals for individual modules purchased later can be slotted in — a nice touch.

25 modules are currently confirmed, with six more on the drawing board. Basic modules scheduled for shipping before June 1995 include:

- **A110 VCO** — voltage-controlled oscillator with sawtooth, rectangle, triangle and sine waveforms; adjustable rectangle pulsewidth; hard sync input and two pulsewidth voltage controlled inputs.
- **A118 Noise/Random** — offers white, coloured, red and blue noise sources with random rate and level controls.

- **A120 VCF1** — voltage-controlled low-pass 24dB-per-octave filter with three frequency control voltage inputs; audio input with attenuator and resonance control capable of self-oscillation.
- **A130 VCA** — voltage-controlled 'linear' amplifier with two control voltage inputs; manual gain control and two audio inputs. Also available as A131 voltage-controlled 'logarithmic' amplifier, with same features.
- **A138 Mixer** — with four audio inputs and rotary level controls, and one audio output socket and level control.
- **A140 ADSR** — voltage-controlled four-stage envelope generator; two gate inputs; two outputs and one inverted output.
- **A150 LFO** — low-frequency oscillator with three ranges, from sub-LFO to audio (5kHz); triangle, rectangle, sine, rising and falling sawtooth waveforms; and sync input for synchronised start.

Orders are being taken for these modules on a 'first come, first served' basis. Doepfer recommend contacting UK distributor Future Age Music Express for details concerning additional modules.

To date, Doepfer are most well-known in the UK for their excellent MAQ16/3 MIDI Analogue Sequencer (reviewed in the July 1993 issue of *Sound On Sound*), which in itself has undergone a facelift — the original plain black livery has been discarded in favour of a fetching light grey to match that of the A100 modular system. Changes are not simply cosmetic — new v3.0 software increases memory locations from a measly four to 32, whilst the knobs now have graduated scales, unlike the continually variable affairs found on the original unit.

**A** Future Age Music Express, PO Box 387, 1A Buckingham Road, London, N22 6SF.

**T** 0181 880 0616.

**F** 0181 880 0616.

## PRACTICE THE KARMA CHOPRA WITH AMG

Sample CD specialists AMG have released the fourth disc in their 'street series'. *Karma Chopra* (£54.95 inc VAT) is an ethnic dance sample CD and, as such, features a range of sounds designed for ethnic dance rather than just ethnic applications, grouped as follows:

- **Fusion Loops** — ethnic grooves fused with 'western' drum loops.
- **Ethnic Build-Ups** — grooves featuring a few different instruments, as well as each element in isolation and combinations for greater flexibility.
- **Tabla Grooves** — medium-length

grooves, usually performed at two different tempos, and in two different keys.

- **Ethnic Grooves, Licks and Hits** — more percussion, plus string and wind instruments, including Tabla; Dholak; Dhol; Egyptian Drum; Duggi; Chanda and Shenhai, to name but several.

**A** The Advanced Media Group, PO Box 67, Farham, Surrey, GU9 8YR.

**T** 01252 717333.

**F** 01252 737044.



# The Expandable Workstation

TAKE A GREAT NEW SYNTHESIZER...



ADD UP TO 4 8MB WAVE EXPANSION BOARDS...



AND IT CAN ONLY BE THE NEW...

 Roland

Just £1499

# XP-50

## MUSIC WORKSTATION

64 Voice Polyphony • 32-bit RISC Processor • Expandable to 42Mb • 16 Part Multitimbral • Built-in MRC Pro Sequencer

For further information on the Roland XP-50 Music Workstation, or the name of your nearest Roland Dealer contact:  
Roland (UK) Ltd, Atlantic Close, Swansea Enterprise Park, Swansea, West Glamorgan SA7 9FJ. Tel (01792) 700139



# Shape of THINGS TO COME

Readers attempting to contact Mark Spivey of the Midlands-based recording initiative The Network (mentioned in last month's Shape Of Things To Come pages) will undoubtedly have been confused when connected to a local Nottingham pizza delivery service! Obviously an incorrect telephone number is to blame, so here's the correct one: 01623 422962. Further apologies are due to Northants Network coordinator Alison Bown, whose number was also incorrectly printed, as was her surname. She can be contacted on 01536 460555.

Yet another *faux pas*, unfortunately — readers of our Changing To Hard Disk feature in last month's SOS may have been confused by an old address given for the Mac Draw listing. The new address is: daw-mac@best.com. The actual address to subscribe to is: majordomo@best.com with the content of the message as subscribe daw-mac. Oops!

In The Nursery, featuring Sound On Sound contributor Nigel Humberstone, have released a compilation CD entitled *Scatter* on their own ITN Corporation label. The 16-track CD includes new songs alongside deleted rarities and remixes from throughout the group's 12-year career.

**A** ITN, 52 Roebuck Road, Sheffield, S6 3GQ, England.  
**T** 0114 266 8575.  
**F** 0114 266 8575.

Importer/distributor AS. McKay Ltd, known for their dealings with the Russian Octava microphones, are offering yet another range of competitively-priced Russian mics by Byetone 2, manufactured in Russia under a US patent. They will be exhibiting these mics at this year's APRS trade show (21-23 June) at Olympia, London.

**C**arslbro Retail Ltd and Confetti Studios have joined forces to set up a new studio in the centre of Nottingham as a non-profit-making school of recording. Based around an automated Allen and Heath console and a 24-track ADAT system, the studio features a wide selection of outboard and MIDI gear.

Part-time, evening and full-time music and recording courses are available, either directly from

## CARSLBRO TIE UP WITH CONFETTI IN NOTTS

Confetti or through Nottingham's Arnold and Carlton College. These range from six-week Cubase or DJ mixing courses right up to a BTEC Diploma in Studio Engineering for those aiming for a career in the industry. Course fees start from an amazing £1.80 for unwaged students — and no, that's not a misprint, it really costs less than two quid!

Confetti, Carslbro and Arnold & Carlton have also organised a four-day Music Industry Week from July 24-27. The event will feature seminars on A & R, getting signed, touring, arranging and recording, MIDI and digital technology, and computers and composition. Evening events will include gigs and guest speakers from the industry. A place costs £45 waged or £15 unwaged — be there (or be somewhere else)!

**H**ot on the heels of their news in last month's SOS (see the 'Et Cetera slots into PC market' item in June's Shape Of Things To Come), Et Cetera Distribution have announced the release of *ReSample Professional* for Windows, which enables the use of samples from virtually any source and in almost any format. No fewer than 23 sampling formats are supported, including Akai, Roland and Kurzweil.

Priced at £99, this looks like a very good deal for PC users tired of staring at their favourite sampler's tiny panel display — in *ReSample Professional*, sample information is graphically displayed in a manner more pleasing to the eye. Setting loop points, for example, is reputed to be, "a few mouse clicks away." Features include:

- File conversion between supported sample formats.
- Sample rate conversion and override.
- Crossfade looper and envelope shaping.

## NET SURFING WITH TURNKEY

**T**urnkey, the retail division of the Arbiter Group, have launched a full information service on the Internet. Information about all their products can now be accessed in the following categories:

- Computers and software.
- MIDI hardware.
- 8/16-track packages.
- Mastering.
- 4-track cassette multitrackers.
- Studio hardware.
- PA systems.
- DJ production.
- Effects processors.
- Pro studio systems.
- Accessories.



Two sources of information are available:

- <http://www.demon.co.uk/turnkey> — a non-restricted access World Wide Web server provides graphical information browsing.
- [telnet://cix.compulink.co.uk](mailto:telnet://cix.compulink.co.uk) — a conference-based BBS (Bulletin Board Service) facility, including downloadable demo disks for PC and Mac, available via the CompuLink Information Exchange (CIX).

Note that dial-up access to the CIX system is for members only, although you may join on-line by dialling 0181 390 1255 and logging in as follows:

- Login : (type CIX)
- Nickname? : (type new)

We look forward to the day when you can download a complete recording studio onto your computer desktop!

**A** Turnkey, 114-116 Charing Cross Road, London, WC2H 0DT.  
**T** 0171 379 5148.  
**F** 0171 379 0093.

- Automatic loop finder — very handy!
- ReSample Professional* requires an IBM PC 386, 486 or Pentium computer, a hard disk, 3.5-inch floppy disk drive and Windows 3.1. At least 4Mb of RAM is

## ET CETERA: RESAMPLING PROFESSIONALS

recommended, plus a Windows-compatible 16-bit soundcard to replay samples. You will also need a MIDI interface if sample dump is required, although most soundcards now have a MIDI interface as standard.

**A** Et Cetera Distribution, Unit 17, Hardmans Business Centre, Rawtenstall, Lancs, BB4 6HH.  
**T** 01706 228 039.  
**F** 01706 222 989.



# 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®

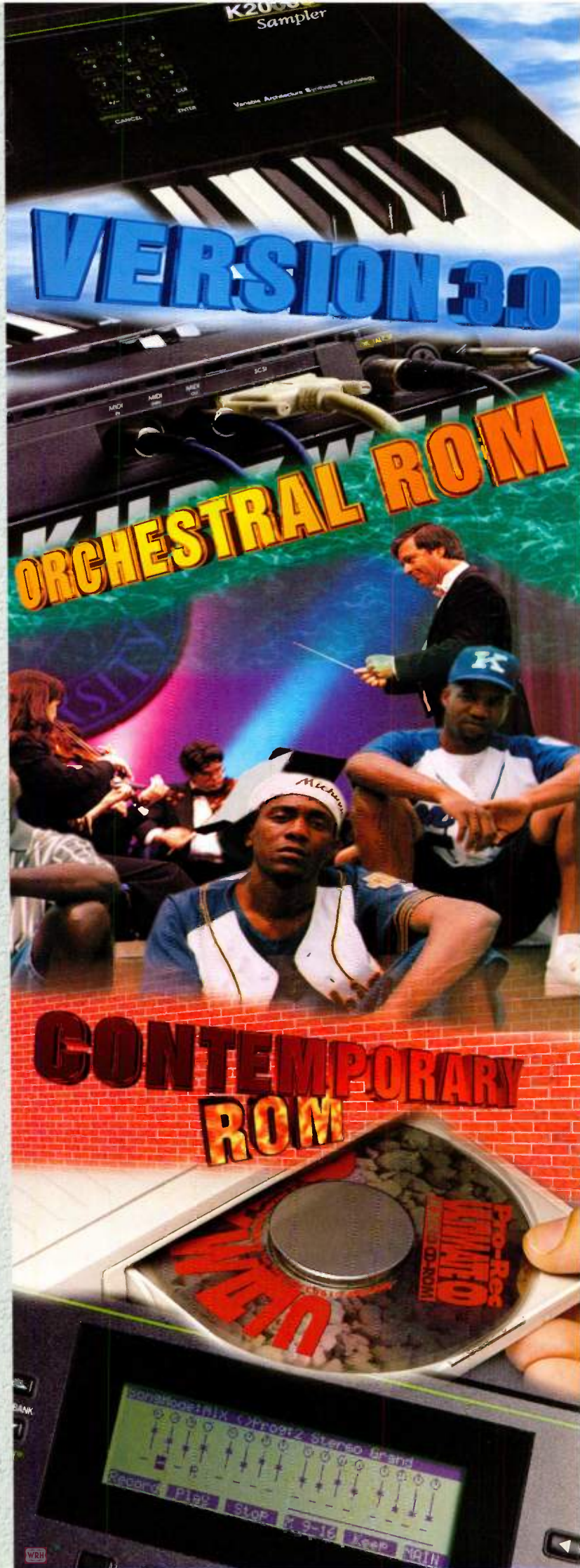
*Music Systems*

Kurzweil is a product line of Young Chang Akki Europe GmbH

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





# Shape of THINGS TO COME

## WORK, REST AND PLAY/RECORD/ERASE

**P**roducer Pascal Gabriel will soon be moving into a rather tasty London pied-à-terre — or 'a flat or other lodging for occasional use', as those with access to a dictionary will know. However, this flat also houses a professional 48-track recording studio — such are the trappings of fame and fortune!



Designed by Jo Hagan of USE Architects, the recording studio comprises two 'spaces' — the 'main space', which acts as the mixing room, and a live room, which also forms a foyer to the main space. The flat also features a custom-built sleeping

platform, an en suite bathroom, and all-purpose living space.

**A** USE Architects,  
113-117 Farringdon Road,  
London, EC1R 3BT.  
**T** 0171 278 7503.  
**F** 0171 833 1027.

**U**sers of the highly-underrated Acorn RiscPC platform may be interested in the opening by retailer Turnkey of London's first high-street showroom for *Sibelius 7*, one of the most powerful notation publishing packages available. For those

## SIBELIUS SCORES FOR ACORN

wondering why *Sibelius 7* was not written for the Mac and/or PC, with their far greater user base, the reason is that the creators of *Sibelius 7* wrote the program whilst at university,

where they use Acorn Archimedes. The program processes highly complex musical scores with almost instant screen redraws and virtually no 'thinking time'.

Turnkey's showroom gives customers the opportunity to compare *Sibelius 7* and the Acorn system directly with a 486 PC running Windows software, so they can make an informed decision in a 'non-pressured environment'.

*Sibelius 7* is available from Turnkey, packaged with an Acorn RiscPC600 computer, for less than £2350, or separately for £1097. Those qualifying for educational discount can 'score' a copy for £586 — sounds like a good deal for schools! All prices include VAT.

**A** Turnkey, 114-116 Charing Cross Road, London, WC2H 0DT.  
**T** 0171 379 5148.  
**F** 0171 379 0093.

# 2turnkey complete

## EMULATOR IV 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. **NEW SOFTWARE UPDATE** an additional 32 different filter types including band pass and morphing filters.

## TASCAM DA88

8 track digital recorder



**CALL**

## FOSTEX RD8

8 track digital recorder

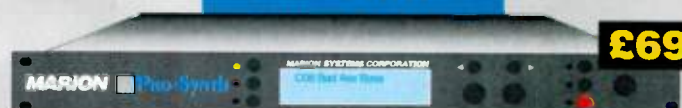


**CALL**

The Tascam DA88 has a place in most of London's professional environments, establishing itself as the premier digital 8 track. Come in & judge for yourself.

If you want a digital multitack for use with video or MMC then this is the machine that has it all built-in. In simple terms this is a Turbo'ed ADAT at a keen price.

## NEW MARION SYSTEMS PRO SYNTH



The legendary American synth designer Tom Oberheim's Pro Synth is today's analogue synthesizer. The eight part multi-timbral voices utilise 200 RAM patches, 200 ROM and 100 layers, with 2 high resolution oscillators per voice. All this is housed in a 1U rack and at an incredible price of **£699**

### A SELECTION OF EX-DEMONSTRATION, USED AND NEW ITEMS, (All prices include VAT)

Tape	
Alesis ADAT	£1999
Fostex RD8 new	£3295
Tascam 122Mk II	£595
Revox B77	£595
Tascam MSR16 dbx	£3995
Tascam DA88	£POA

### Consoles

Soundcraft Delta 20/8	£1999
Soundcraft DC2000	£POA
Tascam M520 20/8/2	£599
Yamaha DMP7	£499
Roland M240	£799
Roland M480	£999
Direct-to-Disk	
Digidesign ProTools	£3499
D.design AudioMedia II	£799

### Akai DR8

Samplers / Synths	
Akai CD3000 NEW	£2199
Emu E11xp	£1949
Peavy DPMC8	£1295
Kurzweil K2000	£1699
Roland JV1080	£POA
Roland MKS70	£695
Microphones	
Manley Baby Cardiod new	£1199



# adj (1927) : installed and ready to operate

## Manley Laboratories



David Manley's vacuum tube designs use only the highest quality components. The single or dual channel Microphone Preamps are designed for use with modern capacitor mics ( a 60dB version is also available), with rugged, thick CNC milled front panels, and aluminium sides. With his 'Purist Mixers' the actual mixing is achieved by each input having its own dedicated input grid to avoid unnecessary increase in noise-floor. Manley Labs is the only authorised user of the original Western Electric passive EQ circuitry used in the original Pultecs. Both the EQP1 and Mid Frequency EQ monoblocks use this classic design for an equally classic sound. If you are interested only in the best valve equipment call us to arrange a demonstration. Assessments 'on site' are available, call for details.

NEW



NEW



NEW



## waldorf

The **Wave** synthesizer is now available in a range of different colours and sizes. A 76 note version in either black, red or sand. To add to this Waldorf have released two new MIDI accessories called the **Gekko MIDI Trigger** and **MIDI Note** at £79. With the new **Miniworks Analogue Filter** it is now possible to address the legendary filter of the MicroWave with any audio signal, whether from a sample, mic or guitar. The unit consists of a resonant 24dB low pass filter whose input can be over-driven like in the MicroWave. ADSR envelope curves can be started over MIDI, trigger input, audio input or the trigger pad. In addition, it is possible to choose between a conventional or a one-shot envelope curve. Via a sequence, all settings can be operated in real-time by a MIDI controller.

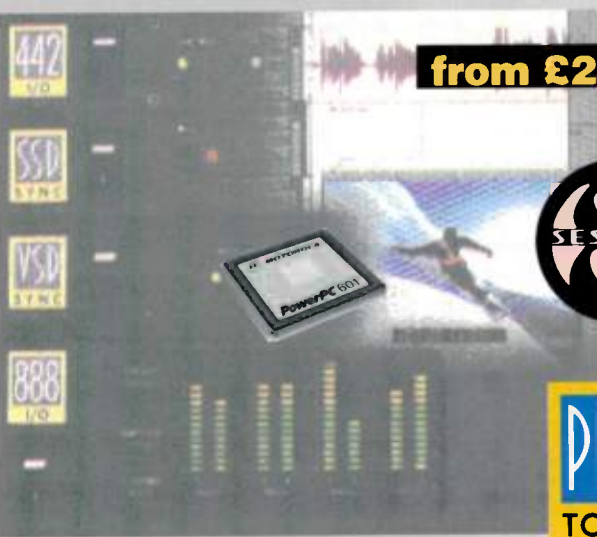
from £2,499

## digidesign

We've sold literally thousands of computer-based systems from the first Apple IIe sequencers in the early 80s and our Apple-trained product specialists demonstrate and support applications in music and post-production. As an authorised Apple Reseller we have on permanent demo a PowerPC 7100 with Pro Tools III with all the range of MIDI/SMPTE interfaces and MIDI based, TDM/DAE compatible MIDI sequencers. Please call for the keenest prices and a comprehensive, unrushed demo.



Authorised Apple Reseller



Langwin CRSA NEW	£349
Neuman KM56	£POA
Neuman TLM193	£POA
Audio Technica 4033	£POA
<b>DAT</b>	
Sony TCD-D1	£1150
Fortlex D208 new	POA
Sony PCM2309	£1049
<b>Computers</b>	
OpCedia Studio 3	£POA

MOTU MTP II	£POA
JL Cooper DistriMaster	£499
on Mac Quadras	CALL
<b>Outboard</b>	
Manley Pure EQ NEW	£1599
Manley Dual EQ Lim new	£1875
Langwin Dual mic pre-EQ	£1099
Langwin dual E/O Lim	£1349
Drawmer DS201	£299
Roland SDE33C	£549

Drawmer DF320	£339
Sony MP5 new	£449
Lexicon PCM80	£POA
Lexicon LXP15 Mk II	£POA
Mackieberg GML EQ	£POA
SSL G38FX new	£2799
SPL Vitalizer Stereo	£585
Behringer Compex	£269
<b>Analog</b>	
SE1 Rack Mixing	£1475

Prophet vs	£1399
Oberheim OBX-A	£699
<b>Monitoring</b>	
Dynaudio M1 new	£POA
ATC SCM20 new	£POA
OmniPhoria's Footprint	£279
Chameleon Amps from	£749
Waldorf Red & Blue new	£POA
Genetic 1010 & 1031s	£POA
Tinney PBME-S	£249

turnkey

studio  
Systems



## Shape of THINGS TO COME

Sony have announced a new four-motor direct-drive DAT recorder, the DTC A8, aimed directly at the home studio recording market and priced at less than £1000 (inc VAT). A nifty feature is the DTC A8's ability to use either a dedicated or standard musical instrument footswitch for remote control of simple record and playback functions.

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

**T** 01256 483646.

**F** 01256 812232.

Pro audio dealers Axis Audio Systems Ltd wish to report the theft of their hire model Sony DTC60ES DAT recorder, serial number 600618. A client was returning the unit to Axis' premises in Stockport town centre on Monday 15 May, when he was attacked by an assailant. The DAT was housed in a CP EMS ABS plastic 3U flight case. Anyone with relevant info should contact Axis on 0161 474 7619.

The Microphone Shop is a company specialising in a wide range of microphones (funnily enough) and accessories. Their aim is to provide the widest possible choice and unbiased qualified advice at competitive prices. For further details, and a free catalogue, contact them at the address below.

**A** The Microphone Shop, PO Box 2517, Eastbourne, East Sussex, BN21 2PZ.

**T** 01323 848808.

**F** 0585 464606 (mobile).

ABC Music have recently opened a digital demonstration suite at their Alma Vale Road store in Clifton, incorporating Digidesign Session 8, Alesis ADATs and Akai DR4 and DR8s, as well as desks by Studiomaster and Soundcraft, and a host of effect processors and monitors.

**T** 0117 923 8200.

**M**ixer manufacturer Spirit By Soundcraft have entered the microphone marketplace with the release of their new wireless mic and instrument systems. There are three radio systems in the range, all retailing at £311:

- The Vocal Set — featuring a rugged hand-held dynamic mic with integral transmitter and aerial.
- The Guitar Set — with a transmitter belt pack and jack cable for guitar or other instruments.
- The Presenter Set — with transmitter belt pack and tie clip that can be discreetly attached to clothing.

All systems contain two independent aeriels to minimise dropouts, and allow freedom of movement within 30-100 metres indoors, depending on conditions. Outdoors, the system will transmit up to a maximum distance of 500 metres.

It's worth noting that all systems are available in three licensed frequency bands, providing the assurance of working in FM frequencies approved for use.

**A** Spirit By Soundcraft, Cranborne House, Cranborne Industrial Estate, Cranborne Road, Potters Bar, Hertfordshire, EN6 3JN.

**T** 01707 665000.

**F** 01707 660482.

## SPIRIT TUNE IN TO RADIO MICS



## STEINBERG KNOW THE SCORE

**A**fter the release of *Cubase Score v2.0* for the Macintosh, it comes as no surprise that Steinberg are upgrading the PC version to include the same features, as of June 1995.

New facilities include a completely redesigned colour user interface; 230 new scoring tools, providing near desktop publishing features; unlimited tracks (RAM permitting) and unlimited groove quantise. As an added bonus, Steinberg also include *CueTrax* and *StudioModule* (worth £159) in the complete package, which is priced at £499. Upgrade packs will be available to existing users for £99.

For the fiscally challenged, *Cubasis Audio PC* is the first integrated sequencer/digital audio package for the PC. *Cubasis Audio PC* (yours for £249) includes all the sequencing functions of Steinberg's entry-level sequencer, *Cubasis*, but with an additional Audio menu, allowing up to four tracks of stereo digital recording. Tracks are recorded directly into

the arrangement page, and, just as with MIDI parts, audio can then be edited with the toolbox.

*Cubasis Audio* is compatible with MME soundcards, although simultaneous playback and recording is dependant on the specification of the soundcard.

Still on the subject of PCs, Steinberg have released the PC MIDI 3 output expander (£169) for users requiring more than 16 MIDI channels. With one MIDI In and three Outs, the unit provides an extra 48 MIDI channels, and can also be used alongside existing MIDI cards. As the PC MIDI 3 connects to the computer via the parallel port, it can provide an interface for notebooks and laptops too. Steinberg kindly include a power supply. An Atari ST/C-Lab Falcon-compatible version is also available, priced at £179.

For those Mac users out there who may be feeling left out with this flurry of PC activity, it has been announced that *Cubase Audio v3.0* for Macintosh will

include many new features. Highlights are time-stretch and harmonisation in the Wave Editor, and editing in the Time Domain, which allow visual editing of the Master Track in the Audio Editor. Colours and a new Arrangement page have been implemented to complete the program's facelift.

In hardware terms, there are three ways to use this new program:

- With any PowerMac — up to 16 audio tracks can be run via Apple Sound Manager. The built-in recording and playback facilities of the PowerMac are used to provide 16-track playback *without* additional hardware.
- In conjunction with Digidesign AudioMedia and Session 8 hardware.
- With TDM, enabling the creation of a virtual studio on the computer, by utilising the DSP facilities provided with Digidesign's ProTools III.

**A** Harman Audio, Unit 2, Borehamwood Industrial Park, Rowley Lane, Borehamwood, WD6 5PZ.

**T** 0181 236 7250.

**F** 0181 207 4572.

**A**nglia Polytechnic University have announced a new BSc Honours degree course in Audio Technology, starting in

## ANGLIA GO AUDIO

September 1995 at their Cambridge site. The full-time course is for three years, and has a modular format.

Modules include Acoustics and Reproduction (with studio practice); MIDI Implementation; Computers in Music; Music Technology and Digital Generated Music. All modules are supported by extensive practical sessions and workshops. Contact Dr Allen Brown for further details.

**A** Anglia Polytechnic University, East Road, Cambridge, CB1 1PT.

**T** 01223 363271.

**F** 01223 352979.





**E**magic have announced the release of *Logic PC* v2.0 for Windows. Available as a free update for existing users or as a complete package, *Logic PC* v2.0 comes with a brand new manual dedicated solely to the PC platform, including information on installing MIDI cards, IRQ (Interrupt ReQuest) settings, and many more useful hints and tips. Here are a few enhancements to whet your appetite:

- Full colour support.
- MIDI groove templates.
- Improved tempo functions.
- Automatic mapped drum notation.
- Guitar tablature.
- Grace notes.
- Multi-bar rests.
- New score layout tool.

*Logic* files are fully compatible between platforms — *Notator SL* files can be imported and converted to *Logic* format.

The *Logic PC* v2.0 update includes a new dedicated PC manual, and several megabytes of support material is available free of charge to all registered *Logic PC* v1.9 owners — how thoughtful.

**A** Sound Technology plc, Letchworth Point, Letchworth, Herts, SG6 1ND.  
**T** 01462 480000.  
**F** 01462 480800.

## THE PC GETS LOGICAL

**I**nformation concerning a new opportunity for postgraduate study has just filtered through to us from the University of Essex — their MSc in Audio Systems Engineering is aimed at students with a particular interest in audio engineering, electronics and auditory perception, who are considering a career in audio systems design and research. Close links with the department's Centre for Audio Research and Engineering ensure

that the nine-month course will have a strong research ethos. Core subjects include: audio system design; analogue and digital systems; the perception of complex sounds in speech and music; and the theory of signals and systems.

**A** Postgraduate Courses  
 Admissions Secretary (PSA95),  
 Department of Electronic  
 Systems Engineering,  
 University of Essex,  
 Colchester, CO4 3SQ.

**T** 01206 872419/8  
**F** 01206 872900.

## NEW COURSES FOR ESSEX GIRLS AND BOYS

# 737

## Voices

FOR

JUST

# £429

## MUSO

Get more sound for your pound with the MU50. Yamaha's new professional tone generator. Supporting XG and General MIDI, the MU50 delivers 32-note polyphony and 16-part multi timbrality in 64 preset and 128 user programs. Up to four voices can be layered in performance mode and there are five fully-programmable multi-effects sections on-board. A direct input lets you mix external sources with the MU50's voices and a brilliant, backlit graphic display facilitates quick and easy operation. What's more, the MU50's "to host" computer port means Mac and PC users don't even need a MIDI interface.

Call Now for Full Information pack

01908 369269

\*MRP inc. VAT

# XG

# YAMAHA

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



## Shape of THINGS TO COME

Following on from last month's news item on the Vintage Musical Instruments auction, scheduled to take place in Exeter on Sunday, 2 July 1995, we can now confirm the venue as Oaks Auction Rooms, Thorverton Mill, Thorverton, near Exeter.

Hands-on viewings, by appointment only, are available on Friday, 30 June and Saturday 1 July, 7.00am to 10.00pm, with restricted viewing on the morning of the auction itself, which kicks off at 2.00pm.

Organiser Peter Forrest adds that 200 vintage keyboards are already set to make an appearance, so the event appears to be hotting up nicely — see you there?

**A** Star House, Sandford, Devon, EX17 4LR.  
**T** 01363 774627.  
**F** 01363 777872.

If DCC's just caught your eye, then Marantz's professional portable Digital Compact Cassette recorder may be right up your strasse. Priced at £995, the PMD601 features balanced microphone inputs and a 10-hour battery life. Note that SCV London have been appointed as the exclusive UK distributor for Marantz Professional audio products, and can be contacted at the address below:

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

A nifty piano teaching package is now available from Techmate UK for £179, including delivery. The package comprises a 4-octave touch-sensitive MIDI keyboard, complete with sounds, speakers and sustain pedal, plus *Miracle* piano teaching software.

**A** Techmate-UK, 215 Harwich Road, Colchester, Essex, CO4 3DF.  
**T** 01206 793355.  
**F** 01206 791371.

## WAKEMAN'S CLOWNING GLORY

CIRQUE



**K**eyboard virtuoso Rick Wakeman has composed and recorded exclusive music for Philip Gandey's Cirque Surreal — The State Circus Of Imagination.

Cirque Surreal is a "brand new

all-human designer circus", currently entertaining thousands of visitors to the Brighton Festival, with the aim of re-establishing the circus concept as quality entertainment with mass appeal

— hence Rick Wakeman's involvement with a collection of musical pieces, specially written to enhance the characters in the show.

Rick and his band, which includes his son Adam, will be performing the music live at selected venues during the tour. The circus moved

to Bath in June.

**A** Circus Surreal Ltd, Chapel House, Chapel Street, Congelton, Cheshire, CW12 4AB.

**T** 01260 276627.

**F** 01260 270777.

**R**eaders perusing the SOS Classified Ads of late may already be acquainted with The Studio Wizard. For the rest of you, the Wizard is actually an umbrella alliance between Raven Recording, SM Acoustics and a number of experienced professionals. The Wizard offers a complete package of services for anyone involved in recording, including:

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**A** The Studio Wizard Organisation, Howard Turner T/A Raven Recording Services, 1 School Cottages, Billingsford, Norwich, NR20 4RE.

**T** 01362 668900.

**F** 0860 666523 (mobile).

## BOOK CORNER

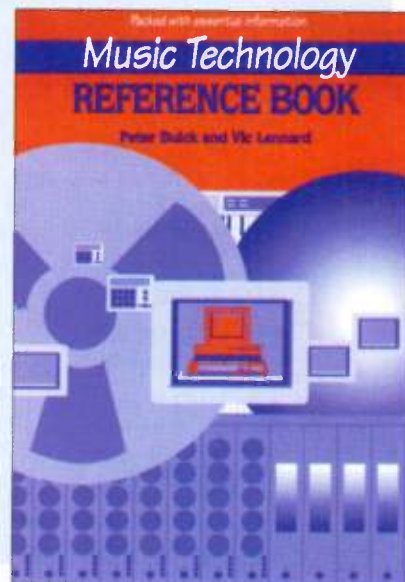
**T**he books just keep on coming, and there's a couple of new titles this month. On the technology front, there is the *Music Technology Reference Book* by Vic Lennard (author of *Sound On Sound's* Atari Notes column) and Peter Buick. All aspects of MIDI and related technology are covered, and the book should be useful whether you're a beginner or an experienced user in the studio, live, film, post-pro and multimedia areas. It contains a comprehensive MIDI spec, plus loads of data on General MIDI, SysEx, hard disk recording, mic placement and so on. A very practical and useful book for just £12.95 (plus postage) — SOS order code B305.

Also on a practical level is *Perfect Freelancing* by Sean Marriott & Paula Jacobs, which aims to provide all the basic information you need to offer your services as a freelancer of any description. No matter what you want to do, there's good advice in here, from common sense information about planning to tax and legal considerations. A variety of case studies offer real-world examples of people who have become successful freelancers, including photographers, graphic designers and musicians. We've seen nothing else like this slim and useful volume. Price is £5.99, plus postage. *Derek Johnson*

**A** Sound On Sound Ltd, Media House, Burrell Road, St Ives, Cambs PE17 4LE.

**T** 01480 461786 (24 hours) or 461244.

**F** 01480 492422.



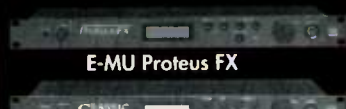


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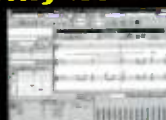
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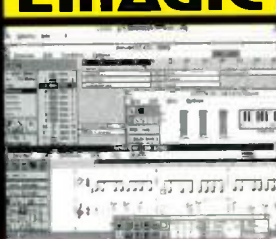
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## Shape of THINGS TO COME

Jim James, the former Marketing Manager of AMS Neve plc, is to set up a new marketing agency, East West Communications, based in Singapore from June 1995. The agency aims to meet the needs of professional audio, video and multimedia manufacturers trying to communicate with their existing and potential customers in the most dynamic region in the world, namely Asia Pacific. They can provide market information and promotional tools to access local markets, with an emphasis on "flexibility, efficiency and helping the client to achieve their own objectives."

**A** East West Communications,  
181a Telok Ayer, Singapore  
0106.

**T** 0065 226 5165.

**F** 0065 226 3235.

Computer desktop-based composers with limited working space may be interested in Yamaha's new CBX K1, a compact 37-key MIDI keyboard with a comprehensive MIDI spec. The CBX K1 is the latest in the Yamaha line to support the XG (Extended General MIDI) format. Check out Brian Heywood's PC Notes column on page 162 of this issue for further details.

**A** Yamaha-Kemble Music (UK)  
Ltd, Sherbourne Drive,  
Tilbrook, Milton Keynes,  
MK7 8BL.

**T** 01908 366700.

**F** 01908 368872.

Struggling studio owners will be relieved to know that grants are occasionally given for recording purposes — Watercolour Music's husband and wife team Nicholas and Julie Turner, owners of the only professional recording studio in Lochaber, Scotland, have secured £1600 of funding from their local enterprise company, Lochaber Limited, towards the purchase of a new £6300 digital recording system, which will bring Watercolour up to 24-track status.

**A** Lochaber Limited, St Mary's  
House, Gordon Square, Fort  
William, PH33 6DY.

**T** 01397 704326.

**F** 01397 705309.

## FROESE BRAVES THE STORM



**T**his month sees the release of a new Virgin Records double retrospective CD by Tangerine Dream's founder, keyboard player and guitarist, Edgar Froese. Beyond The Storm (AMBT 5) features a mixture of solo material mostly culled from Edgar's Virgin catalogue, dating from 1974's Aqua to Pinnacles, his final solo release in 1983. The album is digitally remastered, substantially remixed and partially enhanced with new material, in a similar fashion to last year's Tangents: 1973-1983 Tangerine Dream retrospective boxed set, also on Virgin.

This is hardly surprising, given that the new production dates from the same (re) recording sessions. Froese himself recalls: "I did everything possible, from remixing original 8-track and 24-track tapes, to recording in parallel with very noisy original quarter-inch master tapes, and then taking the original away, leaving the new recording with a very strong correspondence to the original."

As an added bonus, Beyond The Storm includes 13 new tracks, as well as tracks from Macula Transfer and Ages (from 1976 and 1978 respectively), which were previously only available on vinyl.

The album cover itself bears an uncanny resemblance to Tangerine Dream's 1976 classic Stratosfear, although I suspect this is a Virgin marketing ploy to tug at the heart (and consequently purse) strings of Tangerine Dream fans the world over!

## SOUNDCRAFT'S MIXER TREADS THE BOARDS



**T**heatres up and down the country and beyond may well be interested in the Soundcraft K3 Theatre, an 8-buss live mixing console which offers integrated mute scene setting and MIDI control over external equipment. With eight module options, including five output configurations, the K3 Theatre is available in sizes from 16 to 48 inputs, and is optimised for use in live drama productions. VAT-inclusive prices start at £8343 for the basic 16-channel version, reaching £18,800 for 48 channels, with 'mix and match' configurations and prices in between.

Using Soundcraft's C3 Console Control and Communication System, up to 128 'scenes' may be recorded, with input and output muting and MIDI program changes. A linear DataFader allows the more creative user to benefit from real-time

manipulation of external effects parameters — very handy in the complicated world of theatre sound, as any self-respecting engineer will testify.

Soundcraft also manufacture the K3 Standard as an alternative specification to the K3 Theatre, with a choice of live music mixing facilities in the same frame, starting at £7215 (inc VAT). Theatre and Standard modules are interchangeable, allowing for future expansion.

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

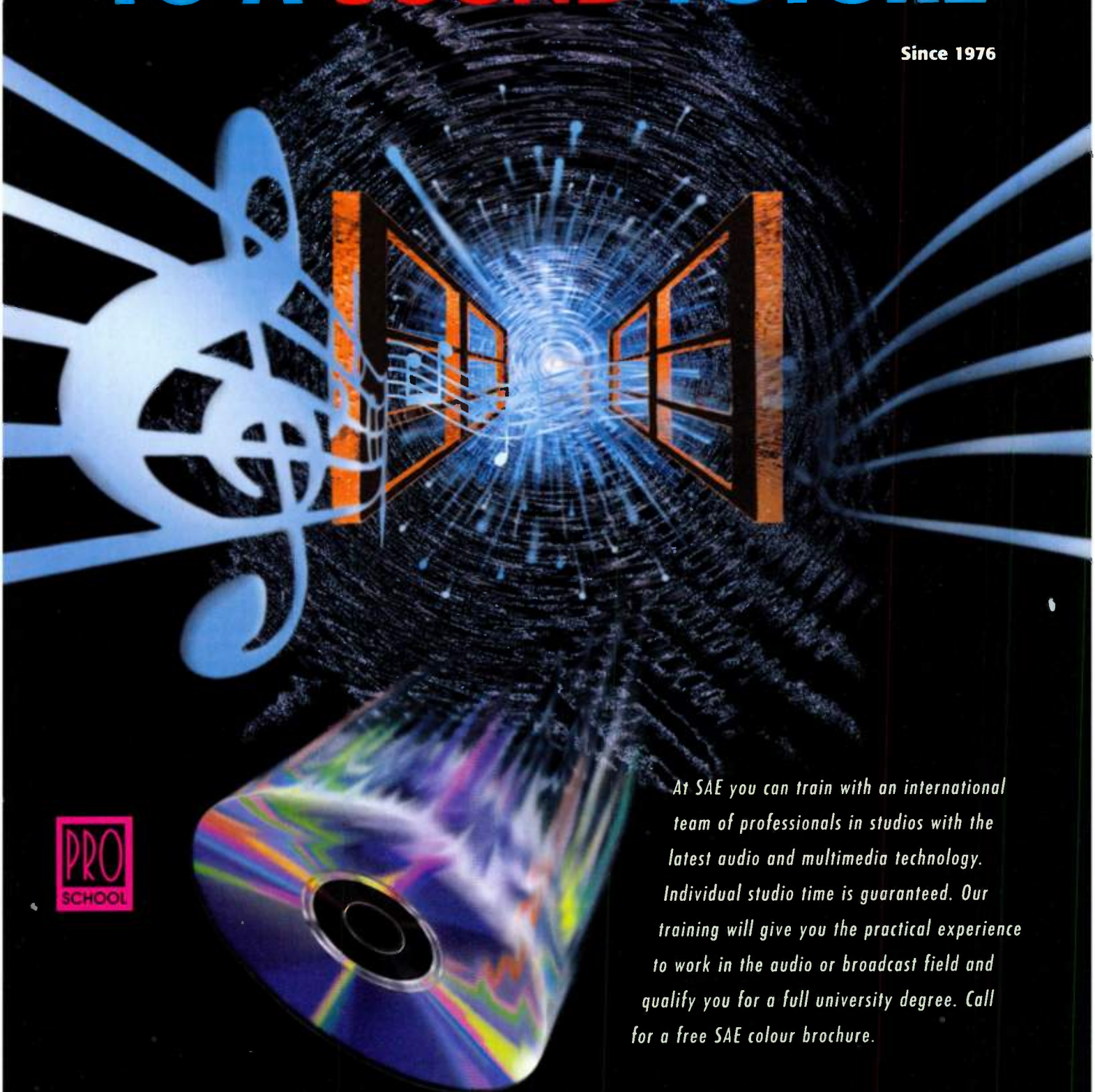
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# Emu Systems e64

## Digital Sampler

*Hot on the heels of the ESI32 and EIV samplers comes Emu's latest mid-price unit. We sent PAUL WIFFEN to find out how the e64 differs from its siblings.*

At first glance, the e64 looks just like an EIV. In fact, the only thing on the front panel that gives away the fact that it is not an EIV is the 'e64' logo. The e64's operating system software is identical to that of the EIV, which I waxed so lyrical about back in *SOS* April. Without going into too much detail here, it utilises a hierarchical menu system very reminiscent of Mac or Atari computers, enabling you to get around the system and edit parameters quickly and intuitively. It is without doubt the easiest operating system I have ever come across on a sampler. (For more details, see the full EIV review.)

### HALF AN EIV

The main differences between the e64 and the EIV are in the internal hardware. Whereas the EIV has 128 voices and 8Mb of RAM (expandable to 128Mb), the e64 is 64-voice polyphonic with 2Mb of RAM as standard (expandable to 64Mb, using SIMMs). This makes perfect sense, as these days polyphony and RAM capacity

are the two principle factors which determine the price of a sampler (and with an RRP of £2650, the e64 costs about half the price of an EIV). In fact, Emu's maths is impeccable, as it costs twice as much as the ESI32, which offers 32-voice polyphony and is expandable to 32Mb.

Looking at the back panel, there are a few more visible differences. Although the e64 keeps the two 50-pin SCSI connectors; MIDI In, Out and Thru; the ASCII keyboard input; stereo sample inputs; the eight polyphonic jack outputs and the XLR digital in and out; it does not have the EIV's alternative main outputs (on balanced XLRs) and the three expansion slots. I have never had much time for balanced outputs (invented just to give studio engineers something to drone on about!), but the e64's lack of expansion slots might cause someone who needs the second MIDI buss (for 32-part multitimbral operation), the Alesis ADAT interface, or the other forthcoming EIV options to opt for the more expensive big brother, which was designed to completely fulfill the studio professional's needs after all. Of course, if you just want 32-part multitimbrality, 128 voices and 128Mb of sample data, then you could always add a second fully expanded e64 for the same total cost as an EIV.

### VOICE ARCHITECTURE

Each 'voice' in the e64 has exactly the same architecture as its EIV counterpart, with G-chip sample transposition (giving a 10 octave range) and H-chip filtering; the latter has all the warmth and character

### EMU E64 £2650

#### PROS

- Incorporates best features of EIV for half the cost.
- 64-voice polyphony.
- Easiest-to-use operating system of any sampler (except EIV).
- Unrivalled real-time processing of samples during playback.
- 17 types of filtering available (including morphing).

#### CONS

- Only 2Mb RAM on basic model.
- Niggling problems with some non-Apple SCSI drives.

#### SUMMARY

Features-wise, currently the best value for money sampler around. Superb sonic quality with a mouth-watering range of usable filter types.

of traditional analogue filters but all the precision and flexibility of digital processing. Real-time processing of samples during playback is unrivalled on any competitor's sampler, thanks to Emu's versatile modulation structure, which includes three 6-stage envelopes and two multi-wave LFOs with sources and destinations galore. All the non-real-time digital processing is there too, with unique algorithms like Transform Multiplication and Doppler Shift, as well as the staple diet of Timestretch, Compression, and Sample Rate Conversion.

Doing justice to this voice architecture in the space available is simply not possible (it took 6,000 words in my April EIV review, which is where I suggest those who want more details should look), but I must take time to talk about all 17 filter types on the e64, simply because there were only three on the EIV that I reviewed. EIV owners (actual or prospective) need have no fear of missing out, however, as exactly the same set of 17 filter types is now implemented in software version 1.10f (contact Emu Systems if you don't have this software yet).

In addition to the EIV's traditional 2, 4 and 6-pole Low-pass filter types (giving 12, 24 and 36dB/oct cutoffs respectively), there are now two High-pass filters (12 or 24dB/oct cutoff) and two Band-pass filters (6dB or 12dB/oct cutoff either side). These are particularly useful if your source sample is taken from an analogue synth, as they can faithfully recreate traditional





synthesizer timbre and movement.

Then we come on to the more experimental filter types. Contrary Band-pass (which I suspect we would call Band Reject) gives a very novel sweep effect, where the movement is obvious but without exaggerating a single frequency. There are three Swept EQ filters acting over one, two, or three octaves at the bottom end of the audio spectrum but all over one octave at the top. These are essentially 24dB cut or boost parametric equalisers, giving extremely precise tonal alterations.

### MORPHING FILTERS

The final six filter types use the Z-Plane techniques (multiple notch/peak filtering) first introduced on the Morpheus and UltraProteus: three Phaser algorithms use comb filtering to produce phase-shifting effects with fully adjustable notches/peaks; Flanger Lite gives a more pronounced effect with three more severe notches; the remaining two Vocal filters produce human vowel approximations sweeping from 'Oo' to 'Ah' or 'Ah' through 'Ay' to 'Ee' respectively (well how else are you going to define vowel sounds, I ask you?). Using a single source sample from a synth, you could easily spend years unsuccessfully trying to exhaust the possibilities of these

innovative filter types, and create some unique sounds in the process.

### CONCLUSION

Drive disparities was really the only area where I could find any fault with the e64 at all. It seems to be too good to be true that you can get so much of the EIV's power and flexibility for half the price, so soon after the EIV's launch. Of course, some professional users will not settle for anything less than the 128 voices and expandability of that machine, but for those who cannot afford the £4,800 price tag all in one go, the e64 is a perfect way to split the cost in two (and end up with 16 polyphonic outputs). And if your budget for a sampler is never going to

they did mount, they would not transfer full data banks properly.

I spoke with George Bell, Emu's European Service Manager, about this anomaly and he assured me that the imminent Version 2 software for the ESI32 will broaden the range of samplers which will work with that machine, so let's hope that similar code will soon be available for the e64. In the meantime, the golden rule is always try any CD-ROM you plan to use with an Emu sampler before you buy.

SO5

### FURTHER INFORMATION

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# NHT 1.3A

## Nearfield Monitors

**PAUL WHITE** tries out a pair of West Coast hi-fi speakers from the USA, and finds that they are much like Californian wines — a hint of presumption with no breeding, but you'll be amused by their impertinence.

Most main studio monitors are designed specifically for just that — studio monitoring, but when it comes to *nearfield* monitoring, there's less of clear dividing line between hi-fi speakers and dedicated monitors. Indeed, Yamaha's NS10 is a classic example of a speaker that has actually managed to cross the line: it started life as a hi-fi speaker, but is now built and marketed as a studio nearfield monitor.

The speakers under review here come from NHT (Now Hear This — it could only be a West Coast company!), a Californian manufacturer. Unported, two-way units, these speakers are conventional in most respects, although the 10-litre cabinets are quite distinctive in appearance, with the front baffles angled so that the drivers face inwards towards the listening position. This geometry also helps prevent

standing waves inside the speaker cabinet, with the aim of lowering colouration. Because these speakers are designed for the home, they have a rather sophisticated gloss black piano finish, which doesn't look out of place in the studio.

The driver setup comprises a 6.5-inch polymer-cone woofer with a soft rubber roll surround, while the top end is handled by a 1-inch soft-domed fabric tweeter. A passive 12dB/octave crossover comes in at 3.1kHz, which keeps it clear of the most vulnerable part of the vocal spectrum, and the circuitry contains damping compensation to help keep the drivers under control. The result is a response extending from 55Hz to 25kHz,  $\pm 3$ dB, but the efficiency is a little low at 86dB, 2.38V at 1 metre. Nevertheless, the speakers are nominally 8 $\Omega$ , which means that most hi-fi amps will drive them quite effectively. The maximum power handling is quoted as 150W, but in the nearfield, I felt they were quite loud enough driven from my trusty 75W Yamaha test amp.

Connection to the speakers is via rear-panel terminals mounted on a recessed plate. These terminals accept banana plugs, but there is no provision for bi-wiring. A pair of clip-on speaker grilles is included for domestic users.

### IN USE

The manufacturers obviously don't target the studio market, as the USA warranty excludes any form of commercial use, but in the UK, warranty laws are different. In practice, the speakers turned in quite a good performance as small studio or nearfield monitors. Because these are physically small speakers, they don't have the same 'in your face' bass response as midfield or main monitors; nor do you get the familiar 80Hz thump, as the cabinets aren't ported. On the other hand, when you have a ported design, there's effectively no loading below the cutoff frequency of the port. The 1.3As' lack of porting produces a smoother bass response that extends further down the spectrum, and perhaps more importantly, the air loading on the

### NHT 1.3As £389

#### PROS

- Smooth, open sound.
- Compact, stylish cabinets.
- Good dispersion.

#### CONS

- Modest bass end performance, especially at low listening levels.

#### SUMMARY

Good performers for their size. The overall tone is smooth and accurate and the bass goes down quite low — there's just not a lot of it!

bass driver cone is maintained down to very low frequencies.

The top end is bright and detailed, and to be honest, I think the voicing is just slightly on the bright side of natural — not at all uncommon for West Coast speakers. Even so, the use of a soft-domed tweeter has managed to keep the tonality reasonably smooth. The monitors only start to sound really aggressive when you put up a mix that isn't balanced or EQ'd properly.

One really good feature of these speakers is their wide dispersion — you can move well to one side and still get an accurate tonal balance. This is important in the studio, where several people may need to be in a position to comment on the mix at the same time. Hand in hand with the dispersion goes good stereo imaging, and while the 1.3As aren't outstanding in this area, nor do they disappoint.

Priced at near to £400 a pair, the 1.3As face competition from several similarly priced, more established brands. I feel that the price is not unreasonable given the performance, but some users may feel that more bottom end would be useful. In that case, something like the Alesis Monitor Ones (reviewed in *SOS* January '94) or the KRK K-ROKs (tested last month) might be better choices. On the other hand, if you're used to NS10s, but want something smoother and more accurate, with a similar overall tonality, then the 1.3As should interest you. Similarly, if you're using the same speakers for the home hi-fi and for recording/monitoring, these speakers should fit in both sonically and visually. If you're pushed for space, you may be interested to know that the 1.3As measure only 7 inches wide, by 10 inches deep, by 16.5 inches high.

*SOS*

### FURTHER INFORMATION

- £ 1.3As (pair) £389 inc VAT.
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## Guitar Amp Simulator

**PAUL WHITE plays axe hooligan for a day with the Sansamp PSA1.**

**E**ver since my first encounter with the prototype programmable Sansamp at a trade show a couple of years back, I've wanted to try one, and now that I've finally got round to it, I can confirm that it was worth the wait. For those not yet familiar with Tech 21's Sansamp units, the underlying principle is that a tube amp circuit is recreated using solid state devices, but retaining the same circuit topography, including the push-pull output stage. A lot of attention has gone into recreating the coloration of real valves and loudspeaker cabinets, and because of the relentless enthusiasm of designer Andrew Barta, there can be few people who'd recognise Sansamp products as solid-state in a blind listening test.

Originally, Sansamp products were built only as pedal-type units, but then the Rack Sansamp was added to the range for the benefit of those who wanted more control and a full rackmount format. The PSA1 takes this concept one step further, adding programmability and MIDI patch changing, thereby allowing the player to switch between a large number of virtual amp channels during performance. Unlike some attempts at programmable guitar amps, the Tech 21 people have realised that guitar players want separate knobs for each function — they don't like buttons and menus. So, knobs is what you get.

### PRESENTATION

The Sansamp PSA1 is a neatly-styled, single-unit rack processor, controlled by means of eight knobs, a pair of Up/Down

buttons, and a recessed Save switch (to prevent accidental overwriting of programs). There are 49 preset factory programs, plus a further 49 user memories — patch 00 and 50 are bypass settings. A two-digit display is used to show the current patch number selected, but this also provides additional information when editing or setting the MIDI channel. If there's a limitation here, it is that patches are only numbered, not named, and while this makes for

### SANSAMP PSA1 E500

#### PROS

- Superb range of convincing guitar sounds.
- Very easy to use.

#### CONS

- Patches cannot be named, only numbered.

#### SUMMARY

This may not be the cheapest guitar preamp on the market, but it is certainly one of the most effective and most versatile.

very simple operation, it also means you have to remember which patch sounds like what.

Because the knob positions are digitally encoded, they have 256 discrete steps, rather than being continuously variable, but in all other respects, they behave much like conventional preamplifier controls. There is one MIDI In socket and a single MIDI Out socket, the latter of which also doubles as a Thru. Any of the programs may be called up directly over MIDI using program change information, as well as by using the front panel buttons. The MIDI Out facility is required when data dumps of the Sansamp PSA1's memory are being

transmitted to a MIDI data storage device, or when MIDI patch numbers are being sent. An optional footswitch may also be used to step through the presets for live applications; the number of presets through which you cycle is user-determinable.

Though the unit is a single-channel mono processor, there is an alternative, dual-level input jack on the rear panel that will accept line level signals, as well as a stereo effects loop which allows any mono-in, stereo-out effects unit to be patched in. For this reason, the Sansamp PSA1's outputs are stereo rather than mono, and in addition to standard jack outputs, there are also balanced XLRs for use in professional applications. Both sets of outputs are switchable between -10dBV and 0dBV operating levels. A Mix 50/50 switch is fitted to the rear panel, which automatically splits the signal, half into the effects unit and half direct, so that when using an external effects device, you don't have to send your entire signal through the effect unit's A/D and D/A converters.

### THE CONTROLS

The Sansamp PSA1 is fed from a single jack input. After this, the input signal passes through the initial Preamp Gain control, plus three EQ controls charmingly entitled Buzz, Punch and Crunch. These are pre-overdrive EQ settings, and are directly followed by the Drive control, which determines how hard the output stage is being driven. High settings here give the classic smooth valve distortion sound, independent of the front-end sensitivity. At the end of the signal chain, High and Low post-overdrive EQ and output Level controls allow overall tone and level to be set independently of the distortion. Because both pre- and post-overdrive EQ is available, the tonal range available is incredibly wide, and encompasses just about any guitar sound you can think of.

To edit a sound, you simply turn the appropriate knob on the front panel, just as you would with a regular amp. If the physical position of a knob is different from the value used in a preset, the display shows a dot on either the left- or right-hand side, depending on whether the knob position is too high or too





# PSA1

low. These dots blink at a rate which increases as the knob position approaches the internal parameter value, and when the two match, both dots are extinguished. The edited patch may then be memorised by pressing Store, stepping through to the desired program location, and then pressing Store again.

## STAR QUALITY

Like previous Sansamp units, the Sansamp PSA1 has a built-in speaker/amp simulator, which means it can be plugged directly into a mixing console for recording, although you do need to add your own effects, as there are none built in. For live use, the manual recommends that the PSA1 be plugged into a standard guitar amp, and that the EQ controls be used to compensate for any tonal change brought about by having both a speaker simulator and a real speaker working at the same time. In practice, this seems to work just fine.

Used DI'd in the studio, the PSA1 has the characteristic Sansamp sound, which is both valve-like and ballsy, but because it has both pre and post-overdrive EQ, the range of sounds you can coax from it is much wider than from the 'box' versions. The PSA1 isn't just good at dirty sounds, it's also capable of emulating most clean sounds, with the possible exception of the characteristically 'glassy' Rockman sound. In most cases, a touch of reverb and possibly chorus is all that's needed to give you a fully-produced guitar sound. Unfortunately, when I used the unit with my PRS guitar (before reading the manual, of course!) I found that preset 00 gave the nicest clean sound of all, but when I tried to edit it, I realised it was the bypass position!

What I particularly like about this unit is that the overdrive sounds are very responsive to playing style — the guitar actually seems to 'feel' different as you switch from one patch to another, just as a real amp does. There's also plenty of overdrive on tap, which gets you into the world of screaming harmonics and hammering without having to patch in a fuzz box.

Criticisms are few, though I do wonder why the Buzz, Punch and Crunch pre-overdrive EQ controls couldn't have been labelled low, mid and high. There's also a hint of a low-level fizzy buzz as the note expires when a bright, biting overdrive setting is used; to be fair, this happens on most other guitar DI preamps too, but I wouldn't have thought it beyond the bounds of technology to get rid of it, even if it is an exact emulation of something that some valve amps do!

On the whole, the PSA1 is good news. It DI's beautifully, it's as quiet as you can reasonably expect for anything with the capacity for so much gain, and the operating system makes it as easy to use as a traditional guitar amp. When you 'dig in', the harmonics squeal and sing, just as they do with a 'real' amp, and though you lose the contribution of acoustic feedback when DI'ing (unless you monitor very loudly!), this is about as close to the 'real amp' sound as it gets. The rock sounds also have the ability to sound loud, even at low listening levels, something that not all other units succeed in doing.

50%

## FURTHER INFORMATION

- E** Sansamp PSA1 £499.95 inc VAT.
- A** MCMXCIX, 9 Hatton Street,  
London NW8 8PR.
- T** 0171 723 7221.
- F** 0171 723 8150.

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# Synclavier S Link

## Audio File Format Conversion Software

**Most new software arrives in a blaze of publicity, but Synclavier's incredibly useful Mac utility dropped unannounced onto the SOS desk. PAUL WHITE checks it out.**

**S**Link is a very simple software concept — you feed it an audio file in any of the popular formats and ask it to convert it to any of the other popular formats. I suspect, however, that the programming that makes this possible is anything but simple. Not satisfied with handling any known sound file format, *S Link* also includes a facility for presenting any type of file as an audio file, and while there may be limited mileage in finding out what your latest article sounds like when played back as audio, the program does make it possible to open damaged audio files or files of an unrecognised type.

### UP AND RUNNING

To run *S Link*, you'll need a Macintosh with a floating point processor (or at least a software emulation of one) and you must be running System 7.0 or later. You'll also need Sound Manager 3.0 (or later versions) and Apple's QuickTime for certain operations. The software is key disk protected and has two 'installs'

available — which means that you have to use the master disk to install it, and you can only install it twice. The second install isn't provided so that you can install a copy on your pal's computer — it's intended as a safety backup, in case you accidentally trash your first install. If you need to format your hard drive for any reason, you must de-install the software authorisation first. This is a widely used software protection method and most Mac users will be familiar with it.

After installing the software and firing it up, the first thing that happens is that the SCSI buss is scanned to show you what drives are connected to your Mac and what addresses they occupy. External SCSI systems, such as Synclavier hard disk recorders or Fostex Foundations, will also show up — or so the manual claims, as neither units were at my disposal to verify this.

Folders on the displayed drives can be opened in the usual way and any recognised audio file formats are tagged with a loudspeaker icon. At this point, the file may be played over the Mac's internal speaker by pressing the spacebar on the QWERTY keyboard. According to the manual, Macs with slow processor speeds (LC, IIcx etc) might play back in a somewhat glitchy way, but this won't affect the quality of the converted file at all.

### FILE IDENTIFICATION

If the file format isn't immediately recognised, you can select a magnifying glass icon which scans the files at a deeper level and tries to determine their file type. Anything still not recognised as a sound file shows up with a document icon, and if these start to clutter your screen window, you can opt to have them hidden.

Once all the recognised sound files have been identified, their size, file type, sample rate, number of audio channels (stereo or mono), length, bit-depth, format, and compression status are displayed after the filename. Two data formats are commonly used for audio files — 'offset' and 'twos-compliment' — the latter being the most frequently used in professional applications. If this doesn't mean much to you, don't worry about it; the software knows what it's doing!

As already explained, *S Link* initially

ignores any files it doesn't recognise as audio files and gives them all document icons. However, there's a separate function window available called Sound Doctor, and this allows almost any file to be played back as a sound file — and that includes spreadsheets, graphics files, and pretty much whatever else you can think of. Most non-audio files just sound like a ghastly burst of noise, but if you have a damaged audio file that has lost its header information (ie. the data which tells the Mac what file type it is), you can force it to play back using Sound Doctor — very useful. You can select the number of bits, number of channels, sample rate, format and word order for the file you wish to be played, making it possible to modify the sample rate of a sound file in order to change its pitch. Sound Doctor is also able to import sound files that have an unusual or unrecognised format, such as Atari SND files.

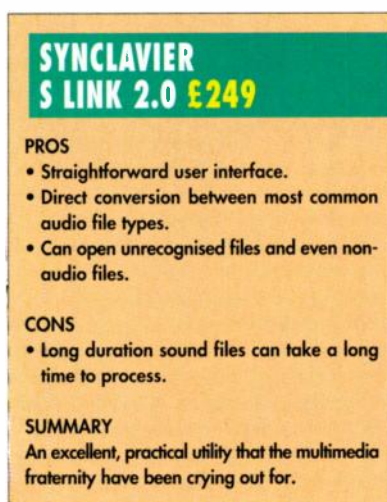
### CONVERSION TIME

To convert a file, you first ask *S Link* to duplicate the selected file, whereupon you are confronted with a dialogue box in which you must specify the destination format for the file. File types currently supported are as follows:

- AIFF
- AIFF-C
- Amiga IFF-8SVX
- System 7 Sound File
- OMF Interchange
- QuickTime
- Raw Sound File
- Sound Designer I
- Sound Designer II
- Sun/Next.au
- SND
- Creative Labs Voc
- Windows .WAV

A waveform display window can be called up if you just want to process a small part of a complete sound file, as might be the case if you're taking something from a CD (with copyright clearance, of course!).

Some file formats may only have fixed parameters, so there's no need for you to do anything except select the type and hit the button. In other cases, you can also opt to convert the sample rate, convert from 16 to 8 bits, or even impose some data compression. The three included





# 2.0

compression types are designed for low quality speech, where file size is the prime concern. To date, no high quality compression types are included.

## PROCESSING SPEEDS

How long the file takes to process depends on how many stages of conversion you ask for, but as a guide, on my Centris 650, the conversion always took several times longer than the length of the sound file to do the job. For short extracts, this isn't a problem, but it could easily take several hours to process an entire album-length sound file. *S Link* is 'Power Mac compatible', but the handbook doesn't actually say whether it runs in native or emulation mode, so I can't hazard a guess as to what (if any) speed increase would be likely.

## SUMMARY

For anyone involved in multimedia authoring or any other field which requires the handling and conversion of several different audio file formats, *S Link* is an

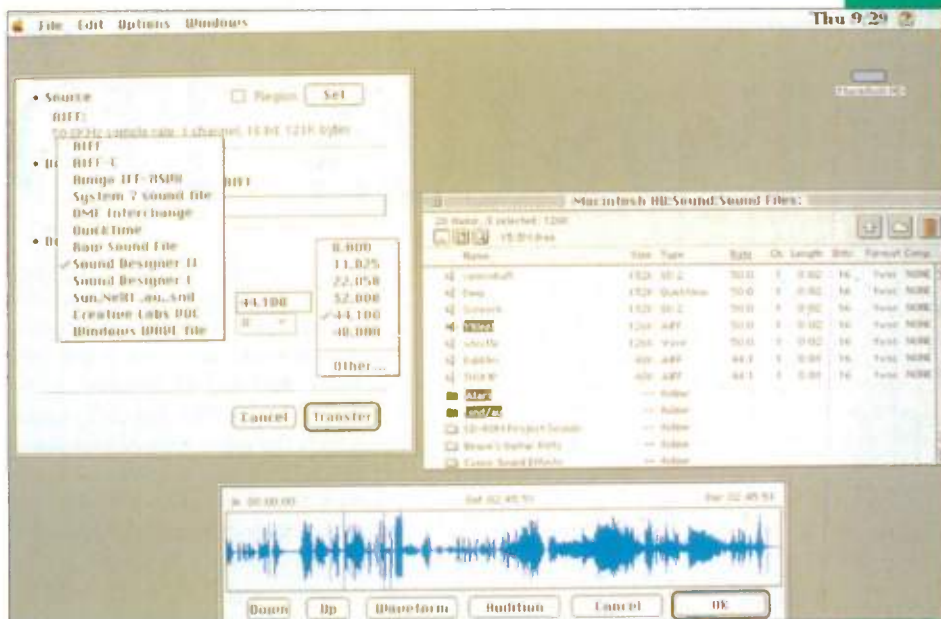
absolute lifesaver. It could also save the day if you have a sound file which refuses to open normally, because the header is damaged or missing. Obviously I don't have enough equipment to check every type of file conversion thoroughly, but the ones I did try worked flawlessly, and the user interface is very intuitive. The bottom line is this: if you need the facility to convert audio file types, you really must

get *S Link* — I don't know of anything else that does the same job!

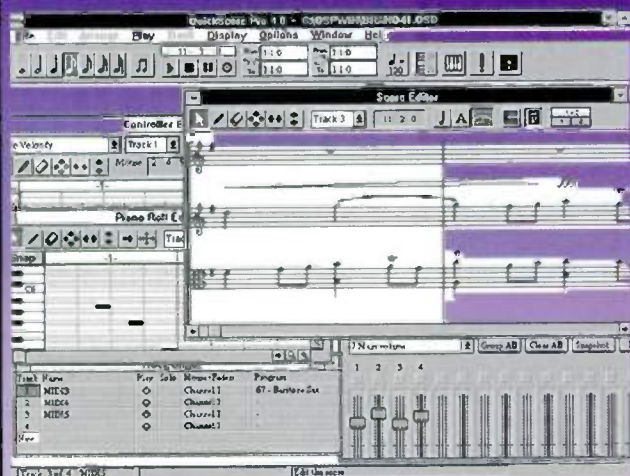
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## FURTHER INFORMATION

- E** £249 inc VAT.  
**A** Natural Audio Ltd, Suite 6, Kinetic Centre, Theobald Street, Borehamwood, WD6 4SE.  
**T** 0181 207 1717.  
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# Quick Score Professional



## Features

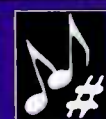
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# Fostex D5

## DAT Recorder

**PAUL WHITE** takes a look at the smallest of Fostex's 'D' range of pro DAT recorders.

Fostex have been building pro DAT recorders almost since the format was introduced, and even now, they've resisted the temptation to produce a budget, consumer-grade model. Nevertheless, the D5 on review compares favourably in price with the two-track analogue machines that it replaces. Unlike most consumer machines, the D5 has switchable sampling rates, balanced audio and digital I/Os on XLRs, and there's no hint of SCMS anywhere in the manual (for those new to DAT machines, SCMS is a supposed anti-piracy system which prevents you making digital backups beyond one generation from the master tape. In practice, this is a major inconvenience for legitimate users, and no deterrent at all to pirates, who can easily afford a couple of hundred pounds of their ill-gotten gains to buy an SCMS stripper box!).

### OVERVIEW

The D5 is a 3U professional DAT machine with a clean and simple front panel layout. Surprisingly, the machine is very light — probably about half the weight of my original Sony DTC1000. Though the construction gives no real cause for concern, the tape door and retractable plastic tape tray feel a touch on the flimsy side. The D5 can be controlled via the included infra-red remote, though it is possible to switch the wireless reception mode off, which

might be a good idea if you have more than one of the same type of machine. For those preferring wired or computer-controlled operation, a rear panel DIN socket is fitted, and this provides access to Stop, Play and ID search in either direction. The inputs have an impedance of 4.7kΩ, and must be pulled down to ground to activate them. This simple arrangement means that conventional pushbuttons could be used to build your own remote control.

Most of the facilities offered by the D5 are pretty standard, though I was rather surprised to find balanced digital I/Os, and optical S/PDIF digital I/Os, but no phonos. OK, so phonos aren't professional, but when you want to make a quick and dirty hookup to clone a DAT tape from one

**FOSTEX D5 £1195**

**PROS**

- Simple to use.
- Good tape handling.
- Excellent sound quality.
- No SCMS.
- Switchable sample rates.

**CONS**

- Rather lightweight construction, especially the tape drawer.
- No shuttle wheel.
- No phono analogue or S/PDIF digital connectors.

**SUMMARY**

A sensibly-priced, pro DAT recorder for those who don't want to make do with a consumer machine.

switching to either -10dBV or +4dBu input operation; the output is always set to +4dBu. The headphone output will feed any phones from 8Ω upwards, and I can confirm that there's plenty of power available. The recording level is set using



machine to another, the phono facility is pretty handy. Likewise there are no audio phonos, so to get sound in and out of the D5, you'll need XLR leads.

A sensible inclusion is the option of

a level and balance control rather than two independent level controls, and in most situations, the adopted approach is more comfortable.

One neat feature is that if you're making a digital copy from a CD (and let's face it, there are legitimate circumstances under which you'd want to do this), the Q code on the CD is directly translated into DAT Start IDs, so you don't have to worry about ID's being missed when one track runs into another, or unwanted IDs popping up whenever there's a break. Like most modern DAT machines, the D5 records a real-time subcode onto the tape to provide a real-time display. All the usual ID editing and renumbering facilities are fully supported.

### TRIAL WITH ERRORS

Another advantage the D5 has over consumer machines is its error readout system, but as no details are provided as to what type of errors the system detects, or over what period, it can only be regarded as a general guide. The manual skips over this facility in just a few lines without giving much away, other than to say that there's an independent error readout for the left and right channels. When I tried it out, I consistently got an error readout of 0 playing tapes I'd made on my Sony

machine, but whenever I stopped the tape, the readout set itself to the maximum value of 9. A quick phone call to Fostex's UK distributor SCV London shed a little light on the way the system works; it seems the number generated is related to the number of errors found, with a '9' readout indicating a tape with severe problems. Nevertheless, the exact relationship between the number of errors found and the error readout number remains unclear!



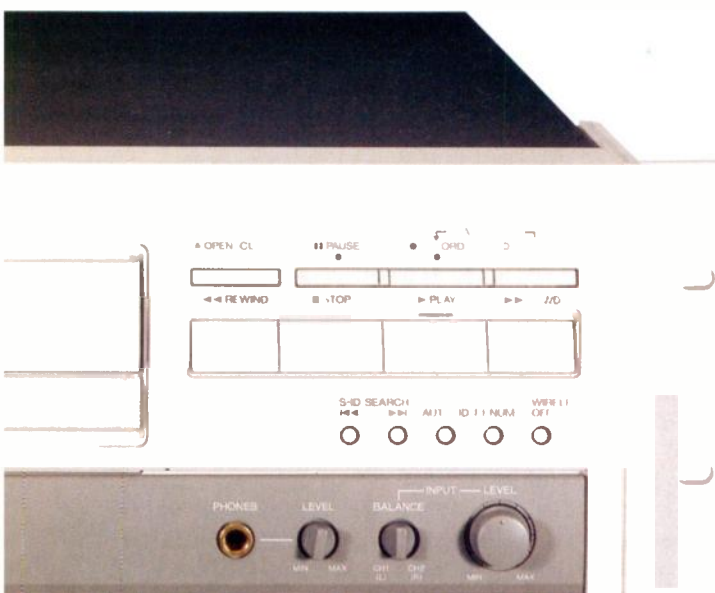
Soundwise, the D5 uses single-bit converters fed from a clock system designed to minimise clock jitter, now widely acknowledged as one of the main reasons why some machines sound noticeably worse than others. The result is a signal-to-noise ratio and dynamic range in excess of 90dB, and an audio bandwidth from 20Hz to 20kHz within +/-1dB. There's also a long-play mode (rather out of place on a pro machine?), and this

*"One neat feature is that if you're making a digital copy from a CD, the Q code on the CD is directly translated into DAT Start IDs"*

provides the same kind of dynamic range and noise performance, but with the upper frequency limit restricted to 14.5kHz.

### IMPRESSIONS

During my tests, the machine worked flawlessly, sounded great, and happily played tapes made on other DAT machines. Ergonomically, I don't like the small round buttons used for ID search and ID editing, but the main transport controls are fine, and



the motorised tape tray works smoothly enough. The display, while a little on the small side, carries all the usual information as well as metering, and the tape handling is both positive and very fast. I felt that Fostex might have included a shuttle control, because I find the one on Tascam's DA30 MkII invaluable for cueing up songs, but other than that, the machine is a joy to use. You can buy cheaper DAT recorders, but some of the cheaper consumer models don't tend to last very long in a studio environment. When you work out what you spend on your other recording and musical equipment, buying a decent DAT recorder makes a lot of sense.

505

### FURTHER INFORMATION

**£** D5 £1195 inc VAT.  
**A** SCV London, 6-24 Southgate Road, London N1 3JJ.  
**T** 0171 923 1892.  
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# SAMPLING ANALOGUE SYNTHESIZERS

## A HANDS-ON GUIDE TO EXPRESSIVE SAMPLES

*Given the outrageously high asking prices of so-called classic analogue synths, it can often pay to hire them and sample the sounds yourself. PAUL WARD passes on a few tips.*

### GETTING STARTED

The first step towards making analogue synth samples is to get hold of an analogue synth! If you are not lucky enough to own one, then it's amazing how much loan time a lager and lasagne can buy from someone who does!

Although it may be tempting to get hold of a wall of analogue modules in the belief that the results will be much better for it, in reality even a fairly humble monosynth (Pro-One, Prodigy, SH101 etc) will produce some excellent results and will certainly be much quicker to set up!

Alternatively, you could try hiring a synth for a few days from a pro audio hire company (such as FX Rentals, Music Lab, Hilton Sound etc) or book a visit to the UK's Museum of Synthesizer Technology (pictured above) — tel: 01279 771619.

**T**here can't be many sample libraries that do not contain at least a modest selection of analogue synthesizer samples. They are often tagged with such optimistic titles as 'Moog-142' or 'Oberheim-27' and vary in quality from the truly awesome to the truly awful. Many of them are memory hungry and often do not transpose particularly well, perhaps due to oscillator detuning or vibrato captured from the original sound source. One alternative to putting up with such dodgy material is to create your own, but sampling analogue synths can be a very frustrating experience. Here I'll make some suggestions which may help you get better results from your efforts.

### TAKING PRECAUTIONS

By their very nature, analogue synth sounds are at their best when gradually changing over time, maybe as a result of filter sweeps, deliberate oscillator detuning, or (more likely) somewhat less deliberate tuning instability! One solution might be to make a long sample (I'd consider a 'long' sample to constitute a minimum of five seconds) in an attempt to capture more of the character of the sound. This will also allow the possibility of making a long loop, which generally gives a better chance of disguising the loop points.

When taking a long sample of an analogue synth patch, there are a few simple precautions you can take to prevent problems later on. If the source sound utilises two or more audio oscillators, you might consider sampling each of the oscillators in isolation to avoid also sampling the 'beat' frequency (the cyclic effect caused by two or more oscillators playing back with slight tuning differences). This will not only make sample looping easier, but will also make playback transposition more successful. In many cases you may find that the oscillators are merely producing detuned versions of the same basic sound, so taking more than one sample might prove unnecessary. In most modern samplers, duplicating and detuning layers to achieve similar results takes a few moments work.

If you are intending to loop the sample, it is probably a good idea to ensure that the sustain level of the amplitude envelope on the source instrument is set to its maximum value. Although this will

effectively remove the decay portion of the amplitude envelope, this is probably the easiest audio element to replicate by using the sampler's own envelope generator. Finding suitable loop points will become considerably easier, since you will not have to contend with constantly changing volume levels across the length of the decay stage. It will also help to make the most of your sampler's bit resolution, by keeping the input level consistently high. Similarly, it might also be a good idea to apply a compressor to the analogue synth sound prior to feeding it into the sampler. Careful use of compression will produce a signal with a higher average volume level that will help greatly in the war against noise, and a more consistent signal level that should prove easier to loop.

If the source sound has any cyclic variation during its sustain period — such as chorus, vibrato, or filter modulation — then make sure you sample a whole cycle of the effect, or finding a good loop point could prove impossible. If in doubt, make the sample far longer than you might otherwise deem necessary — you can always discard the excess later in the editing process.

### CHOOSING LOOP POINTS

After having taken your sample(s), you're really at the mercy of the facilities available on your particular sampler (unless, perhaps, you have some clever sample editing computer software like *Sound Designer* or *Alchemy*).

When looping, try to find loop points where the sound is at its brightest, tonally speaking. I find that clicks or glitches are usually easier to hide when the sound has a lot of high frequency content. The best loops are to be found where the cyclic variation in the sound repeats itself. Ideally this will be around a single repetition, but sometimes you may need to loop around two or more to make the loop less obvious. Bi-directional loops might also provide a better result if the going gets really tough — providing your sampler allows such things. When all else fails, a short crossfade can hide a multitude of sins!

### SIDE-STEPPING PROBLEMS

Making use of long samples has its merits, especially for one-shot sounds or off-the-wall effects, but it can lead to problems. When played back higher up the keyboard, for example, a gentle envelope sweep



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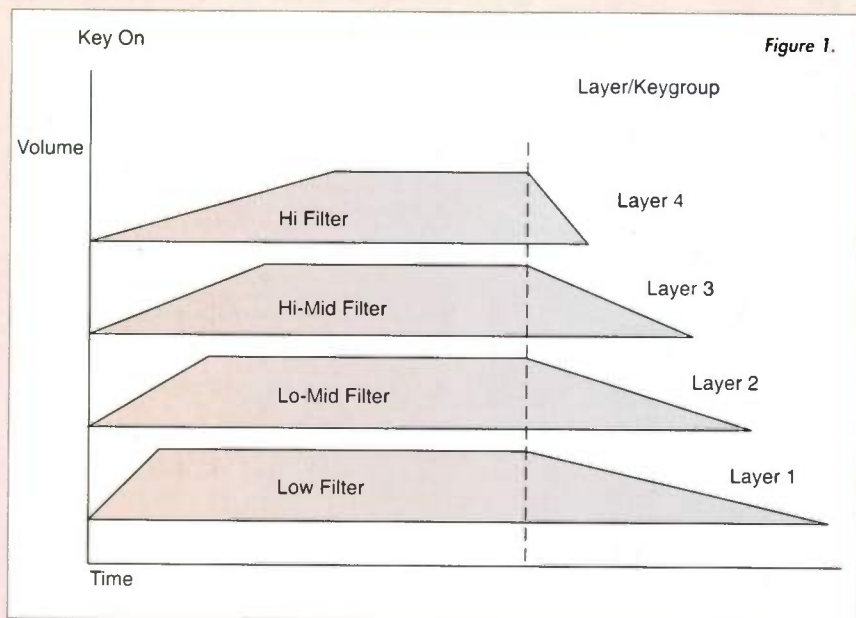
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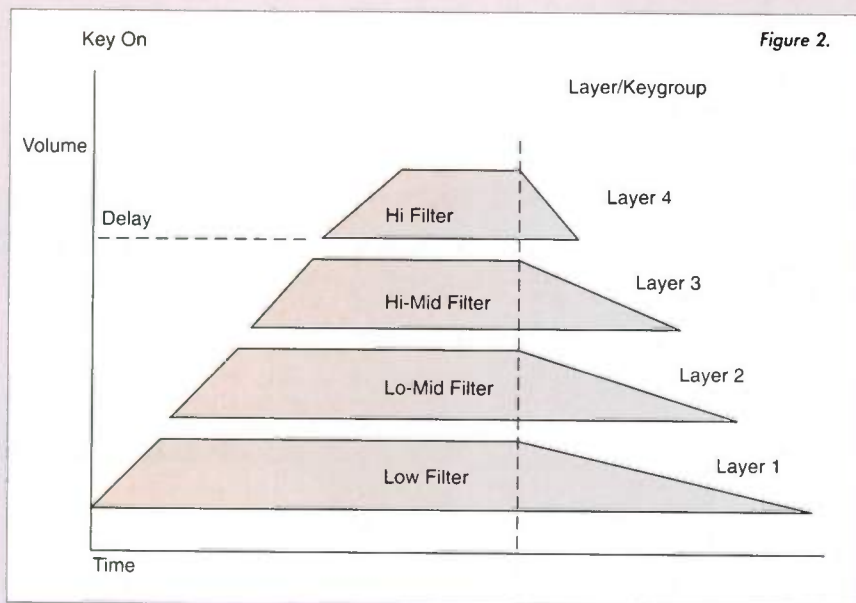
# SAMPLING ANALOGUE SYNTHESIZERS

► becomes a fast blip and subtle vibrato mutates into an irritating warble. Lower down the keyboard, the attack stage seems to last forever and the vibrato just leads to sounds being out of tune for much of the time. Multi-sampling provides one way around these kinds of niggles. Even though 15 or more samples may be needed to produce a convincing four-octave range, if a song calls for the sampled synth sound to be played back over a narrow range of keys, two or



three of your samples may be enough to produce perfectly acceptable results.

An alternative method is to take a short sample of a raw analogue waveform, preferably from a single oscillator. By making a very short loop of this sample, possibly even down to an individual waveform cycle, the sampler's own synthesis engine can be pressed into service to emulate the original sound. Most samplers feature envelopes, filters, and LFOs which should be sufficient to do



a reasonable job. For a thicker, multi-oscillator sound, duplicating the layer or keygroup with some subtle detuning or vibrato is usually sufficient. Employing these relatively simple methods, it is possible to get extremely close to the character of the original analogue texture, with a considerable saving on sampler memory.

Once the raw waveforms are safely archived (on floppy and/or hard disk), you also have a set of building blocks from which to construct original patches, maybe far removed from the sound you were originally trying to emulate. The disadvantage is that you are very much constrained by the quality of the sampler's own sound processing architecture. Digital filters, in particular, rarely exhibit the warmth and complexity of their analogue counterparts. However, there is a way to capture more of the character of an analogue filter, whilst retaining the flexibility of shorter samples.

## PSEUDO-ANALOGUE FILTERING

First of all, create a patch on the analogue synth with a single oscillator passing through a low-pass filter. Apply a reasonably noticeable amount of filter resonance (this will help to make the results more obvious for this example). Remove any vibrato or other modulation effects, including filter envelopes. Turn down the filter cutoff to the point where it is close to reducing the oscillator's output to a sine wave. Sample the resultant waveform and make a short loop of it — the shorter, the better. Now increase the filter cutoff about a quarter of the way between its current position and its fully open position. Sample the same note as before and then loop it. Do this twice more, increasing the filter cutoff another quarter of the way to fully open each time (see Figure 1).

You should now have four sampled waveforms taken at various stages in the filter's cutoff range. Create a program with each of the samples in a separate keygroup or layer. Each keygroup should be assigned to play across the whole keyboard range. Now here comes the clever bit...

Set the envelope of the keygroup containing the first sample to a one second attack, full sustain, and a long release of about 10 seconds or so. Set the second sample's keygroup to a two second attack, full sustain, and an eight second release. Edit the third and fourth keygroup envelopes similarly, adding a second to the attack and subtracting two seconds from the release each time. The following table should help to make this more clear:

Keygroup	Sample	Attack	Sustain	Release
1	lo filter	1s	100%	10s
2	lo-mid filter	2s	100%	8s
3	hi-mid filter	3s	100%	6s
4	hi filter	4s	100%	4s

What you are creating here is a limited form of 'wavetable synthesis'. As you play the sample program from a keyboard, the various static filter settings of the four individual samples will blend together to create an impression of the filter opening and closing over time.

Experiment with the attack and release times to ►





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## SAMPLING ANALOGUE SYNTHESIZERS

► alter the nature of the 'filter envelope'. Adding more layers of samples will obviously yield far more convincing results, but setting them all up will become more unwieldy too! Judicious use of the sampler's own filter envelopes can help to smooth out the effect a little more.

Besides playing with envelope times, if your sampler can delay the time at which a layer is triggered, the flexibility of this technique becomes even greater. Try setting envelope attack times to their fastest values, and use delays to successively switch in the sample layers, for a hybrid analogue/digital effect that would be extremely difficult to achieve by analogue means alone (Figure 2). Many other techniques can be applied to bring sample layers in and out for some truly strange results, perhaps utilising LFOs or performance devices such as modulation wheel or breath controller. The relative volumes of the samples will also play a great part in the overall effect. Try detuning the layers to produce an even thicker texture.

Eminently usable results can be achieved by using this method — and for very little cost in sample memory too, since you will be using relatively short loops. There is a slight catch, however, since you will use up a voice of polyphony for each extra layer you introduce on playback. Whether this is a fair trade-off will depend largely on the polyphony and memory capacity of your particular sampler.

Some samplers (such as the Ensoniq EPS) allow loop start and end points to be simultaneously modulated. This can also be used to create a more realistic impression of an analogue synth's filter. Simply record a short sample of the analogue synth while moving its filter cutoff control from one extreme to the other. Find the shortest loop you can at the start of the sample — a single waveform cycle if possible — and then allow the loop points to be shifted with the modulation wheel. On playback, you can now move the mod wheel to open and close a 'virtual' analogue filter! This is essentially the basis of true wavetable synthesis and has been used to great success in instruments such as Korg's Wavestation. If only more samplers had this facility...

### WELL STACKED

Whatever methods you employ to capture your analogue synth sounds, try stacking the samples for some truly monster patches! It's amazing how even two or three half-decent analogue synth samples can combine to produce textures that would give a wall full of Moog modular units a run for their money — and your samples will stay in tune!

None of the techniques I've discussed above are going to turn your Akai S900 into a MiniMoog, but with a little care and patience you might just fool more people a little more of the time. Happy sampling!

SOS

*"Although it may be tempting to get hold of a wall of analogue synth modules in the belief that the results will be much better for it, in reality even a fairly humble monosynth will produce some excellent results."*

### WOT, NO FILTER?

For anyone whose sampler lacks a decent filter, there is some good news. Several companies are now producing analogue filters [eg. Analogue Systems FB3 (reviewed in this issue); Peavey Spectrum Filter] which take an audio input and can be triggered by MIDI note messages or control voltages. These devices are capable of giving a startlingly close impression of a true analogue synth, despite the fact that they may be filtering a digital waveform.

Some analogue sounds can be perfectly usable without resorting to multi-sampling. These would include organ-type pads, deep bass drones, or even string pads that do not feature a great deal of detuning. Lead sounds, such as oboe or flute-type patches featuring a very fast attack transient, can sometimes actually improve when transposed over large pitch intervals.

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# Get Yourself Heard

## TIPS FOR ASPIRING SUPERSTARS

**ANTHONY GRAHAM**  
*passes on some valuable advice to help maximise your chances of landing that elusive recording/publishing deal.*

**W**hy are we all here? No, I'm not talking about life, the universe and everything. What I'm talking about is the very reason why you have bought this magazine, why you invested in a multitude of MIDI and recording equipment, and no doubt why you spend most of your spare time (and then some) noodling away on another masterpiece.

A recording and/or publishing deal is the aspiration of virtually every musician on the planet, yet the odds of obtaining a deal are (not to put too fine a point on it) somewhat stacked against each and every one of us. But some people do make it, and a much smaller minority go on to even greater musical heights. So how can you maximise your chances of being one of the lucky ones?

In the course of a year I have gone from having no business contacts whatsoever, no management, no live experience, no songs, minimal money

and equipment, and little experience of the music biz, to the point where major record companies and music publishers are chasing me, and my band are about to be signed by both a major record company and music publisher.

Want to know how to do it? Read on...

### GET YOUR ACT TOGETHER !

At the end of the day, however much it may irritate you, your future lies well and truly in the hands of the dreaded A&R department. So just who are these all-powerful people? Their backgrounds vary tremendously, but in my experience the best 'types' fall broadly into two categories: those that are old

(by which I mean middle-aged or over) and those that are musicians/producers. Most of the former tend to occupy the higher ranks in the company, such as A&R Head or Managing Director, which means they're harder to get to, but they have got to that position by having success after success, and proving that they know a good act when they hear one. Musicians and producers also make good listeners, particularly if they have had first-hand experience of being a performer, because they know what is required from a new artist.

The remainder seem to come either from related fields, such as music journalism and recording studio administration, or have worked there way up from the bottom of the company.

Bearing this in mind, it is very important to remember that musical talent alone is nowhere near enough to ensure interest from a record company, never mind a contract. Anyway, talent (or the lack of it) is a personal opinion and those that you receive will vary immensely. There are other aspects that should be considered:

- **LOOKS:** If you have them, then it's a definite advantage; if you don't, then it can be worked around. If you're a female singer, then it will be harder if you are neither attractive or 'different' (Tori Amos and Bjork are good examples). But if you're an unattractive male singer, then it should be rather easier (Jimmy Nail, step forward).

- **RELATIONSHIPS:** If you're putting together a band or looking for a partner, then ensuring that all egos and personalities are at least vaguely compatible is very important. This is obviously hard to establish in the beginning, so it's wise to have a trial period for all parties, to see how they work with one another. Duos, be they writing and/or performing partners, can be particularly intense — especially if your partner is of the opposite sex! Incidentally, 'looks' should also be borne in mind for each person that you audition or are considering working with, unless they are purely writers.

- **AGE:** Quite simply, if anybody is over 25 then it lessens their chances of being signed. Sad but true.

There are also other factors that do not really concern A&R people, but should nevertheless be considered now. For example, who does what in the band/partnership? Is one person going to be the 'manager' and be the spokesperson for everyone else? How are the costs (and profits, if there are any) going to be split? And what about songwriting?

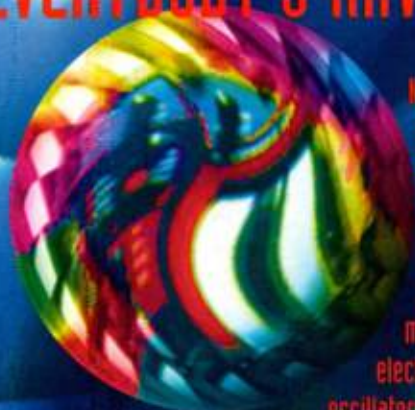
### SONGWRITING

By far the simplest way of writing songs is to do everything yourself. But a quick glance at this week's singles chart will show you that the majority of songs are written by two or more people. Why? Well how do you really know that the brilliant idea you just came up with really is that brilliant? You certainly can't rely on your girlfriend / boyfriend / parents etc to be honest with you. But a good working relationship with another person allows you to be objective about each other's work and bounce ideas between you, hopefully resulting in a song better than anything either of you could have achieved individually. So if you don't have a band and are looking purely for a writing partner, then an advert in the *SOS* Reader Ads or in *Melody Maker* (or a word with an organisation like





# EVERYBODY'S RAVING ABOUT IT!



Nord lead is the first digital synthesizer to use "Virtual Analog Synthesis". Clavia has analysed analog synthesizer design in detail and implemented the research in a digital model. Nord lead employs mathematical simulations of the electrical signal generated by analog oscillators, instead of using waveform tables.

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# Get Yourself Heard

► BASCA) should point you in the right direction.

Once you've settled on one or two people who you'd like to try working with, then it's a good idea to discuss the subject of royalties early on. DO NOT wait until you're offered any sort of deal, because by that time you will (hopefully) have become good friends, therefore making it much harder to rationally discuss business matters between yourselves. Some books I have read suggest that you ask your new collaborator to sign a collaborator's agreement, outlining your working relationship. Whilst the legal benefits of this are undoubted, I have to say that I've never heard of anyone being asked to sign one. In my opinion, asking someone you've just written a song with to sign a contract may create the wrong impression.

An easier way of getting the division of labour in print is by registering yourselves and your songs with the Performing Rights Society (PRS). The *Joint Notification (Works) Form* is a standard form that must be filled in before anyone can earn any performance royalties, and it's thus unlikely to insult your partner! As far as splitting royalties, the only norm to bear in mind is that music (including vocal melody) is usually 50% of a song and lyrics the other 50%, but this is often varied if everyone is agreeable.

## RECORDING

Once you've written a few songs you should be thinking about demo-ing them: no more than four songs at a time, and obviously make sure they are your strongest. When looking for a suitable recording studio, it is recommended that you talk with the engineer you will be working with and listen to material that he has previously recorded at that studio; also you may like to take along a favourite CD (or DAT) to check out their monitoring and acoustics.

Many people believe that to impress A&R departments you need to go to a big, expensive, 24-track studio. Well that may help, but make sure you don't go over the top. A song that's been 'over-polished' can actually be a big turn-off if the people you're playing it to don't like the arrangement or production style. Sometimes it is better to go with a simpler version that lets them use their imagination, particularly if you're primarily a writer seeking a publishing deal.

In my case, I only had a Roland U220 to write and arrange with. To save time in the studio, I premixed the backing tracks using the internal mixer/effects and laid them onto DAT. In the studio they were then transferred onto two tracks of an Alesis ADAT and the vocals plus any other instruments recorded 'on top'. Despite this minimalist approach, I was constantly told that my demos could have been released as they were and that they sounded like a big studio production! The moral of this story is that as long as the song, arrangement, and vocal is good then everything else will seem better, even if you don't have lots of good equipment.

When approaching a studio it is tempting to ask for deals or deferment of payment; you'll rarely get either but what you may be offered is a 'production contract', whereby you sign away a percentage of

your song to the studio or production company in return for them providing 'free' recording facilities. Think *very carefully* before agreeing to this and *always* get any contract checked out by a specialist Music solicitor first. Musician's Union and BASCA members have free access to a solicitor, others may qualify for legal aid if low earners.

## THE IMPORTANT STUFF

Presuming that everything went according to plan in the studio, then you should now have a master DAT of mixes — if possible, get a compilation DAT made of the best mix of each song in your preferred order. This provides a backup should anything happen to either DAT, and will be more convenient when playing the songs to other people.

By now you should know whether your partnership or band is working. Hopefully it is, and now is when you should get photographs and biographies done. Photos should be 10" x 8" Black & White glossies with the most attractive members (hopefully including the singer) at the front, hiding any less attractive members at the back (no, I'm quite serious...). Biographies shouldn't be over-long, as all the time people spend reading them they're not really listening to your music. Concentrate on the most important personnel — in other words the singer and songwriter(s), and write it from an outsider's viewpoint. Always include everyone's age (unless they're really old) and concentrate on facts about each person's musical background, not speculation or opinion.

When you're ready with all of this, then it's time to go trawling through something like *Music Week Directory* or *Kemps* [see SOS Bookshop] to find the details of suitable companies to approach. Once you've got phone numbers, then ring up and ask for the A&R department. You'll normally get through to an assistant, but occasionally you may get lucky and be put through to an A&R person. Briefly explain your style of music and ask who the best person is to see. They will give you a name and then usually say that he or she never takes appointments without hearing a tape first. This is where things get a little tricky. I never stood for this on the phone and through a combination of charm, persistence, and good old-fashioned lying, I have got in to see virtually everybody I've ever wanted to see, without them having a demo tape first.

To be honest there are good reasons why they'd want a tape first, but if you send one in you never know where it's going to end up. I have sent in tapes to people who knew me and requested them, and subsequently discovered that they never received them. Invariably the parcel would be opened up by a secretary, who listens to your tape for 10 seconds and decides it's not what the company wants! So even if you have to forget about a company for a few months, always try and avoid sending in tapes — very few people get signed this way. (Tip: Faxing your biography to the person in question often helps — particularly if you bend the truth a little about how much interest you have from other companies!!)

## REFERENCE MATERIAL

**1995 Songwriter's Market**  
Published by Writer's Digest Books.  
A Songwriter's 'Yellow Pages' with a distinct US bias, but useful nonetheless.

**The Business Of Music**  
Series of books published by Omnibus Press in the UK. Based on a series from the US, with parts rewritten for the UK market.

**Music Week Directory**  
Published by Music Week.



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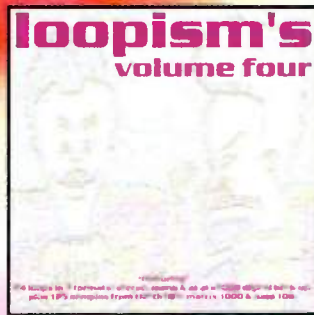
24 loops (house, trance & rap) & 150 samples from the matrix 1000 module. (cd has mono & s3000 backup of the loops)



we had as many musicians asking when we were going to do a jungle album, we had to act "they claim there are the only two sounds you will ever need for jungle, and they're not far wrong!" but make sure you stick up an album of you in your sampler! (the mix - May 1999)



24 full length loops (house, rap & jungle) plus 115 classic keyboard samples "what a price", 4 out of 5 (sound on sound) "it's almost more costly not to buy it", djs will love it" djs who also do studio work will want to live with it forever and have it's children! (the mix) "useful & affordable", 7 out of 10 (future music)



"loopism's 4 is a decent enough collection and at just £11, 7 out of 10 (future music) "the beats are all kickin', and may even encourage me to overcome my prejudice against using drum loops" (the mix) "as a modern dance-floor production tool, loopism's 4 rates very high indeed", 4 out of 5 (sound on sound)



"the diverse selection of synth and real instruments are worth the very modest asking price alone" (the mix) "workstation 1v offers a large selection of well recorded and interesting sounds, mixed with a good collection of drum loops" (sound on sound) 7 out of 10 (future music)



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## USEFUL CONTACTS

Showcases are regularly held at the following places:

- The Original Songwriter's (on Mondays) at The Orange, North End Road, London, W14. Tel: Pam Robbins, 0171 625 6957.
- New Songwriter's (alternate weeks) at The Marquee Cafe, Greek Street, London, W1. Tel: Irene Bull, 0181 923 7780.
- Live At The Y (irregular Cable TV show), YMCA, East Street, Leicester. Tel: Kevin Wilson, 0113 255 6507.
- International Bar (Tuesdays), Wicklow Street, Dublin 2, Eire. Contact: Dave Murphy.
- The Glasgow Songwriter's Club (Tuesdays), Blackfriars, 36 Bell Street, Glasgow G1. Tel: Alex Osborne, 0141 647 6406.
- Northern Song Project, 12 Benson Street, Liverpool, L1. Tel: G. Murphy, 0151 709 6005.

The following can help with contracts, solicitors, advice etc.

- Musician's Union, 60/62 Clapham Road, London, SW9 0JJ. Tel: 0171 582 5566.
- PRS, 29-33 Berners Street, London, W1P 4AA. Tel: 0171 580 5544.
- BASCA, 34 Hanway Street, London, W1P 9DE. Tel: 0171 436 2261.

# Get Yourself Heard

## YOUR FIRST MEETINGS

So you've arranged your first meeting. You've already come a lot further than most hopefuls but, unfortunately, there's still a long way to go! If you're unsure of the location of somebody's office then allow time for this, and try and arrive 10-15 minutes early so that you can browse through trade papers, eavesdrop, mingle, etc...

It's really not a good idea to bring the whole band to a first meeting — it makes you look desperate. I've found that the elected spokesperson, and maybe also the singer, is more than sufficient. Make sure you are well dressed, have a professional looking bag (not a dirty plastic one) containing your professional looking material, and are feeling confident. Don't expect a long meeting: 20 minutes is a rough average. Never ramble on endlessly and *never* appear over-confident or arrogant. Despite how it may appear sometimes, A&R people are normal human beings just like you or I. I'm sure you wouldn't appreciate somebody coming into you and telling you how brilliant they are and how they won't even consider an advance of less than a 100 grand — so don't do it to them! However, it is usual practice to casually inform them of anybody else that's interested in you, but please be careful if you name other parties; the music biz is a very small world — everyone knows everyone else. Too much bull and you definitely won't come up smelling of roses.

The usual opinion that an A&R person will offer is that they're "interested and would like to hear more". In other words they'll want a copy on cassette, which they'll hopefully listen to again at a later stage, and will want to hear your next set of demo songs. If they really don't like your music and can't see it going anywhere, then they will tell you, but it takes a brave A&R person to be confident that a bad or mediocre artist will never improve. They may also want to see you perform live, although if I had a pound for every time an A&R person told me they would come to a gig and then subsequently never showed, I would be a very rich man. So don't read too much into either of these responses; they are positive signs but ones which are shown to many people on many occasions.

## GETTING GIGS

Most people have their first taste of gigging at local pubs or clubs. This is a good way of building up your stage confidence and presence, and polishing up your performance. But don't think that someone from a major label in West London is going to come to 'The Dog & Duck' in Basildon for the amateur talent night, just because you are playing there. A much better way of attracting attention is to appear on the bill of a well respected showcase night.

Showcase gigs are especially for unsigned, up-and-coming acts that write their own material and need a platform to play on. Audition is

usually by tape (ie. your demo) and if accepted you will be offered a spot where you can play a couple of songs to an assembled paying audience, often including passing industry folk. The organisers make their money from the numbers of people that turn up, so you will find that many of them are more concerned with how many friends you have rather than how many songs you have. Nonetheless, it is virtually the only way for an unknown to play a good club and it should cost you nothing.

Note that showcase gigs lean towards certain types of music, usually acoustic (or at least something that could be performed 'unplugged'), so acts that use a lot of equipment to perform may not find it too easy to get a spot. In this case it's probably better to approach smaller clubs with your tape and biography, and ask for a support slot. If you have interest from any record or publishing companies, tell the club promoter about it — oh, and feel free to exaggerate about the size of your live following [*size doesn't count anyway* - Ed.]; they won't sue if you only bring your *Grap* and next-door neighbour.

## MAINTAINING INTEREST

I've never liked to ask an A&R department just how many tapes and appointments they have each day from new artists, but I know it's a lot. A hell of a lot. So however much the people you have met liked your material, if you're not there to remind them then they will forget you.

To maintain interest, try and demo a couple of songs every three months at the most, and get them to the person(s) concerned. Send them flyers for your gigs, copies of any press you may get, new photos, updated biographies — *anything* that can sit on their desk and remind them of you. Try calling them after a month has passed and speaking to them, but remember that they are busy people so their abrupt telephone manner isn't necessarily a sign that they don't wish to speak to you.

## YOU'RE HALFWAY THERE WHEN...

- They ask you to come in personally with your next set of demos. If they say "put it in the post", then they're probably interested but not especially so.
- They offer to pay for something — like more demos.
- They remember you straight away when you call up.
- The meetings get longer and more informal.

## YOU'RE 99% THERE WHEN...

- They want to showcase you to the rest of the company.
- You meet the Head of A&R or Managing Director.
- They invite you out for drinks or a meal, on their expense account.
- They start talking about working together and asking who you want to be produced by.

SO

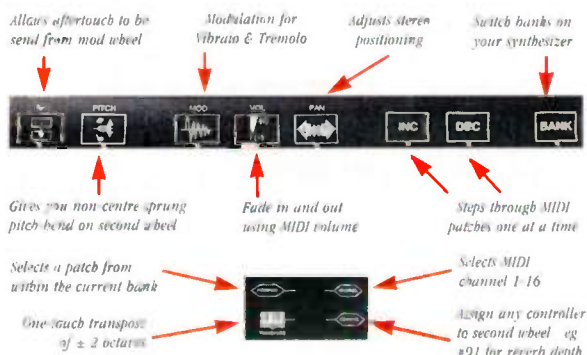


# A Real Mother at £599?



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.



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.

## 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 short stabs and fluid 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 ten-banded paradiddles... and while we are talking percussion it's worth remembering that keyboards are used for triggering all sorts of things these days.

## 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 keyboard \* 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



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# Switching gear

*DAVID MELLOR goes all gooey about Kenton's new MIDI guitar switcher, designed to put a stop to all the embarrassing onstage effects pedal swapping that goes on in the dark between numbers.*

## KENTON GS8 MIDI GUITAR SWITCHER

**D**id you know, all you guitarists out there, that keyboard players think you have it easy? OK, so keyboard players have multiple keyboard setups, with computers, modules and effects all lashed together in a complicated spaghetti of MIDI cables. They consider their lot a tough one, but really, it's all in the preparation, isn't it? Once his rig is set up, all the keyboard player has to do is tickle the old imitation ivories, and he doesn't even get callouses on the ends of his fingers! Guitarists, on the other hand have to tap-dance their way through pedal-encrusted sets with all the agility and timing of Fred Astaire. What they really need is something to take all the fuss and hassle out of performances, so that sounds can be prepared in advance, as keyboard players can do, and leave just the playing to be done when the guitarist gets on stage. There is now a huge range of guitar effects available, and they all come in different shapes and sizes. The Kenton GS8 MIDI Guitar Switcher promises to make sense of them all, or at least any six from your collection, and should allow you to get the best from your investment in separate effects units. Of course, the GS8 is just a switcher, so it can't twiddle all the knobs for you as well. You'll have to hire a guitar tech to do that for you!

For the GS8 to be a useful part of your system, you should already have two or more effects units,

and some kind of MIDI controller. The controller may be a floor-standing unit with a number of built-in footswitches, or could even be a multi-effects unit in its own right. Alternatively, you could control the GS8 from a sequencer, or simply select preset combinations of effects manually between songs. What you can't do, unfortunately, is step through presets or patches in sequence using a simple open/closed footswitch, but I suppose these simple ideas do sometimes get lost in the headlong rush of progress. To connect up your pedals, rather than daisy-chaining one pedal to the next in the normal way, plug your guitar into the (rear-panel!) GS8 input and then connect up to six of your effects to the dedicated 'to and from' connectors on the GS8. Your MIDI controller should then be connected to the front panel MIDI In socket (a Thru is also provided). A quick read of the instruction manual, and you're away. Any effects loops not connected are automatically switched straight on down the line.

### FIRST STEPS

The GS8 boasts three modes of operation, and the first of these, the Channel and System Settings mode, is devoted to setting up the GS8, as this is necessary before you can use the switcher properly. In addition to the six effects loops, two switches are provided to take the place of the footswitch you may normally connect to your amplifier. Since time immemorial (well, alright — the early 60s, I think) guitar amplifiers have often been provided with built-in effects that can be switched with a simple on/off footswitch. If your amp does this too, or uses a footswitch to change from one group of settings to another, you can have the GS8 switch the amp along with your pedals. Some amps,

### KENTON GS8 £250

#### PROS

- Internal power supply (thank you, oh thank you!)
- Does its job with no nonsense.
- Quiet.

#### CONS

- Problematic when used with amps designed to respond to momentary footswitches.
- No input for simple footswitch to step through patches.

#### SUMMARY

The ideal solution for guitarists who have problems manually switching between all the effects units they use on stage, and would prefer just to get on and play.



however, require a footswitch that latches in the on and off positions, while others are happier with a momentary switch. The GS8 can imitate either — all you have to do is follow a few simple instructions. There is a slight problem when the amp requires a momentary contact to switch the effects, but take a look at the 'Momentary Lapse Of Reason' box for more on this, as it's quite involved. If you have a greater-than-average requirement to switch settings or effects on the amp, two of the effects loops can easily be turned over to this alternative use. These can only be of the latching variety, however. Once these few system settings have been made, the MIDI channel can be selected, and the whole lot stored, so you won't have to bother with it again.

The second mode is called Patch Edit, and this is where you'll spend most of your time figuring how to get the most out of your collection of effects. The GS8 will allow up to 128 patches, but since the display only has two digits, you will have to learn an arcane code to be able to read patch numbers between 100 and 128. On the other hand, if you are finding that you need more than a hundred patches, you may consider whether you ought to be spending more of your time actually playing! A patch is simply a combination of effects wired in series and switched into or out of the loop, in conjunction with up to four effects built into the amp itself. Programming a patch is simplicity itself. Just select a patch number and push the appropriate buttons to activate the effects you want to use for that patch. Once you have found the right combination, just press and hold the Patch/Chan button, and the patch will be stored. It's odd that any old car radio will use a 'press to select/press and hold to store' system for allocating radio stations to buttons, while hi-tech music equipment usually has something far more complicated. Not here, though.

There is one distinct advantage in having a switcher like the GS8, in addition to the convenience aspect — if you're not using an effect, you don't have to pass the signal through it. This is good news for those of us who hate excessive noise. Also, when an effects unit suddenly dies on you, as they often do because of all that rattling around in your gear bag, you can simply switch it out of the circuit, rather than having to do a lightning replug in front of an unimpressed audience. The legending on the unit is white on black (ideal for the low lighting you find in most venues), and since each switch has an LED, you always know exactly which effects you're using.

For guitarists who have embraced MIDI wholeheartedly, there is a third mode, Controller Assignment moded, in which the GS8 can be controlled by a sequencer. As you probably know, MIDI supports controllers — messages that can be activated by pitchbend or modulation wheels, MIDI footswitches, breath controllers, and so on. Using MIDI controllers, you can automate each effects loop individually within a patch fairly simply, by allocating one of the possible controllers to each effect, and then programming the sequencer to send a MIDI value

of 65 or over. A value of 64 or under will deactivate the effect. MIDI System Exclusive dumps are also supported.

## OPTIONS

Like some other sensible manufacturers, Kenton allow users to remove the top cover and make minor modifications themselves. The act of removing the cover won't in itself void the warranty, although you have to accept the responsibility of not causing any damage. There are two options, one of which is to lift the earth for any of the effects that may be causing an earth loop. This doesn't apply to battery-powered effects, or those that don't need a mains earth anyway, but if a pedal has to be earthed at the mains plug, leaving the green and yellow wire firmly in place is certainly the best policy. Ground-lifting on individual channels is a simple matter of removing a jumper (plastic, not woolly) on the circuit board. The other option is to configure effects loops 1 to 4 as simple switches. This is also done by just pulling off jumpers, and creative system builders will certainly find an application for this.

One matter remains for discussion — what does it sound like? Does it change the sound of your guitar? To put your mind at rest, the Kenton GS8 uses gold-plated relays to switch the signal, so the potential for degradation is kept to an

### A MOMENTARY LAPSE OF REASON?

As mentioned in the main body of the review, there is a potential problem when using the GS8 to control a device that requires a momentary switching action to turn an effect on or off. Momentary switching, by its very nature, can't define whether something is switched on or switched off, it can only flip it to the opposite state; if something is on, the switch will turn it off and vice versa. In the context of performance programs, that means you can't rely on a momentary switch to set your device to the right state unless you happen to know for sure what state it's set to in the first place.

One solution would be for the controlling device to keep track of the on/off state of any momentary switch controlled functions and either send or not send a switch action as necessary. This sounds a trifle complicated to me but Kenton say the solution is a mere software fix away, and they're working on it now. To be fair, the problem stems from the whole concept of momentary switching, not from anything Kenton have done wrong, but it's nice to see that they're looking for a way to solve the problem anyway. In the meantime, just expect problems if you have a system that works on momentary switching and you won't be disappointed!

absolute minimum. I couldn't hear any change through my Fender amp. An additional advantage is that the bypass works even when the unit is switched off (or the plug is pulled).

## SUMMING UP

In conclusion, I have to say that this unit works as described, and if you are an effects junkie, it really will make your life easier (but won't cure your craving!). OK, it costs at least as much as one super-warm valve overdriver, or similar, but the net result will be that you get more satisfaction from the effects you already have, and you will at last be able to use them to the full.

SOS

### FURTHER INFORMATION

- E** GS8 £249.98 inc VAT.
- A** Kenton Electronics, 12 Tolworth Rise South, Surbiton, Surrey KT5 9NN.
- T** 0181 337 0333.
- F** 0181 330 1060.



# Rev it up!

## YAMAHA REV100 DIGITAL REVERB

**PAUL WHITE tries out  
Yamaha's new easy-to-use  
digital effects unit, and  
finds it brash rather  
than bashful.**



On the face of it, Yamaha's new REV100 appears to be another simple-to-use 'reverb plus chorus delay' box.

Like others, the REV100 offers a choice of presets which can be modified by using knobs to adjust the two most important parameters, plus the effect level. However, the hidden power of the REV100 should not be underestimated; quite apart from the fact that the reverb is provided by a powerful engine (capable of delivering 20Hz to 20kHz effects, with a creditable 80dB signal-to-noise

them. As is becoming increasingly commonplace, the mains power comes from an external adaptor. There are two audio ins and outs on unbalanced jacks, and if you don't want to use a stereo input, plugging into the left input only will do the trick. Similarly, you can use a mono output by just plugging into the left-hand output jack. MIDI is catered for only via a MIDI In socket, so you can't dump your patches to MIDI, but given that you can only edit the patches superficially, this isn't much of a limitation. Patches may be called up via MIDI, and a program table system allows the patches to be assigned to different MIDI program numbers if you happen to want them in a different order.

The front panel is very simple, with only five knobs, four buttons, and a two-digit LED display. The input level is set by the control of the same name, and two peak LEDs are fitted, one monitoring the left channel and the other the right. Personally, I find this kind of metering a little too sparse, and would at least like to see an additional green LED indicating that a nominal working signal is being received. The wet/dry balance is set manually, courtesy of the next knob along, though this parameter isn't stored as part

of a program. Simple Up/Down arrow buttons are used to navigate through the 100 patches (0-99). The two remaining buttons, MIDI and Store, provide access to the MIDI program change table and allow edited programs to be stored respectively.

As supplied, the MIDI mode is set to Omni, but by switching on the unit while holding down the MIDI button, the REV100 can be set to operate on any one of the 16 available MIDI channels. Once set, the channel allocation is remembered when the unit is switched off.

### OVERVIEW

The REV100 provides six basic effect types, and the role of the three continuous control knobs depends on what type of effect is selected. If you're working on a mono or stereo reverb, the

controls set the pre-delay, reverb decay time and effect level, but in Gate reverb mode, the decay control sets the gate level. In delay mode, you get to tweak the feedback and delay amounts as well as the delay level, whereas in the combined Delay/Reverb mode, you can access delay time, feedback level and reverb level. The biggest change comes about in the Reverb/Modulation mode, where you can set the modulation depth and rate plus the reverb level, but not the resonance amount of, say, a flanger patch without using MIDI controllers. A red LED adjacent to each knob flashes when you pass through the position corresponding to the stored data, so you can always see whether you are increasing or decreasing the original parameter value.



### YAMAHA REV100 £265

#### PROS

- Easy to use.
- Good modulation and delay effects.
- Additional parameters may be accessed via MIDI.
- Good plate reverb simulations.

#### CONS

- Unsubtle reverb sounds.
- Inadequate level metering.
- Limited range of control unless you use MIDI.

#### SUMMARY

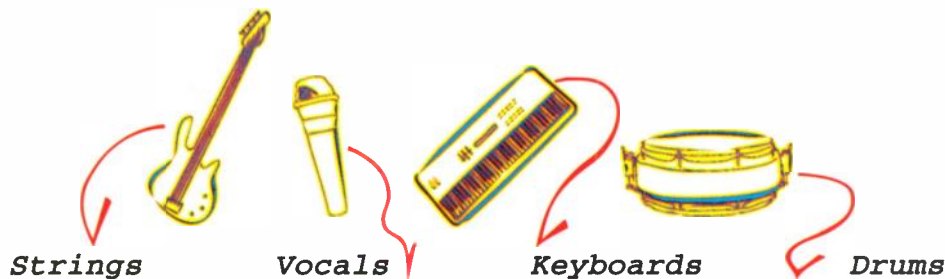
A very straightforward budget effects unit, let down only by the unnatural quality of its reverbs.

ratio), you can also access up to eight parameters per effect using MIDI controller information. Many modern sequencers will allow you to construct a virtual fader page, with each fader sending the requisite controller data, thus providing a useful way to edit and save settings. The manual doesn't actually say that setting changes made via MIDI will be saved, but experimentation confirmed that they are. If you don't have a suitable sequencer, pretty much any keyboard with an assignable mod wheel or fader will give you MIDI control.

### EXTERNALLY SPEAKING

As 1U rack units go, the REV100 is visually fairly unremarkable, but it is solidly built, nicely styled, and the controls have a smooth, positive feel to





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**Greg Rule**  
*Keyboard magazine*

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# Yamaha REV100

## THE EFFECTS

As supplied, all 100 of the REV100's memories are occupied by factory patches, and if you do decide to edit a patch, it has to be saved in the same location. As a result, you can't, for example, decide you don't like some of the gated presets and replace them with your favourite reverbs — the reverbs have to stay where they are! However, edited patches can be reset back to the factory settings, either individually or globally.

The first 40 patches are all variations on different types of reverb, from plates and room ambience up to large halls, chambers, churches and even a bathroom. 41 to 50 are all gated effects, while the next ten are delays, both mono and stereo. Patches 61 to 70 are delay/reverb combinations, and the remaining 30 are reverb/modulation combinations, embracing flanging, symphonic chorus, Leslie emulation, tremolo and panning. All these last combinations include a preset reverb effect that can be varied in level, though if you're using MIDI controllers, you can change the reverb parameters as well as having more control over the modulation parameters.

The quality of the reverbs, while clean and bright, isn't nearly as natural as what we've come to expect from modern reverb units, and this is particularly evident on drums, where a slightly ringy, fluttery colouration is evident. This tonality is reminiscent of early Yamaha reverb units, but ironically, it has become popular in contemporary dance music production, because of its brash, aggressive character. Similarly, some of the reverbs are a little coarse, but this really flatters things like synth pad sounds, strings and even vocals. Technically then, the reverb is hardly state-of-the-art, but artistically, if you already have a natural-sounding reverb, it's a very useful addition to the armoury. As a main reverb, however, I'd be reluctant to recommend the REV100, even bearing in mind its low cost.

The gated reverbs are fine — after all, they're supposed to be brash — but there seemed to be no reverse simulations, which is a pity. The delay effects fare rather better, as there's nothing too technically difficult about creating clean delays, and the fact that you can access the delay time and feedback directly makes setting up very easy. There's the usual selection of straight delays,

stereo ping-pong delays, and other delays with rhythmic timings, all of which are useful.

Perhaps the best part of this machine is the modulation section. Here, there are some really dramatic flanging and phasing sounds, which I particularly liked — you can lay the flanging on really thickly, and get a very strong, almost analogue sweep sound. I also liked the chorus effects, Yamaha's classic Symphonic setting, and the neat panning effects. Variable amounts of reverb may be added to any of the modulation effects, and you have control over the rate and depth of the effects.

After hastily constructing a few MIDI faders on my sequencer's environment page, I tried using controller information to access the various parameters described in the manual (see the 'Controller Parameters' box for details), and found that everything worked as documented. The one caveat is that there's sometimes some audible glitching as the parameters are changed, especially if they relate to delay time or reverb decay time — so this method of access is more useful for in-depth patch editing than for smooth real-time control. Even so, you can make some real-time adjustments smoothly enough to use in a mix.

## SUMMARY

Any criticisms of this unit must be viewed in the light of its sub-£300 price, and it also has a number of strong points, not the least being its simplicity of use. The reverb sounds are a touch on the brash and trashy side for me, but if you like plate sounds that have a bit of edge to them, you'll probably find plenty to like in the REV100.

I can't say this is a great unit, but I can't say that it's bad either — it does some things exceedingly well and others less well. Its weak spot is its seeming inability to produce snare drum reverbs that don't ring like plates. On the other hand, for those who like the sound of plates...

SOS

## FURTHER INFORMATION

REV100 £265 inc VAT.

Yamaha Kemble Music (UK), Sherbourne Drive, Tilbrook, Milton Keynes MK7 8BL.

01908 368872.

01908 366700.

## REV100 MIDI CONTROLLER PARAMETERS

TYPE	MIDI CONTROLLER NUMBER							
	20	21	22	23	24	25	26	27
Reverb	Pre-delay	Reverb time	Effect level	Hi damp	Filter (LP/HP)	Cutoff freq	N/A	N/A
Stereo Reverb	Pre-Delay	Reverb time	Effect level	Hi damp	N/A	N/A	N/A	N/A
Gate/Reverb	Pre-Delay	Gate Level	Effect Level	Reverb time	Hi damp	Release time	Filter (LP/HP)	Cutoff freq
Delay	Delay time	Feedback level	Effect level	Hi damp	Filter (LP/HP)	Cutoff freq	N/A	N/A
Delay/Reverb	Delay time	Feedback level	Reverb level	Reverb time	Reverb hi damp	Delay hi damp	Filter (LP/HP)	Cutoff freq
Flanger	Mod depth	Mod speed	Reverb level	Reverb time	Reverb hi damp	Resonance	Filter (LP/HP)	Cutoff freq
Chorus/Symph	Mod depth	Mod speed	Reverb level	Reverb time	Reverb hi damp	Filter (LP/HP)	Cutoff freq	N/A
Tremolo	Mod depth	Mod speed	Reverb level	Reverb time	Reverb hi damp	Phase	Filter (LP/HP)	Cutoff freq



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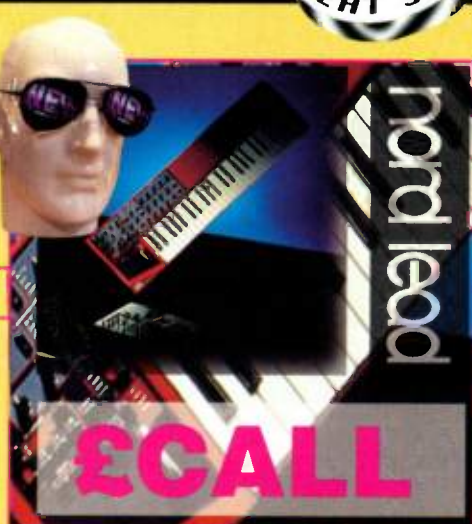
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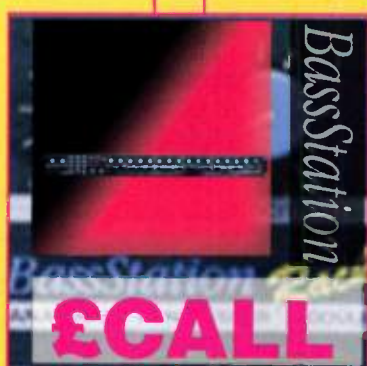
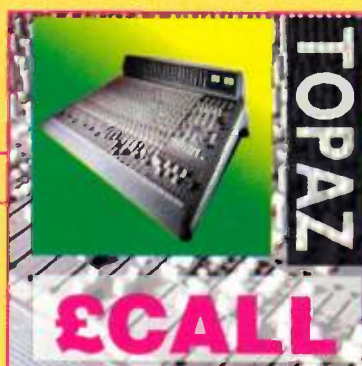
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**A**mazingly, it's exactly two years since I sat down with Dr. Alex Paterson in Marcus Studios to talk about the rich history and future adventures of his ingenious electronic music vehicle, The Orb. Back then, he had just returned from trips to the Far East and Morocco and was full of new rhythmic possibilities for The Orb sound. His partner, Kris 'Thrash' Weston, was busy mixing a spacey dub track called 'Plateau' and experimenting with a customised Westward Electronics MIDI controlled

# JOURNEY TO THE CENTRE OF THE

# ORB

filter system. Both men were considering making an album to rival Pink Floyd's *Dark Side Of The Moon*, to be titled 'The Seven Wonders Of The World'. Everything seemed to be open, everything seemed to be possible...

However, things started to change and what once seemed easy in the wake of No. 1 chart albums and hit singles, began to be dogged by ill-luck and negative press coverage. After 1992's tightly constructed smash hit, *U.F.Orb*, came works of sprawling experimentation, like *Pomme Fritz* in 1994. Everybody was waiting for the 'Wonders' mega-opus but The Orb became embroiled in legal tangles as they detached themselves from Big Life and signed to Island Records. If that weren't enough, their management company — Wau! Mr Modo — collapsed leaving the duo in some debt. A

subsidiary record company, Inter-Modo, and a recording studio near Battersea all had to go as well. Then in a shock move, Thrash left The Orb in August 1994 after "musical differences" between he and Alex came to a head. All seemed to be lost...

## REBIRTH

Despite this barrage of troubles, Orb founder Alex Paterson has reconstituted the group and delivered a hugely ambitious new Orb album, entitled *Orbvs Terrarvm*, housed in a gorgeous sleeve emblazoned with references to 18th century cartography and early celestial maps. The album is a musically dense and exotically produced entwining of dub reggae ideas with the latest electronic possibilities. It is more experimental than *U.F.Orb* but retains enough of The Orb's special brand of humorous vocal samples and curious timbres to make it entirely their own.

Prior to the group setting off on a six-month world tour I was granted an interview with the new Orb contingent, at Terminal Studios near London Bridge. After much waiting and wandering around the studio complex in search of Paterson and crew, I eventually find them in a smoke-filled rehearsal room where the equipment setup looks fairly rockish — there's a large drum kit, owned by new drummer Nick Burton; a number of bass guitars are lying in front of some amps and long-haired bassist Simon Phillips is thumbing away. To the left, German House musician Thomas Fehlmann is staring at a Macintosh screen. At the back of the room, Alex Paterson and engineer Andy Hughes are busy chatting with friends. I'm swiftly ushered out of the room into an adjoining space to do more waiting. With The Orb you definitely gain the impression that

*The Orb survived a barrage of legal wrangles, financial upsets and personnel changes to deliver their latest collection of Ambient musical adventures.*  
**MARK J. PRENDERGAST** gets the word from the group's founder, Alex Paterson.

urgency isn't their number one priority!

Eventually Paterson appears, sans his usual beret. The hairline is more receding and the figure more rotund but the twinkle is still in his eye. He immediately starts talking about the new record.

## SAMPLES

"*Orbvs Terrarvm* is what we've come up with after two years of hard labour and a lot of changes. There were certain things from the past I wanted to clear up and put in the relevant places. Both 'Valley' and 'Plateau' had appeared on our 1993 live album, and we felt that to give these tracks any credibility we had to have studio mixes of them. Early mixes came out on a Bosnian Save The Children Fund album but I thought the samples could have been done better,





could have been covered up and meshed more into the overall sound. Hence the new mixes.

"What with all the problems we've had in the past, every litigation department in the world goes 'Ah, there's a new Orb album out, let's check it out and see if there's any of our samples on it'. We had a lucky break in 1990 with 'Little Fluffy Clouds' and Rickie Lee Jones liking what we did with her voice, but her lawyers took a dim view. They just couldn't see the humour in it."

If Alex seems a tad edgy, it's because of the strain caused by convoluted business affairs. He may also be ruffled by the then early reports that initial music press reaction to *Orbvs Terrarvm* was far from positive. "It's a serious album. The idea of 'Plateau' was that we went back to the drawing board, took out all the samples and replicated them with other instruments. That worked sufficiently well. There are some vocal samples on the album which we took from a radio station in middle America. When you hear them, you think you are in the lap of the Gods."

Certainly the way many of *Orbvs Terrarvm*'s seven long tracks are prefixed by vocal samples calls to mind The Who's *Sell Out* album of the late 1960s, where bits of radio jingles and ads suddenly appeared and disappeared between songs.

Paterson continues: "We structured it in such a way that the samples introduce each track. 'Valley' actually opens with the outro to 'Blue Room' and we're like saying here we are back from 1992, as if the live album and *Pomme Fritz* never happened. Just because we used samples this way on this record doesn't mean we won't go back and use them on a track all the way through again. The whole idea was like dub.

"15 years ago I made up a dub tape of all my favourite reggae records, just using a tape machine and a record player, not using great technology. And in-between each dub record I put on this story about slugs [the garden pest variety]. It wasn't mixed or anything, just edited on a cassette. A few years ago I played it to a couple of people and they liked it, and I thought there were some brilliant samples on it. The record I used was this old Billy Bobtail 7", which I've lost now."

### SPLITTING HEADACHE

The fruits of Paterson's creativity can be heard on 'Slug Dub', the album's quirky closing cut, which amusingly samples the Billy Bobtail story of slugs eating up all the lettuces in a garden and sprinkles it through a typical Orb heavy dub mix. Paterson agrees that the whole concept is a lot more down to



# The ORB

► earth than the previous outer space explorations of *Adventures Beyond The Ultraworld* and *U. F. Orb*. It's a very terrestrial record and Kris Weston receives a lot of credit for the outcome.

"Kris, as a writer, is all over the record, along with myself and Thomas Fehlmann. 'Valley' is the three of us with Tom Green and Simon Phillips. 'Plateau' is the three of us. 'Oxbow Lakes' is the three of us again, but the piano is mine. I was quite pleased with that. 'Occidental' is a track we started together but which Kris wanted to remix for different projects. There was a lot of friction and Kris walked out of the group at the beginning of the mixing stage [in August 1994]. Then Andy Hughes, Thomas and myself set about mixing.

"Andy actually appears as a writer on 'Montagne D'Or', but Kris couldn't get his head around the idea that it had derived from another track and that the other people involved should get a credit. In the end we gave him a writing credit, because he was in the studio when pedal-steel guitarist B.J. Cole [famous for his work with David Sylvian and Elton John] was putting his licks down! Kris mixed 'Occidental' and 'Slug Dub' with us but he wasn't involved in the rest of the mixes."

Hmm... There seems to be a lot of residual feeling about this split. Only two years ago Paterson and the baby-faced Weston were the geniuses of Ambient cool, in a class of their own. Now that's no more. Paterson obviously wants to get something off his chest: "Kris didn't see The Orb as a band, he saw it



Dr. Alex Paterson in full swing — triggering samples on his Roland PC200 keyboard.

## THOMAS FEHLMANN

Fehlmann is 37, Swiss-German and bespectacled. He looks like a smaller version of Robert Fripp, who he says inspired him to become a musician when the two met in Berlin in 1979. Having formed the stylish new wave group Palais Schaumburg in the 1980s, Fehlmann met Alex Paterson in Berlin as the wall came tumbling down. He has contributed to all Orb albums and is an important recording artist for R & S (the famous Belgian Ambient label) under the moniker of Sun Electric.

"I've always been involved in The Orb, but now my role has intensified. I'm a studio musician and not involved in the live side. I love working with computers and the latest software but I'm not brilliant at it. In a way I'm track-oriented, more musical and always trying to get more of a tune into the track. I also play keyboards, but if something really complex had to be sorted out on the computers, then I'd have to ask Andy.

"This album was different for me. Before, I'd be in Berlin writing something on the computer, then I'd bring it over to London and build it up with Thrash in a studio. This time it was all done in London as a collaborative effort, with me on hand all the time. It was much more like being in a band.

"Our most important keyboard source was the

Waldorf Wave, which was excellent fun. It was easy to use and without reading the manual I could get it to produce sounds I'd never heard before. Another interesting sound source was obtained by feeding samples through long effects chains. On the record you hear the samples as well as the sounds derived from them using this technique. In this way you may begin with a sample controlled by a lyrical keyboard melody, but after being put through the effects chain its character is sufficiently altered to unhook it from its melodic source. Using this chain technique on samples, you can create more spatial sounds.

"None of us are real players of instruments. We love the music, we love sounds, we love pretty things in a sequence. We know how to work the whole sequence as it's happening, from a computer angle, but not so much on an instrumental basis. We all have different criteria but we are not fussy about our parts. In many ways our work is interactive and random. Nobody is trying to say, 'Oh that's my part, I'd like it louder' as is the case with song-oriented bands. It's a pretty lengthy process getting tracks created the way we do it and sometimes it doesn't really work out. In 1993 we recorded an Orb track which was so long that it eventually became the album *FFWD!*"

## ANDY HUGHES

Andy Hughes is a typical long-haired engineer in his mid-twenties. He started working with The Orb in 1992 when he helped build their fave London studio Bunk, Junk & Genius. In 1993 he built The Orb's former Battersea studio, which he completed in two months. "Thrash spent the money, I put it together. It was in Clapham and used to be called Joe's Garage. We took over the SSL room that was downstairs. It was a shell, which allowed us to put in what gear we wanted."

"We kept on buying old gear. Classic things like the Mellotron, Wasp, EMS Synthi, Arp Odyssey synths; early Yamaha and Korg keyboards. Equipment dealers kept on ringing us up and getting us to buy something they'd found. One great piece of equipment we found was a DX programmer, an old programmer for the Yamaha DX7 which used pots to instantly access any control on the DX7, and that was quite something.

"We used that on the album with the Oberheim 4-Voice, which was used extensively on 'Occidental'. For manipulating samples the Roland S750 was fantastic, because the envelopes and filtering on it were great. A lot of the percussion sounds on the album were done using envelopes and filtering on normal sounds, which would end up sounding completely different.

Another important piece of sound processing software featured on *Orbvs Terrarvm* was *GRM Tools* [reviewed last month]. This is a digital signal processor plug-in for Digidesign's ProTools system. Andy: "You put in a stereo sample and it gives you loads of different effects like stuttering and phasing, flanging and amazing pitch-shifts. There's a doppler effect on the vocal in 'Plateau' that was done on four channels. We got this loop that was in time, put in this doppler effect from *GRM Tools* that slowed down and sped up again as it came around, and when it looped it was still in time with the track. It was just fantastic!

"The album took six months to record after Thrash left. It was recorded on a Studer A800 and the Alesis ADAT, which were both sync'd up using a Micro Lynx. We mixed it on a 48-channel Amek Mozart mixing console, which I enjoyed using."

as us two. I was having a lot of trouble trying to convince him that it was more than that. Even my musical contributions I had trouble convincing him of. 'Oxbow Lakes' is an example of what I could do given the space and time, and that was the last piece of music we ever worked on together. It's quite ironic, because it turned out to be one of the most beautiful pieces of music we ever did. That track was just done in half an hour, but Kris could never get his head around the fact that I would not spend five hours trying to create a sound; it would be sufficient for me to spend an hour and get a sound I liked. Decisions have to be made and Kris never wanted to finish 'Plateau'. He was always putting it on the backburner and starting something else, because he was bored with it. Everybody needs a channel and in The Orb it's me that says 'Let's stop now. Let it end there.'"

## A FRESH START

Unfortunately Kris 'Thrash' Weston wasn't available for interview but rumours have been circulating around the business that he is fed up with Paterson claiming all the glory for The Orb's sound. In a rare statement, Thrash bitterly exclaimed ►





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# The ORB

► that Paterson "never did 50% of the work, never came into the damn room."

Yet Dr Alex continues to be philosophical about the situation and maintains that things didn't fall apart when Jimmy Cauty upped and left to join The KLF in 1990. "You see, The Orb is The Orb — we all know that. And it's still The Orb even with all the changes over the last two years. We had a good studio in Battersea which we had to sell, because the management left us with loads of bills. Our production company, Wau! Mr Modo, deceived us and we had a legal battle with Big Life Records. Island is now the record company, Inter-Innit is now my own record label, and Primal Scream's manager is temporarily taking care of business."

Paterson is happy that the new management have co-ordinated The Orb's six-month tour of America, Europe and Japan at the exact same time that *Orbvs Terrarvm* is released. He sees it as the right way to do things. Under the old regime The Orb had only played one gig in six years in Germany, "and that's not a very good way to be advised. I'm seeing how things should be done now."

Paterson is still on the go as a DJ. "I never go out and play Orb records when I'm DJ-ing," he reveals.

"That's something more personal." He recalls two recent successful DJ slots — one at The Fuse club in Belgium, where he and Andy Hughes mixed Steve Hillage



Photo Mick Hulson

guitar loops with various new Ambient House and Techno records, and another in the Swiss Alps. "That was amazing. I was really high-up in the mountains at a 10,000 people rave. There were two big ballrooms, and in one there was 'bang, bang' Techno music and in the other just me playing Ambient records, like Manuel Gottsching's 'E2-E4', to 2,000 blissfully happy people. You see, after six years I've got the confidence to play what I think is right and not do what anybody else thinks I should do. That's also the way it is with The Orb; a certain *je ne sais quoi*, where we adapt to our own needs and always surprise people. A lot of the people into Ambient Techno and House will be surprised by the fact that our new album has *real* drums on it and that there's even a rock track at the end of 'Montagne D'Or'."

## TRANCE

Now that Ambient music has become a huge movement in its own right, Paterson doesn't see himself or The Orb as part of anything. His views on Techno are straight to the point: "I'm very fed up



### • VALLEY

Written by Kris Weston, Tom Green, Simon Phillips and Alex Paterson. Mixed by Andy Hughes, Fehlmann and Paterson.

This begins with the Nasa style interchanges of 'Blue Room' from 1992 and the familiar treacley production of that period, before moving into a solid dub groove over which elastic bass sounds, bird noises, and thumping hand drums are heard. The densely shifting soundscape is augmented by a little flute-like melody, which floats enticingly along in the background.

### • PLATEAU

Written by Weston, Fehlmann & Paterson. Mixed by Hughes, Fehlmann & Paterson.

Beginning with a radio announcer, this quickly turns into the "squishy bass run" that Thrash was working on two years ago. According to him the bass sound was altered using a Marshall Time Modulator [a type of digital delay]. Over this is heard a grandiose synthesized string melody, before the dub beats kick in.

## ORBVS TERRARVM — TRACK GUIDE

A perfect example of the effects which can be achieved with *GRM Tools* comes as sounds and noises of all descriptions are fired into the mix and then stretched until they just dissolve into the background.

### • OXBOW LAKES

Written by Weston, Fehlmann & Paterson. Mixed by Hughes, Fehlmann & Paterson.

The lounge-bar piano at the beginning is Paterson's, while swirling reverb distorts the tune as a hefty House beat seems to come up for air underneath the piano run, which is suddenly smothered by the insistent beat. There is an industrial air to the mix as it progresses, which is certainly the mark of Thomas Fehlmann.

### • MONTAGNE D'OR

Written by Weston, B.J. Cole, Nick Burton, Andy Hughes, Fehlmann & Paterson. Mixed by Hughes, Fehlmann & Paterson.

Another silly vocal sample, about somebody leaving for Constantinople, preambles what is a vehicle for B.J. Cole's pedal steel guitar. Supported by watery and increasingly distorted high-register keyboard accompaniment (again Fehlmann's work), the track takes about five minutes to work itself into some kind of groove. Subtitled 'Der Gute Berg', this track has all the metallic flavour associated with German groups like Can, and unsurprisingly comes to a loud, thrashy climax.

### • WHITE RIVER JUNCTION

Written by Weston, Fehlmann & Paterson. Mixed by Hughes, Fehlmann & Paterson.

More vocal samples, this time from some American self-help radio ad from the 1960s, brings us back to the land of the squish. Perfectly Ambient and slow, the track's harsh timbre is once again Fehlmann's hand at the controls. After four minutes it develops into a very strange door-slammng beat, with an accompanying funk style bass riff.

### • OCCIDENTAL

Written by Weston, Burton, Phillips, Kris Needs, Andy Hughes, Fehlmann & Paterson. Mixed by Weston, Fehlmann & Paterson.

Imagine an orchestra playing House music underwater with dustbin lids! This clattering track, with its odd interjection of rubbery bass keyboard notes, is incredibly weird. After three minutes it stops to showcase more talking samples and then starts up again. There is a hook, there is a beat, but both so experimentally rendered as to defy analysis. Way out.

### • SLUG DUB

Written by Weston, Paul Ferguson, Fehlmann & Paterson. Mixed by Weston, Fehlmann & Paterson.

Another vocal sample, this time from Alex Paterson's Billy Bobtail record about slugs eating lettuces. In the distant sonic backdrop can be heard a neat little reggae melody, which rises to the fore to be offset by a banging drum rhythm courtesy of Alex Paterson's old Killing Joke mate, Paul Ferguson. After 10 minutes of distortions the slug story is heard again and the tune grows more dub-like, before ingeniously transforming itself into the characteristic stuttering keyboards of Detroit Techno.



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# The ORB

► with hearing Techno; it's just faceless crap half the time." Yet no matter how the artist sees the world, the world itself places The Orb in the premier league of Ambient music maestros. In terms of sales, even the strange mini-album *Pomme Fritz* (with one

good trancey track and a lot of peculiar noises) shifted 70,000 copies in the UK alone. *Orbvs Terrarvm* confirms The Orb's position as geniuses of the trance-inducing track — where strange loops of sound intersect and dissolve heaven bound, where effects are tossed into a whirlpool of sound and allowed to decay in slow motion, where the beat is never far from the surface and all kinds of samples bob up and down along the way. A new double 12" of 'Oxbow Lakes' remixes even features a classical string version.

## EXPERIMENTORS

"I'm becoming quite a classical fanatic," Paterson admits with a wry grin. "I'm a bit of a sponge, when it comes to music. I'm still listening to reggae and still listening to dozens and dozens of 12" records, which I get every week. I still like dance music, and I think what the Mo-Wax label are doing with Ambient Jungle — with its characteristic slow breakbeats — is quite wonderful. What I'm into now is adding a different tinge to the music I hear. I'm into Kraftwerk but I'm not into taking any synth sounds off Kraftwerk LPs. In a sense, The Orb are now more of a drums and bass band. And when you go through that state where you don't want drums, you can manage to retain that rhythmic feel using other instruments. If something is used for the same purpose as a drum, it doesn't necessarily have to be a drum playing it. And that's the beauty of The Orb, the sense that we are always willing to experiment with something different."

SO

## THE ORB LIVE

During the interview Alex Paterson promised that The Orb's live show would be a spectacular with "each track having its own visual setting". He maintained that "hardly any strobes would be used". Engineer Andy Hughes even said that the new shows would get away from the tired formula of "strobes going off at random to the music".

As well as working with the music, Andy is in charge of mixing and playing the lights. According to him this is achieved "by having a MIDI feed up to Chris Craig's MIDI controllable lighting desk. In order to achieve interesting interaction between the lights and the music, there are footpedals to trigger MIDI sequences for the lights as we play. Every track has a setting and we even have little strummers to clip on various people's belts, so that they can strum the lights like the strings of a guitar."

The Orb have now got a live show to rival Pink Floyd. Their shows at The Forum were spectacular.

Paterson (in bobble hat) and Andy Hughes stand each side of the stage behind two dual record decks. To Paterson's right is the trusty old Roland PC200 keyboard, with a sample guide taped onto the keys. Various voices and sounds (mostly aircraft and helicopter noises) waft back and forth across the PA until the strobes go off and we're plunged into the thrash metal ending of 'Montagne D'Or'. Both Paterson and Hughes work pretty frenetically, constantly spinning records and changing tapes. According to Hughes: "We use 24 tracks of ADAT with Alex DJ-ing with CDs, records, cassettes plus TV and radio snippets."

After the usual outer space Ambient extravaganza of 'O.O.B.E.' the pair are joined on stage by drummer Nick Burton and bassist Simon Phillips for some Orb dub. 'Towers Of Dub', 'Close Encounters' and 'Spanish Castles In Space' are all great crowd pleasers, while 'Valley' (from the new album) sounds much more



Photo Mick Hulsan

They chose this London venue because of the high ceiling above the stage area. A circular lighting rig, not dissimilar to that used by Floyd, hovers over the group and changes position from horizontal to vertical, moving up and down at different stages in the show. Contrary to what Paterson promised, two large strobe rigs hang each side of the stage and at certain points, usually when the dry ice starts billowing, they are triggered to mind-numbing effect. Mostly though, the lighting is used intelligently. Various coloured spots around the auditorium bathe the stage in complimentary light to suit the mood of the tracks, while the backdrop features continual projections, the celestial maps from the new album cover, laser images, starbursts, an Escher drawing, and The Orb logo.

But all this is mere filigree compared to the music, which live is nothing short of brilliant. Initially Alex

muscular live. The more the concert progresses the louder the bass parts grow, and in general the rhythmic element is much more pronounced live.

A high point of the show I attended was the interlacing of 'Blue Room' (from *U.F.Orb*) with 'Loving You', the track which launched The Orb in 1989. This brought cheers from the assembled throng, who were even more mesmerised when Paterson intercut voice samples from the popular TV series *The X-Files* with a terrifically loud and bass-heavy rendition of 'U.F.Orb'. Another highlight was a lengthy version of 'Slug Dub', whose reggae underpinning makes it suitable for The Orb's Ambient rave experience. Andy Hughes explains it as "a mixture of some pre-recorded tracks with improvisations over and beyond them. We're not shy about seeing what happens on a given night and seeing where the music takes us."

## RECENT ORB RECORDS

Though The Orb have recently remixed U2's 'Lemon', Yellow's 'You've Got To Say Yes To Another Excess', Pop Will Eat Itself's 'Home', Bill Laswell's 'Praying Mantra' and Innersphere's 'Out Of Body', it is their own output which most accurately charts their recent development.

### *Pomme Fritz*

(Mini-album, Island, May 1994)

Six tracks recorded in Berlin and London, 1993-1994. Written by Kris 'Thrash' Weston, Alex Paterson, Sun Electric & Thomas Fehlmann. Produced by The Orb and Thomas Fehlmann. Engineered by Thrash and Andy Hughes.

### *FFWD*

(Album, Inter, August 1994)

Recorded in London/Berlin, 1993-1994. Written by Robert Fripp, Thomas Fehlmann, Kris Weston and Dr Alex Paterson. Mixed by FFWD. Produced by The Orb and Thomas Fehlmann. Engineered by Thrash & Andy Hughes.

### *Orbvs Terrarvm*

(Album, Island, March 1995)

Recorded in London, 1992-1994.

### *Oxbow Lakes*

(Double 12", Island, April 1995)

A DJ special on yellow vinyl, featuring four radical remixes by A Guy Called Gerald, The Sabres Of Paradise, Carl Craig and Alex Paterson (under the pseudonym Instrumental).





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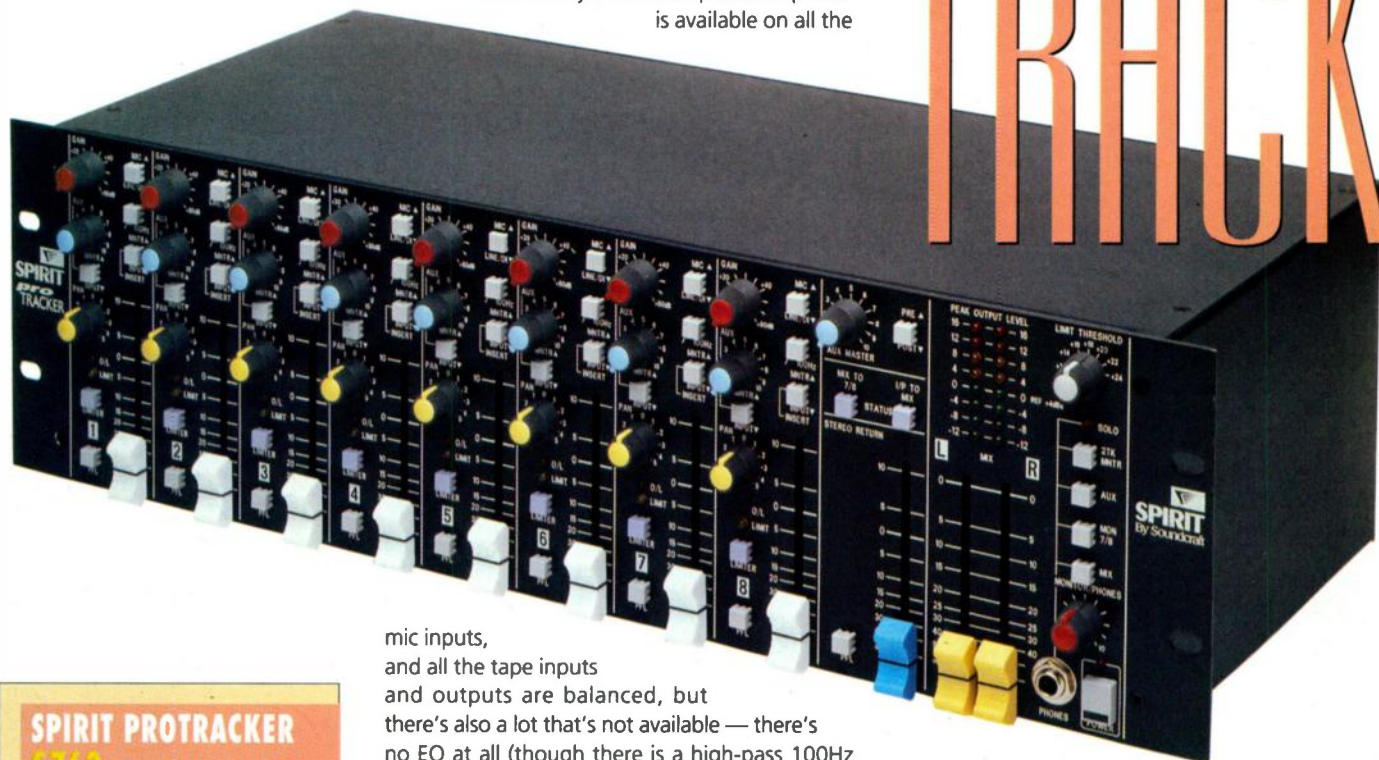
**S**pirit by Soundcraft's tiny ProTracker mixer may not look much like a conventional desk — but that's because it isn't one. This little mixer has a number of possible applications, but I'm going to concentrate on its live recording abilities (see the 'Going Live' panel elsewhere in this article), where it may be used to get mic or line signals onto tape cleanly, while at the same time providing a basic monitor mix.

The ProTracker can essentially be viewed as eight mic/line DI boxes sharing a box with an 8:2 monitor mixer. Because signal levels are notoriously inconsistent in live situations, the ProTracker also incorporates a safety limiter which can be switched in or out for any channel, and which is set from a master threshold control.

Individually switchable phantom power is available on all the

stepped switch in the master section of the mixer, and though the lowest setting is +12dB, this seems to correspond nicely to the maximum input level on an ADAT. It may not be appreciated that digital multitracks are usually calibrated so that a nominal 0dB input still leaves a reasonable amount of safety headroom. When using an ADAT here, a 0dB input seemed to register at around -10 to -12dB on the ADAT's own meters. The ProTracker's limiter has a reasonably fast 300 microsecond attack time, and if the signal is deliberately pushed into regular heavy limiting, the audible side effects are nice enough to

# TRACK



mic inputs, and all the tape inputs and outputs are balanced, but there's also a lot that's not available — there's no EQ at all (though there is a high-pass 100Hz filter), there's only one Aux Send, and there are no dedicated subgrouping facilities. Essentially, the ProTracker will help you make a good recording, but unless you can make do with the most basic of mixing facilities, you'll need a more conventional mixer at the final mixing stage.

## LAYOUT

The ProTracker comes as a mains-powered, 3U rack unit with all the connections, other than the headphone jack, on the rear panel. Each of the eight input channels is comprised of a mic/line input with the aforementioned switchable 100Hz high-pass filter, and phantom power may be fed to the inputs via individual switches on the rear panel. The line input is balanced, and another rear panel switch sets the sensitivity of the tape In/Outs to either -10dBV or +4dBu, while the Gain is set by means of a rotary control. To round off, there's a (globally switchable) pre/post-fade aux send, and an insert point that can be separately switched into either the input or monitor path.

Each of the tape outs is routed via a limiter which may be switched in independently for each channel. The limiter threshold is set globally using a 7-position

be useful as an effect. A yellow LED shows when a channel is limiting, and a second red LED warns when the mixer input level is within 4dB of causing the internal circuitry to clip.

No recording mixer would be complete without a Pre Fade Listen button (PFL), and in the case of the ProTracker, this works as you'd expect, both for soloing the channel and putting up the signal level on the master meters.

Tiny though the ProTracker is, the channel layout follows an in-line topography, the monitor section simply comprising a short fader and a pan control. As mentioned when discussing the input section of the channel, the aux send and insert point can be placed in either signal path.

## MASTER SECTION

The ProTracker may be small, but it still needs a master section, and it's while exploring this area that you realise how clever this little mixer really is. Here you'll find the Aux Master knob and Pre/Post switch, as well as a fader to handle the stereo return (which also has its own PFL button), but there are a couple of less obvious buttons that require explanation. Mix

## SPIRIT PROTRACKER £763

### PROS

- Excellent sound quality.
- Compact and simple to use.
- Good on-board limiters.
- Balanced tape feeds with a choice of operating levels.

### CONS

- Restricted routing options.

### SUMMARY

Ideal for those who want to make live recordings with a simple, portable, 'record-only' mixer, but who have a full-size mixer at home to finish the job.



to 7/8 takes the stereo output mix and feeds it through input channels 7 and 8 instead of the usual channel mic/line inputs. This can be used for a number of applications, including recording the entire mix onto two tracks of an 8-track while still recording the first six channels onto separate tracks. Because this kind of routing could easily result in a feedback loop, the feed from the tape returns on channels 7 and 8 is disconnected in this mode.

The other neat switch is labelled Input to Mix, and allows the mic/line inputs to be fed directly into the stereo mix; the tape returns are bypassed

and while this is absolutely fine at the recording stage, it leaves a lot to be desired if you have to do your final mix on the ProTracker.

I see the ProTracker mainly as a 'record-only' mixer, and in this light, it performs brilliantly. The sound quality is exemplary, the limiter is a real life-saver, and the fact that the mixer is only 3U deep means you could flightcase your entire mobile studio and still be able to carry it with one hand. If you want to work with 16 tracks (or even more), and you don't need fancy subgrouping, just link two or more ProTrackers together.

# ~IN~A~BOX

## SPIRIT PROTRACKER 8-CHANNEL MIXER

in this mode, although the tape sends work as normal. Used with the Mix 7/8 switch, the input signals can be sent to the mix while the tape returns are still mixed to channels 7 and 8. If you're stretched, this makes it possible for the desk to be used to mix a gig at the same time as recording it!

The Mix L/R faders have yellow caps and control the Mix Out level; the signal is available on both balanced XLRs and unbalanced phono simultaneously, as are the 2-Track Returns. A separate pair of jacks carry the Left/Right monitor outputs, though plugging in a pair of headphones will mute these. Simple 8-section LED meters monitor the mix level or the PFL level, and the headphone outlet is switchable to monitor the 2-Track Returns, the Aux send, Channel 7/8, or the whole stereo mix. A separate headphone level control is provided, and when a channel is PFL'd, its signal overrides the current headphone monitor selection. That leaves only the limiter switch, which may be set in 2dB increments between +12 and +24dB.

If you need more channels, a pair of 9-way 'D' connectors on the rear panel allows virtually any number of ProTrackers to be used together — so 16- or 24-track recording isn't out of the question.

### SUMMARY

The ProTracker's strength is its simplicity — not only is it easy to use, it also has a very short signal path, and this results in very little coloration of the recorded sound. Working with an 8-track recorder, where you want to record one signal or mic per track, the ProTracker is ideal, but it does fall down in one area in comparison to conventional mixers — with only eight channels at your disposal, you can't route complex subgroups to tape. This isn't too serious when you only have eight tape tracks to play with, but if you double up to create a 16-track system, I feel you might find the routing options a little too limited. Similarly, the lack of EQ means that you can't do much with the sounds other than limit them or connect processors via insert points,

I'll finish as I started, by saying that the ProTracker concept is really based around eight mic/line DI boxes with limiting and phantom power combined with a simple 8:2 monitor mixer. When you add up the cost of buying all these bits as discrete components, the ProTracker makes a lot of financial sense — and it also reduces the live recording wiring nightmare to a bare minimum. OK, so it can't tackle every conceivable job, but in the majority of situations, it's all you need. A great idea — and something that I see myself using on a regular basis.

SOS

### FURTHER INFORMATION

- £ ProTracker £762.58 inc VAT.
- A Spirit By Soundcraft, Cranborne House, Cranborne Ind Est, Cranborne Road, Potters Bar, Herts, EN6 3JN.
- T 01707 665000.
- F 01707 660482.

### GOING LIVE: THE PROTRACKER IN USE

The only way to evaluate a mixer like this is to use it, so I volunteered to make a live recording of a local rock band at their rehearsal room. The idea was to use one ADAT to record the main backing tracks via ProTracker, then to bring the project into my studio, where a second ADAT could be used to overdub the vocals and obligatory guitar solos.

I set up a couple of dynamic mics close to the guitar cabs, fed the bass into the ProTracker via a phantom-powerable active DI box, and miked the drums with dynamic mics on the bass and snare, and a couple of capacitor mics as overheads. As we were after a fairly live sound, close tom mics weren't used, and as it turned out, the tom level in the overall mix was fine. Using the PFLs to set the individual to-tape levels, I next switched in all the limiters so that they'd operate just before clipping on the ADAT. A test recording confirmed that everything sounded OK, and that there was adequate separation. I then pressed the Record

button and went to hide in the kitchen until they'd finished!

As it turned out, it's a good job I had the ProTracker's limiters at my disposal, because everyone seemed to get louder after the sound check, especially the bass player. The effect of the limiter on the bass produced a really punchy sound, so rather than reset the levels for another take, I left things as they were.

After the session, the phono mix outputs were plugged into the band's hi-fi, and we listened back to a rough mix of the recording. The band were well pleased — even though we had had no EQ and no effects, it was evident that the recording quality was excellent. At the time of writing, the studio overdubs haven't yet been finished, but I'm already convinced that for conventional band recordings, this hybrid mobile approach is infinitely preferable to having a drum kit and three Marshall stacks set up in your lounge!





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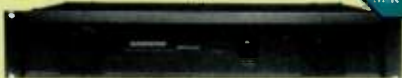
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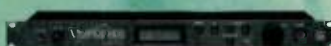


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Photo courtesy Foster.

# back to basics

**PART 5: Nothing dampens creativity more than a studio full of 'spaghetti' cabling. This month, PAUL WHITE explains the virtues of installing a patchbay to banish cable clutter once and for all.**

## PLANNING YOUR FIRST HOME STUDIO

**L**ast month I introduced the essential features of a multitrack mixer and described how it acted as a central routing system for the studio. Even so, there are still some routing tasks that can't be achieved using the mixer controls, so to accommodate these we need to add one or more patchbays to the system.

Patchbays come in two basic configurations: *normalised* and *non-normalised*. Normalised patchbays contain switch contacts, so that the signal flow is unbroken when nothing is plugged into the patchbay sockets. Non-normalised patchbays, on the other hand, can be considered as the audio equivalent of extension leads, allowing you to bring existing connections out to a more convenient location. Professional studios generally use patchbays which have miniature 'bantam' jack connectors, but in the project studio where we

need to interface with a wide range of musical instruments and processors — most of which employ standard quarter-inch jacks — a quarter-inch jack patchbay makes a lot more sense. It's also a lot cheaper than using bantams. Jack patchbays come in unbalanced and balanced versions, using mono and stereo jacks respectively, and in most instances connection to the rear of the patchbay is again achieved using jacks. For a full description of patchbays and their workings, see 'Practical Studio Wiring II' [SOS May 1994].

Even if you have a very small recording system, patchbays can still help you operate more smoothly by bringing things like insert points, effects sends and returns, and the inputs to your various effects and processors to a convenient, central point. There are few things that dampen the creativity more than having to start pulling plugs out of the





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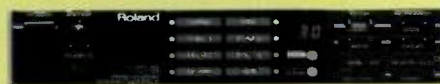


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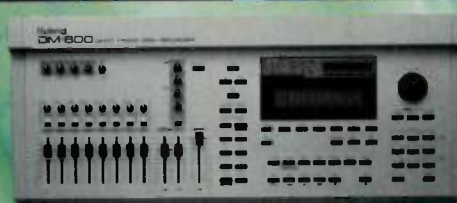
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# Your first home studio

*"There are few things that dampen the creativity more than having to start pulling plugs out of the backs of units."*

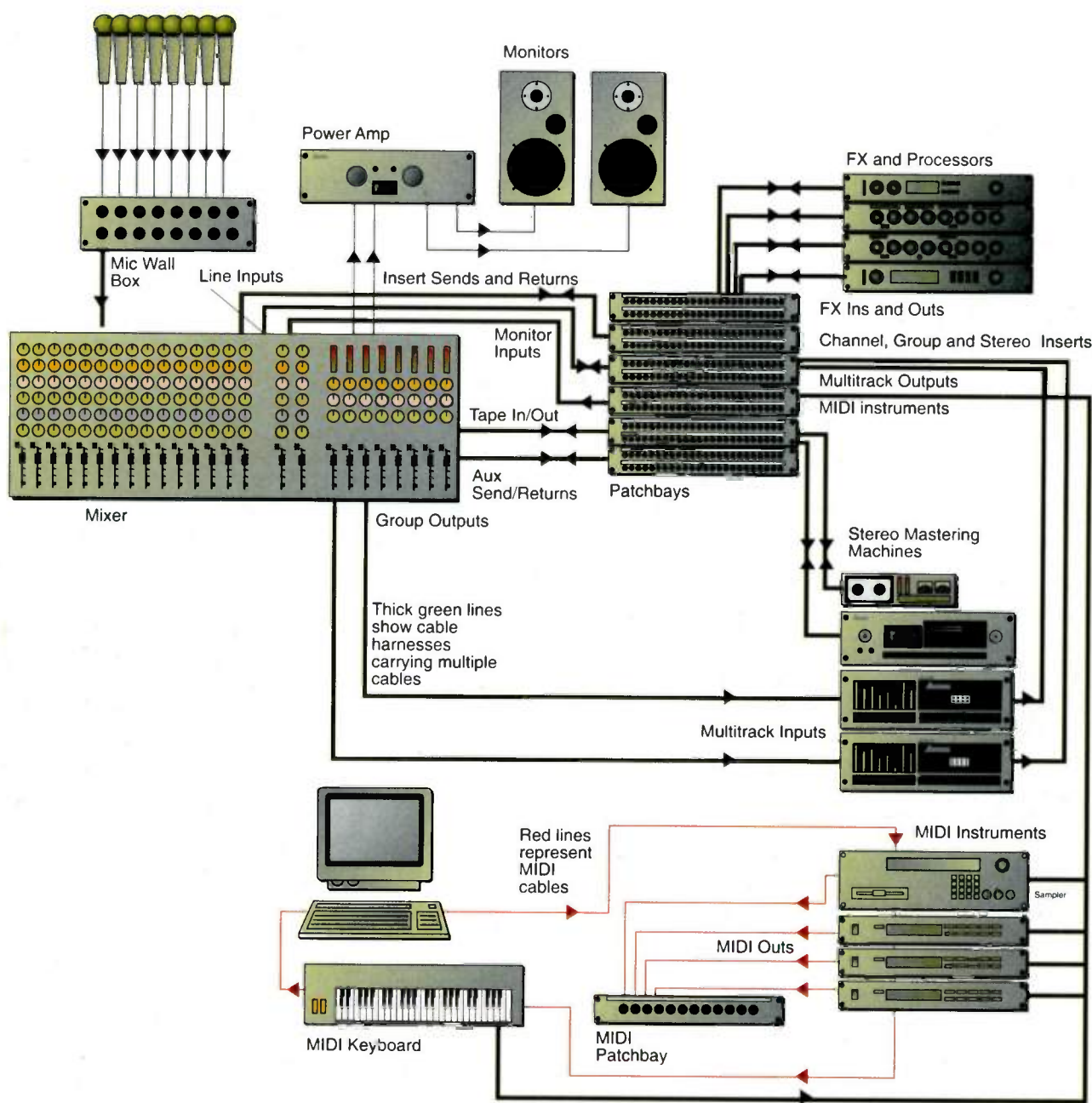
► backs of units. However, providing the jack sockets on your mixer are reasonably accessible, there's no reason to use a patchbay for connections that are rarely, if ever, changed.

Note that the convention for patchbay wiring requires that the bottom socket of a pair should be the input, and the top socket the output. Because some commercial patchbays are provided semi-normalised (ie. the signal path is only broken when you plug into the bottom socket), using them the other way up will prevent them from working on those occasions where you just want to take a feed from the insert send without breaking the signal path. Again, this concept is explained fully in the previous article on patching, so I won't go into too much detail here.

## TO PATCH OR NOT TO PATCH?

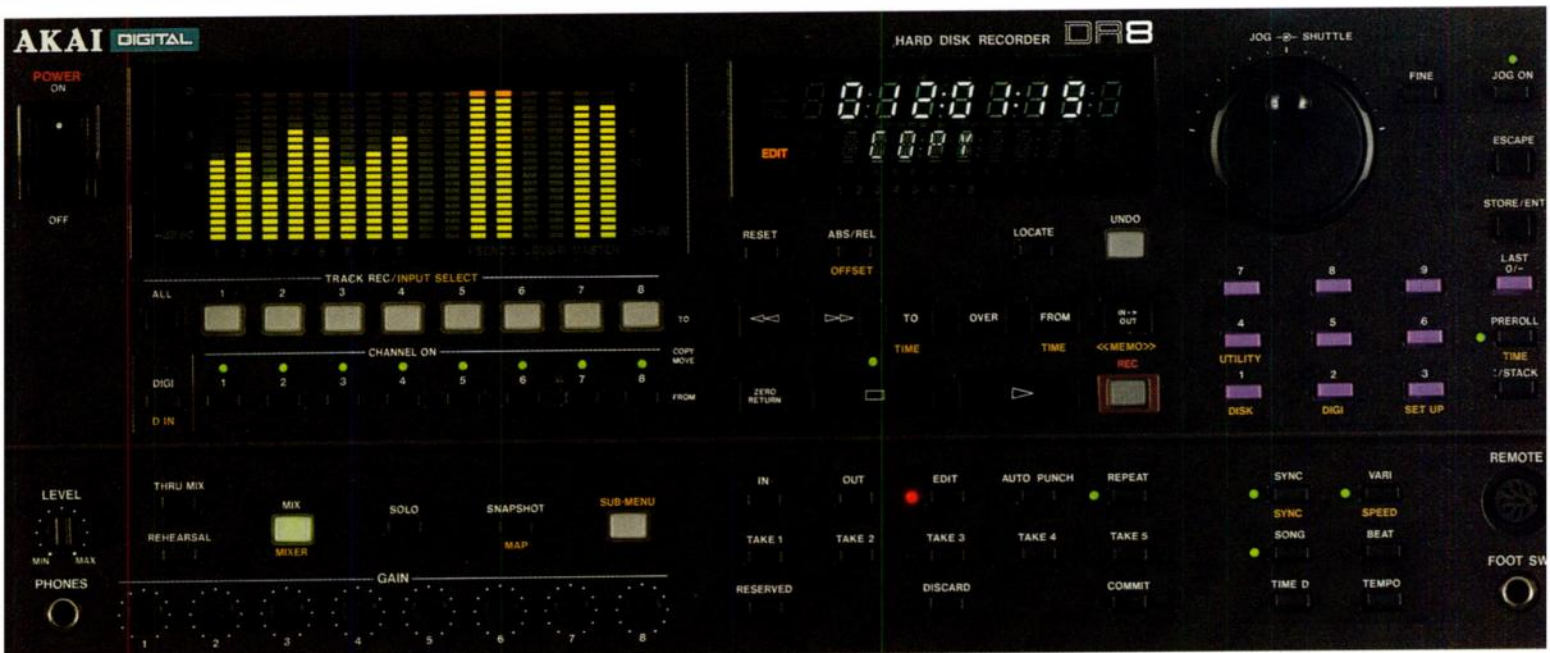
Technically speaking, the signal path is cleaner without a patchbay because there are fewer resistive contacts for the signal to pass through (every plug and socket represents a resistive contact), so if you can organise your system to keep patching to a minimum, not only will you save money but you'll also reduce the risk of signal degradation. The secret to getting all this right, of course, is planning. An evening or two spent with a notepad and a pencil is time well spent, and the bigger your studio setup, the more important it becomes that your patching system is designed properly.

If your setup is large, consider using foil-screened cable or some other suitable small diameter





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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

from any track; copy, 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.



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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.

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DIGITAL



# Your first home studio

## NORMAL OR NOT?

Normalised patchbays are used in situations where a signal path needs to be interrupted, in order to either insert another audio processor into the signal chain or to divert an input or output somewhere else. Insert points must always be normalised, but normalised patchbays are also useful for connecting your multitrack inputs and outputs to the mixer — they allow you the flexibility of patching in a different multitrack machine or routing things like mic preamps directly to tape without going via the mixer.

Inputs and outputs to effects processors should be connected to a non-normalised patchbay, unless you want to set up a default system so that certain effects units are routed back to certain mixer channels or effects returns. It's a good idea to plan your patchbay so that when no patch cables are inserted, you have a default setup which allows you to do all your basic jobs without having to plug in any patch cables at all. That way, you only have to patch when you want to insert a processor or do something a little out of the ordinary.

- screened cable for patchbay wiring, otherwise you might find the wiring harness ends up being incredibly bulky. If you're not sure which cable is best for a specific application, try to get a copy of the Studio Spares catalogue [Tel: 0171 482 1692], as this carries a variety of cable types and describes their applications. For smaller systems, regular screened instrument or mic cables (or even ready-made moulded jack cables) will suffice.

Let's take the obvious things first: you can't really pre-wire processors such as compressors or gates, because you don't know what mixer channel they'll be needed in (unless you use your studio purely for your own work and always work in exactly the same way). Consequently, most studio patching systems bring out all the mixer's Channel, Group and master Stereo insert points to a patchbay. The majority of project studio mixers use unbalanced insert points, where a stereo jack carries both the send and return signal, so you'll need a mono, normalised patchbay and a whole bunch of Y cables (cables with a stereo jack at one end and two mono jacks at the other). Again, the SOS article on patchbays describes Y cables in more detail, but in any event, this kind of information is usually provided in your mixer's handbook. If you can face the prospect of soldering, it's far cheaper to make your own Y cables, though companies like Hosa do offer ready-made Y leads that are fine for use in smaller systems.

Having connected up the insert points, it's also useful to bring out both your auxiliary sends and returns, plus your various effects and processor in/out (not forgetting any side-chain access points). If you have a mixing console with plenty of aux sends and you only own two effects units, it may make sense to wire these in permanently, but it's still worth bringing the remaining sends out to a non-normalised patchbay for the occasions when a friend brings over another processor which you want to use.

Most studios use at least two types of stereo machine, often a DAT and a cassette deck, and if you do any kind of commercial work you may also have an open-reel analogue mastering machine. If your mixer doesn't cater for multiple mastering machines,

then the various machines and the mixer stereo output will have to come out to patch points, so that you can connect them as required. In my own system, I've used a normalised patching system so that when nothing is plugged into the patchbay, the mixer output feeds into all three tape machines at once. However, when a plug is connected to the input of one of the machines, it is isolated from the mixer output. This way I can mix directly onto any of the three stereo recorders (or all at once if I wish), but it's also easy to patch the output of one machine back to the input of another for copying. Similarly, the output of any tape machine can be patched into a mixer input if you wish to add taped sounds to a mix.

While it is quite possible to plug things directly into the input sockets on your mixer, you'll probably find it more convenient to bring the input channels out to a non-normalised patchbay. If you want to use your mixer's Direct channel outputs (if you have them), you can use a single patchbay with the Line inputs on the bottom row and the Direct outputs on the top. If you don't have Direct outputs or don't need to use them, then you can use both rows of the patchbay as inputs rather than adhering rigidly to convention.

At this stage, it's also worth looking at the audio outs from your MIDI instruments (synths, drum machines, etc). If these are normally connected to specific mixer channels, you might find a normalised patchbay is a good idea as this would allow you to break in and take a synth output or use a mixer input without having to unplug anything. Having said that, if you're confident that you will hardly ever need to change the way things are patched, there's a lot to be said for not having a patchbay there at all.

## MIDI PATCHING

On the MIDI side, if you have a lot of sound modules, or if you're in the habit of working with more than one type of sequencer, a simple, mechanical MIDI patchbay comes in very handy. These are simply front panels fitted with DIN connectors, and there are usually more DIN connectors on the back so they can be wired up using standard MIDI leads. Even if you

## LABELLING YOUR PATCHBAY

Clear patchbay labelling is important, but with the small size of today's 1U patchbays, this isn't always easy to achieve. P&R Audio's patchbays, for instance, come with a sheet of self-adhesive labels, some blanks, but most printed with commonly used terms such as 'insert' or 'input', and numbered up to 24. These certainly help, but when it comes to your effects units or synths, you still have to make your own labels. After much Blue Peter style experimentation, I've come up with a system to make my own self-adhesive labels — it involves both double-sided tape and Scotch tape, but sticky-backed plastic is optional.

I find it's tidier to make the labels in strips of eight channels, rather than trying to line up individual labels over individual sockets. The reason I go for eight is that you can easily print one across a sheet of A4 paper. The

other reason is that with a 24-way patchbay, you only need three to go right across. Using any word processor, set up the tabs to match the spacing of your sockets. The ruler facility built into most word processors will help here, but you may still have to print a few test pieces to get the spacing exactly right. Use a small, clear typeface (Helvetica or Geneva is good), and if you have the facility to condense the type, you'll probably be able to fit in most words without using too many abbreviations. Setting the type to 'bold' may also make it easier to read.

Having done this, type out your patch labels using double spacing between rows. If possible, use different colour paper for inputs, inserts, and so forth, to make everything visually clear. Any cheap inkjet printer will do a good job of this type of work, but if you have access to a laser printer, so much the better. Even if you don't

have a computer, you'll probably be able to get a local typing bureau to do the job for you relatively cheaply (see your local Yellow Pages under 'typesetters').

Stage two involves sticking double-sided carpet tape on the back of your labels, and clear Scotch tape (the matt stuff looks best) over the front to protect the printing. Finally, use either a guillotine or a steel ruler and Stanley knife (or scalpel) to cut the labels into strips about a quarter of an inch wide.

Now all that remains to be done is to peel off the protective backing and stick your labels onto your patchbays. Old adhesive left over from previous attempts can usually be removed by spraying it with household spray polish and then leaving it for a few minutes to soften. But don't get spray polish down the inside of your patch sockets!



don't need one of these to handle the MIDI feeds to your instruments, it makes life easier to use one for the MIDI Outs as this makes it easy to patch a synth back into your computer for editing. Programmable MIDI patchbays may seem to offer a more sophisticated solution, but we hear so many horror stories about them not passing System Exclusive messages properly that I would be inclined to keep things simple and put up with moving the occasional patch cable.

## MICROPHONE PATCHING

In a mainly MIDI studio with only one or two microphones, it's hardly worth putting in any special provision for them — you might just as well plug them straight into the mixer whenever you need them. In the larger studio though, or one with a separate playing area, then it pays to run a balanced multicore cable from the mixer's Mic inputs to a wallbox fitted with balanced XLR sockets. The multicore should comprise individually screened balanced pairs and should be kept away from mains cables, if at all possible.

## SUMMARY

I don't think the perfect patching system exists, but by thinking about what you want to achieve, you can come up with a system that will allow you easy access to all the most frequently changed signal paths. Modern patchbays can be switched

## PATCHBAY TIPS

Even a relatively small studio can become a wiring nightmare if you don't keep track of what's going where, so it's a good idea to label all your leads and plugs as you go along; sticky paper labels protected by Scotch tape are usually adequate. It's also vitally important to have clear access to the back of your patchbays, as I discovered to my cost when I built a system that could only be accessed by removing the patchbays from the front! The combined weight of several wiring harnesses is not inconsiderable, so if you try to pull out a patchbay from the front, the chances are that all the jacks plugged into the back of it will pop out.

It may also help to use a larger than necessary racking system for your patchbays, so that you have somewhere to coil up the extra cable that somehow

seems to accumulate. In a perfect world, all cable harnesses would be exactly the right length, but it can help to make them a few feet longer than necessary to provide a little flexibility for when you next change your studio layout.

Because most patchbay connections run to the mixer, it makes sense to keep the patchbay as close to the mixer as possible, but you also have to consider the placement of your effects rack because all your effects ins and outs also end up at the patchbay. In my own studio, I've built a combined patchbay and effects pod that sits right alongside the mixer, so that only the MIDI rack and multitrack/DAT wiring harnesses are visible. In theory, shorter cable runs will reduce the risk of interference and crosstalk, but equally important is the fact that less cable costs less money!

from normalised to non-normalised operation, usually by soldering a wire link or by reversing a circuit board. It's therefore no problem to configure a patchbay that has, for example, 16 pairs of normalised sockets for insert points plus a further eight pairs of non-normalised sockets to handle your effects unit inputs and outputs. OK, so patchbays cost money and they take time to wire up, but they work out a lot cheaper than the hair transplant you might end up needing if you don't have a sensible patching system!

SOS

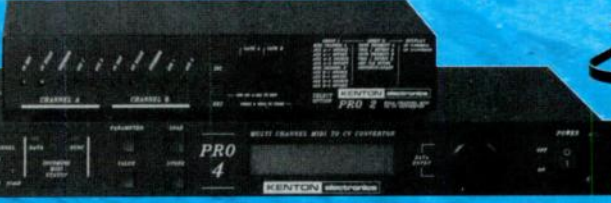
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*Most home recordists would love to own a stereo digital recorder, but the relatively high price of DAT and MiniDisc has kept this desire a pipe dream — until now. PAUL WHITE tries out the very attractively priced Philips DCC730 digital recorder and discovers what could become a new standard in affordable digital mastering.*

**F**or more than a decade, the audio industry has been trying to convince the buying public to forsake their analogue cassettes in favour of digital recording; first in the form of Sony's PCM F1 system, which worked with a suitable Betamax video recorder, then with DAT, and most recently with Philips' DCC and Sony's MiniDisc systems. However, the greater listening public have largely ignored these advances — indeed, they've demonstrated their seeming disregard for audio perfection by making TDK's budget 'D' ferric cassettes a top seller, while sales of the technically superior Type II (chrome) and metal cassettes lag behind by a significant margin. In a logical world, you might expect that a failed professional recording format might eventually filter down to the consumer market, but what's actually happened is that the pro and semi-pro audio industries have come to rely almost entirely on DAT, a failed consumer format, for stereo mastering and archiving.

Great value though DAT is, the initial prevalence of cheap DAT machines has made people reluctant to pay upwards of £1,000 for a professional model (even though a technically

technically aware members of the public may also instinctively feel that a disc offers better sound quality than any form of tape. However, DCC machines tend to fare slightly better in comparative listening tests, presumably due to the differences in the data compression systems used, and though DCC doesn't offer instant track access, DCC machines can replay conventional analogue audio cassettes as well as recording and playing DCC digital cassettes.

The third generation of technically improved DCC recorders has just been launched at an aggressively low price point — £249 inc VAT — which is little more than half that of MiniDisc and well under half that of most budget DAT machines. To put things in perspective, you can now buy a DCC recorder for around twice the price of a typical hi-fi cassette deck; the sound quality is so close to that of DAT that few people will be able to tell the difference, even on very demanding material; and because the digital I/O ports on DCC machines are S/PDIF compatible, data can be copied between DCC and DAT entirely in the digital domain. It would seem then that DCC is now the perfect answer for those

# HOT STUFF!

## PHILIPS DCC730 DIGITAL RECORDER

inferior analogue 2-track will cost at least this much). And now that the supply of very cheap DAT machines is drying up, a great many home studio owners are wondering which way to turn for mastering. Furthermore, certain very cheap DAT machines have gained reputations for unreliability.

Just when we had almost given up the Digital Compact Cassette (DCC) for dead, it seems now almost certain to become a significant player in the private studio market. Two years ago DCC machines cost about the same as budget DAT machines, and because they utilise data compression (which, on paper at least, results in a slight loss of fidelity), it seemed that we were being asked to pay too much money for a product with no obvious advantages over DAT. To compound the problem, Sony's MiniDisc system came on the scene at around the same time as DCC with the inevitable result that the mass public, keen to avoiding choosing the audio equivalent of a Betamax video, bought neither — introductory sales were far lower than anticipated. Sony's MD system wins out in the cuteness stakes because it has the instant track access advantage of conventional CD, and the less

### PHILIPS DCC730 £249

#### PROS

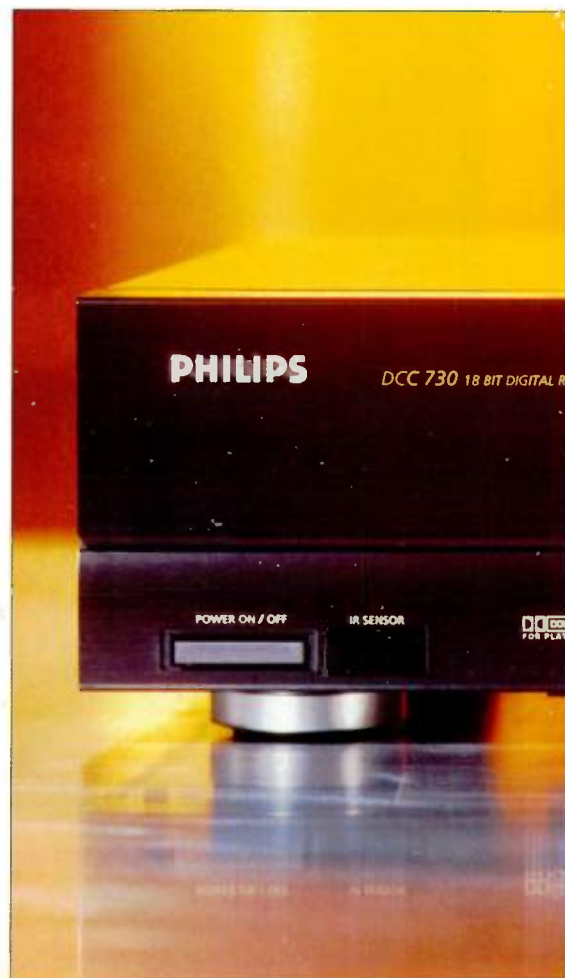
- Excellent sound quality.
- Very attractive price.
- Easy to use.
- Also plays standard audio cassettes.
- Infra-red remote control included.

#### CONS

- No bargraph metering system.
- SCMS copy-protection.

#### SUMMARY

At this price, DCC is currently the only low cost option for high quality, stereo digital mastering. A real bargain.





looking for a low cost means of recording high quality stereo digital masters. Unfortunately, the SCMS anti-piracy copy management system is fitted which, as always, inconveniences the legitimate user more than it does the determined copyright pirate.

For those unfamiliar with SCMS, this system only applies to recordings made via the digital input. You can make unlimited direct copies from a digital master (such as a CD or DAT), but no further digital copy can be made from your first generation copies. This causes problem when you try to clone your own backup tapes in the digital domain, though unlimited recordings via the analogue inputs are permitted.

### DCC730 FEATURES

Philips' DCC730 is a hi-fi format machine and is the same size as a typical 'separates' cassette deck. The analogue inputs and outputs are on unbalanced phonos, just as you'd expect on a piece of hi-fi gear, but you also get S/PDIF compatible digital ins and outs on phono connectors, plus an optical S/PDIF input. A wireless, infra-red, remote control is supplied with the machine along with a full set of cables and a blank DCC tape to get you going.

As with a DAT machine or CD player, the media is loaded via a motorised drawer controlled by the Open/Close button, and if you're thinking the front panel looks very simple, that's because a lot of the functions normally served by switches have been moved into software. The display below the tape drawer includes the record level indicators, track information, and a text area where up to 12 characters can be displayed. You can enter your own track titles (up to 40 characters), and these will scroll if they exceed 12 characters in length. Pre-recorded DCC cassettes may also include

additional text information, including the artiste's name and even scrolling lyrics — but no bouncing ball! Having said that, the current pre-recorded DCC catalogue probably contains fewer titles than you have in your own album collection.

A headphone output is provided to the right of the machine and there's also a stereo jack input for a suitable stereo microphone (200—2,000 Ohm impedance). Unlike a standard cassette machine, the level metering display doesn't use conventional bargraph meters and is only present for 10 seconds following an adjustment of the recording level — unless you change the default setting, in which case you can look at it for as long as you like. The level information is presented as a peak level value (updated every second or so), with the headroom in dBs, and an over indicator. Any record level changes are made using up/down buttons, not knobs, from which I assume that the designers imagine most users will be digitally copying their CDs, where gain control and metering is less important than in studio applications. Even when the metering isn't on the screen, the 'Over' indicator still comes on if you put in too high a signal, but I'd still feel more comfortable with bargraph meters.

When you're recording in digital mode, there's no metering at all. I know that you don't need to check the level of a digital input, but metering still provides valuable confirmation that the signal is getting through OK. In playback mode, the default setting provides tape position information rather than metering, but you can change this if you prefer so that the metering information is always on view.

*"It would seem that DCC is now the perfect answer for those looking for a low cost means of recording high quality stereo digital masters."*





# PHILIPS DCC730

► Because the consumer is likely to have a number of potential sources from which to record, including CDs and tuners, the DCC730 allows the user to programme preset record levels relating to four different sources; the idea being that, once set, you don't have to bother about them again. In theory, this means you could use the level setting to calibrate the DCC input to your mixer's output, allowing you to use your desk's meters to obtain a more accurate picture of what's going to tape. The CD input preset may also be set to digital, optical, or analogue.

also name your tracks. The deck itself has a reverse operation, so you don't need to turn the tape over at the end of the first side. You can also decide what happens at the end of the last track — you can either continue from the same physical location on Side B, or have the machine wind to the start of Side B before continuing. If the tape approaches the end of Side A whilst you are recording, the machine goes directly into reverse mode to minimise any lost information, but there doesn't seem to be any kind of buffering system to close the gap. What this



Personally, I prefer physical switches, but I concede that being able to store optimum record levels for up to four sources is a good idea. Note however that if a mic is plugged in, this overrides whatever other input source may have been selected.

Like DAT, you can do more than simply record and replay audio signals — you can also store track IDs, allowing you to search to any particular song on an album, and if you have the inclination, you can

means is that you have to think in terms of conventional cassettes, where you have two discrete 'sides', rather than CD and MiniDisc where everything is continuous from beginning to end.

When you first make a recording (you have a choice of 32, 44.1, or 48kHz via digital and optical connections; 44.1kHz only for analogue line inputs), the machine writes a leader to the start of Side A, after which the counter starts at zero indicating ►

## THE DCC FORMAT

DCC (short for Digital Compact Cassette) is a digital tape recording system invented by the Dutch consumer electronics giant Philips. DCC uses a stationary (S)DAT record/play head, as opposed to a rotating, video-style head found on (R)DAT machines. In order to get enough data onto a tape running at the same 1.75 ips (inches per second) as a standard audio cassette, DCC records the data as several parallel stripes, much like the tracks on an analogue multitrack recorder. This requires a very special type of tape head, and the technical problems involved in manufacturing this head in quantity were partly responsible for delaying the commercial launch of DCC, several years ago. To maintain backwards compatibility with already recorded analogue cassettes, DCC machines incorporate an analogue playback head and Dolby B/C decoding, but it is *not possible* to record analogue compact cassettes in a DCC machine.

Even with the technology behind DCC cassettes and

heads, there still isn't sufficient capacity to record 16-bit audio in the same linear format as used by DAT and CDs, so data compression is used to reduce the amount of data needed to represent the audio signal. The compression system used is known as PASC, and works by mimicking the way the human hearing system perceives sound. Essentially, the human hearing system can't hear everything at once because some sounds are always masked by others. So if a sound is masked, why bother recording and reproducing it at all? By constantly examining the spectral content of the music or sound being recorded, PASC identifies those elements which have been rendered inaudible by masking, then systematically discards the irrelevant information prior to recording, achieving something like a four-fold improvement in the amount of data that can be accommodated.

The latest generation of DCC machines (like the DCC730 under review) start out by sampling the incoming

signal not at 16-bit but at 18-bit resolution, which gives a potential improvement in both dynamic range and residual noise of around 12dB. Of course, if you're recording from a 16-bit digital source, there will be no increase in resolution. After data reduction, you still keep the resolution and dynamic range, and though some purists claim to hear a minimal loss of stereo integrity or 'space' when listening to well-recorded classical music, the real-life situation is that on the vast majority of pop music, DCC sounds just the same as DAT.

DCC tapes are physically the same size as analogue compact cassettes (also a Philips invention), but are fully enclosed like video tapes and come in a special slide-out library case. The tape formulation is different to that of analogue tape, which is one of the reasons why you can't make digital recordings on ordinary cassettes. The other reason is that digital recording doesn't tolerate dust very well, so a fully enclosed tape package is essential.





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# PHILIPS DCC730

*"...the DCC730 is  
a superb budget  
mastering machine  
marred only by  
the lack of more  
conventional  
metering."*

► that recording can start. If you're recording the tape in sections, the Append function lets you join up with the end of the last recorded section, but if you want to make your own decision as to whereabouts to start recording, the Pause/Record function will let you do just that. It is important not to leave any unrecorded tape between tracks though, otherwise the automatic track numbering won't work. Similarly, you can renumber tracks after recording, just as you can on a DAT machine, but again there must be no unrecorded sections between tracks, otherwise the subcode will have discontinuities which will prevent the numbering process from working. It is good policy to leave the DCC machine recording for a few seconds once you've finished mastering a mix, simply so that the subcode extends beyond the end of your song.

## SONIC IMPRESSIONS

To confirm that the DCC730 was compatible with DAT, I digitally cloned a tape I'd made in the studio and had no trouble with this procedure at all. When the two recordings were compared (by switching from the original to the copy during replay), a difference in sound was just evident, but it was subjectively no greater than the difference between one make of DAT machine and another. On very ambient, airy music, I felt that something subliminal might be being suppressed very slightly, but again the effect was so subtle that it could easily have been the result of other factors — such as the difference in tone between the converters in the DAT machine and those in the DCC machine. Test recordings made via the analogue inputs also showed the recording quality to be truly excellent.

The fast-wind time was surprisingly fast, and though DAT tends to spoil you in this respect, the DCC730 spools through a minute of audio in just a second or two. In fact, if it isn't near a Start or Stop ID, its top speed actually breaks the one minute of tape per second barrier. Having the ability to locate song starts, just as you do with DAT and CD, is also very useful, and on the whole I found the machine pretty intuitive to use.

Blank media costs are respectable: a 75 minute DCC tape (enough for an entire 73 min CD) costs £6.49 inc VAT and £6.99 for a full 1.5 hours (90 mins).

When used for playing back pre-recorded

compact cassettes, the choice of Dolby B or Dolby C ensures reasonable compatibility with your existing tapes. But as pointed out in the manual, while DCC tapes are unlikely to dirty your heads, analogue tapes could well leave oxide behind, and in the case of DCC machines, you need a special head-cleaning tape. As an analogue tape player, the DCC730 can only be described as adequate, and in a digital mastering context I think I'd be inclined to ban analogue tapes from the machine altogether.

## VERDICT

At its current RRP of £249 inc VAT, plus free blank tape and infra-red remote control, the DCC730 is a superb budget mastering machine marred only by the lack of more conventional metering. Even so, thanks to 18-bit resolution, you have enough dynamic range (92dB at 1kHz) to leave a generous amount of headroom, so you can get by pretty well without precise metering. Signal-to-noise ratios are quoted as 105dB on playback (A-weighted, 1kHz) and 100dB for analogue input recording. The fast-wind time is surprisingly fleet for a non-rotary head machine, and to all intents and purposes the recording quality is indistinguishable from DAT or CD. Indeed, if you're recording using the analogue input, you'll actually get a little more dynamic range than you would with a DAT machine.

Also reassuring is the fact that the digital I/Os seem happy enough talking to DAT machines (at 44.1kHz), and that bodes well for those who want to download their finished mixes into digital editing systems or make DAT clones. In fact, you have the advantage that the sample rate of DCC conforms to the pro 44.1kHz, rather than the '48kHz only' standard adopted by most budget DAT recorders.

I still think that DCC is about as likely to make it as a *consumer* format as you are to find crop circles in your muesli tomorrow morning, but for anyone looking for an affordable, high quality digital mastering system that maintains a high degree of compatibility with existing equipment, I have no hesitation in saying that the Philips DCC730 represents an excellent way of spending £250. And if you want a portable DCC machine that's about the size of a Walkman and includes mic inputs, a little birdie (well, a press release actually!) tells me that something conforming to that description will soon be available for exactly the same price. (Expect a review in SOS in the near future.) The way DAT machines keep going up in price, DCC could well become the home recording digital standard for the latter half of this decade.

SOS

## WHAT ABOUT ALTERNATIVES?

Here are a few alternatives to a DCC recorder that you might want to consider:

### • Pro Cassette Recorder

A high quality, professional stereo cassette deck, such as a Denon DN720R Pro, will set you back £429 inc VAT, and still not match DCC for audio quality.

### • DAT Recorder

You'll pay well over £600 for a new DAT machine (although some portables are cheaper). A Sony DTC60ES will set you back £599 inc VAT, for example. But frankly, you'd be hard-pushed to

find even a used DAT machine for the DCC's asking price.

### • MiniDisc Recorder

Sony's alternative format to DCC also uses data compression, but the recording model is double the price of the DCC730 (around £500) and only offers digital I/O via its optical connector. MiniDisc is arguably cuter and offers the benefits of random access, instead of shuttling tape, but at a price.

In truth, there are currently no real alternatives to DCC which offer high quality digital audio for under £250 inc VAT.

## FURTHER INFORMATION

£ £249 inc VAT.

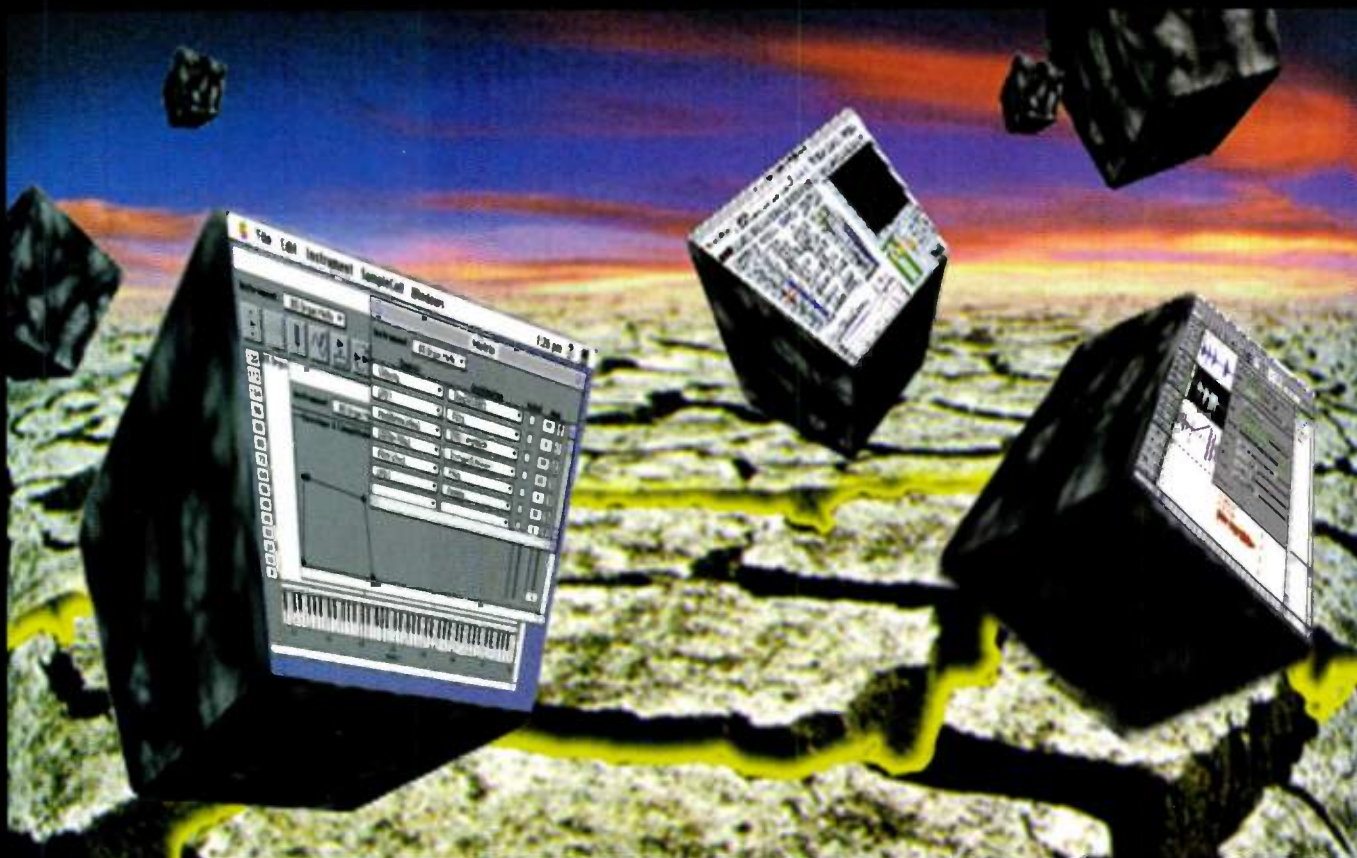
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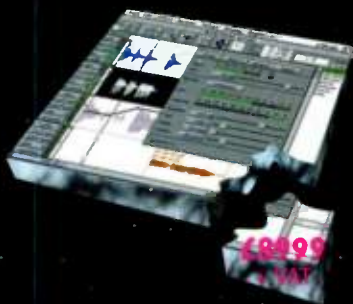


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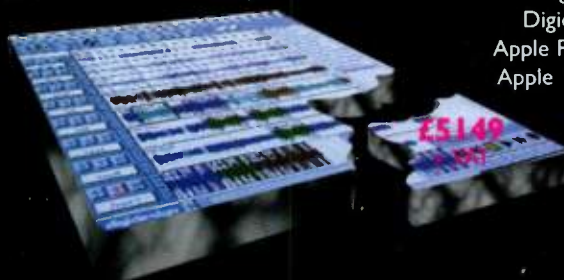
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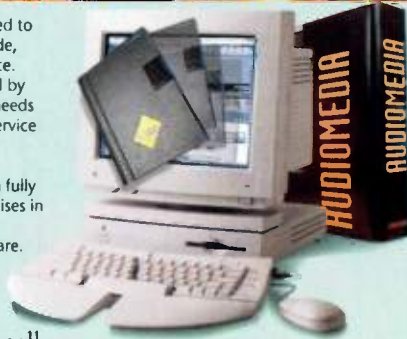
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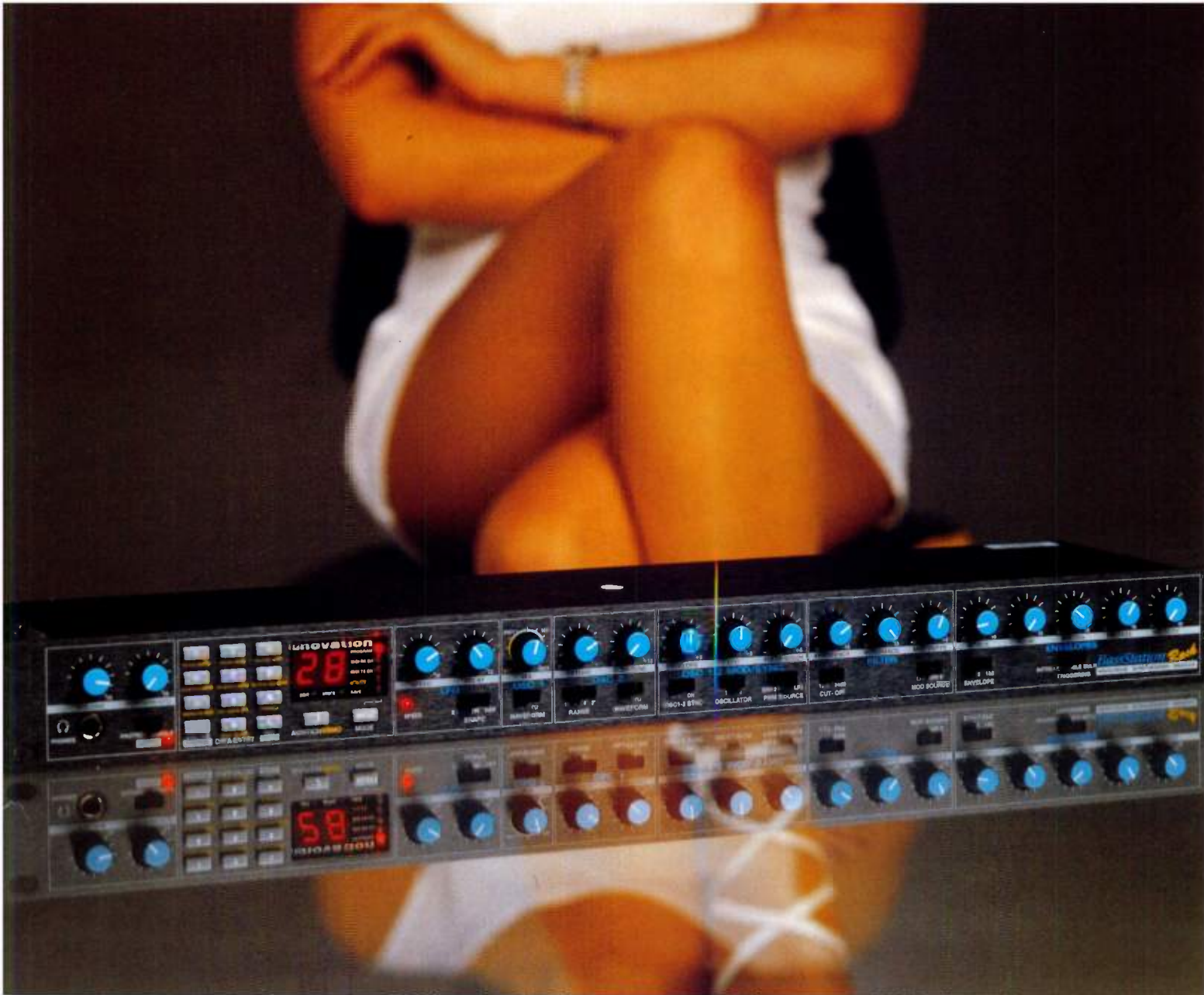
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# BASSIC

## *Novation BassStation Rack Analogue Synth*



One of 1994's runaway successes was an unassuming little product by UK manufacturer Novation, namely the BassStation analogue MIDI monosynth.

Prior to this breakthrough, Novation were known for their cheap-and-cheerful MM10 battery-powered mini keyboard controller for Yamaha's QY-series of 'pocket sequencers' — a useful combination for those awkward outdoor occasions when musical inspiration strikes. The BassStation keyboard heralded Novation's timely foray into the world of subtractive synthesis, coinciding with the ongoing analogue revival and

'price hike' of so-called classic monosynths like Roland's SH101 and the much-sought-after MiniMoog.

However, it is undoubtedly Roland's TB303 Bassline, the essential ingredient of Techno music in one or more of its facets, that tops the class in this respect, now commanding 'silly money' — offers are currently swanning around the £700 mark! As implied by its Analogue Bass Synth subtitle, Novation are obviously aiming their instrument directly at this market. However, as the review unit is indeed a full-blown, two oscillator, analogue



monosynth with many of the trappings that this entails, it offers a sufficient range of sounds to make it useful long after the current TB303 fad is over. I gave our review model a side by side listening test against Roland's 'silver dream machine' and found the BassStation Rack can produce convincing TB303-style sounds — Novation even dedicate a page of their excellently presented user manual to setting up a 'TB303 Emulation'.

Needless to say, both amateurs and pros alike rushed out to buy the BassStation keyboard, including Ozric Tentacles' Ed Wynne, who sees it as a kind of "MIDIified Pro One" and SOS contributor and Keyfax author Julian Colbeck, following his SOS July 1994 review.

Around the time of its introduction, the BassStation's main competitor was the Deep Bass Nine from Control Synthesis, essentially a single-oscillator 1U rackmounting TB303 clone, with MIDI and a very useful built-in MIDI/CV convertor — see Paul Ward's December 1994 SOS review for further information. Since then, German electronic instrument manufacturers Doepfer have muscled in on the action with their 1U rackmounting MS404 MIDI Analog Synthesizer, which appears to fall somewhere between the BassStation and Deep Bass Nine in terms of the facilities on offer.

### LET'S RACK!

With the history lesson over, let us move onto the subject of this review — the Novation BassStation Rack, which is a rackmounting offspring of the original BassStation. This time the unit is emblazoned with the words 'Analogue Synthesiser Module', suggesting Novation have acknowledged the fact that the BassStation has also found favour outside of the dance fraternity — and deservedly so.

Physically, the BassStation Rack obviously bears little resemblance to its moulded plastic keyboard forefather, being a brushed steel affair of rigid

panel for accessing 100 patch memories — a vast improvement over the keyboard's miserly seven!

Memory allocation is in fact shared between 60 user programmable memories and 40 factory presets, all accessible (when sequencing) with Program Change commands, as are the keyboard's seven. These are backed up by an internal battery with an approximate 10-year lifespan, so it's very unlikely that sounds will be lost in this millennium! If you run out of storage capacity — let's face it, in the instinctive world of hands-on subtractive synthesis, you undoubtedly will — the BassStation is capable of dumping singular sounds or its entire contents to a backup storage device for instant recall, via System Exclusive.

A 12-button Data Entry panel calls up stored sounds in time-honoured fashion — simply key in the corresponding sound number which in turn is displayed on the two-digit LED, yet another feature sorely missed on the keyboard. When used in combination with the Mode Select button, these same keys double up to access the extensive MIDI Controller functions that the BSRack is capable of receiving, including: pitch bend; pitch modulation; filter modulation; aftertouch/breath modulation and aftertouch/breath filter modulation — again, the keyboard is distinctly lacking in this area.

### EASTERN PROMISE

Continuing our eastward journey, the LFO, Osc 2, and Filter control sections are identical to their BassStation keyboard counterparts. You can even sync the LFO to MIDI Clock to create various sweeping sounds and rhythmical pulses. A quick glance at the accompanying photograph and the more astute amongst you will spot my deliberate Osc 1, Osc 1-2 Mod/Sync, and Envelopes section omissions, the reason being the Rack's ability to mix an external sound source (more of which later) against its second oscillator; additional oscillator

## NOVATION BASSSTATION RACK £399

### PROS

- Wide range of usable analogue sounds.
- Built-in MIDI/CV convertor.
- External input to Filter and Envelope sections.
- Receives extensive MIDI Controller data.
- Transmits MIDI Controller data during editing.

### CONS

- Potentially confusing Envelope switching controls.
- No octave-switching facility on Osc 1.
- No independent Pulse Width for Osc 1 and Osc 2.

### SUMMARY

A true programmable monosynth for the '90s, *without* the reliability and durability problems that plague the analogue equivalents of yesteryear. As with the BassStation keyboard, tremendous fun and an unqualified bargain, with built-in MIDI/CV convertor to boot.

# INSTINCT

construction with an incredibly shallow depth of 3.9 inches — no racking problems here then, such are the wonders of modern technology. Novation have even seen fit to supply four rubber feet to stick onto the underside of the unit, should you desire to employ it in a desktop capacity — nice touch.

The all-important rotary pot controls for real-time sound tweaking are arranged across the front of the unit in the same order as found on the original BassStation's control panel. Starting on the left, the first section contains Volume and Portamento (between 0 and 5 seconds), a headphone socket (sorely missed on the keyboard) and a Write Protect/Enable switch relating to the adjacent control

sync facility — perfect for those searing lead lines a la Howard Jones' 'What Is Love?'; and its envelopes' increased switching ability.

In layman's terms, the Rack is capable of receiving MIDI Controller information relating to *all* stages of its envelopes — Attack, Decay, Sustain, Release, and Velocity on Envelopes 1, 2 and 1 & 2 — as opposed to only Attack and Decay on Envelopes 1 and 2 on the keyboard model. Although there is only one set of physical envelope controls, the Envelope switch determines whether you are working on the amplifier (Envelope 1) or filter (Envelope 2) envelope shape, or both. Either way, it's essentially a compromise due to panel





# Novation BassStation Rack

- ▶ space restrictions. This could be a tad confusing for novices, even more so given that the user manual employs different terminology — ie. volume (amplifier) and brightness (filter). On the plus side, the BassStation is velocity sensitive, hence the Velocity parameter in the Envelopes section.

Graphically, the BassStation Rack has undergone a cosmetic change for the better, such that it is more pleasing to the eye and consequently a lot easier to use.

## THE WORLD OUTSIDE

The back panel includes all the necessary connections for communication with the outside

pressed, the BSRack will simultaneously 'play' the same note — all this, and not a MIDI cable in sight!

It's worth pointing out here that it is not necessary to have a keyboard, either MIDI or CV/Gate, connected to the BassStation Rack in order to hear its sounds. The Audition/Demo button in the Data Entry/Program section can be used to trigger a currently selected sound, providing a convenient way of monitoring a sound when tweaking.

One final addition worthy of mention is an external audio input to the BassStation Rack's Filter and Envelope sections, enabling these to be used to further process any sound source, in much the same



world: 9 Volt DC input socket for the external power supply, *without* an on/off switch; obligatory MIDI In, Out and Thru sockets; Line Output. Here all similarity with the BassStation keyboard ends.

A major plus point and one which, in my opinion, justifies the Rack's £399 price tag, compared with the keyboard's £349, is the inclusion of a built-in MIDI/CV convertor with CV/Gate inputs and outputs. Obviously Novation have taken a leaf out of the Deep Bass Nine and MS404 books along the way.

I am happy to report that the BassStation Rack's MIDI/CV convertor functioned perfectly when I hooked up my trusty old Sequential Circuits Pro One and heard it in all its sequenced glory in the marvellous world of MIDI for the first time [see 'No Self Control: The MIDI/CV Convertor' side panel].

Unlike the Deep Bass Nine, the BassStation Rack's MIDI/CV convertor is not simply restricted to the 1 Volt per octave (1V/Oct) variety, as popularised in the past by the likes of Roland, ARP, and Sequential Circuits. It is also capable of generating the Hertz per Volt (Hz/V) linear system used by old Korg and Yamaha synths and supports an S-trig option for old Moog equipment. (Tom Carpenter's March 1995 SOS article on controlling vintage synths via MIDI is a particularly useful source of additional information on this subject.)

The BassStation Rack could equally act as a keyboardless expander for a vintage synth by simply connecting the synth's CV/Gate outputs to the Rack's CV/Gate inputs and playing the synth's keyboard. Every time a key is

way as on a Pro One. A flabby acoustic kick drum, for example, could be trimmed using the envelope controls to make it sound more punchy or clicky.

## SONIC YOUTH

For a more in-depth appraisal of the BassStation's synthesis capabilities, check out Julian Colbeck's comprehensive July 1994 SOS keyboard review. As far as my youthful ears are concerned, the review model is sonically capable of holding its own against my Pro One — I pitted the BassStation with its filter in 24dB per octave mode in a head-to-head dual against the Pro One for 'Best Moog Emulation' award, and the result was a draw; they both sounded equally good. When monitoring on headphones, the BassStation's background noise was very low for an analogue synth — a sure sign of a good design.

All the bleeps and squelches you could wish for in an analogue monosynth are featured in the first 40 factory preset patch locations — Novation have obviously done their homework, albeit with a bias towards the dance market (check out the BassStation Rack's impressive demonstration sequence, accessed in 'Utility' mode by pressing the Audition/Demo button). My personal favourites include patch 08, 'Power Bass', a deeply thunderous bass sound reminiscent of the Moog Taurus bass pedals; 'Spit' (18), the resonant click much beloved of Kraftwerk; and 'Yazoo Lead' (20), a highly playable MiniMoog-type lead voice. I couldn't resist having a tweak — once hooked, you're off into analogue heaven!

However, common sense should prevail and tell you that the BassStation Rack's 18 rotary pots and 12 switches are not going to permit the same degree of sound sculpting as the Pro One's 28 knobs and 23 switches (excluding sequencer and arpeggiator functions) — the BassStation's modulation options are somewhat limited by comparison.

Of course, every synth has its merits, the Pro One's being its incredibly fast envelope generators. ▶

## NO SELF CONTROL: THE MIDI/CV CONVERTOR

By connecting an external MIDI sequencer to the BassStation Rack, plus a suitable CV/Gate synth (like the Sequential Circuits Pro One) via the CV/Gate outputs provided, the additional synth can be simultaneously sequenced on an independent MIDI channel selected from the BassStation's Data Entry panel. In other words, the BassStation deals with incoming MIDI data both for itself *and* the connected external synth. The result is two different monophonic analogue sequences playing at the same time — brilliant!

Setting the correct type of CV/Gate system for your vintage synth is a fairly straightforward procedure: Put the BassStation Rack into 'Utility' mode, stepping from the default 'Program' mode by pressing the Mode/Select button (in the aforementioned Data Entry panel) three times. Press button 8, which doubles as the CV/Gate Ch. button, and select the correct option — 00 (1V/Oct), 01 (Hz/V) or 02 (S-trig) — using the +/- increment buttons, and *voilà* — you can forget about it.

However, it's worth bearing in mind that the MIDI/CV convertor will *only* automate the triggering and pitch of the connected vintage monosynth's oscillator(s), such are the constraints of analogue CV/Gate technology. Any additional sound tweaking must therefore be manually done 'on the fly', as in days of old.

Obviously this is not the case with the BassStation Rack, which transmits MIDI Controller information whenever its relevant knobs are twiddled — the MIDI Controller info can be recorded into, and replayed from, a connected MIDI sequencer, effectively automating the entire sound sculpting process.



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# Novation BassStation Rack

► In this respect, the BassStation fares reasonably well with its tightest attack time of 1ms. However, given the current fashion for percussive textures, Novation could do themselves even more justice by reducing the attack time even further.

The BassStation has enough flexibility to keep the new generation of analogue enthusiasts happy, despite the drawback of two waveforms (Square and Sawtooth) per oscillator, plus a switchable pulse width option for either Osc 1 or Osc 2. Unfortunately, you *cannot* independently control the pulse width setting for each oscillator. Still, that's a lot more than can be said for the Roland TB303!

On the subject of oscillators, the BassStation's are *not* true VCOs (Voltage Controlled Oscillators) in the Pro One sense, but are in fact based on digitally-synchronised, analogue ramp generators from which are derived the sawtooth and pulse waves. This reduces dither and instability considerably when compared to a traditional VCO, though some purists may feel that a degree of instability is part of the character of a true analogue synth. Whatever the technicalities, I don't feel the BassStation has quite the same 'warmth' as my Pro One, but then again, I'd prefer to stay in tune any day of the week!

Since the BassStation is primarily designed as a bass synth, Osc 1 does not have a dedicated octave-switching facility, being restricted to its C-2 to C-7 range. This is a bit of a bind, although the instrument's sound palette extends way beyond this field.

## AND THE WINNER IS...

If monosynths are not to your liking, multiple BassStations can be chained for polyphonic playing, although this could prove a costly way of 'creating' an analogue polysynth (£3,199.92 inc VAT for 8-note polyphony, if my mathematical brain serves me correctly!). Rumour has it that Novation are presently working on an analogue polysynth — a very attractive proposition indeed, assuming the price is right.

For anyone wanting to doodle on the move, the original battery-operated BassStation with its two-octave, full-size, velocity-sensitive keyboard, remains without comparison and is highly recommended — after all, Mute mogul and Depeche Mode mentor Daniel Miller uses one as part of his portable setup on "stressful business trips."

All told, Novation have surpassed themselves here, ably overcoming the shortcomings of the original BassStation — its flimsy casing and limited patch memories — and adding enough extras to give the competition a good run for their money — or even yours.

SOS

## FURTHER INFORMATION

- E** £399.99 inc VAT.
- A** Novation Electronic Music Systems Ltd, The Ice House, Dean Street, Marlow, Buckinghamshire, SL7 3AB.
- T** 01628 481992.
- F** 01628 481835.

## SPECIFICATION

(NB: refers to the BassStation as a monophonic sound source.)

### OSCILLATOR 1

Range	C-2 to C-7
Waveform	Square, Saw, Pulse
Master Tune	+/-50 cents

### OSCILLATOR 2

Range	C-3 to C-10
Waveform	Square, Saw, Pulse
Semitone Tune	+12 semitones
Detune	+/-50 cents
Range	16', 8', 4', 2'

### OSCILLATORS 1 & 2

Pulse Width	Variable depth and source mod
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### MIXER

Range	Variable mix control between Osc 1 & 2
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### FILTER

Cutoff Frequency	5Hz to 10kHz
Resonance	0 to self-oscillation (24dB)

### Envelope

Envelope	Variable +/- control of LFO Mod Depth
----------	---------------------------------------

### Cutoff Slope

Cutoff Slope	Switchable between 12dB and 24dB
--------------	----------------------------------

### ENVELOPES 1 & 2

Controls	Full ADSR with variable Velocity
----------	----------------------------------

### TRIGGERING

Selectable	Autoglide, Single & Multi
------------	---------------------------

### PORTAMENTO

Range	Auto, 0 to 5 secs ramp time
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Having recently completed two new World Music albums, one for Indian electric mandolin player U. Srinivas, the other with legendary Pakistani Qawwali singer Nusrat Fateh Ali Khan, Canadian producer/guitarist Michael Brook never wanted to confront music technology ever again! PAUL TINGEN explains why...

From a beach apartment in sunny California, Michael Brook waxes lyrical about all manner of things, amongst them the beauty of the town where he's staying and the quality of a Lowden acoustic guitar that he's just found. What appears not to be on his list of favourite discussion topics is life in the recording studio in general and music technology in particular. This is a little surprising, coming from a man who has a name to uphold as one of the leading lights in the international music scene — famous for his work with Brian Eno, Daniel Lanois, and Jon Hassell— and who has achieved many feats of musical innovation by means of cutting-edge music technology. It's equally surprising since we're supposed to be doing an interview for a hi-tech music magazine, following the occasion of two brand new collaborative releases that carry his name. One has just been released, namely *Dream*, with the electric mandolin player U. Srinivas, revered in his native India. The other, with the legendary Pakistani Qawwali singer Nusrat Fateh Ali Khan, is expected in Autumn.

Both records were made in a decidedly hi-tech manner, with sampling, digital editing, looping, and sonic manipulation all employed. Yet Brook initially appears reluctant to talk in too much

nightmare to make in some ways", and adds that even with the Srinivas record (a much easier record to make), he had moments of grave doubt about the way he was doing things: "I sometimes really thought in the middle of it: 'why the f\*\*k are we doing this? Why don't we just get musicians in, have them play some music and record it?' Instead, there was just the two of us staring at computers. That is not fun. Playing an instrument is generally a lot closer to what one would call fun."

### MODUS OPERANDI

Thus it is that Brook is in irritated and introspective state of mind about music technology, explaining that part of the brief for his first deadline-free holiday in five years is to reassess for himself how he will use technology in the future. His thinking isn't entirely dissimilar to Rupert Hine's [*SOS* February 1995], who stresses the difference between 'creative' mode and 'editorial' mode, and laments that many technological interfaces force the musician too soon and for too long into editorial mode. To this, Brook adds the concept of 'engineering' mode.

Brook: "There's something dead about all this eternal editing and looking at f\*\*\*ing VDU screens. The alternative to being in engineering mode is to hire an engineer or a programmer. The disadvantage is that someone is translating your ideas for you. You're one layer removed from directly manipulating things."

Those record producers that hire engineers and/or programmers argue that in order to make sound judgements on the tracks they are working on, and do their job properly, they can't be too involved in the technical aspects of record production. In other words, they prefer to stay as

# Infinite Possibilities

## MICHAEL BROOK

'Dream' from U. Srinivas;  
produced by Michael Brook.



technical detail about them. It's not that he has anything to hide, it's just that he is fed up with making hi-tech records. Hence the beach holiday in California and his present affection for the low-tech simplicity of an acoustic guitar. Clearly, the man has developed a severe case of hi-tech blues.

In our previous discussions, Brook was an avid talker about the ins and outs of modern technology, and he even holds an electronics degree to prove that his interests extend purely beyond being a user. In car owner's terms, he likes to have a 'look under the bonnet' too. Yet when we talk this time, he gets more fired up talking about technology on a more conceptual level. This shows when he exclaims that the Nusrat Fateh Ali Khan record was "a monumental

much in creative mode as possible, limit their time in editorial mode, and stay completely clear of engineering mode.

Michael Brook, on the other hand, belongs to that breed of producers that prefers a hands-on approach. He has his own home studio (Allen & Heath Saber 24:16:16 desk, Fostex E16 multitrack, Yamaha NS1000 monitors) where he writes and records his own music and often does the pre-production for artists he produces. This exemplifies his background: he started out as an engineer, working in Bob and Daniel Lanois's Grant Avenue studio in Ontario in the late 70s/early 80s. So how does he reckon that his frequent ventures into engineering mode affect his ability to make musical judgements?

Brook: "It does affect it, though not necessarily always poorly. It makes you listen more closely, and that can help you to evaluate stuff. The negative side is that it might freeze you up compositionally, because you can endlessly move things around and chop and change them. In the



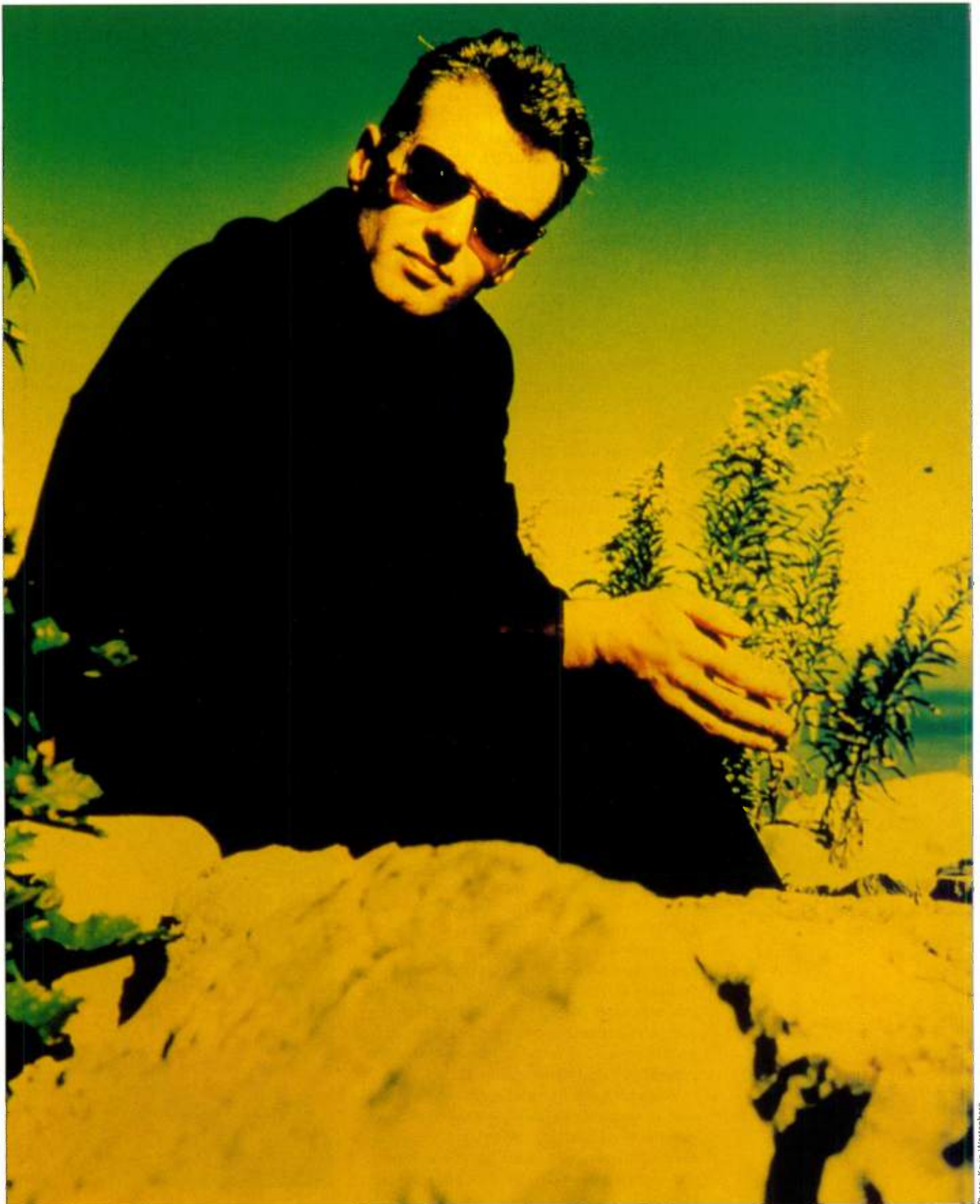


Photo: Kevin Westenberg

past, it was technically possible to get two 24-track tape machines and copy, say, a vocal part and move it across from the first to the third verse. But the cost of doing that in terms of time, inconvenience, and losing focus of your original idea was so great that people didn't tend to do that very often. To me, this has to do with a very important factor in the making of records that's seldom acknowledged; I call it 'the overhead of inconvenience.'

"With today's MIDI-plus-audio sequencers, the cost of moving vocals around or experimenting with different arrangements is lowered, and the result is that you're more likely to try that kind of thing. I find it silly sometimes when people say: 'well, you can do it this or that way', yet they never seem to acknowledge how much time it's going to take them to do it, and what price they'll have to pay when it puts them in a different state of mind. The







Michael Brook.

► problem is that to do these kinds of edits you have to shift into a kind of 'computer operator' state of mind, thinking in a logical cause/effect mode, rather than asking 'what aesthetic effect is this having upon me?' This may detract from your ability to make good musical decisions."

Brook cites other major disadvantages of the hours, days, weeks, and months that one can spend fiddling and fretting in front of VDU screens: "I definitely don't spend as much time playing as I should." And in calling the Nusrat Fateh Ali Khan project a "monumental nightmare", he indicated that this is where he reached his nadir in nose-to-the-VDU-grindstone, suggesting that he severely violated his own 'overhead of inconvenience' principle. So how badly was his artistic judgement clouded in this case?

Brook: "It probably wasn't as objective as it should have been. Yet I'm not sure it negatively affected the final result. I feel pretty musically proud of what we ended up with. I think it's really good. It just was harder to do and the record took longer to make."

## AMBIENT-CROSSOVER-TECHNO-FUSION

Since the Nusrat Fateh Ali Khan CD hasn't been released yet by Real World Records, and preview tapes were unavailable, it's impossible to make a judgement on its quality, though I can say that the snippets that I heard when I visited Brook last year in Real World Studios, where he was editing one of the album's nine tracks, sounded excellent: fluid bass lines and infectious

grooves underpinned some exciting vocal performances from the Pakistani master. However, an informed judgement can be made about the Srinivas CD, *Dream*. Whatever headaches Brook may have had in making it, the Srinivas CD itself is a miracle: absolutely captivating with a gorgeous, yet delicate, spacious sound, and destined to become a classic of World Music crossover.

*Dream* contains four tracks, three of them well over 10 minutes long, and features the talents of violinist Nigel Kennedy, Brazilian percussionist Nana Vasconcelous, Canadian singer Jane Sibbery, and cellist Caroline Lavelle, with pride of place going to U. Srinivas's mesmerising and lightning fast electric mandolin playing, Sikkil R. Bhaskaran's elegantly evocative violin playing, and Brook's infinite guitar. Two tracks have strong, hypnotic grooves, the other two are of an ambient nature.

In the promo literature, Brook writes that he wanted to bring out "the more introspective, meditative spirit that Srinivas reveals in his music and that is a big part of Indian music." He also writes that "one of the big challenges of the record was to try and encapsulate the large contrasts in

styles from the frantic, almost heavy metal, sections to extremely tranquil sections of music", and he mentions that the musicians involved jokingly referred to the project as "an ambient-crossover-techo-fusion record!"

## DREAM SEQUENCE

*Dream* was recorded during Real World Recording Week in September 1992, at Peter Gabriel's Real World studio complex near Bath.

Brook remembers: "When I arrived at Real World to record Srinivas's traditional record (*Rama Sreerama*, 1994), there were so many musicians around that I thought that it would be possible to squeeze another record out of it. So before we recorded *Rama Sreerama* I withdrew to Peter Gabriel's writing room, called The Shed (a stone's throw from the main studio building), and with a Roland S770 sampler, DX7 and Atari/Notator, worked out some bedtracks that Srinivas and other musicians could play to. One of them was Caroline Lavelle, whom I recorded during this period at The Shed, when she improvised to some of these grooves."

The second round in the construction of *Dream* happened directly after the recording of *Rama Sreerama*, which was recorded live in Real World's massive control room, with an audience present. Once the recordings for the latter album were completed, Brook brought out his bedtracks and Srinivas and Bhaskaran improvised across them. These sessions formed the foundation for what was



U. Srinivas.

to become the album's title song. The next evening there was a session with Srinivas, Nigel Kennedy and Nana Vasconcelous, who improvised both on their own and with another of Brook's bedtracks. This session formed the basis for the two more danceable tracks on the album, 'Dance' and 'Run', with especially the first three-quarters of 'Dance' being a fairly faithful reflection of what happened ►



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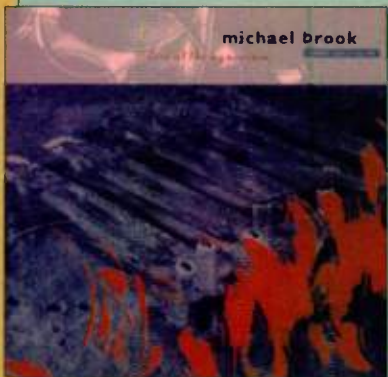
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# Michael Brook

"...I withdrew to Peter Gabriel's writing room, and with a Roland S770 sampler, DX7 and Atari/Notator, worked out some bedtracks that Srinivas and other musicians could play to."



► that September evening. After this there was yet another session, with Srinivas, Jane Sibbery, and a few other musicians, of which Brook only used Sibbery's harrowing, wordless backing vocals. The other musicians that feature on the album — amongst them King Crimson's Trey Gunn on Chapman Stick — were overdubbed at a later stage.

All sessions were recorded to 24-track analogue and until this moment there was nothing unusual to the making of *Dream*. It was only in round three that music technology started to play a crucial role, making things possible that "hadn't been technically possible or easy to do until recently", writes Brook in his sleeve notes, adding that this concerns "quite a different and new way of working for me, where you grab moments with musicians and later turn them into pieces of music." During our interview, Brook explained that his sleeve notes were referring to the ability to record musicians without having a clear idea about the structure, form, or even musical contents of the final piece of music, and create that structure afterwards out of the building blocks you've recorded.

Brook: "For instance, with Caroline Lavelle, I knew the key and the tempo of the piece I wanted her to feature on, but that was about it. So I got her to improvise along with a rhythm track and then much later, when the piece of music had some shape, I took bits of what she had done and fitted them in."

Brook had recorded Lavelle's cello on a DAT, sampled the sections that he wanted to use in his S770 (stereo sample time of 200s), and dubbed them back onto the 24-track. Brook's S770 is his sampler of choice only in so far as "it's the sampler I own (laughs). But if I were buying one today I'd look at an S760, or the new Emu. I've never got on with the Akai machines. I don't like their fiddly interface and dinky little screen, and the sound is rather hard. I bought the Roland because of the screen and the hardware controller, and every engineer that I've ever worked with has commented on how great it sounds."

All four songs on *Dream* were constructed in a similar cut-and-paste manner from the initial sessions with the S770, with Brook applying his talent for electronic treatments to great effect on 'Think', where an unearthly, hypnotic-sounding, 16th note arpeggiated riff turns out to be a short cello phrase, played back at double

speed, looped in an Electro-Harmonix Memoryman analogue delay and heavily treated. Brook even went as far as to paste in some percussion playing by James Pinker, which he'd originally recorded for a different album, indicating that there's no limits to this way of working.

## CUT-AND-PASTE CULTURE

Constructing tracks by cutting and pasting sampled building blocks is one way of working that is being used to great effect in the remix world. A remixer usually gets a copy of the original format that a track was recorded on, whether 24-track or ADAT, samples the parts that he thinks he's going to need, and rebuilds the track from these elements, adding other instruments and drum arrangements that take his fancy. The end result may well bear only a passing resemblance to the original song.

Michael Brook constructed the whole of his Indian/Western crossover album in a similar fashion, albeit with one crucial difference. And it was this difference that was to cause him the greatest difficulties, nearly driving him to distraction with the Nusrat Fateh Ali Khan record. A remixer typically builds his mixes out of recorded parts that have already been carefully selected and edited by the original artist and producer. Brook, however, had to decide which sections out of sometimes hour-long improvisations were the best and how they were going to fit together, without having a structural point of reference to start with or aim towards. Anyone experienced in working in the studio can imagine that this involves a gigantic editing challenge, and the risk of not seeing the wood for the trees anymore.

Brook: "The Srinivas album involved two days of recording, a week of making an inventory of what we had, and a month of making it into a record."

On the Nusrat Fateh Ali Khan project, this balance between actual recording session time and editing time was even more lop-sided. Brook had worked with the singer before, producing traditional albums such as *Shazbaaz* (1991) and *The Last Prophet* (1994), as well as Khan's first crossover album, the highly acclaimed *Mustt Mustt* (1990).

During the making of *Mustt Mustt* Brook discovered that Khan soars to his greatest heights when he has ample time to improvise and Brook was frustrated because the backing tracks he'd made

## MICHAEL BROOK: TRACK RECORD

Michael Brook was born in Toronto 43 years ago. He studied electronic music, electronics, and psychology in the arts at Toronto University. Soon afterwards he played bass on one of Jon Hassell's albums, and guitar with Martha & The Muffins (remember their UK hit, 'Echo Beach'?), before finding work as an engineer at Daniel and Bob Lanois's Ontario-based studio. It was here that he first met Brian Eno, who had a decisive influence on his career. He collaborated on several Eno albums, before Eno (and Lanois) helped him out with his first solo album, the dark and ambient *Hybrid* (1985).

Since then Brook has worked as a solo artist and

producer, especially gaining acclaim for his productions of World Music artists such as Nusrat Fateh Ali Khan, Youssou N'Dour, Khaled, and The Pogues. In 1992, 4AD released his second solo album *Cobalt Blue* [for an in-depth interview on this album see SOS June 1992] and later that year *Live At The Aquarium*, a remarkable live CD that featured many of the tracks from *Cobalt Blue*. These were performed single-handedly and entirely live on one electric guitar by Brook, aided by a battery of MIDI sound sources and looped parts that he played into his delay lines live. He also played this material during the Sylvian/Fripp tour of late 1993.



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# Michael Brook



Michael Brook produced Nusrat Fateh Ali Khan's past two CDs.

► were on the short side. This led him to try a different approach for the new collaborative album. For logistical reasons, it wasn't possible to have Khan and the Western musicians in the studio at the same time, so Brook decided to improvise bedtracks with guitarist Robert Ahwai, percussionist James Pinker, and Brook himself on infinite guitar, bass, keyboards, and drum programming. He selected the best parts of these 24-track analogue recordings, and sampled and looped them in the Roland S770, triggered from his Atari/*Notator* sequencing system. These loops were then mixed to two tracks of another 24-track reel. A 24-track reel has a running time of 28 minutes, which meant that Brook had 21 tracks (one was sacrificed to SMPTE code), each 28 minutes long, available for overdubs. Khan ended up improvising three or four takes to each of the nine tracks, resulting in many hours of unedited material. But it turns out that this was only the beginning of Brook's problems....

Another problem was that, whilst the 2-track mixdown of looped backing track sounded too "loopy", the original bedtracks of Brook, Ahwai, and Pinker sounded too rough and inconsistent to really work well with the vocals. Transferring sections of the vocals to the bedtrack 24-track didn't work for that reason. So Brook decided to sample sections of the original bedtracks and transfer them to the 24-track vocal reel, and then overdub other instruments onto that.

The problem was, however, that Brook had no idea at all of what structure he was working towards: "The best bits of the vocals were spread out all over the tape, and it was very hard to hear things in context or in proper sequence. So what we then did was to transfer sections of what we called the original master to the vocal master, and then do a mock-up, synchronised mix to DAT of the different sections that we liked, stopping the DAT every time we moved to the next section. We'd then listen to this DAT mix to see if things worked in sequence.

It was a very slow process, because you could never let the multitrack tape run and say: 'oh, this sounds good', or 'that transition doesn't quite sound right'.

"It was made even slower because I didn't have a hard disk editor available, and had to do everything with the S770 sampler. To be able to hear whether something worked or not I had to load it into the sampler, copy it onto tape, maybe do this for five or six tracks or more, and then do the rough DAT mix to listen to the result. It would take us half a day just to be able to listen back to something, whereas the same edit would have taken two minutes in a 24-track Fairlight."

Brook remarked during the sessions, with a sense of understatement, that he "cannot imagine a more laborious way of making a record." Nine months on, he still appears to shudder at the memory of the technological nightmare that the project became: "One day, after a particularly long period of laborious editing, sampling, and shifting things around in MIDI sequencers, some people from Baba Maal's band came in to do some overdubs for us. It was amazing how that instantly lifted our spirits. When you get so bogged down in details, you quickly lose the mood."

The Srinivas CD was much less of a problem, explains Brook, because he had a lot less material to sift through, only four tracks to work on instead of nine, and he found editing mandolin and violin playing a lot easier than endless tracks of 28 minutes of vocals. "Just to listen to the vocals for one track would take two hours, and then you had to try to edit that! You kind of lose your way."

## APPROPRIATE TECHNOLOGY

So what then are the conclusions, if any, that Brook has come to now that his head is slowly being cleared by the fresh air of the Pacific? Amazingly, he reckons (with a grin) that he cannot rule out the possibility that he will work in this way again, but maintains: "I would insist that I have the right tools to do the job, rather than attempting to fit the camel through the eye of the needle. If we'd had a 24-track Fairlight it would have been alright, but there was no budget for that. Even using a few ADATs, where you can slip and slide tracks, and bounce between them, would have been much better. Having a single 24-track most of the time was very frustrating. Working with this montage-type approach meant that everything took forever."

So one of Brook's answers to 'the overhead of inconvenience' issue is to reduce the overhead, not by shying away from technology and near-impossible edits, but by moving straight ahead and using more appropriate technology. He's now looking into buying his own hard disk editing system, and as a prelude to this he's currently getting to know *Notator Logic* on a Mac Quadra 840. At the same time, he readily acknowledges that he wants to shift his focus and, amongst other things, would like to get his guitar chops back into shape: "I really want to get away from this way of working and make more time for actually playing music."

SOS

## INFINITE GUITAR WISDOM

Michael Brook's Tokai Stratocaster guitar is fitted with an IVL Pitchrider 7000 MkIII pitch-to-MIDI convertor and Digitech Mark IV guitar-to-MIDI interface, triggering a whole battery of MIDI equipment and sample/delay boxes.

The main delays that he uses for looping are the Electro-Harmonix Memoryman and the Bel BD80S delay/sampler. Other equipment that he currently uses for live gigs includes six volume pedals (to adjust the volume of the various loops, plus the level of his infinite and normal guitar output), Eventide H3000 Harmonizer/multi-effects, Electro-Harmonix fuzz, Electro-Harmonix 16-second delay, Yamaha GE10N graphic EQ, Yamaha TX802 FM tone module, Korg OVD-1 overdrive, Sansamp amp simulator, DOD 280 compressor, and a Rocktron Relay Switcher.

The 'infinite guitar' is a famous invention by Michael Brook, that is essentially his superior answer to the E-Bow. It gives the guitarist infinite sustain, with a controllable breaking point where the guitar goes into screaming overtone feedback. Unlike the E-Bow, it does not require the guitarist to hold any devices, and with both hands free great expressiveness can be achieved. Wishing to maintain the mystique, Brook is reluctant to discuss exact technical details, but apparently the infinite guitar works electronically, rather than mechanically, by feeding some of the output of his Tokai Strat back into the guitar.

To date, Brook has made two other copies of his infinite guitar system: one is owned by U2's guitarist The Edge, the other by producer/musician Daniel Lanois.



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#### SUMMARY

A well designed and sensibly priced general purpose mixer, but as there are so many companies now building mixers like this, it's really a buyer's market.

Probably the least well-kept secret in the music world is that Mackie have done rather well out of their little 12- and 16-channel mixers. The second least well-kept secret must be that every other mixer manufacturer on the planet is trying to get in on the act by offering an extra channel or two, in a similar format, for a similar price. Spirit's Folio series has already done very well in the UK-built stakes, while the USA's own Samson is taking a very aggressive stance. Now we see Soundtracs, best known for their recording consoles, launching their own range of well-specified, budget-priced, general purpose mixers. I'm sure the fact that the first three letters of Macro are the same as those of Soundtracs' Seattle-based rivals is nothing more than a coincidence, but one look at the styling of this range leaves you in absolutely no doubt as to whom they are selling against.

### OVERVIEW

The model under review is the Macro 14:2, which is physically small but no more cramped than a typical full-scale recording console. The use of sheet steel for all the casework lends the desk a utilitarian but purposeful demeanour, and even the normally unwelcome external power supply is fitted with a sensibly thick cable and a locking connector. All the connections and controls for this mixer are located on the top panel, and even though there's no armrest, the front of the case is thoughtfully curved so you don't get grooves in your wrists during long sessions.

A 19" rack-mount kit is available as an option.

The Macro 14:2 follows the now familiar format of offering a combination of mono mic/line channels plus a limited number of stereo, line-only, channels. In this case you get 10 mic/line channels, each fitted with three-band EQ, plus two more stereo line-only channels with two-band EQ. All the channels have two auxiliary sends: Aux 1 is switchable from pre- to post-fade globally, via a single switch in the Master section; Aux 2 is fixed as a post-fade effects send. Also global is phantom powering for the mic inputs, and this can be turned on or off in the Master section. As pointed out on many prior occasions, you can plug any balanced mic into a phantom powered input without causing any problems, but it's always advisable to plug the mics in before you switch on the phantom power. Unbalanced mics should never be used with the phantom power switched on; at best the sound will be compromised and at worst you'll damage your mic.

Unlike many budget mixers, the line inputs, Master outputs and Aux outputs are all electronically balanced, though the effects returns, insert points, and phono tape connectors are unbalanced. The two stereo channels have -10dB/+4dB sensitivity switching buttons instead of input gain trim pots, and the main output level runs up to +26dBu before clipping — so there's plenty of headroom, even if you're running everything at the professional +4dBu level.

### SIGNAL PATH

Unlike larger consoles, there's no mic/line switching on the Macro's channels; mics go into the mic input, line sources go into the jack input, and if you connect both at the same time, both sources will be active. In theory, this allows you to mix line and mic signals, but as there's only one Gain control to cover both, there's no way to set the relative balance between the mic and line sources. On all the mono channels, the input Gain control sets the gain for both the mic and line-level inputs; on the stereo channels, you simply switch between -10 and +4. Proper Solo buttons are fitted to each of the channels, which serve the usual dual purpose of isolating individual channels in the headphones and also metering channels one at a time, so that you can optimise the gain setting. The Master outputs are not affected by the Solo button operation.

One of the problems when designing an EQ section with a fixed mic control is to decide on the best centre frequency and bandwidth for general purpose applications. In the case of the Topaz Macro, the High and Low filters provide a shelving response at 10kHz and 70Hz respectively (+/-15dB)



and the Mid control has the same cut/boost range centred around 1kHz. The insert points, which come post-EQ, are wired ring-send, tip-return. This enables them to be used as direct outputs, with a specially wired lead or by plugging a mono jack halfway in. The stereo line inputs have no insert points, but it's a simple enough procedure to connect a signal processor between the signal source and the line input, to achieve the same result.

A short-travel fader completes the channel controls, though it's worth commenting on the wide scribble area which makes it easy to annotate your current mix.

## YES, MASTER...

On a compact stereo mixer of this kind, the Master section is usually pretty basic and includes the obvious things like meters, headphone output, stereo faders as well as the Aux send masters. The Topaz Macro follows these lines, more or less, though there are no Aux send masters. Given that most effects units have their own input gain controls, this doesn't present a problem, and I would imagine this omission was a way of saving space and cost without unduly compromising the performance or usability of the desk.

Two stereo aux returns are fitted, both of which do have master gain controls; the second one doubles as an off-tape volume control, when a stereo tape machine is played back into the mixer and the Tape button is pressed. Though the desk isn't specifically designed for recording, the provision of 2-track in and out connections at least makes it possible to mix down and then replay your mix without repatching anything.

Another nice touch on such a simple mixer is the provision of Solo buttons for the two Aux sends, which allow you to check what's being sent to the external effects or to a foldback system. A single stereo fader controls the overall mix level and the metering is handled by two 10-section LED bargraph meters. A separate headphone level control is located above the master fader and status LEDs are used to indicate whether or not mains power, phantom power, and Solo are active.

## MACRO IN ACTION

Tested with both mic and line level sources, the Topaz Macro performed very cleanly and smoothly with a very low level of background noise — and, to be honest, I'd expect nothing less from one of the UK's more prestigious mixer manufacturers. There was no evidence of distortion or crosstalk at all, and checking the manufacturer's spec confirms that both these figures are creditably low. The frequency response is flat to within 1dB either way from 20Hz up to 30kHz, and I'm pleased to see that the outputs have a sensibly low impedance of 70 Ohms, which means they should happily drive any practical load. There's also adequate level from the headphone output.

The one subjective area on any mixer is the EQ, and though the High and Low sections behaved in a very musical and controllable way, I found that any attempt to boost mid-frequencies using the fixed Mid control added a nasty 'honky' character to the tone. This isn't a fault of the EQ in any technical way, it's simply that 1kHz is a pretty

'honky' part of the spectrum, but it does highlight the shortcomings of fixed Mid controls. Used in cut mode, the Mid equaliser fared much better and proved itself supremely able to de-'honk' badly EQ'd sounds. The fact that all the EQ controls have detented pots means you can find the flat position easily, which makes up for the fact that there are no EQ bypass buttons.

## IS IT FOR YOU?

I don't believe that multitrack recording would be much fun with any desk of this type, though you could get away with 4-track work simply by using the insert sends and Aux sends to feed signals onto tape. Alternatively, you could use the main left and right outputs to feed your tape machine and then monitor in mono, using the pre-fade Aux sends with four of the channel faders turned down.

The Macro really comes into its own for live PA work or direct-to-stereo recording, where the tough casework will be appreciated by those who need a mixer they can cart around. The Macro is nice to use on an ergonomic level, it sounds good, and has the right combination of facilities to allow it to tackle just about any conventional mixing job you can think of. Whether the market is really big enough to support the ever-growing number of compact, general purpose mixers now flooding on to it is another matter, but based on quality and performance, this is one of the better contenders for your money.

SOS

## BRIEF SPECIFICATION

Maximum Output Level:	+26dB Master +21dB Aux Outs
Frequency Response:	20Hz to 30kHz +/- 1dB
EIN:	-128dBu (150 ohms)
Mix Noise:	-81dB faders down
Channel Crosstalk:	Better than 85dB at 1kHz
Dimensions:	405mm x 445mm x 85mm
Weight:	7.15 kg

## FURTHER INFORMATION

- £ Topaz Macro £429 inc VAT.
- A Beyerdynamic UK, Unit 14, Cliffe Industrial Estate, Lewes, Sussex, BN8 6JL.
- T Freephone 0800 374994.

## MANUFACTURER'S RESPONSE

David Gibbons, International Sales Engineer for Soundtracs Plc, offered the following response to our review.

Thanks for doing such a comprehensive and balanced review on our new mixer. I noted Paul's observation on the 'honky' character of the Mid EQ band on the mono inputs, and thought you might appreciate some background on the design process that surrounded this.

We spent some time prototyping this mixer, even to the extent that we took our existing sweepable EQ designs and did some blind tests, asking staff to sweep the controls to what they thought would be the most useful fixed High, Mid, and Low bands (without letting them know the range or position of the controls they were sweeping).

We then measured the frequencies they had set those controls to and found that the Highs averaged at 10kHz, the Lows at 70Hz, and the Mids at 1kHz. We built a fixed frequency version of the EQ and found that, due to the nature of fixed circuit design, an unusual thing happens — the Q factor for the Mid band varies according to the amount of cut or boost applied!

When the control is boosted by say 12dB, the Q is about 1.1 (a reasonable compromise between tight control and broad effect). However, if the control is set for 15dB the Q goes to about 1.35, producing a much narrower effect. As you've discovered, this

makes it very useful for de-honking, but potentially dangerous as a boostable +15dB band. Our dilemma then, was whether to restrict the range of the control (say to -15dB/+12dB) or to take the risk of having our EQ seem subjectively less musical than others (Mackie, Spirit, and Samson get around this problem by making their Mid fixed bands +/-12dB controls). In the end, we made it a +/-15dB control because our philosophy has always been to put the power and creative discretion in the hands of the user, and we will tackle the potential negative effects by putting warnings and explanations in the user manual.

I'm pointing this out because we accept the criticism that the EQ sounds peaky when boosted to 15dB, but we feel that you may be able to help us explain our reasons for designing it this way to potential customers before they have had a chance to peruse our manual.

It is inevitable that the mixer will be thought of in the same frame of reference as the Mackie 1202 and the Spirit Folio, and I have spent a considerable amount of time comparing our product to theirs. I noticed that you mention the absence of Aux masters on the Macro. Again, as you correctly guessed, this is the result of design economy to make the product meet a target market price. I guess for the same reasons, neither the Mackie nor the Spirit mixers have Aux masters either.

I hope this provides a bit more insight into how our minds work here at Soundtracs!



# The Bargain Basement

## A GUIDE TO CHEAP SECOND-HAND EQUIPMENT

*While the likes of Roland TR909 drum machines and TB303 Basslines sell for inflated amounts, less trendy but often more functional gear regularly appears in the free ad columns at unbelievable prices.*

**DEREK JOHNSON and DEBBIE POYSER take advantage of the fickle nature of fashion to help you assemble a budget second-hand system...**

excellent price-to-performance ratio, and all the instruments mentioned, from synths to drum machines, sequencers and samplers, work with MIDI, so there's no bother with retrofits. Whether you're new to electronic instruments, and looking for a complete music and sequencing setup for minimum outlay, or whether you simply need cheap new sounds, we hope the following ideas will at least give you a starting point for your own journey into the unhip zone...

### SYNTHS

#### • CASIO CZ-SERIES

Casio's mid-'80s CZ-series synths used the company's Phase Distortion (PD) synthesis, which, broadly speaking, was a variant on Yamaha's FM synthesis, as found on DX synths. What this meant at the time was up-to-the minute digital sounds at an unprecedented price; what it means now is a slice of soon-to-be-hip digital history, at unmissable prices on the second-hand market. To be more specific, the strengths of the

#### CASIO CZ101/CZ1000

Polyphony: 8-voice.

Multitimbrality: 4-part.

Sequencer: None.

Patch Locations: 16 ROM, 16 RAM.

External Storage: Cartridge, System Exclusive.

Keyboard: CZ101 49-note mini keys; CZ1000 49-note full-size keys.

Synthesis Method: Phase Distortion.

Target Price: CZ101 £100 or less; CZ1000 £100-150.



CZ series are the strengths of FM-style digital: metallic bell sounds, thumping basses, and sharp, precise textures that stand out in a mix. The CZ101, particularly, is a winner where space is at a premium, being about the size of a Novation BassStation. But don't let the diminutive size fool you — this is a real synth, and eminently programmable. Those looking for a cheap synth to use as a master keyboard could do worse than big brother CZ1000, which boasts full-size keys, although if you need velocity sensitivity, you'll want to look at the top-of-the-range CZ1. In between, you'll find bargains in the form of the CZ3000 and the sequencer-equipped CZ5000. Note that patches are pretty much transportable between the whole range.

#### • CHEETAH MS6

With all the hype surrounding the new generation of MIDI-controlled analogue synths, such as the

The last 15 years have seen ever-increasing activity on the electronic musical instrument market. The advent of MIDI, in particular, seems to have urged manufacturers into a frenzy of research and development, with an accompanying yearly cycle

of new product launches and a shorter shelf life for each batch of instruments. While this can be galling if you happen to have bought one of these instruments new, it can only be good news for the many musicians who buy almost exclusively on the second-hand market, where many amazing deals can be found on instruments that are no longer current, but not yet trendy. At the moment, the best bargains are to be found on instruments of mid-to-late '80s manufacture, and here, we've picked out a personal selection of what we think is the cream of cheap gear. We've tried to choose gear which we think offers an

#### CASIO CZ1

Polyphony: 16-voice.

Multitimbrality: 8-part.

Sequencer: None.

Patch Locations: 64 ROM, 64 RAM.

External Storage: Cartridge, System Exclusive.

Keyboard: 61-note, velocity- and aftertouch-sensitive.

Synthesis Method: Phase Distortion.

Target Price: £300-350.

SOS Review: October 1986 (CZ3000 reviewed April 1986).



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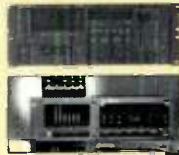
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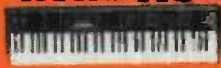


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# Cheap Second-hand Equipment

► Novation BassStation and Control Synthesis Deep Bass Nine, it's easy to forget that Cheetah made a MIDI-controlled analogue synth module way back in the late '80s. The MS6 utilised circuitry based around the legendary Curtis Electro Music chips, as found on Sequential's Prophet 5 and Digisound's range of modular synth kits. This 1U

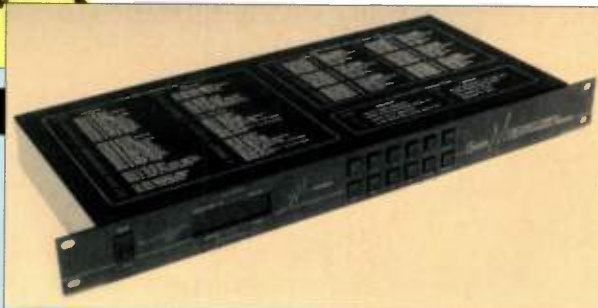
## ENSONIQ ESQ1

**Polyphony:** 8-voice.  
**Multitimbrality:** 8-part.  
**Sequencer:** 8-track, 2400 note (expandable to 10,000 notes), sends and receives Song Position Pointers.  
**Patch Locations:** 40 (four banks of 10).  
**External Storage:** RAM cartridge (80 patches), tape dump or System Exclusive.  
**Keyboard:** 61-note, velocity-sensitive.  
**Synthesis Method:** Sample + Synthesis.  
**Target Price:** £300-350.  
**SOS Review:** August 1986.

embraced by many musicians as a master keyboard and centre of their MIDI setup — a role for which it is still well suited today. It's available fairly easily on the second-hand market for little more than £300 — indeed, a recent *SOS* Reader Ad offered this worthy instrument for £325 or nearest offer, complete with full metal flightcase! Sound-wise, the ESQ1 offers a take on sample plus synthesis, as pioneered by Roland's D50, but with a warm, pleasing, human quality which may be a result of the genuine analogue circuitry used for the filters and envelope generators. Synthesis options are comprehensive, and programming is as friendly as you'll find using a parameter access system — the large display and a system of soft

## CHEETAH MS6

**Polyphony:** 6-note.  
**Multitimbrality:** 6-part.  
**Sequencer:** None.  
**Patch Locations:** 320 presets, 96 user memories, 64 Performance memories.  
**External Storage:** System Exclusive.  
**Keyboard:** None.  
**Synthesis Method:** Analogue subtractive synthesis.  
**Target Price:** £150.  
**SOS Review:** November 1988.



rack module produces genuine analogue tones under full MIDI control, and can regularly be picked up for around £150.

### • ENSONIQ ESQ1

First launched in 1986, the ESQ1 was Ensoniq's first synthesizer, and very well-specified for its price tag of just under £1100. Boasting a 2400-note sequencer (though you may find a machine expanded to 10,000 notes), the ESQ1 was

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keys really helps here. The ESQ1 is also available as the sequencer-less ESQM module, although these come up less often on the second-hand market, and have tended to retain higher prices.

### • KAWAI K1/K1R/K1M

The 1988-vintage K1 is still regarded with affection by many musicians. Launched as a budget instrument, with an original price of under £600, it nevertheless offered a respectable specification, including a velocity- and aftertouch-sensitive keyboard, a maximum 16-note polyphony, and 8-part multitimbrality. But it's the instrument's distinctive sound that makes it well worth having in the mid-'90s — a combination of the delightfully cheesy and the richly complex is easily attainable with Kawai's idiosyncratic

### KAWAI K1

Polyphony: 16-voice.  
Multitimbrality: 8-part.  
Sequencer: None.  
Patch Locations: 64 patches, 32 combinations.  
External Storage: RAM card, System Exclusive.  
Keyboard: 61-note, velocity- and aftertouch-sensitive.  
Synthesis Method: Sample + Synthesis.  
Target Price: K1 £250-275; K1M £200; K1R £150.  
SOS Reviews: K1 June 88; K1 Mk II December 1989.

### LIFE IN THE OLD DOG YET: THE ATARI ST

The Atari ST needs virtually no introduction to readers of *SOS*: in spite of rumours to the contrary, this computer is alive and well in music studios all over the world. Impoverished musicians can therefore make a second-hand ST their choice as a sequencing platform, secure in the knowledge that there is still an abundance of excellent software available for musical purposes, and plenty of companies capable of servicing and upgrading your computer. Finding decent games for down times may be problematic, however! Although buying latest versions of ST music software from companies like Steinberg and Emagic

can make a big hole in your budget, you may well find that your second-hand bargain ST will come with older versions of software that will do what you need perfectly; if you're not content, then contact the distributor for details on trading your dongle up to the latest version. This will often be considerably cheaper than buying the new version outright. Alternatively, there is lots of cheaper and very good sequencing software available new (for example, Roni Music's *Sweet 16*, at around £50), and PD libraries offer adequate music software of all kinds for the price of a disk.

implementation of Sample and Synthesis (S+S) technology. The lack of filter means that the K1's basic waveforms are never really disguisable, but a clever method of delaying the onset of waveforms (a patch contains up to four) allows strikingly complex textures to be developed — and dig that crazy pseudo-ring modulator effect! A joystick on the front panel allows you to alter, in real time, the relative volume of the waveforms that make up a patch.

The K1 is also available in table-top module (K1M) and rackmounting (K1R) packages. Both are identical sonically and operationally, though the K1R lacks the joystick. Note that a K1 MkII

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# Cheap Second-hand Equipment

## DRUM MACHINES

### • KAWAI R50/R50e

Like so many currently cheap, second-hand instruments, Kawai's R50 is of late '80s vintage. Its launch as a budget machine (£325 new) is reflected in a very low second-hand price; it can be picked up for as little as £60, though a reasonable price is more like £80 to £100. It is this affordability, coupled with some rather nice features, which make it worth considering for the musician on a budget.

One consequence of the R50's late '80s provenance is a collection of 24 12-bit, 32kHz drum samples. Do not let this put you off; there is a little noise, and a little crunchiness, but in practice, this simply adds to the character of the sounds, which can be modified and enhanced by per-voice tuning (+/-8 semitones) and panning, plus chorus, delay and gating effects. While these effects aren't quite in the top rank of on-board DSP, they do add a little something extra. Playing

the R50 over MIDI takes it several steps further: the sounds become velocity-sensitive (the pads aren't), and by setting up your kits carefully, you can assign every sound in all 12 kits to its own MIDI note number. Note that each kit also features eight mute triggers, which can be assigned their own MIDI note numbers. These are used to trigger sounds from external synths or modules, allowing the R50 to be used as a simple sequencer.

The R50 (like the more up-market R100 which preceded it) could be supplied with alternative drum sounds; however, the only way to do this was by removing the back and changing the sound ROM chip. Kawai produced several such chips. We have heard of internal and external modifications for the R50 and R100 that allow you to switch between several ROMs, but availability was never widespread, so don't hold your breath if your machine isn't already modified. Incidentally, the R50e is simply a relabelled, relaunched R50 equipped with one of the alternate chips. And for your interest, the larger R100 (reviewed June 1987) had double the patterns, and eight individual outputs.

### KAWAI R50

Pads: 10.

Outputs: Stereo plus one assignable output.

Sounds: 24. R50: Bass Drum 1-3; Snare 1-3; Hi, Mid & Low Toms; Open & Closed Hi-hat; China Cymbal; Ride Cymbal 1 & 2; Crash Cymbal 1 & 2; Cowbell; Claps; Agogo; Shaker; Tambourine; Conga; Timbale; Claves. R50e: Electric, Room & Acoustic Kick; Electric, Atomic, Acoustic & Room Snare; 'Purple' Rim Shot; Electric Hi, Mid and Low Toms; Room Hi and Low Toms; Open & Closed hi-hat; Crash Cymbal; Electric Handclap; Click; Finger Snap; Mellow & Funk Bass Guitar; Orchestra Hit; Brass Hit; Timpani.

Patterns: 50 user and 50 preset.

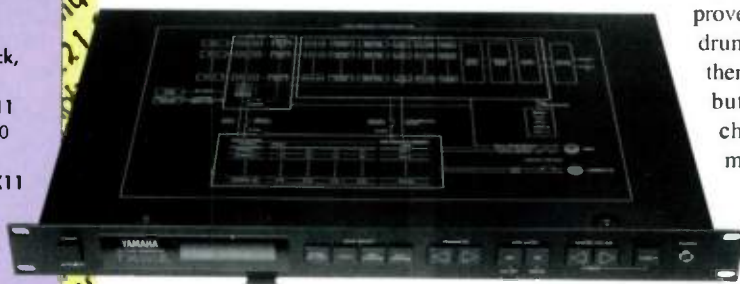
Target Price: sub-£100.

SOS Review: September 1987.

appeared in late 1989, adding effects and dedicated drum sounds (the drum part is additional to the eight multitimbral parts), but since this later version doesn't appear to have sold very well, the majority of machines on the second-hand market will be original KIs.

### • YAMAHA DX11/TX81Z/V50

In 1995's FM-synthesis-free synth marketplace (the most recent synth incorporating an FM element, Yamaha's SY99, having lately been discontinued), it's easy to forget the hype and



promises of over a decade ago, when FM was apparently the future of synthesis! The immensely popular DX7 spawned an enormous family of synth offspring, all of which sold in sufficient quantities to make them easily, and cheaply,

available on the second-hand market now (a DX7 for £250, anyone?). This is where you come in, and as the word on the street is that the definitively '80s sounds of the DX family are on the way back 'in', now is probably the time to cash in. Don't expect analogue-style over-inflation, though — supply is probably too plentiful for this to occur, and naturally, if you can't stand FM-style sounds, don't let fashion dictate.

With so many 6- and 4-operator FM synths and modules to choose from, we have to pick out a couple of favourites. The four-operator TX81Z has been a perennially popular choice for the fiscally-challenged musician looking for a versatile digital module, and if you're in the market for an FM keyboard, check out the DX11, which is essentially a TX81Z with a keyboard. If you'd like a workstation, hunt out a V50: this four-operator monster features the equivalent of two TX81Zs, a QX-style sequencer, an RX-style drum machine, effects and a disk drive, all for a street price of about £450. Phew.

If you're not familiar with what FM can add to your sound, think bass (more than a few dance tunes feature FM on bass), bells, and delicate, spiky digital textures — but don't expect sample-like realism. An especially nice feature for the adventurous amongst you is microtonal tuning.

### YAMAHA DX11/TX81Z/V50

Polyphony: 8-voice; V50, 16-voice.  
Multitimbrality: 8-part; V50, 8-part plus rhythm track.

Sequencer (V50 only): 8-track, 16,000 notes.

Patch Locations: TX81Z/DX11 128 ROM, 32 RAM; V50 100 ROM, 100 RAM.

External Storage: TX81Z/DX11

System Exclusive, tape dump; DX11 cartridge; V50 floppy disk.

Keyboard: DX11/V50 61-note, velocity- and aftertouch-sensitive

Synthesis Method: 4-operator FM.

Target Price: TX81Z £150; DX11 £200-250; V50 £450.

SOS Reviews: TX81Z May 1987; DX11 June 1988; V50 May 1989.





## KORG MR16

Pads: None (controllable over MIDI).

Outputs: 16, plus main stereo output.

Sounds: 19, plus metronome. Bass drum; Snare; Rim Shot; Low and Hi Toms; Closed and Open Hi-hat; Crash and Ride Cymbals; Hand Clap; Low and Hi Conga;

Timbale; Tambourine; Cow bell; Woodblock; Cabasa; Low and Hi Agogo.

Patterns: None (not a drum machine!).  
Target Price: £100 or less.



### • KORG MR16

It was early days for stand-alone sound modules when Korg released the MR16 in 1985, and many couldn't see the logic of a drum machine without the machine. Almost exactly 10 years later, it all seems to make sense: the MR16 offers MIDI compatibility and 19 sampled drum sounds of reasonable quality, each with their own level and pan control, and individual output. The sounds themselves are sourced from Korg's DDM110 and DDM220 pre-MIDI drum machines. That means sample quality is not late '90s hi-fi, but it's not without its charm either. In a world where individuality seems to be defined by paying as much as possible for a TR909, the MR16 could well find a niche.

Note that some pairs of sounds share an output, and cannot sound at the same time (the snare and rim shot, for example — although a drummer would be physically unable to produce this pair of sounds simultaneously anyway!).

## FANTASY GEAR LEAGUE

A few suggested setups to set you thinking about what you can get for your money!

### SAMPLE SETUP 1: AROUND £500

- Casio CZ1000 — £150
- Cheetah MS6 — £150
- Alesis MMT8 — £100
- Roland TR626 — £100

Or you could just buy a Yamaha V50!

### SAMPLE SETUP 2: AROUND £750

- Ensoniq ESQ1 — £325
- Casio CZ101 — £75
- Yamaha QX5FD — £175
- Yamaha RX5 — £200

This setup could come in at almost £200 cheaper if you decided you could manage with only the ESQ1's own on-board sequencer, since you wouldn't then have to buy the QX5FD. This is eminently possible (someone we know used to produce albums using the ESQ1's sequencer). Bear in mind, though, that you would run out of sequence memory fairly soon, and would need to budget for some way of saving sequence data — unless you can cope with the decidedly low-tech tape dump option!

### SAMPLE SETUP 3: AROUND £1000

- Yamaha DX11 — £250
- Kawai K1R — £200
- Roland S330 — £350
- Roland MC500 — £200
- Korg MR16 — £100

This setup adds sampling, with the S330, and still gives you a nice range of modern synth sounds.

### SAMPLE SETUP 4: AROUND £1500

- Ensoniq ESQ1 — £325
- Yamaha TX81Z — £150
- Cheetah MS6 — £150
- Roland S550 — £500
- Atari ST + software £250
- Kawai R50 — £100

### SAMPLE SETUP 5: AROUND £1750

- Yamaha V50 — £450
- Ensoniq ESQM — £300
- Cheetah MS6 — £150
- Casio FZ10M — £600
- Yamaha RX5 — £200

Setups 4 and 5 give you everything: sampling, FM, analogue, sample + synthesis, even a drum machine — all for less than the cost of just one high-level synth such as a Kurzweil K2000 or an Ensoniq TS10. Go and buy yourself a mixer with the change.



### TL Audio 8:2 Valve Mixer (optional free standing)

Valve 4 band eq & mix amps, balanced busses & outputs. Class A discrete option. Link facility for 16, 24, 32 etc. channels.



### Dual Valve Mic Pre-amp/DI

Mic & instrument inputs, peak LED, +48v phantom power, input/output gain controls, front panel instrument input, Phase reverse switch, Filters.



### Dual Pentode Valve Pre-amp

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



### TL Audio Valve EQ

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



### TL Audio Valve Compressor

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"I fell in love with these from the start" - Mix

"Incredibly quiet... Addictive... Really good & smooth" - Audio Media

"Well suited to the professional or project studio" - Professional Sound Mag

"Bass sounds through the compressor where warm, fat and huge" - Mix

"It is hard to produce unpleasant sounds with the mixer" - Studio Sound

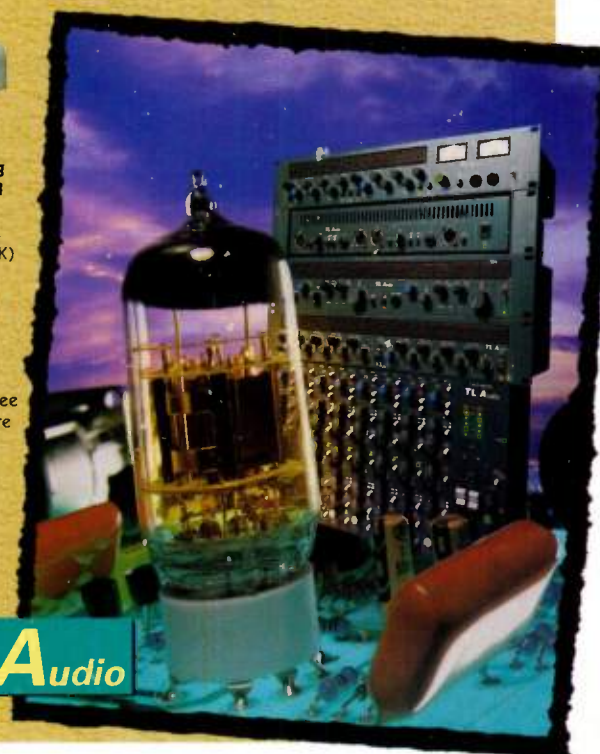
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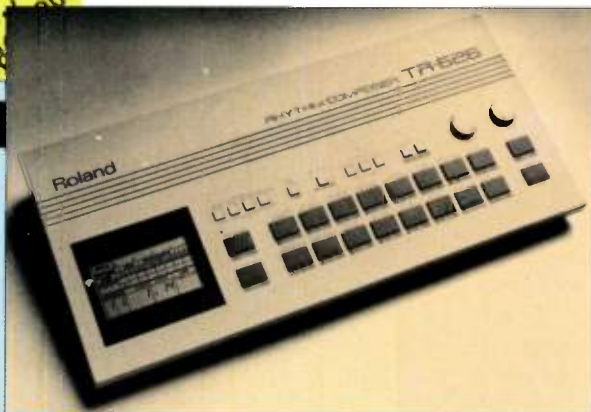




# Cheap Second-hand Equipment

## ► • ROLAND TR626

With all the attention grabbed by Roland's TR808 and TR909 drum machines, it's perhaps surprising there are beatboxes from this company that are not in any way cool or trendy. The fact is that



### ROLAND TR626

Pads: 16.  
Outputs: 8, plus stereo pair,  
Sounds: 30. Bass Drums 1 & 2; Snares 1-3; Hi Tom 1 & 2; Mid Tom 1 & 2; Low Tom 1 & 2; Tambourine; Cowbell; Low & Hi Agogo; Low & Hi Timbale; Low, Open & Mute Conga; Handclap; Shaker; Claves; China, Crash, Ride & Cup Cymbals; Closed & Open Hi-hat.  
Patterns: 48 preset, 48 user.  
Target Price: £100.  
SOS Review: November 1987.

Roland released so many drum machines during the '80s (off the top of our heads we managed to list well over a dozen) that some have inevitably fallen by the wayside. One such is the TR626, a compact machine that offers a compilation of Roland sampled drum sounds up to late 1987, drawing heavily on the excellent, but also not very trendy, TR707 and its Latin partner, the TR727. A large-ish LCD aids in programming the TR626, which utilises Roland's easy-to-absorb grid-based system. Sounds are tuneable +/-7 semitones, a tape sync facility is built in, and there is a trigger output, perhaps the last time this appeared on a Roland drum machine. You can use it to trigger the arpeggiator on your pre-MIDI synth, or to drive non-MIDI drum machines. A budget machine on its release at £350, the TR626 now commands a second-hand price of £100 or so, making it a bit of a bargain.

## • YAMAHA RX5

Yamaha have never had the recognition they deserve for their drum machines — certainly none is anywhere near as sought-after as the legendary units produced by Roland (Yamaha are even providing thinly-disguised samples from the TR808 and TR909 in their current instruments — and don't forget that the Analogue Kit in the General MIDI sound set is essentially a TR808!). This is not to say that all of Yamaha's drum machines are unsung classics, but the flagship of the RX range, the RX5, is definitely worth a little reassessment, especially given the fact that it was spotted recently in the *SOS* Readers' Ads for the exceedingly silly price of £100. A more realistic price would be in the vicinity of £200.

On its launch in mid-1987, the sample-based RX5 cost an amazing £999 — though reviewers of the

time seemed to think that this was quite reasonable for the facilities on offer. It's possible to see why — for a start, how about 12 individual outputs, all sounds tuneable over a five-octave range (two octaves up, three down), a 6-parameter envelope generator, pitch bend, reversible sounds, and a selection of non-percussive samples including electric bass, DX Orchestra, DX Marimba and DX Clavinet. This set of samples assumes increased significance when you realise that the RX5 has a so-called 'Multi Voice' function which allows you to have 12 'copies' of any one sound assigned to the top row of 12 pads and given their own parameters. In practice, this function would allow you to play tunes with RX5 sounds, and make better use of the Latin percussion on board. Note also the inclusion of good tape sync facilities.

There is a disadvantage, though: the RX features a mere 24 internal sounds. Fortunately, the comprehensive sound-shaping facilities on board, and waveform cartridges containing 28 sounds each go some way towards mitigating this limitation. Note that one of these cartridges was supplied with the RX5, so ensure that it is present if you buy second-hand. Be aware also that programming may not be intuitive for those brought up on Roland-style drum machines.

## SAMPLERS

### • CASIO FZ1

Criticised for its difficult operating system when first launched, the FZ1 remains popular due to the long sample time offered even by the unexpanded version. At its top sample rate of 36kHz, 14.5 seconds of sample time is available, increasing to

### CASIO FZ1

Sample Time: 14.5 seconds at 36kHz, 58 seconds at 9kHz.  
Sample Rates: 9kHz, 18kHz, 36kHz.  
Polyphony: 8-voice.  
Multitimbrality: 8-part.  
Keyboard: 61-note, velocity- and aftertouch-sensitive.  
Outputs: 8.  
Target Price: £500 (FZ10M £650-700; FZ20M £700).  
SOS Reviews: FZ1 June 1987; FZ20M August 1989.

a whopping 58 seconds at 9kHz. The optional RAM board doubles these figures. This 16-bit machine features comprehensive synth-style editing features, plus the so-called Wave Synthesis feature, which allows you to create your own digital waveforms from scratch or from a selection of preset Waves. An early association with Steve Reich gave the FZ1 a certain credibility, and the long sample time, coupled with 16-bit quality and vast quantities of library disks, makes either the FZ1 or its two modular counterparts (the FZ10M and FZ20M) worth consideration.

### • ENSONIQ MIRAGE

It's become a bit of a music industry cliché, but the Mirage was really a bit of a marvel. Fairlight may

### YAMAHA RX5

Pads: 24.  
Outputs: 12 plus stereo output.  
Sounds: 24 plus further 28 with supplied cartridge.  
Internal sounds: Bass Drum 1 & 2; Snare 1 & 2; Rim Shot 1 & 2; Toms 1-4; Electric Toms 1-4; Hi Hat (Open & Closed); Ride Cymbal Edge; Ride Cymbal Bell; Chinese Cymbal; Crash; Tambourine; Claps; Shaker; Cowbell. Supplied cartridge sounds: Bass Drum 3; Snare 3; Conga Hi Mute, Hi Open & Low; Bongo Hi & Low; Timbale Hi & Low; Agogo Hi & Low; Castanet; Whistle; Tympani; Cuica; Glass Crash; Gunshot; FM Percussion 1-3; Electric Bass Hi & Low; DX Orchestra; DX Marimba; DX Clavinet; Hey, Wow and Ooh sampled vocals.  
Patterns: 100 of up to 99 bars, linkable into 20 songs of up to 999 parts.  
Target Price: £200.  
SOS Review: April 1987.



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prefer), reverb or chorus and RAM sample triggering. No other software/hardware combination gives you this much power, yet in terms of cost per track, no other hard disk recording system comes close to matching its price.

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analysis, stereo coherence and level metering.

Version 3.0 of Steinberg's Avalon will allow high-speed sample transfers via SCSI-2 between your sampler & the Falcon MKII for visual editing, looping and DSP processing.

Of course, Steinberg are not the only company whose software runs on the Falcon MKII. Because it is fully compatible with the Atari Falcon and also run hundreds of ST programs, you will find many other programs you can run. It's just that none of them will get you anywhere near the performance from a C-Lab Falcon MKII that Steinberg's Cubase Audio 16 does. And Cubase Audio will only give you that level of performance on a C-Lab Falcon MK II. The perfect match.

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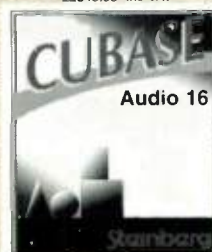
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# Cheap Second-hand Equipment

► have made sampling possible. Emu may have made it affordable, but it was Ensoniq who made sampling *truly* democratic: initially priced at around £1700, and eventually reaching a price of under £1300 (with a module launched at £995), the Mirage really was attainable by the musician in the

basic samples you'll ever need. One irritating feature, though, is the way that the sample RAM is divided into two unjoinable sections (four in the S550's case).

The W30 is also worthy of mention. This was basically an S330 with a keyboard, sequencer, half a megabyte of ROM samples, and an optional SCSI connector for access to CD-ROM or a hard drive. The lack of MIDI Sample Dump Standard compatibility gets the thumbs down, though, and so does the fact that samples made with the W30 have to be converted before they'll load into the S330 or S550. The W30 seems to have retained a certain popularity with DJs, and has consequently retained a fairly high second-hand price.

## SEQUENCING

### • ALESIS MMT8

The MMT8 came relatively early in Alesis' master plan for studio domination, released in 1988 as a partner for the HR16 drum machine. It's a simple-to-use, yet powerful sequencer, whose lack of on-board storage is one of its few real failings. Most notable is its extremely friendly method of programming, which gives each of the eight tracks its own button, thereby allowing real-time track muting and unmute for spontaneous mixing. In addition, each track is capable of recording all 16 MIDI channels, enabling very sophisticated sequences to be built up. Up to 16 channels of MIDI data can also be bounced down onto one MMT8 track, giving you the potential for a total of eight alternative mixes, if you like, at the touch of a button. This friendliness (especially for the non-music-literate musician) is further underlined by the fact that the MMT8 works in terms of beats rather than time signatures and bars.

Yet another notable bonus is the inclusion of on-board tape sync connections, complete with MIDI Song Position Pointer compatibility, saving you the cost of an external device. At prices as low as £80, this *has* to be the cheapest well-specified hardware sequencer around.

### ALESIS MMT8

Tracks: 8 although tracks are multi-MIDI channel.  
Note Capacity: 11,000  
Resolution: 96ppqn.  
Storage: Tape, System Exclusive.  
Target price: £80-100.  
SOS Review: January 1988.

### • ROLAND MC500

The first of Roland's modern generation of Microcomposers provided the musician with a powerful, flexible and easy-to-use compositional tool, including an on-board floppy disk drive, informative display, two MIDI outputs (for 32-channel operation), a built-in Smart FSK tape synchroniser, and software expandability. This last point means that various enhancements could be, and were, introduced to improve the MC500's performance — for example, the MRB500 bulk

## ENSONIQ MIRAGE

Sample Time: 4.4 seconds at 33kHz to a maximum of 13 seconds at lower sample rates.  
Sample Rates: 10kHz-33kHz; early machines have an expansion slot for a 50kHz sampling cartridge.  
Polyphony: 8-voice.  
Multitimbrality: Up to 8-way keyboard splits possible.  
Keyboard: 61-note, velocity- and aftertouch-sensitive on later models.  
Outputs: Stereo.  
Target Price: £300.  
SOS Review: March 1986.



street (or bedroom). The Mirage's sampling time is not huge, and quality is only 8-bit, but a number of points make Ensoniq's machine viable today: its cheap, excellent third-party support means it has a large sound library, and, most importantly, it uses 3.5-inch floppy disks — you may recall that certain 'budget' Japanese samplers of a similar vintage saved samples to 2.8-inch 'Quick Disks' — a short-lived format that was rather inefficient in data storage terms.

The Mirage is a sampler with a history, and was the recipient of numerous hardware and software enhancements. Make sure that you buy one with MASOS (Mirage Advanced Operating System), which provides you with a better selection of editing features (including sample reversal and digital mixing). You might prefer a later machine with stereo outputs as well: very early machines had only one. Note that samples can be comprehensively split across the keyboard, although true multitimbrality isn't available as such.

### • ROLAND S330/S550/W30

Until they started releasing the S700 series of 16-bit samplers, Roland were definitely seen as playing second fiddle to Akai. As long-time Roland users, we always thought this a shame. Sure, sample organisation was a bit of a chore on the S330 and S550 (it still is to a certain extent on the 16-bit machines), but it was worth it; being able to use a full-sized monitor and a mouse to edit samples was a revelation, and the sheer musicality of the S330/S550's synth-style editing parameters put either sampler ahead of Akai's machines, in sonic terms at least. Also worth noting is the excellence of the Roland sound library — a truly inspiring collection of orchestral, percussion, ethnic and pop sounds. The S550 (which offers double the S330's sampling time) could be upgraded with a SCSI interface (unlike the S330), and just this machine, plus Roland's library on CD-ROM, could provide all the

## ROLAND S330/S550/W30

Sample Time: 28.8 seconds at 15kHz, 14.4 seconds at 30kHz.  
Sample Rates: 15kHz/30kHz.  
Polyphony: 16-note.  
Multitimbrality: 8-part.  
Keyboard: None (61-note, velocity- and aftertouch-sensitive for W30).  
Outputs: 8.  
Target Price: £300; S550 £450; W30 £650.  
SOS Reviews: S330 and S550 June 1988.



## ROLAND MC500



Tracks: 4 plus tempo track, although tracks are multi-MIDI channel.  
Note Capacity: 30,000.  
Resolution: 96ppqn.  
Storage: Floppy disk.  
Target Price: £175-200.  
SOS Review: MC500 August 1986; MC500 Mk II Oct 88.

librarian, and the Super MRC system software, which doubled the number of sequence

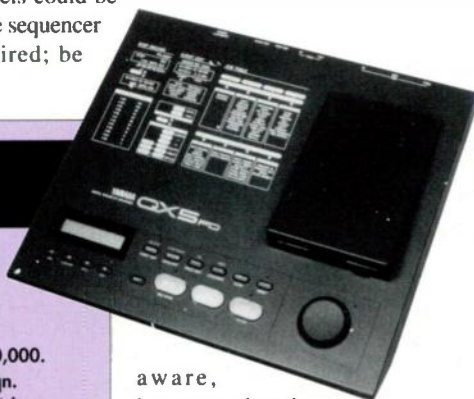
tracks to eight. Roland even produced an MC500 conversion kit to upgrade it to MC500 MkII status. Amazingly enough, the MC500 retailed at £999 on release in 1986 — contrast that with a more up-to-date and powerful MC50 MkII recently spotted at retailers for around £550. However, the MC500 can be had for a rather more reasonable £175 or so on the second-hand market.

### • YAMAHA QX5FD

Yamaha have produced more than their fair share of hardware sequencers, although they seem not to be pursuing this market at the moment. But that leaves us with no end of QX-prefixed machines, the most immediately useful of which must be the QX5FD. This was much more sophisticated than the host of cheaper QXs, and even offered facilities not found on the QX1 (which was originally much more expensive). In common with the MMT8 and MC500, the QX5FD allows you to record on all 16 MIDI channels at once, and all 16 channels could be bounced onto one sequencer track, if so desired; be

## YAMAHA QX5FD

Tracks: 8, though tracks are multi-MIDI channel.  
Note Capacity: 20,000.  
Resolution: 96ppqn.  
Storage: Floppy disk.  
Target Price: £125-150.  
SOS Review: FD-less QX5 reviewed December 1986.



aware, however, that the QX5FD allows a maximum of 32 notes to be played at a time. Yamaha's editing system — based around a collection of Jobs — is

not quite as immediate as that available on Roland's MC series, but it's still perfectly logical. Similar features are still found on the sequencers of Yamaha's more up-to-date workstation synths, such as the SY85. FSK tape sync facilities are also featured on Yamaha's machine. Don't be tempted by an FD-less QX5 — unless it's very cheap.

### AND, AS ALWAYS...

Don't buy it if you haven't heard it! But do stay open to sounds and instruments that don't fit in with what's currently trendy. A willingness to use less obvious sound sources in your music could result in you creating the next TR909-style vogue...

SOS

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# Terraforming Replicants

*A relative newcomer to the UK electronic music scene, Andy Pickford is giving the likes of Mark Shreeve, Ian Boddy, and John Dyson a run for their money.*

**JONATHAN MILLER**  
*witnesses the new kid on the block in action at Derby Cathedral.*



## ANDY PICKFORD

**T**he City of Derby is inextricably rich in railway history — it was Midland Railway's headquarters after all. Not exactly 'Grand Music Central', yet Saturday, 8 April 1995 saw 29 year-old Andy Pickford launching his new 'contemporary instrumental electronic music' album, *Maelstrom*, with an ambitious concert at Derby Cathedral. This event was well attended by over 400 people, attracting television coverage and a certain newly-appointed *SOS* representative to boot.

Fortunately, deconsecration of the building was avoided, unlike Tangerine Dream's notorious Rheims Cathedral show in 1974, where some 6,000 people crammed into a 2,000 capacity venue with dire consequences. Pope Paul VI issued a decree banning the Tangs from playing any more Catholic cathedrals and even went as far as having Rheims purified. Needless to say, I'm happy to report that Derby Cathedral's public conveniences coped magnificently on the day!

### ONE MAN AND HIS MUSIC

So, who is this Andy Pickford bloke? Well, the long and winding road to 'musical success' began at the tender age of four with ominous signs of affinity for the keyboard, courtesy of his grandmother's piano. An interest in electronic music blossomed upon hearing it on the radio —

an admittedly rare occurrence these days, although BBC Radio Derby presenter Ashley Franklin is attempting to rectify this situation with *Soundscapes*. Britain's first and only radio show devoted to electronic music, which helps explain Andy's unusual choice of venue. Aged six, his first record purchase was 'Popcorn' by Hot Butter, an early '70s novelty electro-pop hit. Thereafter, he spent the remainder of his early childhood attempting to goad strange noises out of a Yamaha organ.

A yearning for a 'proper' synthesizer was finally realised in 1981 when Andy's long-suffering parent's traded in the organ and coughed up the necessary cash difference. Armed with a solitary Korg MS20 monosynth, Andy immediately set about creating his own music, using a tape recorder and cassette deck to layer sounds in time-honoured, pre-MIDI fashion. The shortcomings of this crude system soon became apparent, necessitating the dreaded job syndrome to expand the set-up. Andy promptly worked his way through several different synthesizers, before settling on one sounding "weird" enough.

After a false start in 1983, under the somewhat dubious pseudonym of Kris McKuen (whose *Linear Functions* cassette album made 'tape of the month' status in two leading keyboard magazines of the day), financial constraints forced Andy to curtail his musical activities. He took up traditional songwriting in the meantime, accumulating around 400 songs — prolificacy springs to mind here. ►



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# Andy Pickford

## SAYONARA

Andy resumed his synthesized love affair in Autumn 1992 and sent a demo of his work to Ashley Franklin at BBC Radio Derby, who promptly broadcast some tracks on his show. As luck would have it, local businessman Terry Musk tuned in and decided to sponsor this new talent. His generous backing enabled Andy to bring his material up to scratch and, more significantly, give up his day job to become a full-time musician. Perhaps this helps explain the speed at which Andy caught up with his established UK counterparts.

Work on *Replicant* began in earnest in early 1993. This album is dedicated to artist Ian Mullis, responsible for the *Linear Functions* album sleeve, who, upon hearing the original version of 'Sayonara', commented that it reminded him of his favourite sci-fi movie — hence the album's grandiose concept of Andy Pickford's Psyborg Project. This is reflected in its artwork, track titles like 'Questions' and, to a certain extent, the music itself — Ashley Franklin later wrote, "'Sayonara' could be a lost Vangelis score to an epic, romantic movie."

The motion picture in question is, of course, *Blade Runner*, Ridley Scott's compelling vision of a bleak and not too distant future. Sadly, Ian Mullis died shortly after the release of *Linear Functions*, prompting Andy to write in *Replicant*'s sleeve notes, "I share many of Ian's sentiments for the sci-fi movie genre, and I hope that my album is 'epic' enough for him."



Photo: Jason Hopkins

## I THINK THEREFORE I AMBIENT

Upon hearing the finished result, Dave Shoesmith (proprietor of C & D Compact Disc Services of Dundee, a specialist importer/distributor of electronic music) signed Andy to his newly-formed Centaur Discs label and *Replicant* quickly became Compact Disc Services' fastest selling synth album ever.

During the obligatory after-show reception at Derby's European Inn, Dave proudly stated that musically Andy has 'something' which appeals, as evidenced by selling 1,000 copies of his second album *Terraformer* within a week of release. He also admitted that two General Productions Records' 12-inch/CD singles of 1994, "got Andy an ambient audience that maybe otherwise wouldn't have been there."

Andy recalls the situation: "GPR would describe themselves as a sort of ambient label, along with Warp Records to a lesser extent. The guy behind them is a very high energy sort of chap — he's good at promoting this stuff, but there's an awful lot of people on one small label, each selling a relatively small amount. The idea, I think, is that if any of the acts on the label take off, then the label would pool their resources behind that artist. At the time, that wasn't me, although I did obtain some Radio One airplay, thanks to John Peel and Annie Nightingale."

The 'Darklands' and 'Apocalypse Of Love' singles were in a different style to their original album versions: "They were remixed by a chap called Beaumont Hannant into a format which GPR describe as 'ambient'," Andy explains, "but I think he's got a style of his own. I did appreciate it a great deal and could see what he was trying to do by changing the music, sometimes beyond recognition. It gave it the necessary push that was required for that label, but contracts have now been amicably terminated."

Andy once told me that he was planning to retire from the 'traditional' electronic music scene in favour of a more ambient-orientated style. However, judging from *Maelstrom*, this idea appears to have been abandoned.

"Quite frankly, I'd have performed rhythm and

## ANDY PICKFORD LIVE

Andy Pickford's evening performance at Derby Cathedral was appropriately introduced by BBC Radio Derby's Ashley Franklin literally preaching the virtues of electronic music from the lectern — a nice touch.

In the event, the show was a mixture of new compositions and old favourites, divided into two sets. The first consisted of the following tracks from his Centaur albums, *Replicant* and *Terraformer*, namely 'Darklands', 'Asgard', 'Twilight In Valhalla', 'Wasted' and 'Sayonara', the latter being wittily introduced by Andy as, "'Sayonara' is Japanese for 'Sounds a bit like Vangelis'!"

This humour owes much to Rick Wakeman and went down well with the audience, with Andy receiving a thunderous reception between each track. In terms of keyboard virtuosity, further parallels can be drawn with the former 'caped wonder', not forgetting the blonde hair.

Many pieces were smoothly segued into the next and, judging from the equipment on stage, the backing was a combination of a DAT recording and live sequencing, courtesy of the Atari ST, as Andy later confirmed.

"There are bits where the computer sequencer

kicks in and takes over in parts of the backing DAT that doesn't have a rhythm. It's a situation where one thing's going when the other isn't, although the DAT machine doesn't stop. It's incredibly complicated to choreograph and I wouldn't recommend anybody trying this at home!"

Andy whetted appetites for the main set of the evening's performance, by playing unaccompanied piano extracts from *Maelstrom*, before breaking for a 15 minute interval. The new album was then performed in its entirety to rapturous applause and the haunting 'Still Waters (Run Deep)' from *Terraformer*, undoubtedly a reflection of Andy's character, made for a contrasting encore after the sheer ferocity of 'Hellgate', replete with pounding drums — very poignant in a cathedral setting! No doubt the building's acoustics added to the cavernous sound.

Overall, the concert was a resounding success. Andy Pickford is living proof that a UK artist residing in the often misconstrued world of electronic music can draw a sizeable audience in their own right, without being part of a festival and the compromises that such events inevitably entail.



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# Andy Pickford

- blues in front of an audience of a dozen people at that time, rather than perform an electronic music concert. I was under a lot of pressure from various sources and wasn't getting a great deal of enjoyment out of the scene. Thankfully I've found it again, with renewed strength and aggression."

## PAST YEARNINGS

I decided to play devil's advocate by asking Andy if he finds it hard to be original in the electronic music field, given that many people argue that it has all been done before, although the same could be said of other music genres: "That's crap!" he retorts. "I suppose the answer is I don't care if I'm original or not. People always come up to me and say, 'That sounds like...', but I *don't* collect electronic music. I don't buy it and I don't listen to it, apart from a few guys who are good friends of mine, whose music

I like. Having said that, there used to be such a buzz going around synthesizer music, and I just picked up on the enthusiasm that was being conveyed through that music. I could actually hear a confidence in it, so I suppose if I'm guilty of yearning back to the past, it's only because I think there was a confidence about the music back then that *can* be recreated now."

## POWER, CORRUPTION, AND LIES

The customary question regarding musical inspiration is obviously a subject close to Andy's heart: "The blues! No, seriously, I'm a bit of a reactionary at heart. I'm political. I don't write music about bloody dolphins, bloody fairies, bloody hobgoblins, bloody stone circles, or whales. There are *no* whales to be found in Derby! This is all 'school of hard knocks' music — somebody pisses me off one day, I go upstairs with the adrenalin flowing and write a piece of music. I *am* afraid to admit it, because electronic music doesn't generally come from the heart, as

such. It comes from the head or the imagination. For me, there may be an ethereal world, but generally things happen in real life."

The instrumental nature of Andy's music, although occasionally interspersed with the odd vocal, leaves it open to interpretation. Given his political orientation, I wondered if he was actively trying to convey a message to his listeners.

"Not necessarily with *Replicant* or *Terraformer*, but with *Maelstrom* I stood up and said it to the audience tonight: *Maelstrom* was composed at the time when I was being rather persecuted for a variety of ideas I had. I stood up for these ideas and the result was *Maelstrom*. I just decided I'd do this music which would hit back and prove a point. I suppose a mainstream recording artist's reply to the question would be 'the music business was getting to me' — the wrong-doings and the corruption."

As for the latest compositions developing from earlier ones, "they've picked up a lot of experience. They're not innocent me, 'Let's do a nice piece of electronic music and thrill a few people.' They're serious. 'I couldn't care less who it impresses, as long as it sounds good to me.' I'm doomed to a lifetime of doing music that sounds nice to me."

## GIG RIG

Andy lives in South Derbyshire and works exclusively from his home studio, which overlooks the Peak District. He gave me a guided tour, in effect, since its entire contents had been transplanted on stage for the evening concert in Derby Cathedral.

"What I've got is a Tascam 688 8-track MID studio; a Roland JD800; a Korg T3EX; a Roland Juno 106; an Akai S900 sampler and only one sound effects unit, which is a Boss SE50. When I've worn out the capacity of any of those, then I'll need something else, but I don't just go out and buy something simply because I want to. ►



## ANDY PICKFORD ON MAELSTROM

The music for *Maelstrom* took me longer to construct than either of my previous albums. It's quite a radical departure from the more commercial track-by-track approach I have previously adopted. Continuity is maintained throughout, with greater attention to detail and the use of recurring themes. The overall impression you will probably get is a much darker, more aggressive feel, while still retaining the fluidity and accessibility of my previous work.

- VOYAGER is a natural choice to open the album. A strongly percussive piece of rigid structure with a solid backdrop, deliberately laced with enough history to whet anyone's appetite!
- CATHEDRAL is the track which provided the inspiration for this concert. The angelic overtones

of the piece may lull you into a false sense of well-being, but with the illegible lyrics, the real meaning is more obscure.

- BLUE WORLD is an optimistic view from a window on a summer's day, as is so much of my material. Is there no end to the ways which one can interpret the same view?
- TETSUO is a disturbing film of the Manga genre, which provided the feel for this mobile, sequence-driven work. The main character is consumed by the high technology around him. An interesting point!
- SYMBIOSIS. Co-dependency. As in the spiritual and material universes, perhaps?
- RAUMFAHRE. Again, a view from a window at a blue world, but this time looking down from outer space.

- OBLIVION. I had a trial in mind for this. A trial of ideas and thoughts rather than for a crime. To be subjected to a trial just for having an idea is itself a crime.
- HELLSGATE. Never mind, I get my own back by subjecting the 'jury' to my own version of judgement day!





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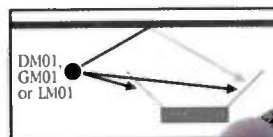
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# Andy Pickford

## ANDY PICKFORD'S GEAR LIST

- Atari 1040ST computer (running C-Lab Notator)
- Boss SE50 multi-effects
- Korg T3EX workstation
- Roland Juno 106 analogue synth
- Roland JD800 digital synth
- Sony DTC-55ES DAT recorder
- Tascam 688 8-track

► I like to almost intimately get to know a piece of equipment, because they are acting as vehicles for my aggression."

Andy also has an Atari 1040ST computer, and given that his compositions can easily be sequenced and recorded direct to DAT, the Tascam 688 has virtually been relegated to a mixing role: "I used to record on it when I did vocals a lot, but I can find ways to get around that on the sampler now. The vocal effects that I do now are sometimes sampled off the multitrack, so I suppose it's main use is to provide a textured sample later. I'm actually going to get one of the new Yamaha ProMix 01 digital mixers — absolutely incredible! They've got everything, all in one 19-inch rack-mounting mixing desk for about £1600 — flying faders, sound effects, full MIDI, the lot!"

## 8 OUT OF 10 ATARI OWNERS PREFER IT

When asked to describe how he composes and records a typical Andy Pickford track, the equipment theme continued: "Just recently I've acquired some very old and basic software — an early version of *Notator* that I'm using on the Atari — but I'll use, improvise, and work on anything. I've got a finished article in my head and can virtually use any old crap to get it. If I had to use a pile of cat's whiskers and a simple old oscillator, I would probably be able to achieve a respectable finished result! I suppose any typical Andy Pickford track revolves around me basically shutting myself away until it's finished, and that can be four o'clock in the morning. There's no let up — a track's got to finish and I won't break until it's done.

## DISCOGRAPHY

Note that the *Linear Functions* cassette album is long since deleted, although the Centaur CDs are readily available from all good record stores. The GPR singles are now very rare, as is a 1994 Pinnacle compilation CD featuring a different version of 'Akira' to *Terraformer*. The 1994 EMMA compilation CD features one Andy Pickford track, 'The Furnace'. 1995's *Voyager* is a private CD-R release, containing different versions of *Maelstrom*, plus unreleased material, "as rare as rocking horse shit", in the words of Mr Pickford himself.

Forthcoming projects for 1995 include a CD of previously unreleased material, live album, another studio album and a possible collaborative project with Ian Boddy, provisionally entitled *Beavis & Butthead* — messrs Boddy and Pickford will also be headlining the 1995 EMMA electronic music festival later this year.

TITLE	LABEL	YEAR
<i>Linear Functions</i>	Pulse Music	1983
<i>Replicant</i>	Centaur Discs	1993
'Darklands'	GPR	1994
<i>Terraformer</i>	Centaur Discs	1994
'Apocalypse Of Love'	GPR	1994
<i>Maelstrom</i>	Centaur Discs	1995

"There's a word I recently picked up on television, from a *Horizon* programme — *synaesthetic*. People who can see colours in front of them when they hear music are synaesthetic. I can see a certain sound that I can equate with a certain feeling or something that I've got. It doesn't matter whether it's the melody, or whatever, it's *that* particular sound which has to be done and usually ends up dominating the track."

## MY GENERATION

Rightly or wrongly, sampling clearly plays a major role in modern music production. Tangerine Dream's founder and mentor, Edgar Froese, recently stated: "Sampling has long overstepped the mark from being helpful to becoming the crutch of helpless musical amateurs."

Andy Pickford's response to this was characteristically damning: "There's a track on their latest album where they've covered a Handel piece, and if that doesn't use extensive samplers, then my arse is gilt — gilt 24-carat gold, and there's a squadron of pigs flying over right now! I've got to say this: Edgar Froese and typically Klaus — any Klaus or any Edgar, no matter who they are in this world — better recognise to which generation they belong, and stay there."

Strong words indeed. Ignoring the 'Floydian' reference, I pointed out that Edgar Froese was obviously partly addressing the legal ethics of sampling, when referring to a lack of 'first generation' musical talent, to which Andy countered: "I've no qualms whatsoever about sampling. I stepped out onto the stage tonight and held up a card in front of the audience, saying, 'Caution: Sampled Vocals', when a whole three or four lines of sampled vocals were coming out of the speakers. There's nothing wrong with it as a form of synthesis that can be manipulated in the same way as any other waveform. As to someone lifting parts off my music, I don't give a toss. I'd take it as a compliment."

## MAN MACHINE

Sampling conundrums aside, it must be said that Andy Pickford coaxes a very professional sound from relatively little gear. Quite simply, he puts many better known electronic artists to shame. It's both his keen ear for melody and infectious repetitive sequences that distinguish him from his contemporaries. Moreover, he also knows when to stop — how many electronic music vinyl albums started promisingly, only to drag on for an entire side?

"All the instruments can join in the sequences. Sequences have always come incredibly easy to me, which is lucky considering this sort of music. I can actually stand up and play a sequence line manually, even a five-note or a seven-note sequence, without losing it, in a 4/4 time signature. I suppose having had some musical training, I can see where the counterpoint needs to step in. So if there are three or four sequences, they're nearly all playing different notes; or if they aren't, they all





blend in anyway."

The evils of quantisation also cropped up in our conversation: "All the rhythm, bass lines, and sequencer lines are composed and quantised very neatly into one rhythmic package. Anything thereafter, like the chords and the solos, are untouched. I'd take hours just editing notes out, if I need to, but I won't quantise a solo or an accompaniment, because that needs to be free-flowing for me."

### CARRY ON UP THE CHARTS

By virtue of its nature, electronic music is often perceived as a static affair. It's that age-old chestnut, publicity — or lack of it, to be precise. Michel Huygen, Spain's leading exponent of electronic music, hit the nail on the head, stating in *SOS* June 1993: "Promotion is a really basic thing. If people don't know that a record exists, then they will not buy it."

Andy has his own views: "It's a 'scene' problem, not an individual problem. I think there are individuals in the electronic music scene who if they could but try, like myself, to take an aside from the 'scene', then it wouldn't be static. They'd show a desire to progressively get themselves publicised. The scene is a little amateur, because it is the mainstay of a lot of highly respected amateur musicians... but amateur they are. As such, it's a bind on one or two of the professionals who want to go out and earn a living.

"Tonight's show proved that one guy, namely Bob Paige, who, in promoting this gig from his hospital bed, managed to get very substantial articles in all of the local and some of the larger regional newspapers. He got it mentioned on *Midlands Today*, on BBC television, and commercial radio airplay, all by 'phoning around. It showed that this sort of music is 'publicisable' and people will turn up to hear it."

At the time of writing, the fact that Vangelis has the number one single and album in both Germany and Switzerland highlights Andy's sentiments — never underestimate the power of the media. Vangelis has major record company support, but more importantly, he has the ability to knock out a good tune — a talent which cannot be bought. Andy Pickford's not a bad tunesmith himself, so there's still hope for those with electronic music aspirations.

**SOS**

### FURTHER INFORMATION

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**Following their flagship  
drumKAT MIDI  
percussion controller,  
KAT Inc have released  
the new trapKAT,  
designed with 'real'  
drummers in mind as  
well as rhythmically-  
minded MIDI musicians.  
PAUL WHITE gets that  
groovy feline...**

**D**rum trigger pads are nothing new — they were first forced into the mainstream of musical consciousness by UK designer Dave Simmons — but when it comes to programming percussion parts into a sequencer, you'd probably rather use something more compact than a full-size drum kit laden with triggers. Of course, compact percussion controllers are hardly undiscovered territory either — the aforementioned Simmons developed his own portable kit, Roland built the Octapad series of instruments and controllers, and ddrum refined the individual pad approach. Relatively recently, KAT Inc joined the list of MIDI percussion controller manufacturers by bringing out their drumKAT, which is now available featuring version 3.5

sensors on KAT's existing poleKAT MIDI trigger stick). These rim sensors are useful for triggering cymbal and general percussion sounds, though you can assign any MIDI note to any pad. In fact, you can store 24 complete kit assignments, and a further 24 preset GM kits are provided, so that anyone with a suitable GM module can hit the ground running. A small, two-line, 16-character LCD window at the top centre of the panel provides kit information, as well as more detailed information while editing. The editing functions are currently fairly basic, although there's promise of a future upgrade to add more sophisticated functions, possibly later this year. If KAT have done one thing with their products, they've avoided the 'buy it today, scrap it tomorrow' mentality — everything they've built has been upgradeable, and even early drumKATs can be brought up to the latest version 3.5 spec.

Power from the unit comes from a very small mains adaptor, which plugs in at the rear of the case. The socket is threaded so that the connector can be locked, but on the review model,

# KAT

## trapKAT MIDI PERCUSSION CONTROLLER

# KIT

operating software. Visit any music trade show and you're sure to see rows of drummers, clamped into their headphones and clattering away at drumKATs like demented knitting machines.

The drumKAT 3.5 is still KAT's flagship product as far as programmability goes (see the brief 'Further Hitting' box on the drumKAT for a little more about this), but if you're more interested in a natural playing surface, lots of pads and a simple operating system, then the new trapKAT (under review here) should certainly appeal to you.

the power supply provided didn't have a locking plug, and was actually quite a loose fit. Hopefully, this will be rectified, as it could cause problems in a live situation.

### trapKAT PEDIGREE

The trapKAT provides a much larger playing area than most all-in-one pad systems, and its 'tailplane' shape measures over 42 inches across and 19 inches from front to back; but it is just 2.5 inches thick. This larger size came about as a response to those drummers who felt cramped by compact pad systems, but even so, the trapKAT is a lot easier to transport and set up than a conventional drum kit. Drummers also traditionally complain about the feel of drum pads, so the guys at KAT (many of whom are drummers themselves) paid a lot of attention to getting the feel of the pads right. The trapKAT employs the same gum rubber playing surface as used on the drumKAT, which gives a realistic amount of stick bounce and seems very durable. In addition, the trapKAT's 24 pads are about twice the thickness of those on the drumKAT, and this improves the playing feel still further. The pads also come in a marbled finish, rather than the plain grey used on the drumKAT. If 24 pads seems a lot to cram onto an area no larger than two or three conventional toms, the secret is that 14 of the pads are configured as raised rim-type sensors around the edge of the main playing area (not unlike the

### KAT CHAT

As with the other KAT drum pad products, the trapKAT converts your playing to MIDI information, which must be fed to an external sound module. There are no internal sounds, though there are on-board grooves, which can be played through any General MIDI module, over a range of tempos, to give you something to practise against — rather like the auto-accompaniment found on home keyboards. A new tempo can be set simply by tapping in a new tempo on one of the rim pads. Though these grooves are unlikely to inspire you to write a hit album, they are very welcome when there's nobody else around to rehearse with.

Unless you are happy to play your bass drum parts with a stick, you'll also need a bass pedal of some kind, and though KAT do build their own superbly-engineered beaterless pedals (as well as pads for use with your own kick drum pedals), they're quite expensive. In a forthcoming SOS, I'll be showing you how to construct a DIY bass drum pad that works with a conventional bass drum pedal, and which anyone can build in an evening for under a fiver. This DIY setup works fine with my drumKAT, and has a more natural feel than a

### TRAPKAT £1449

#### PROS

- Great playing feel.
- Easy to use.
- Absolutely no crosstalk between pads.

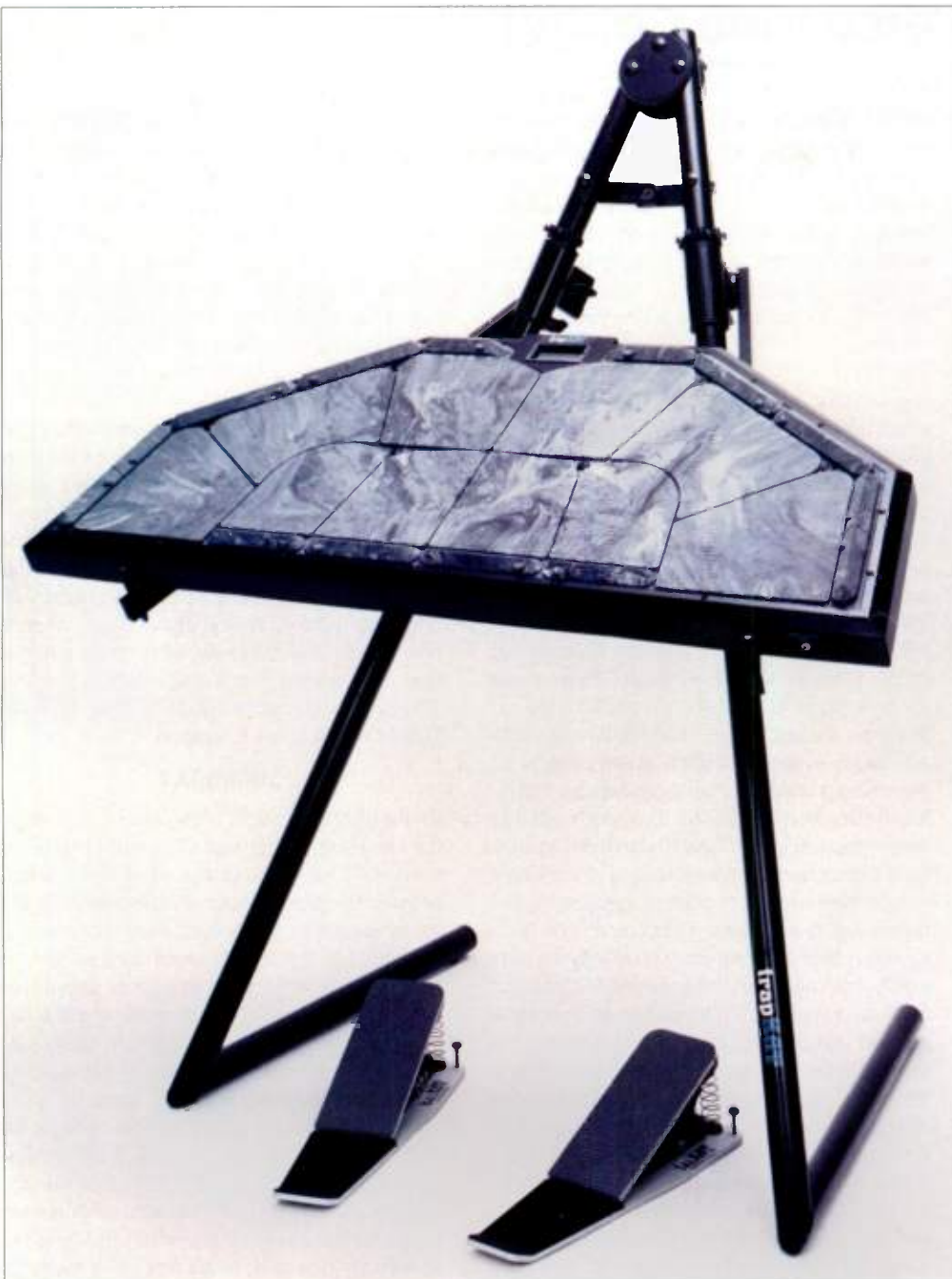
#### CONS

- Not enough external trigger inputs.
- KAT's own pedals are expensive.

#### SUMMARY

An excellent MIDI pad system for both live and studio applications, which will be especially appreciated by those who want a realistic feel and response.





## FURTHER HITTING: THE drumKAT

If you're a percussionist who's prepared to experiment, the original drumKAT could still be of interest to you, as it offers greater programmability than the trapKAT. On the drumKAT, you can have up to eight notes triggered from one pad, either as velocity splits, random sequences or programmed sequences. There are special hi-hat modes to simulate the expression of a real hi-hat, and nine external trigger inputs, which allow you to add just about any type of drum pad to the drumKAT's own 10 playing surfaces. You can use breath control, and the pressure-sensitive pads may even be used to generate MIDI control information, such as pitch bend.

beaterless pedal — so stay tuned!

The hi-hats can be played from any of the pads, but you still need a pedal to open and close your virtual hi-hat. Again, KAT build their own very sophisticated hatKAT pedal, but you can get by with a simple non-latching footswitch or a passive volume pedal.

### YOUR KAT AND MIDI

Unlike the drumKAT, the trapKAT can only handle one MIDI note per pad, so if you want to do any fancy velocity cross-switching or crossfading, you have to take care of it in your sound module or sampler. However, the pads are all fully velocity-sensitive, and can be individually 'trained' to match your playing style. You also get a breath controller, and although this might seem odd for a drum kit, it does allow you to apply MIDI controller information without using up any valuable hands or feet, and may also be used to apply effects like pitch bend to those drum machines or modules that respond to it.

A footswitch is supplied with the trapKAT, and this is used to get you into kit select mode; it's also used in three different sockets (or you could buy more footswitches) when editing Note, Kit/Pad or Global parameters. As you may have noticed, the trapKAT has absolutely no buttons or knobs — the pads themselves are used as programming

## PAWS FOR THOUGHT: KAT PAD TECHNOLOGY

To survive in any market, you either have to undercut everyone else's prices or offer something your competitors don't. KAT fall into the latter category, though their products aren't unduly expensive once you discover what's on offer. KAT's first contribution to the drum pad market was to employ Force-Sensing Resistors (or FSRs) instead of piezo-electric pickups. Systems based on piezo pickups are cheap and easy to make, but because they work almost like contact microphones,

vibration from one drum pad can cause triggering in an adjacent pad, and all kinds of convoluted crosstalk compensation circuitry is used to try to cure the problem. FSRs, on the other hand, respond only to physical pressure, so if you're not actually hitting a pad, it won't trigger. Another major benefit of FSR technology is that the pickup sensor is in the form of a film which can be made as wide as the drum pad, so you don't get any dead patches or lack of sensitivity around the edges.



# trapKAT MIDI Percussion Controller

- buttons, and in kit select mode, you just hit any one of the 24 pads to select one of 24 programmed drum kit assignments, though you do have to go into Global edit mode (see below) to switch between factory and user kits. By plugging the footswitch into the Note Edit input, you can step through the available sounds on each pad by just hitting it until you arrive at the one you want.

## EDITING

The first layer of editing is the Global edit mode, which uses each pad to step through or switch the available functions on and off. Kit/Pad edit also uses the pads to input data, though this time six of the pads are unused (see the separate box for a list of the Global and Kit/Pad edit features). The primary pad edit function names and pad numbers are embossed on the rubber pads, but in reality, these are almost impossible to read, even in good lighting, which means you have to rely on the paper map supplied with the kit. I have the same problem with my own drumKAT, but with the trapKAT, the fact that there are over twice as many pads means there are more to remember. If you're always using the kit, everything quickly becomes second nature, but as I found out with my drumKAT, if you don't edit it for six months, you almost have to start learning again from scratch the next time you want to work on it.

I did have a moment of panic, because the first review unit to be delivered just couldn't be made to work. I tried a second unit with exactly the same result, and knew that there was no MIDI output, because my trusty Studiomaster MIDI analyser showed that precisely zilch was happening. I use this analyser for every MIDI product review, because it helps me confirm what's going on, but after swapping MIDI leads and all the usual stuff, I eventually tried removing the MIDI analyser — and the trapKAT started working perfectly. The analyser has worked with every other piece of MIDI gear it's ever been plugged into, and I double-checked that it was still working by plugging it into other parts of my system with no problem. I've reported this problem back to the UK distributor of KAT, but as yet, both they and I remain without a clue as to why this happens.

## IN USE

One great thing about the trapKAT is that it's a big, solid beast — it certainly isn't going to wobble when you hit it. On the other hand, you do have to budget for a substantial stand. The new, thicker pads feel even better than those on the drumKAT, and the degree of dynamic response, while still not equalling that of a real drum, is a great improvement over most of the electronic alternatives. I also like the large pads — you don't need to be such a good shot! Like the drumKAT, the playing area is covered by a single rubber playing surface with narrow moulded grooves separating the sections, which means the sections are easy to identify, and there's no paint to wear off.

Having raised rim-type triggers around the edge of the kit really helps increase the effective size of the

playing surface without making anything feel cramped, but I think most players will configure their hi-hat pads so that they don't have to play cross-handed. My preference when using my drumKAT is to use a poleKAT external trigger mounted on a stand as a hi-hat trigger, but sadly, one of the trapKAT's economies is that there are no external trigger inputs other than for the bass drum pedal.

Obviously, I can't tell you what the trapKAT sounds like, because it doesn't produce any sound of its own, but connected to an Alesis D4 drum module, the fact that you're playing the sounds rather than programming them really seems to make them come alive. It's also nice being able to select a 'chick' sound for the hi-hat closing effect, which is then triggered whenever you press the hi-hat footswitch. If you have a HatKAT pedal and a drum machine that responds to continuous controller information, it's possible to make your hi-hat sounds change in decay time as you close the pedal, which adds a further degree of realism. Drum machines that can take advantage of this feature include the Roland TD7 and TD5, as well as Emu's ProCussion.

## SUMMARY

For the gigging drummer or for use in studios where the extra size of the trapKAT is not a problem, I think KAT have found the ideal compromise between the drum-like layout of discrete pads, and the far greater convenience of an all-in-one surface connected to the outside world via a single MIDI lead. Even the fussiest drummer should be impressed by the feel of the pads, and the fact that you have 24 of the things should satisfy even those double bass drum users who like to surround themselves with gongs and percussion.

My criticisms are few, but even so, I have to say that I still don't feel entirely comfortable programming by hitting pads rather than pressing buttons. Having said that, I've seen real drummers programme the original drumKATs nearly as fast as they can play rolls, so it's really all a matter of familiarity. I'm also a little worried by the non-locking PSU connector on the review model, and I'd have been much happier if the unit had been directly mains-powered. The final whinge is that a poleKAT input or two would have been nice, purely from an ergonomic point of view, but then that might be one of the future upgrades.

All in all, this product is a real winner. If you don't need the very advanced features of the drumKAT, but you still need an all-in-one drummer-to-MIDI interface, then the trapKAT is the obvious choice. Play a break, get a KAT kit!

**SOS**

## FURTHER INFORMATION

£ trapKAT £1449; drumKAT v3.5 £1099; poleKAT trigger stick £162; hatKAT hi-hat pedal £285; fatKAT bass drum pedal £245; kickKAT bass pedal pad £200. Prices include VAT.

A Omec Limited, 21 Denmark St, London WC2H 8NE.

T 0171 240 8292.

F 0171 240 8112.

## EDITING FEATURES

### GLOBAL EDIT (ALL 24 PADS USED)

- Reinitialise.
- GM MIDI note names On/Off.
- Train hi-hat pedal.
- Bass trigger gain.
- Beeper On/Off.
- Display viewing angle.
- Select breath function.
- Train breath control.
- Global data dump.
- One kit data dump.
- Foot control assign.
- Splash adjust.
- Record program change channel.
- Cymbal choke enable.
- Groove volume.
- All memory data dump.
- User/Factory kits.
- User kits groove enable.
- Memory protect.
- Merge On/Off.
- Pad train.
- Pad threshold.
- Pad low dynamic.
- Pad high dynamic.

### KIT/PAD EDIT (18 PADS USED)

- Kit copy 'to' kit.
- Perform kit copy.
- All notes off.
- Pad gate time.
- Kit hi-hat select.
- Kit splash note.
- Kit program channel.
- Kit program change value.
- Kit volume.
- Kit gate time.
- Kit channel.
- Kit minimum velocity.
- Kit maximum velocity.
- Kit velocity curve.
- Pad channel.
- Pad minimum velocity.
- Pad maximum velocity.
- Pad velocity curve.



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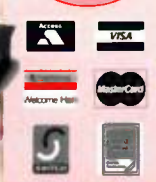
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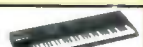


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# NO NOISE IS GOOD

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## SOUNDPROOFING TIPS FOR THE HOME STUDIO

*Not everyone can justify building an acoustically treated, soundproof studio, but with a little effort and ingenuity, you can often make significant improvements to the room you already have at very little cost.*

**PAUL WHITE** presents  
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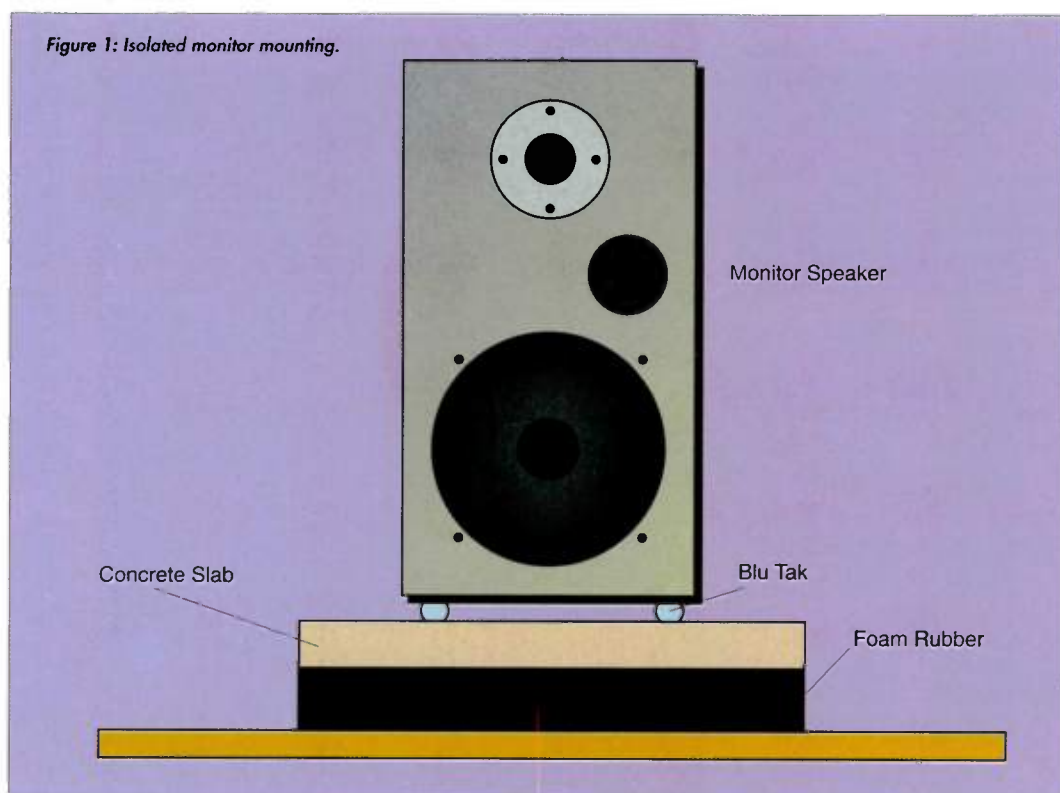
Here at SOS, we receive a great number of readers' queries — by letter, by e-mail, and by phone — and one recurring theme is that of soundproofing and acoustic treatment. About a year ago, we ran a full series on studio construction, but if you don't have a separate room to use as a studio, or if you're living in rented accommodation, you may not be in a position to build a dedicated studio. In fact, it seems that many of you are working in a bedroom or in an untreated spare room, and what you're after is a few tips on how to cut down on noise leakage, while at the same time improve the monitoring acoustics.

I have to come clean at the outset and admit that there's no cheap and cheerful way to soundproof a room. The techniques I'll be talking about here can make a significant improvement, but there's no way you're going to be able to contain the sound of a drum kit or a serious studio monitor system turned up full bore. Anything short of a custom designed studio is a compromise, and if you're working in a typical domestic room, this means taking measures to reduce the amount of noise you actually produce as well as trying to reduce the amount of noise that leaks out.

Most home recording setups are based around MIDI systems and DI'd instruments, so most of the sound you generate will come from your monitor speakers. It's also true that floors and ceilings tend to be less solidly built than walls, and you'll find that most of your sound leakage occurs via floors, ceilings, windows, and doors. Partition walls may also leak sound badly, but unless you're prepared to build a heavy, false wall in front of the existing one, any improvements in this area can only be minor.

Since the monitor speakers are the source of the sound you're trying to contain, it makes sense to start with them. Obviously speakers are designed to launch sound into the air, but what with action and

Figure 1: Isolated monitor mounting.





reaction being equal and opposite, every time the speaker cone moves, so does the speaker cabinet. Though small, this vibrational movement can be transmitted through the speaker stand (shelf, dressing table top or whatever) into the floor or wall, and once you have a vibration in the structure of the building, you have the potential for sound to leak into adjoining rooms.

### BAD VIBRATIONS

There are several things you can do to minimise this problem. Firstly, don't use speakers with a massive bass response, because low frequencies are the hardest to contain in a small or untreated room. Bass frequencies behave very unpredictably, so by choosing a speaker with a more modest bass response, you'll actually end up with a more accurate sound as well as reducing the amount of bass thumping through neighbouring walls.

*"These techniques can make a significant improvement, but there's no way you're going to be able to contain the sound of a drum kit or a serious studio monitor system turned up full bore."*

Secondly, set up your monitors so you're working in the nearfield — in other words, with the monitors around one metre away from you and just a little more than that apart. Because sound intensity works according to the inverse square law (a fancy mathematical term for something being louder when you're closer to it!), the closer you are to your monitors, the less power you need to hear the same sound level. A further advantage of working in the nearfield is that you hear more of the direct sound from the speakers and less of the sound reflected from the walls and objects in the room, so you gain an increase in accuracy without actually doing anything at all to the room.

That still doesn't address the problem of structurally-borne vibration, so what's needed here is some way of isolating the loudspeakers from the surfaces on which they normally stand. At one time, I recommended standing the speaker cabs on a piece of 50mm foam rubber, and I notice that Studiospares [Tel: 0171 482 1692] are now selling foam pads specifically designed for this purpose. The isolation could be improved even further by placing a small concrete slab (an excuse for visiting your local garden centre, if you're into that) on top of the foam and then standing the speaker on four lumps of Blu-Tac on top of the slab (as shown in Figure 1).

Even with nearfield monitors, a significant amount of low frequency energy is still generated, and this is radiated in all directions — not just in the direction in which the speaker is pointing. That being the case, if you're worried about sound passing through a wall into the adjoining room, it's best to position the speakers as far away from that wall as possible.

### SOUND ABSORPTION

Earlier on, I commented on the fact that sound tends to leak through ceilings and floors. Unless you want to get into major structural redesign, the best method to combat this is to fit thick, hair underfelt (the brown matted stuff, not foam rubber) underneath the carpet in your studio room (and beneath the carpet in the room above, if there is one). The combined weight and thickness of the carpet and underfelt provides both absorption and damping, so buy the heaviest grade possible. Also avoid tapping your feet to the music

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# Soundproofing Tips

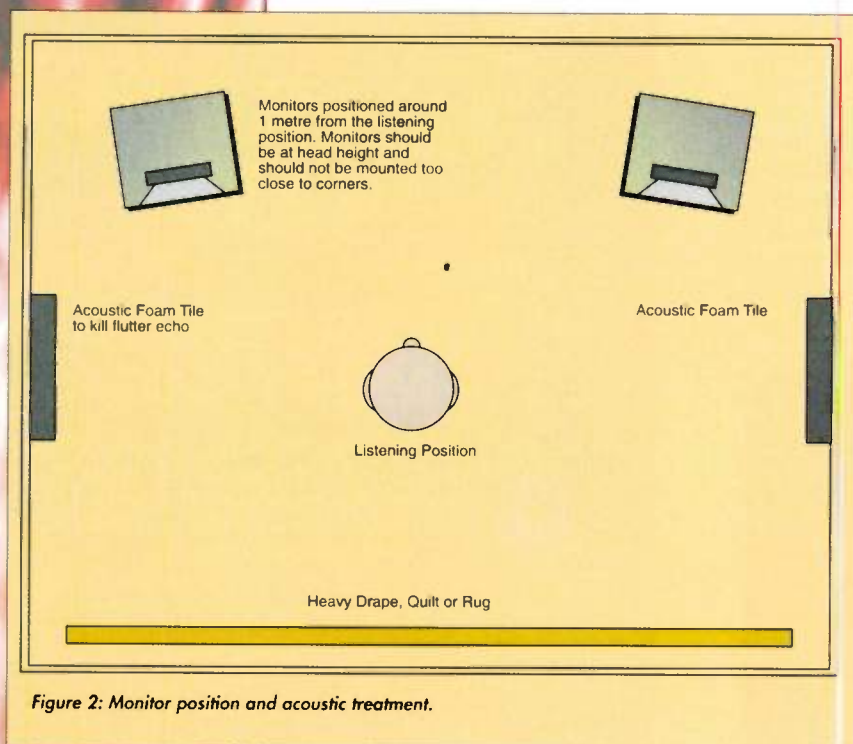


Figure 2: Monitor position and acoustic treatment.

- (yes, I know it's hard, but try) as this is often more annoying to the people below than the sound of your monitors!

If your room is fitted with plenty of soft furniture, you probably won't suffer any serious acoustic problems; but if you've had to clear out a lot of the furniture to make room for your equipment, you might find the room just a bit too live. The tradition studio solution is either to cover the walls with rockwool or hang heavy, pleated, velvet drapes along the back wall, but you can achieve similar results by hanging up an ordinary quilt on the wall facing your monitors. Another option is to buy two or three rag rugs (very cheap and immensely fashionable) and then hang these on the back wall, so that they are a couple of inches away from the wall's surface. It may also help to ensure that there are no hard, reflective surfaces directly to either side of your normal listening position; if there are, a couple of half metre, foam sound absorbing tiles fixed to the walls either side using double-sided tape is usually enough to soak up any serious reflections and to kill any flutter echo. Once again, Studiospares carry a range of foam tiles. Sofas, beds, and armchairs are also useful allies in soaking up reflected sound. Figure 2 shows a plan view of a typical bedroom

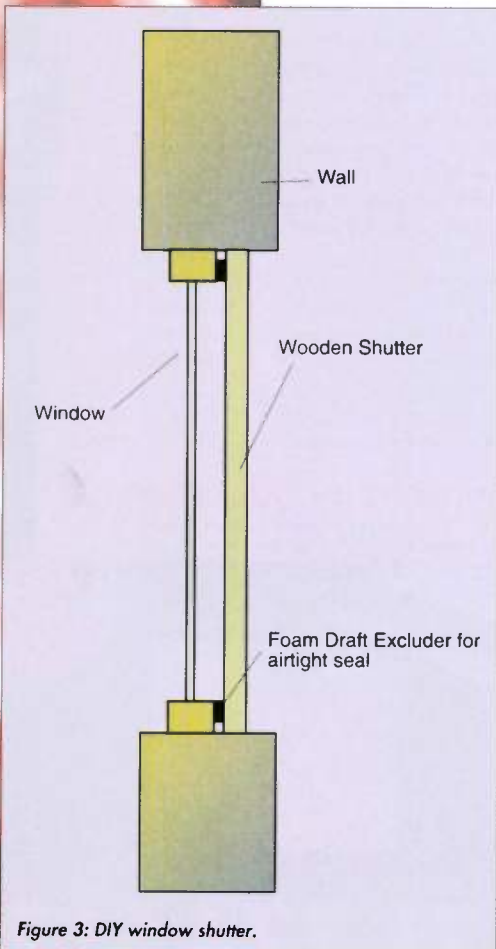


Figure 3: DIY window shutter.

studio, showing the monitor position and the placement of absorbent material.

## DOORS AND WINDOWS

So what about doors and windows? In most cases, these are the most vulnerable areas when it comes to sound leakage. If you don't have double-glazed windows and you have a problem either with sound getting in or sound getting out, then secondary double-glazing is highly recommended. DIY kits are available for a sensible price these days, and because the space between the original window and the secondary glazing is quite large, you'll often find that the amount of sound reduction is better than you'd get from conventional double-glazing alone. If you have a choice of fitting different thicknesses of glass, use the thickest you can, because more mass equates to better low frequency isolation. A cheaper alternative, if daylight isn't a major consideration, is to build a heavy wooden shutter and screw it over the window (as shown in Figure 3). If you want to take it down between sessions, then use sash window fasteners to hold it in place.

Doors are rather less simple to deal with, because their mass is much lower than that of the surrounding walls. Fitting good quality draftproof seals will prevent sound leaking around the edge of the door, but a typical lightweight domestic internal door only provides something like 15dB of sound attenuation, even when it fits properly. Fitting heavy curtains over the door helps a little — but don't expect miracles.

Replacing the door with a heavy fire door will yield some improvement, but it's not until you start fitting double doors that you make any real headway against serious sound leakage. Providing the room adjoining your studio isn't inhabited while you're working, just fitting door seals should be fine — but don't expect to be able to monitor at full volume without upsetting someone, if the next room is occupied.

## SUMMARY

All the above measures are pretty straightforward to implement and all will bring about some improvement. Even so, you won't get anything like the sound isolation you'd expect from a properly-built studio, so you may still have to keep an eye on your monitoring levels and stop work at a sensible time of night. It also helps to use headphones when you're composing or editing music; headphones aren't great for mixing, but providing you have a comfortable pair, you can use them in place of monitors quite a lot of the time.

Finally, don't underestimate diplomacy. Most neighbours will put up with a little noise if they don't think you're being inconsiderate to them. Try to agree times when your neighbours will let you monitor more loudly, and in return, agree not to make too much noise during the times they want a bit of peace and quiet. Whatever else you may think of MIDI, it has at least made it possible for us to compose and record music without having to shake the house.

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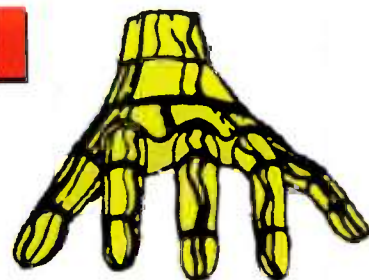
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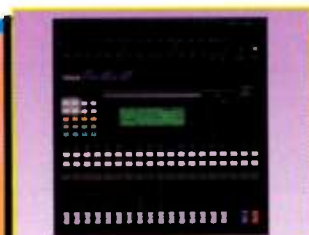
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# Art

## OF PASSION

**Michael Errington**  
started his career  
selling pianos, but now  
he's living in LA and  
writing scores for  
Hollywood movies.  
**PAUL WHITE** discovers  
what happened in  
between...

### *Michael Errington: Film Score Composer*

**M**ichael Errington started playing piano when he was almost 15 years old and describes himself as "a late starter". However, he soon realised that he had an aptitude for the instrument and quickly developed into a very proficient player. Within three years he had passed his Grade Eight music exam, followed by a diploma, but rather than try to make a living playing pianos, he went on to work for Chappells of Bond Street, selling keyboard instruments and demonstrating hi-tech MIDI gear.

His next move was to join Yamaha-Kemble UK, at Milton Keynes, as a piano product specialist, but he soon became more involved in the hi-tech aspect of music-making. All this time, Michael was continuing to develop his skills as a

player, and in the evenings he'd compose using sequencers and synths. I asked him to explain how his interest in film music composition came about.

### WHAT KATIE DID...

"Something at the back of my mind told me that I didn't want to spend the rest of my life performing other people's music. Whenever I wasn't working, I was writing, and I set up a home studio based around a TAC 24-channel desk and several Yamaha synths. I was very much influenced by Kate Bush's music and met her for the first time backstage at a Peter Gabriel concert. A couple of weeks later she invited me to her studio and she gave me a great deal of encouragement. I was invited back several times, and there's no doubt that Kate opened several doors for me — she's been a major influence.

"I still felt that the opportunities for composers were limited, and taking into account the style of music I was writing, I came to realise that writing film music is what I really should be aiming for. A major break came when I met Toto, the band, and David Paitch, their musical director, heard me play. As a result, he invited me to Los Angeles and persuaded me to audition for a place at the University of Southern California (USC), where they have a programme called 'Advanced Studies For Scoring Motion Pictures And Television'. In six years, they'd had nobody from the UK, but out of 230 applicants that year they accepted 12, and I was one of them. Film scoring is very much an American dominated bastion, and though there are major British film composers, such as John Barry, he's been living in the USA for 30 years now.

"But the problems didn't end there... I had to explain to Buddy Baker (former musical director at Disney and director of the University's film programme) that, although I appreciated the offer, I hadn't got the capital to pay for the course, and because I wasn't an American citizen, I wasn't eligible for a scholarship. Buddy still wanted to find a way for me to attend, and in the end I was allowed to sit in on the classes which enabled me to study alongside some of the finest film composers working today — including the likes of Jerry Goldsmith." *What was the most important thing you learned on the course?*

"It was already taken for granted that you could handle orchestration, harmony and so on, and what we learned was the hands-on aspect of working to picture. We were also taught how to deal with the politics of the business and how to deal with budgets. The marvellous thing was that, unlike the Academy and Royal College over here, the people teaching me were the actual composers who write for the major motion pictures. If Basil Poledouris came in to host an afternoon forum, he may well have spent that very morning working at 20th Century Fox."

*Did you find it difficult to make the transition from writing music that works as a stand-alone art form to creating music that is just one element of a film?*

"Well, I did get to see how the other composers work, and the Americans have a wonderful composing style, but I felt that, coming from a very European background, I could offer something a little bit different. Because the University is well funded, the facilities are excellent; they have their own symphony orchestra, and their own





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# Michael Errington



The composer 'in residence'.

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*What was the first film scoring job you got?*

"You don't get given your own film to do right off. What usually happens is that you get to work on commercials and do 'ghost-writing'. Ghost-writing means that you assist an established composer who has been commissioned to do a film, so although you do some of the work, the composer still gets most of the credit. I was very lucky — within three months of leaving USC, I was offered my first feature film based on the show-reel that I'd made there."

## STRINGS AND THINGS

*Were you given the budget to use a full orchestra?*

"The film was called *Unconditional Love*, written and directed by Arthur Bjorn Egeli. It had a total budget of just under two million dollars, but a lot of that went on the location shooting which was done at Cape Cod, Massachusetts. The music budget wasn't sufficient to enable me to work with an orchestra, but I've found that Roland samplers, especially with their excellent sound

library, get closer to the real thing than anything else I've tried. I mainly used a Roland S770 for the project, and though I've used a lot of other things, the Roland strings and brass library is streets ahead of anything else I've ever worked with. I also found some extremely good samples on the Roland format Club 50 Foundations CD.

"When you go to see a film at a cinema, everything is so grand up there on the screen that we've come

to expect to hear a rich, orchestral score, and even though I didn't have the budget, I wanted to get as close to that as I could."

## SCORING FOR PICTURE

*Can you explain the process of writing to picture?*

"It really helps if you can get a copy of the script before you start work. I was given something like six weeks to write and record all the music for the film, and I was fortunate enough to have my own team, including music editor Carl Zittler, who's worked on *Moonstruck* and other films. I sequenced everything on my Mac SE30 using *Performer* v4.3, which I find is an excellent sequencer for this kind of work.

"The edited film was transferred to 35mm stock, and from there onto D2 digital video; from that were produced five timecoded U-Matic tapes with two reels (around 10 minutes per reel) on each tape.

"The first job is to 'spot' the picture, to identify where the music cues should go, based on the director's instructions. However, I've learnt that this accounts for only 70% or so of the work, because directors invariably change things at the very last minute. Because of the time constraints and the sheer amount of music that has to be produced, writing for film is very demanding — it's rather like writing, recording, and mixing three albums in a six-week period! The Americans

work very efficiently, and I feel that working with them has smartened me up — they'll do their best to give you a chance, but if you blow it, you won't get another try.

"Although I had got the contract for the film, I was still asked to write a couple of musical cues, which the film backers had to approve before I could continue with the rest of the score. I took a romantic scene set on a beach, and another big dramatic scene, then wrote the music — which was subsequently played over the telephone for their

approval! Fortunately, they loved it, so I went on to complete the rest of the film."

## STUDIO-WISE

*What equipment did you use to create and record your film music?*

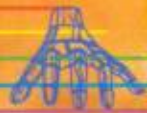
"The majority of the sounds came from my Roland S770, running the orchestral sounds from the Roland sample library, though I also used an Emu Proteus for additional orchestral sounds and an Emu Proformance for the piano parts. We mixed everything on a Mackie CR1604, using both Yamaha NS10 and Tannoy monitors, and finished about two cues a day. At the end of it all, I had produced around one hour and forty three minutes of music, of which around an hour was eventually used.

## UNCONDITIONAL LOVE CREDITS

• Arthur Bjorn Egeli	Writer/Producer
• Hans Gans	Associate Producer
• Barbara Boguski	Film Editor
• Carl Zittler	Music Editor / Supervisor
• Tony Humecke	Engineer / Producer
• Robert Glass	Head Music Mixer
• Jessica Brytn Flannery	Actress
• Buddy Baker	Programme Director, USC
• Mary Ann Garger	Feature Animation, Disney



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Atari
- 5 **Falcon MkII** ☆  
C-Lab
- 6 **Re-Entry K2000** ☆  
Kurzweil
- 7 **ESI-32** ●  
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- 8 **X5/X5DR** ●  
Korg
- 9 **PC 88 (expanded)** ●  
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- 8 3000 series Akai
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- 10 JS-30 Roland

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- 2 JV1080 Roland
- 3 X5DR Korg
- 4 3000 Series Akai
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- 6 **NEW** E-64 Emu
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- 3 MOTU Audio 16
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# Michael Errington

- “One of the things requested by my music editor was that the cues should have long, sustained endings, so that the actually length could be set at the dubbing stage. Similarly, things tend to be mixed



Michael with Robert Glass, Head Mixer at Lucas Skywalker dubbing stage, Los Angeles.

with very little reverb, so that if any more is required, again it can be added during the dubbing process.

“There was no need to use a multitrack as I didn’t run out of polyphony, but because I only had 16Mb of RAM in the S770, one of the big pieces had to be recorded and mixed in two sections and then put together in Pro Tools. The sampler couldn’t hold all the sounds I needed in one go and the instrumentation changed radically in the middle of the piece. The final cues were actually mixed to non-timecode DAT and marked with their SMPTE start time. This didn’t present a problem, as the

music editor positioned the cues using Pro Tools — when you’re working with film, there are inevitably last minute changes to the editing and Digidesign’s Pro Tools helped us make changes

very quickly. However, we were careful to ensure that everything was backed up, often several times. And after a day’s work, I’d take a DAT clone straight over to the music editor, who’d transfer it to hard disk.

“Once out of the Mackie, everything remained digital right up until the final film dub, and the only effects we really used in the studio were a Lexicon reverb and an Alesis Midiverb III on some occasions.”

## ILLUSIONS IN SOUND

*How did you get that sense of orchestral realism? I’ve seen clips from the film, and unless you listen very critically, it’s not at all apparent that you’re not listening to a real orchestra?*

“The score comprised a lot of strings, and one thing I’ve learned is not to use the sustain pedal — that’s always a dead giveaway that you’re using synths.

Instead I’d play things as legato as I could, and record all the string parts individually instead of playing chords — which is quite hard work. For example, I’d never just bring up a string patch and play — instead I’d create and record separate parts for the double bass, cellos, violas and violins. It takes longer but the marvellous thing is that you do recreate the interaction between the string parts. You have to map it all out on paper first, but the effort is well worth it.

“I also tend to work with very little EQ, because that leaves plenty of flexibility at the dubbing stage. If your samples are clean, and if everything is recorded well, you don’t really need to use much EQ. However, if I could see from the film that there would be sound effects going on, such as one scene which took place in the rain, I would orchestrate the music to work with it. At the same time, you have to make sure that the music doesn’t get in the way of the dialogue. The video you get to work to is already edited (though changes to the picture may still be made later), and the dialogue is all there, but at this point there are no sound effects, so you have to try to second-guess what will be added later.”

*As more work comes in, do you envisage having to set up a bigger studio, or do you prefer to hire facilities when you need them?*

“It’s interesting you should ask that, because having been around a lot of equipment for a number of years as a product specialist [with Yamaha], I’ve found that the less equipment I have, the more work I seem to get! I used to have a 24-track studio with every imaginable product in it, but now I’m spending more time as a composer attending film festivals and meeting directors. Because I’m writing to picture and have to have everything locked up [synchronised to picture], what I really need is a musical sketchpad for home, and later this year I’m planning to buy a Kurzweil PC88.”



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# Michael Errington

## CROSSOVER

*On current big budget pictures, there are overtly electronic scores, some full orchestral scores, and compositions that mix both orchestral and electronic sound. Is this an area of composition you'd like to explore?*

"I have been offered a fairly big budget picture this year for the same director, called *Fear Of Drowning*, and I'm hoping to use both the Roland sampler and real strings — possibly the Utah Symphony Orchestra. There have been numerous scores done in the past, such as James Horner's soundtrack for *Willow*, that used both orchestras and synthesizers, and Jerry Goldsmith's been known to work that way too. What style you choose depends on the picture, and in the case of *Unconditional Love*, a traditional orchestral score was called for and I did my best to realise that using the best samples available.

"In the case of a more futuristic film, I would tend to use more synthetic sounds, but a lot depends on whether you are writing for TV or film. Film audiences still seem to expect orchestral scores, whereas on American TV at least, synthesized scores are commonly used and seemingly accepted.

*I would imagine that it's a common occurrence for the film director to ask for radical musical changes right at the last minute? Can Pro Tools always dig you out of that situation, or do you sometimes have to go back and compose something from scratch?*

"Unusually, on this film I was allowed to sit in at the dubbing stage, so I got to work alongside dubbing mixer Robert Glass for a week. Quite often composers are excluded from the dubbing stage, because dubbing mixers frequently want to do something to a music cue that the composer wouldn't approve of! The mix was handled by a Mitsubishi Quad 8, a very large console, and at times a Lexicon 224 was added to provide the final touches. I was fortunate because I had a chance to work closely with the director, but we did have some last minute changes. Systems like Pro Tools are limited in such situations, because you can't always solve a problem by cutting a bar or two out of the middle of a piece of music.

"Right at the last minute, I got a tap on my shoulder and was told that the length of the closing credits had been increased and that the music was now too short. I dashed across town and literally

rewrote and recorded the final cue. It was so close that I was still transferring the cue onto 35mm while the Dolby engineers were approving the first 10 completed reels! Interestingly, even though the recording and editing was all digital, I found that transferring the final product to 35mm with Dolby SR noise reduction warmed the sound up noticeably." *What difference does it make if the film you are working on is going to be mixed into Dolby Surround?*

"You really need to mix the music through a Dolby five-speaker setup, using the encoding and decoding boxes that Dolby provide. I have a friend currently working on a Dolby Surround soundtrack, and he made the mistake of mixing to stereo. When it came to the dubbing stage, there were horror stories, and now he's had to redesign his studio. Because my last job didn't require Surround, straight stereo mixing was fine, but for future work, I may well have to install my own five-speaker monitoring system. It's all a question of budget, because the music normally has to be done on about 4% of the total budget."

## A STAR IS BORN?

*I would imagine that in this business, you're only as good as your track record. How was the film received?*

"At the Boston film festival, it was the highest attended new release. And based on the response the film got there and at its screening in New York, we got accepted into the Hamptons international film festival at New York, which is amongst the biggest in the United States. There are numerous major actors and directors on the advisory board, including Steven Spielberg. The competition is very stiff — you're up against around 48 other films, many of which are made on large budgets and feature very well known actors. Just to be accepted was wonderful, but we actually won the Golden Starfish award, which has the largest financial prize attached to it; that provided us with \$110,000 dollars worth of goods and services towards our next film, *Fear Of Drowning*.

"We also got a great deal of exposure at the festival and had the opportunity to meet a lot of the 'right people'. I was introduced to Quincy Jones by the festival's directors, and as a result of that I've been able to put in a tender for one of the four or five projects he has going at the moment. I also got to do a few TV interviews while we were there. Of course, all this publicity and politics is essential if you're to get onto movies with larger and larger budgets. I have two films to do this year, a TV movie for Showtime and *Fear Of Drowning*, but I'm also conscious that I've only just got my foot in the door and there's a long way to go yet."

*Is there anything specific that you'd really like to do?*

"I'd actually like to do some scoring for the BBC."

*I would imagine that Hollywood pays rather better than the BBC?*

"No Comment!"

*"Because of the time constraints and the sheer amount of music that has to be produced, writing for film is very demanding — it's rather like writing, recording, and mixing three albums in a six-week period!"*

## GO WEST YOUNG MAN!

*Can you offer any advice for readers who feel that they might like to get into the music-for-picture market?*

"I was very fortunate to have the encouragement I did, and although writing for film is quite different to writing songs, I believe that there are still lots of opportunities in the United States. I really would recommend studying at the University of Southern California if at all possible, and although it takes up eight months of your life,

it really is worth it because you learn how the Americans go about doing things.

UK bands can be successful in the States because they have a finished product, and when they tour there, they perform and then they return. The thing about the film industry is that you have to get very involved in the American way of doing things and you really need to live there, because everything is a team effort."



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# ANALOGUE SYSTEMS

***Analogue Systems continue their crusade to bring pre-MIDI devices back into studios everywhere with their new CV-only filter bank. PAUL WARD checks it out.***

**A**rriving hot on the heels of their recently-released TH48 analogue sequencer, Analogue Systems's FB3 is a 1U rack-mounting filter module, containing three custom-designed voltage-controlled filters. As the company name implies, the provision of all things analogue is what these people are about and, if the FB3 is anything to go by, they do it very well.

## AT FIRST GLANCE

The FB3 is a rather attractive device in its silver livery, and certainly seems sturdy enough to cope with the normal rigours of life in a gigging rack. A big bunch of roses is due to Analogue Systems for the proper 'Euro' mains connector, but they deserve a selection of droopy daffodils for the rear panel power switch, and a large sprig of holly up the nose for the rear-mounted mic/line input selector! Whilst I understand the problems of trying to fit this control onto the already busy front panel, I cringe at the thought of trying to get to the back of my rack at the best of times — and I feel sure I am not alone!

All of the important action takes place on the front panel, deriving, no doubt, from this unit's roots in modular synthesizer design. The inputs and outputs are of the standard quarter-inch jack variety, making for easy integration into a typical rig. The controls are chunky and positive, but I would have liked the legending to have been calibrated in Hz and dBs rather than the vague 1-10 scales that have been used.

The audio input has an optimum line input level of 100 to 150 mV, making it suitable for the kind of signal one would expect from most modern synths, though microphone signals can be accommodated by use of the aforementioned mic/line switch on

the rear panel. Particularly nice to see here is an overload light that will warn you if you are in danger of pushing input levels too far. 3dB of gain at the filter outputs helps to make up for any signal attenuation as a result of the filtering process.

## THE FILTERS

Each of the FB3's three parallel voltage-controlled filters has individual knobs for cut-off frequency and resonance. An unsuspecting sound source can be forced to pass through one, two or all three of these filters on its way to the audio outputs. Usefully, there is an overall cut-off control, which sweeps all three filters simultaneously whilst retaining their values relative to one another. Each filter has an approximate range from 5Hz to 20kHz, and the resonance control can go from zero right through to self-oscillation, at which point each of the FB3 filters can become a sine wave sound source in its own right.

A simple triangle wave low-frequency oscillator (LFO) with continuously variable speed and depth controls is provided on-board for modulating the cut-off frequencies of the filters. A small green light blinks away cheerfully to give a useful indication of the current operating frequency. Speed is adjustable from a generous minimum of 1 cycle in 90 seconds to a rather restrictive maximum of 2 cycles per second. I would like to have seen this range extended to considerably faster rates, which would allow for those weird pseudo-ring modulator sound effects much loved by the makers of '70s sci-fi TV shows. The LFO also has its own CV output socket for synchronised control of another FB3, or as a control source to plug into an external synth for duties such as pitch modulation, or auto-panning.

To the far right of the front panel is the socket that provides potential for the most fun with the FB3; the CV input. This is where you can plug control voltage sources, such as those from an analogue envelope generator, an LFO on a modular synthesizer, or a MIDI/CV converter that has derived a voltage from velocity or modulation wheel data on a modern MIDI synth. All three filters respond to the

### ANALOGUE SYSTEMS FB3 £325

#### PROS

- Wide range of analogue filter sounds in a compact package.
- Excellent sound quality.
- Separate, simultaneous outputs of four filter types.

#### CONS

- Rear-mounted mic/line switch.
- Needs external CV control to achieve anything more than basic LFO sweeping effects.
- No filter envelope generator.

#### SUMMARY

A superb-sounding bank of analogue filters that adds genuine warmth and colour to treated sounds — but only if you have a synth that can provide an envelope CV (to feed the FB3's external CV input). This unit is really designed with the serious analogue, modular synth user in mind.





# FB3 FILTER BANK

external control voltage simultaneously, and the depth of effect can be attenuated from a dedicated control on the FB3's front panel. The response to an external CV can also be set to a negative value, to reverse its effect on the filters. This is extremely useful where a negative control voltage may not be available from an external synth. In my own experience, I have found a combination of a low-pass filter and a negative envelope voltage useful for creating excellent plucked sounds and evolving pads. The CV response is somewhat unusual here — it is calibrated to work on a scale of 1 volt per 4 octaves, rather than the 1 volt per octave that many vintage synths run at. In practice, this difference is not a problem, since the depth of effect can be altered from the FB3, but it's as well to be aware of it.

Four filter response types are available at the four corresponding audio outputs. The low- and high-pass filters are both of the typical Moog-ish 24dB per octave variety, whilst the notch and band-pass filters work on a more gentle 12dB per octave. These values are sensibly chosen for a very 'musical' result, although a 12dB/24dB switchable option would have been nice.

## IN USE

The FB3's real piece of magic is that the four filter types are all available simultaneously, although they will of course take up the corresponding number of channels on your mixer. Judicious use of these outputs, combined with stereo panning, can produce some truly inspiring effects. By taking the output from both the low- and high-pass filters, for example, panning the signals hard left and right on the desk, and then sweeping the filters from the LFO, I was able to create some very rich, swirling auto-panning effects. Using band and notch filters in a similar configuration, I found myself back in 1970s territory, with Tangerine Dream-ish sequences bouncing around the studio walls and swept string pads prompting me to brush off a few of the old Jean-Michel Jarre chord patterns... After drafting in a couple of extra speakers and an amplifier, I was able to generate some mind-bending quadrasonic soundscapes by using all of the four outputs. The fun only had to stop when I began to feel sea-sick! The manual suggests synchronising two FB3s for even stronger stereo effects, but unfortunately, I only had only one unit for review. I found my own favourite uses in a more subtle approach, providing gentle notch filter sweeps to pad chords or harmonic movement to bass sequences.

The external CV is arguably the key to getting the best out of the FB3. By using an envelope voltage to create some chunky bass 'thunks' and then sweeping the cut-off frequencies further with the onboard LFO, all manner of techno effects are available, from a notch filter sweep to liven up an otherwise static square wave to a resonant high-pass

filter squelch to add dirt and aggression to a gritty sawtooth. Further experimentation with keyboard control voltages and band-pass filter yielded some highly usable vocoder-type effects, particularly effective when the filtered signal consisted of vocal samples. On the subject of samples, the ones that I fed into the FB3 emerged considerably warmer and more appealing than when they entered.

The filter quality is very good indeed. I have heard warmer, more 'treacley' filters than those presented here, but they were usually on modular systems the size of a small Cornish village. I was prepared to compromise a little hiss and hum for the sake of the end result, but the FB3 proved to be a pleasant surprise, with very little in the way of residual noise. On the one occasion when I did notice some extraneous hiss, it turned out to be a bleed-through of white noise from one of my own synths!

## CONCLUSION

In the right hands, and used in conjunction with the right equipment, the FB3 is capable of producing a wide range of very desirable sounds and textures. However, you do really need a synth or MIDI/CV converter capable of producing some meaningful control voltages to make the best use of the FB3's CV input. This really restricts the usefulness of the unit to owners of modular machines (or pseudo-modular synths, such as the ARP2600 or the old Korg MS series). For the digital synth owner looking to add a little analogue spice, the FB3 is less useful, as it can't be directly triggered via MIDI, and doesn't have its own filter envelope generator. If Analogue Systems were to complement the FB3 with a triggerable envelope generator (ideally via MIDI as well as via a trigger pulse), the unit would be usable with a much wider range of synths and sound modules.

Other items on the wish list would include individually switchable filter responses between 12dB and 24dB per octave, and another CV input. A composite output consisting of an equal mix of the four filters would be useful too, with the insertion of a jack into the separate outputs removing that filter type from the composite signal. But these suggestions would undoubtedly push up the asking price, and probably warrant another unit of rack space too.

SOS

## FURTHER INFORMATION

- E** FB3 £325 inc VAT.
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*"Further experimentation with keyboard control voltages and band-pass filter yielded some highly usable vocoder-type effects..."*

## CORRECTIVE TREATMENT

In addition to the various creative uses of the FB3's filters, I had a great deal of success in pressing them into corrective service. The low-pass filter is ideal for attenuating the hiss from a noisy synth, or reducing the fizz in a DI'd guitar recording. The high-pass filter was perfect as a means for removing low-level mains hum, or alleviating the 'boom' from a flabby bass drum. I discovered an excellent way of adding extra 'presence' to an electric guitar solo, by mixing a band-pass filtered version of the sound back in with the original. This technique proved similarly successful when applied to lead vocals, though the filter frequency does need to be chosen with care.



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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.**

## ONE DROP

**Recording Venue:** DAT mastering at Pilot Sound Studios.

**Recording Equipment:** Yamaha MT100II cassette multitracker, MTR 12:2 mixer, Yamaha QX5 sequencer and MDF2 data storage, Alesis D4 and DD12 drum modules, Korg SDD2000 delay, Audio Technica Pro22 and Altai mics.

Pat Valentine Keane is the man behind the recording of 'Dub Chaptal In Reggae', which he has had blown onto CD as a one-off. Actually, Pat, a tape would have been fine, as you've now been waiting six months for the return of this CD. Many apologies, but the backlog is building up — I now have two bin bags full of recordings to review at home, never mind what's still at the SOS office!

Returning to 'Dub Chaptal' — the title reveals the reggae roots of this CD, but the music crosses over into club mix territory too, as a result of the heavy use of triggered drums and synthesizers. I

## top tape

have to say that for the most part, Pat has done a remarkable job using minimal recording equipment, with just the vocals, guitars and possibly some samples going to tape, and the rest being run on the mix. Two recording approaches seem to have been taken with the drums — three tracks feature live drum playing (later quantised) on an Alesis D4 and DD12, while another four tracks boast live drums.

In comparison to older reggae records (including Bob Marley, who Pat credits for inspiration), the overall sound is brighter and a little harsh on some tracks (particularly track one). My feeling is that the post-production 'tweaking' using a graphic equaliser may have been overdone for the abrasive upper



mids. However, the decision to compress the whole mix with an expensive TC electronic processor at the DAT-to-DC stage was probably a good one.

Regarding the all-important bass end, this is at its best on the truly excellent track three, which has a fine mix. Echoed drums are dropped in to good effect, and the heavy mix of short delay and reverb on the vocals is just right, as is the choice of synthesized sounds — whistle counter-melody and occasional skanking chords. Credit is also due to 'Vibesman', aka Raymond H, for some fine vocals.

The one cover is 'You Keep Me Hanging On', which has been changed and renamed 'Set Me Free', but is still recognisably the original. The drum sounds are heavily synthetic, especially the mellow synth snare, which works really well against the extra snare counter-rhythms and dub echo — obviously Pat has worked hard on the choice of sounds and the mix. Occasionally, the vocals are a bit harsh, but the added reverb treatment suits them, and the reverb gives the vocals a clarity which is required in the often busy 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.*

## KAOM

**Recording Venue:** Home.

**Recording Equipment:** Studiomaster Diamond 12:3 mixer, Ensoniq EPS 16T sampler, Roland TB303 Bassline and R8 drum machine, Boss SE70 effects processor.

'Keep an open mind' says main man Derek Holder, and emphasises this by typing it in red ink. Perhaps this is because the tape is aimed at the underground club scene, and runs through the whole gamut of weird acid, minimal techno, funk acid and jungle/hardcore. Yet the main problem with this tape is not the changes in style, or my objectivity (or lack of it), it's the actual length of the tape — two full sides of music. Yes, I know that club mixes are long, but it just means I can only give an overview, because I simply don't have time to listen to the whole thing.

What I can hear is that Derek has a good grasp of what is rhythmically required on the underground club scene — from the frantic electronic breakbeat of 'Melted Minds', the hand-clap start of 'Ebus-

Tam-Ante', and the ambient kick and pitch-fall synth of 'Naked After Ardcore' to the fusion of 'real' drum patterns with breakbeats on the jungle side of the tape.

The sounds are well chosen too, but I found the overall mix a bit bass-light on my monitors. However, in a club, there's plenty of potential to add some bass. Side one features much of the filter-modulated and intermittent sixteenth-note synth loops that are one of the trademarks of acid dance. These are well-placed in the mix to tickle the senses while the beat keeps the body moving, but Kaom can also sound almost industrial in places — for example, the clangs on beats two and four, with the occasional emphatic low-frequency note for accent.

As for the jungle side, things get busy in places, but there are plenty of good ideas freely



incorporating different styles of music. The opening track merges drum sample loops and breakbeats, and punctuates them with an eastern section and occasional mellow synth strings.

Again, the overall sound balance is good, as is Derek's choice of effects — particularly the rhythmic use of echo on triggered drums, which is in a totally different style to that of

One Drop's 'Dub Chaptal...' (see earlier review). Here, the echos are still in tempo, but tend to be set to faster sixteenth- or eighth-note repeat values, to give a slapback (and consequently more frenetic feel) to the rhythm.

Difficult to evaluate from a listening point of view, sat down as I am, but if I could hear this turned up loud on a club system, I'm sure I'd say that Kaom have come up with the goods. □



## JOHN MILLER AND STEVE GRIFFITH

**Recording Venue:** Home?

**Recording Equipment:** Tascam 38 8-track, Studiomaster Series 5 24:8:2 mixer, Atari running Cubase with JL Cooper synchroniser, Akai S950 sampler, Roland D110 expander, Korg reverb and delay, Boss SE50 effects processor, Shure SM58 mic, Yamaha 2020 compressor.

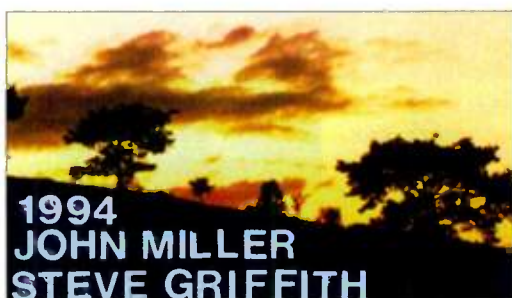
A strange tale I will unfold... John and Steve used to record together. Steve went to Australia, and came back as the singer for The Australian Doors! He still demos tracks

sound, but the organic and throaty vocal sound really needs warmer valve sounds to suit it.

On the second track, John has wisely moved away from a retro production, with a more modern approach that fully incorporates the technology at his disposal. 'Altered States' is perhaps a more apt title than he realises, and the gutsy vocals, often sung in harmony, are very effective here. The programming (which is heavy on percussion and hypnotic repetition) is excellent, and John makes good use of the Roland D110 drum voices. Effective electric guitar feedback and modulated riffing and picking punctuates the piece, and keeps up the interest — especially as the layers build up towards the end. No wonder all the desk channels were used up!

'Judge' is the final track on the tape, and sounds a little bass-light

— the bassline is a vocal line sampled and ingeniously played back a couple of octaves lower. This, however, accounts for the lack of real bass end, and I think a bass synth should have been mixed in for a fuller sound, or some lower mid added to fatten up the bass end. Very reminiscent of Julian Cope in his *St Julian* phase. □



with guitarist John, who has sent a few of the results to us. It's no surprise to find that the vocals are in the Jim Morrison style, but the backing has been brought up to date by the programmed drum machine and modern guitar overdrive.

Some attempt has been made to retain the retro feel by using an old-style Hammond

## BRIAN MARSHALL

**Recording Venue:** Home.

**Recording Equipment:** Atari 1040 ST running Steinberg Pro24, Akai S900 sampler, Roland SRV2000 Space Reverb, Yamaha SPX90 multi-effects, GC2020 compressor, and cassette deck, JVC power amp, Sennheiser headphones, Goodmans Achromat 400 speakers, Aiwa SC A1 mini speakers.

Brian's tape contains eight tracks, which were all recorded by the MIDI studio based around his trusty Atari, and then mixed directly to DAT. Last time I reviewed his work, I apparently gave it a 'good slugging off', after which it achieved moderate success with Teletext, becoming their demo track of the week.

Brian also managed a TV appearance with another composition. Nevertheless, he seems to have forgiven me enough to send in his new compositions!

'Into the Blue' is the first track, and begins with a warm vocal pad, accompanied by harp-style arpeggios. The shuffled rhythm and jaunty bassline further demonstrate that this is firmly in the category of 'easy listening' and, as such, is successful, with a good instrumental balance. The track also avoids the trap that many demos of this nature fall into; that of sounding too digital and sterile because of the sounds chosen.

Echoed flute provides an ambient background to a breathy sound with more attack and this takes us into 'Morning Flight', before the bass drum kicks in on fast fours against a walking bass line. All the sounds are mellow, nothing grates, and even the heavily flanged loop (a metallic banjo) is easy on the ear.

I skipped on to the fourth track, where Brian tackles a traditional Irish air, which he submitted to the BBC for a programme about Ireland. This needed to grab the attention more firmly, and was indeed more direct, with a synthesized whistle and heavy swirling chords as backing. Occasional droning synth helped, but my feeling was that the main theme would have been better played by a real instrument over the existing backing, if only for the pitch-bending, which is too semitonal on the synth to match the real thing. □



## FISHER

**Recording Venue:** Home.

**Recording Equipment:** Fostex M80 8-track, Fostex G16 16-track, Mackie 8-buss mixer, AKG C3000 mic, Soundcraft Series 200 mixer, Quadraverb Plus effects, Great British Spring reverb, Drawmer LX20 expander/compressor, Casio DA7 DAT, Shure SM58 mic, Tannoy DMT8 and Auratone speakers, Atari 1040 STFM running Steinberg Pro24.

Fisher produce some good songs from their home studio close to one of the main London thoroughfares — soundproofing's naturally a problem, but thankfully, traffic noise is not obviously audible on the recording! The early 8-track recordings on the tape seem to lack a bit of sparkle, and would benefit from being run through an enhancer for extra presence. Mixing the hi-hats and cymbals louder would also help fill that gap in the treble region. Yet by the time we get to the later recordings, where the equipment used has been substantially upgraded, engineer Steve has over-compensated by thinning out the sound a little — a tendency towards over-equalisation perhaps? Here, the warmth and earthiness of the earlier recordings are missing, and that's an important part of this mix of rock-orientated pop and boogie. A higher level of bass in the mix reinstates the warmth — a difference I can hear between the tracks 'Give A Little' and 'So Hard'.

Engineering points aside, not only are the songs strong, but both Steve and Tina Pinder come up with some mean vocal takes, with just the right feel for the music. Tina, in particular, seems to have a knack for gritty singing as well as a more smooth style for songs that require the subtle approach. The vocal sound occasionally has too much reverb (for example on 'So Hard'), but Steve also knows when to lay off and go for a drier mix.

Now they've found a 'drummer with arms and legs', the band should be gigging in the London area by the time this review comes out. They're well worth a listen. □

## 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.



# SAMPLE SHOP

Our regular look at the hottest new sample CDs and CD-ROMs.

## FREEKEE JACK SWING (SAMPLE CD)



One of the latest releases from AMG is this collection of loops in new jack swing, rap, and ragga styles. This audio CD is essentially split into two main categories — Split Loops and Composite Loops.

The Split Loops section provides five different alternatives for each of the 23 loops,

and once you start feeding your sampler with this material, it makes you realise just how mediocre some of the drum loops you work with really are.

Particular attention has been paid to the placement (and movement) of percussion and FX noises within the stereo field, and despite often being quite busy, the loops always seem to retain a sense of clarity and space. As the loops build, bass lines, vocal bites and keyboard sounds also come into play. All are in keeping with the style of the loop and, just like the drum tracks, they are meticulously programmed and performed.

The last section of the CD gives you a handful (but not all) of the vocal sound-bites used in the loops. These mainly spoken samples cover a wide range of Rap and Ragga styles, as well as some more unusual, and indeed humorous, examples of ragga vocalisations. One complaint could be that although nearly all of the loops contain vocal samples of one sort or another, we only get to play with 36 of them. Similarly, many people might think that failing to separate out the

basslines and chord progressions on their own could somewhat limit your options in a mix. Teddy Riley's influence is also a touch too prevalent in places, giving a good many of the loops a very *Dangerous*-like feel.

However, the one thing that truly stands out about this sample CD is the sheer quality and musicianship of the programming. All of the loops (drum loops and chord progressions) are completely usable, and despite being very much a dance floor product, this really is a CD of remarkable subtlety, which will undoubtedly be a big hit with anyone needing a fresh and exciting approach to swingbeat groove construction.

Conclusion: *Freekee Jack Swing* is a job well done, and from a user's point of view it

represents an inspired collection of fantastically original-sounding and powerful swingbeat, rap and ragga grooves and loops. *Paul Farrer*

**E** *Freekee Jack Swing* £59.95 inc VAT and P&P within the UK.

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

**T** 01442 870681.

**F** 01442 877266.

**A** AMG, PO Box 67, Farnham, Surrey GU9 8YR.

**T** 01252 717333.

**F** 01252 737044.

## WORKSTATION VOLUME 2 (SAMPLE CD)



*Workstation Volume Two* is the latest D-Zone/Solo release, and more or less carries on from where *Volume One* left off. The format is consistent with all the other D-Zone products — in other words, there's a mixed bag of 24 drum loops (mostly one or two bars long) repeated for a minute and a half. This is eventually followed by a collection of middle C synth recordings, in this case based on the Proteus 3 presets. The drum loops are then repeated at the end of the CD in mono.

The stereo drum loops are all listed with their bpm's and represent a cross section of house, swingbeat and occasionally jungle styles. There's quite a lot of variety considering you only get 24 loops in total, but none of them really break into new territory, in drum loop terms. They do, however, seem to pack more than enough punch for your pound, and they're grainy enough to give 'vinyl authenticity' to any track.

Oddly enough, I found that to my ears, the loops sound slightly better when sampled from the un-processed mono collection, as opposed



starting with a basic drum loop plus variation, which is then joined by a bassline. This is followed by a version with vocals, and finally chords, bass, vocal snippets and effects are added, giving the impression of an almost-complete track.

The Composite Loops section provides another 30 styles, this time in minute-long segments. Again, each track starts with a basic four- or eight-bar drum loop, and builds to a full track from there.

Owen Hunte, the programmer and producer of this CD, cites Teddy Riley (Michael Jackson's right-hand man) as one of his biggest musical influences, and the content of the CD reflects this. The recording quality is superb, and all the loops are easily chopped up into convenient instrumental sections for working purposes. Looking at the drum loops on their own, they clearly stand head and shoulders above the standard of most loops currently available on CD. All the loops are brand new and 'tailor-made' for this release,





to their effects-laden, stereo counterparts. Don't ask me why...

Drum loops out of the way, we move onto the second part of this CD, or should I say the second half of the Proteus 3 factory presets. Just in case you missed the first hundred or so single samples contained in *Workstation Volume One*, here's the other hundred. These stereo noises sample very well, and providing you don't play them too far from middle C, they should be fine. Again, a good cross section of sounds is provided here, and it's a great opportunity to get into the Proteus 3 to see what it's capable of. The FX noises worked very successfully when played a couple of octaves too low, and the sitars and flutes also seem to hold their realism when playing up and down the octaves.

It would have been nice to hear an entire set of all the excellent ethnic percussion samples, as opposed to the odd one or two, but the collection here (despite the lack of multisamples) is enough to keep most people happy for quite a while.

Conclusion: It's difficult to know who this CD is targeted at. Presumably having such long repeats of the drum loops is a pointer in the direction of DJs with no sampler but access to a looping CD turntable. Of course the Proteus 3 presets will be of little use to DJs, but at this price, there's something of use for everybody. Any programmer with a sampler is never going to use any more than the first one or two bars of a loop, leaving almost 30 minutes of CD space completely wasted, but again, it's not a big problem given the very low price of these CDs. Of course, you can't please all of the people all of the time, and perhaps separate releases for DJs and programmers is the way forward. As it stands, *Workstation Volume Two* is a brave and largely successful attempt to bring low-cost sampling into the very competitive CD market. *Paul Farrer*

**E** *Workstation II* CD £12.50, vinyl £9.

Prices include p&p within the UK.

**A** D-Zone/Solo, Freepost CN3194, South Croydon, Surrey CR2 0UZ (UK customers only); PO Box 3, South Croydon CR2 0YW (overseas customers).

**T** 0181 651 2222 (please note new numbers!).

**F** 0181 651 3333.

## THE BASS APPETISER (SAMPLE CD)



This CD comes directly from the somewhat oddly-named Hot Spocksone at Swiss

company XLS Food, whose CDs are currently distributed by Time & Space here in the UK. There's no mucking about as far as the contents are concerned; Track 1 dumps you straight in at the deep multisample end.



Seldom has a sample CD been more straightforward: 98 tracks are given over to one big bass synth set each, with samples taken at approximately quarter-octave intervals. Sounds are extremely well annotated — the liner notes detail the music style (trance, techno, and so on), the number of samples (around 10), the source synth, and whether the sample is mono or stereo. Synths used include the Ensoniq ASR10, Yamaha CS70 and DX7, Roland JD800, JD990, Juno 106, and Jupiter 8, Kurzweil K2000, Oberheim Matrix 12, Waldorf Microwave, the MiniMoog, Roland MKS50, the OSCar and the SCI Prophet 5 — a fine collection of firm favourites. What you are buying is the sound of these instruments and the synth programming expertise (and tastes) of a quartet of Euro-nationals from France and

Switzerland. Oh, and some extremely sympathetic engineering undertaken on some of the jewels in audio's crown. A quick check of the outboard employed reads like a *Who's Who* of desirable audio sweetening — Rupert Neve's Medici and a couple of Focusrite units get a mention, as do contributions from Summit Audio, TubeTech, GML and Eventide, among others. Editing was by Digidesign (isn't it always...?).

The great thing is, none of the patches sound particularly affected by this arsenal of electronics, whose combined value would buy many a decent 24-track studio outright. Certainly, nothing has been added or taken away that forecloses any obvious options (no gratuitous reverb, and no whine either). The sleeve notes are pretty good, with hints and tips on (for example) how to use the velocity-to-sample-start function on your Akai sampler to simulate velocity resonance. But you knew that already, didn't you...?

And the sounds themselves? They cover a wide range of modern dance styles, from techno, acid and hip-hop, to ragga, reggae and jungle. There are no wasted bullets — pretty much every voice has its place on the dancefloor. And while the wildest regions of synth programming are studiously avoided, the sounds on *The Bass Appetiser* form a pretty robust collection of sensible-but-with-attitude patches whose production quality would be hard to beat.

Conclusion: well, I've said it already. This is a definitive collection of 99 essentially dry and delicious multisample bass synth sets. Full patches will not be particularly cheap on memory: don't expect to get more than a few loaded in at once when auditioning for your half-finished tune — The best thing to do is to make up a one-sample economy version of each patch, so that you can load in a decent number of bass sounds at once. Then, once you've more or less decided which ones are likely to fit the groove, go back and pick up the full versions.

This is quality product for discerning dance samplers, and not really too much work either, unless you want to get into looping. And why bother? *Wilf Smarties*

**E** *The Bass Appetiser* £59.95 inc VAT and p&p within the UK.

**A** Time And Space, PO Box 306, Berkhamstead, Herts, HP4 3EP.

**T** 01442 870681.

**F** 01442 877266.





# widgets

## CONCISE REVIEWS OF ESSENTIAL ACCESSORIES

### SKB POP-UP MIXER FLIGHTCASE

American flightcase manufacturer SKB Corporation have added yet another model to their extensive range. This is not simply an existing design with added racking units, but a new case aimed at a specific user. The appropriately-titled 'pop-up' mixer case is intended to house one of the many so-called 'flat bed' rackmount mixing consoles currently on the market, like Mackie Designs' 1604.

Removing the case from its cardboard packaging reveals the now-familiar black SKB moulded styling, manufactured from Ultra-High Molecular Weight Polyethylene — the same material used by the US military for containers required to survive the most gruelling punishment and to 'deliver weapons in performance-ready condition' according to SKB's blurb. Whilst on the

subject of the build quality, SKB cases are impervious to all solvents, oils, fuels and acids — good news for gigging musicians in beer-swilling, or even beer-spilling establishments! The uniquely moulded ribs and bumpers of the design serve a double purpose, as they not only absorb shock vibrations, but also allow the cases to be conveniently and securely stacked together.

The pop-up case is surprisingly shallow in depth — 5.5 inches, to be precise. This is just enough to accommodate the aforementioned 'flat bed'-style mixer, though I'll say more on



this in a moment. The case's generous 12U rack space allocation is comprised of 36 precision-punched holes on aluminium flanges positioned within an inner hinged rectangular frame. The frame is in turn attached to lockable lid stays capable of extending to a 45-degree

open position, leaving ample room to access the inevitable mixer 'cable salad'. The mounting process involves clipping hardened steel nut retainers into the aluminium flanges. These retainers should enable the flanges of the pop-up case to outlast those cases with threads tapped into mild steel or aluminium.

As a 12U unit, Alesis' popular 1622 Audio Console fits the SKB case perfectly, as a quick test proved, although it's worth bearing in mind that the mixer's depth of six inches would not allow the case's hinged rectangular frame to close fully. This is not to suggest you can't mount a 1622 in the pop-up case, as the lockable lid, at 3.5 inches, is almost as deep as the main body of the Alesis mixer, so there's plenty of 'headroom' for extraneous rotary pots. Perhaps the lid's arguably excessive depth is a constraint of the moulding process employed by SKB?

The same occurs when mounting a Spirit By Soundcraft Folio Rac Pac or Samson MPL2242 — they'll fit, but the hinged frame of the flightcase won't then close completely — and given that the case is directly aimed at the flatbed mixer owner, perhaps an extra couple of inches' depth on the main body of the case would not go amiss.

On the plus side, SKB reckon their cases weigh 50% less than wooden counterparts, and though I wouldn't go as far as to agree with the manufacturer's humorous suggestion that the case is 'filled with helium', it was certainly light. It's not light in the visual sense, however, and the jet-black colour goes all the way through the material, so scratches won't show. As far as I'm concerned, if these cases are good enough for Uncle Sam, then this one should easily survive the rigours of the road. At £164, the case also represents a good 'bang for the buck', in the words of our cousins across the pond. *Jonathan Miller*

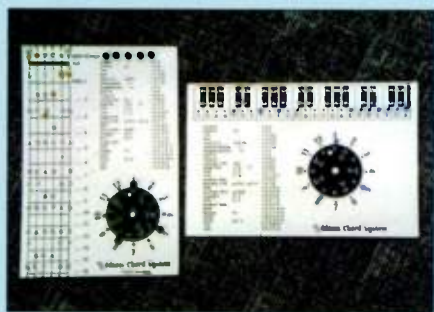
### ADAMS CHORD SYSTEMS

Most of us have used chord books or musical slide rules at one time or another, but a new system has just come on the market promoting a charmingly low-tech approach to working out chords for either the guitar or keyboard. Priced at under £5 each, the two Adams Chord Systems come mounted on an A4-sized piece of hardboard, upon which is printed a list of 26 different chord types, from major to minor 9ths. Alongside each chord type is a row of numbers corresponding to the intervals between the notes in the chord. The 'clever bit' is represented by a movable wheel that

Using the holes and pegs provided, you can build up your chosen chord in any inversion, before copying it into the book of blank chord templates provided with the boards.

The guitar version is similar, except this has a guitar neck printed down one side of the board, complete with nylon strings, each of which has a plastic bead threaded onto it. By sliding the beads to the notes depicted on the movable wheel, you can again work out any number of inversions, for any chord type.

In some ways, I found using these devices a little long-winded, and in some circumstances, a simple chord book or chord slide rule would be both quicker and easier to use. However, this method does make you provide some of the mental input, and it is quite easy to come up with chord inversions that you may not necessarily find in the books. This is especially true of the guitar version, where you can incorporate open strings to create your own power chords. I also feel the large size of the boards and the simplistic approach would lend itself well to teaching situations, especially with younger pupils. Whatever you think of the idea, given the incredibly low price, the Adams Chord Systems represent exceptional value for money, and the only real shortcoming I can think of is that systems like these don't help you work out which fingers to use! *Paul White*



shares the board with the aforementioned chord list. Printed around the wheel are the numbers 1 to 12, and on it are the note/chord names in semitone steps. By turning the wheel so that the root or name note of the chord is adjacent to the number 1, you can read off against the other numbers for any desired chord type, and discover the notes in your chosen chord. Holes and plastic pegs are provided, so that you can, if you wish, mark the numbers around the wheel, to save having to remember them.

If you have the keyboard version, you'll find a three-octave keyboard printed along the top of the board, with all the note names printed on it.

#### FURTHER INFORMATION

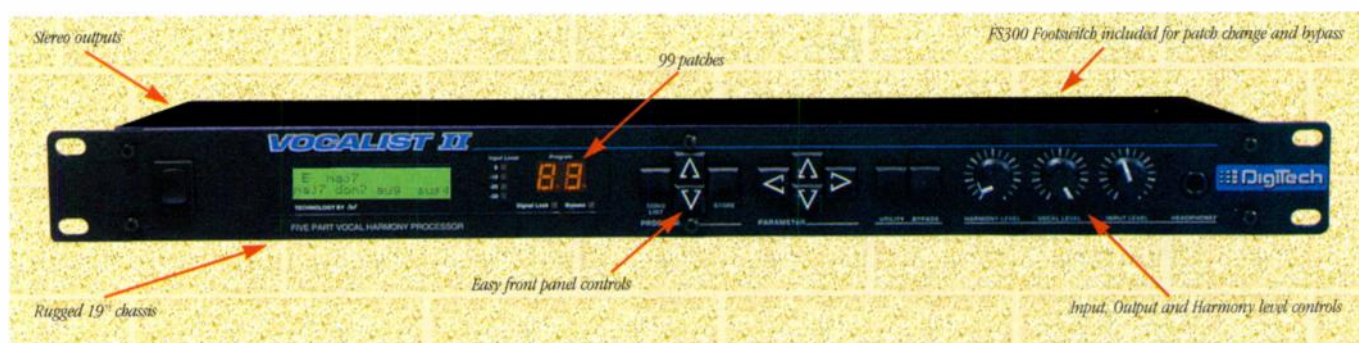
- £** Adams Chord Systems  
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- A** Paul Adams, The Hawthorne, Curriers Lane,  
Shifnal, Shropshire, TF11 8EJ.
- T** 01952 460107.
- F** 01952 672384.

#### FURTHER INFORMATION

- £** SKB Pop-up Mixer flightcase £164 inc VAT.
- A** John Hornby Skewes & Co Ltd, Salem House,  
Parkinson Approach, Garforth, Leeds, LS25 2HR.
- T** 0113 286 5381.
- F** 0113 286 8515.



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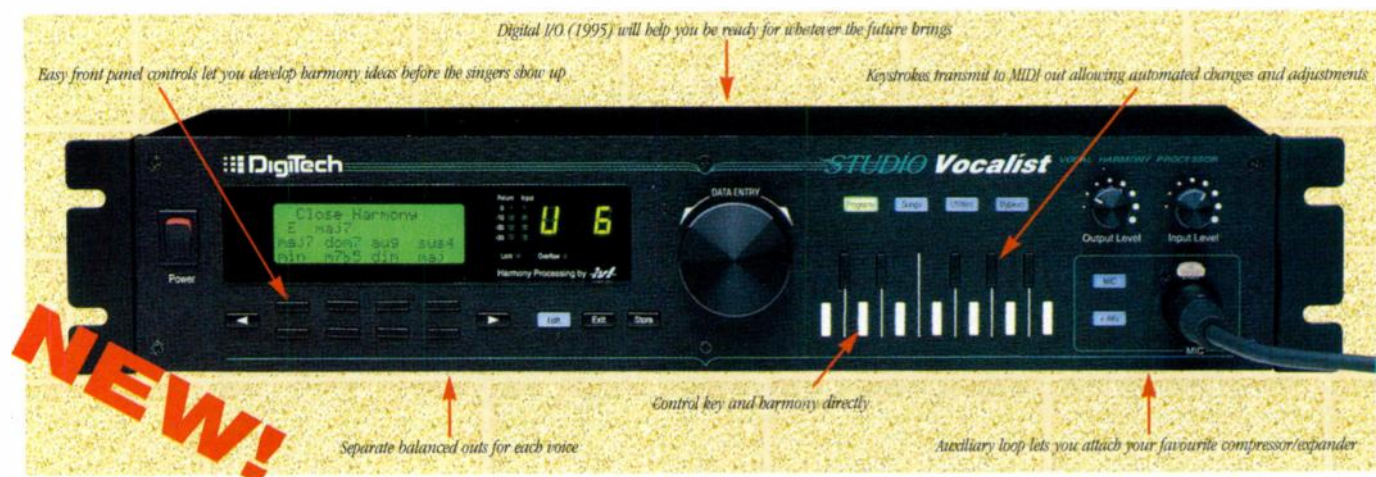
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of the features that can be provided, where do you go next? Has the MIDI-only sequencer reached the end of the road?

► "I personally feel that we are nowhere near saturation with features and functionality. There is tremendous room for user interface improvement, as *FreeStyle* shows. Certainly, integrated digital audio will become a standard feature, but there are many other possibilities yet to pursue.

Do you have any thoughts on using OpenDoc as part of a future product? I can envisage an OpenDoc music software product where you could drop a sequencer, a score writer and a librarian into a document rather than working in three separate applications, for example...

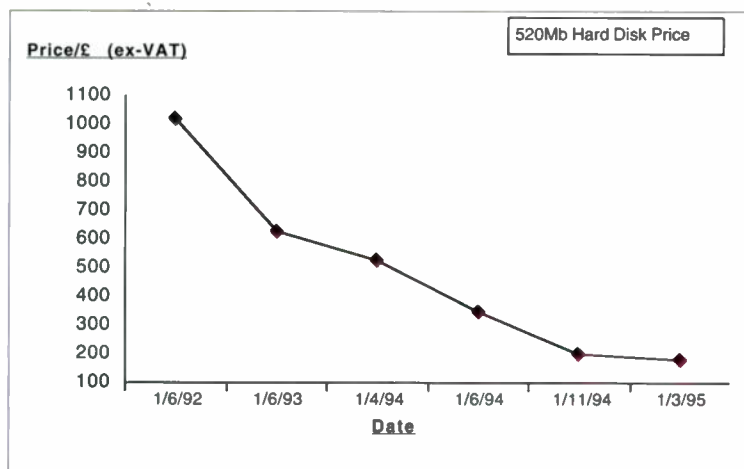


Figure 1: The price of a 520Mb hard disk drive, 1992-95.

"All I can say right now is that we share your interest in this technology."

Do you have a WWW page or an FTP site?

"Coming soon to a hard drive near you!"

Are you planning Windows versions of your software products?

"You can expect Windows *UniSyn* and *FreeStyle* in the near future."

## ON THE NET

The problem with the majority of 'music-orientated' World Wide Web (WWW) sites on the Internet is that they are mostly concerned with musicians and music, rather than technology. One place where this does not hold true is the excellent WWW site for the *emusic-l* listserv mailing list — there's lots of detailed information on a wide range of subjects directly related to the nitty-gritty of electronic music (in its widest sense!). The URL is <http://sunsite.unc.edu/emusic-l/>.

As well as instructions on how to subscribe to the listserv, a set of FAQs (Frequently Asked Questions), and access to back-copy digests via the E-music ftp site, the Web page also has links to pages covering topics like buying your first keyboard, MIDI on PowerBooks, wind controllers, notation software and lots more. Definitely worth a visit.

## HARD DISK PRICES

With the ongoing rush towards making everything digital, the price of hard disk drives has become one of the computer musician's major concerns — especially to anyone involved with direct-to-disk recording. Even without the loading of samples and audio files, I find that copying useful applications and gadgets from CD-ROMs means that I can easily fill up disks which seemed huge only a year ago.

So, what is happening to prices? I've compiled a graph of typical prices for a plain vanilla internal 520Mb SCSI drive for the last few years (see Figure 1). Clearly, the price has plummeted, but it seems to be bottoming out at under £200 for half a gigabyte. Furthermore, it seems that many manufacturers no longer supply drives smaller than 520Mb. This means that you can buy an internal 520Mb drive, and an external mirror of it, and it should only cost about £500. For direct-to-disk audio, you can expect to pay more, of course, but for ordinary storage, you may well be surprised at hard disk prices.

SOS

## TIP OF THE MONTH

This month, Daniel Rose of MOTU describes how to set up *FreeMIDI* to use Opcode's *Studio 5* MIDI Interface. I would point out that using just one serial cable will reduce the maximum amount of MIDI information that you can transfer between the Mac and the *Studio 5* — I use two cables. Also, if you use the *Studio 5*'s MIDI processing features a lot, then you may well miss them — I certainly would. Over to Dan...

This procedure will enable you to create a generic OMS setup document that will enable *FreeMIDI* to do its job correctly with Opcode's *Studio 5*:

1. With one cable, connect the *Studio 5* to your Macintosh to either the modem or printer port. You don't need two cables.
2. With OMS installed in your system, run OMS Setup, and create a new studio document by selecting the New Studio Setup command from the File menu.
3. Using the New Device command from the Studio menu, create a 'generic' device by selecting Other

from both the Manufacturer and Model pop-up menus. The device should be set to transmit and receive on all 16 MIDI channels. In addition, enable all clock options, ie. transmits/receives MIDI beat clock, and so on (the device ID setting should be of no consequence).

4. Repeat step 3 for each of the *Studio 5*'s 16 outputs.
5. From the *Studio 5* menu, select the Compatibility Setup option and check the 'Emulate MIDI Time Piece' box. You should be able to configure the MTP input and output cables by clicking the AUTO button. (1MHz is recommended if you will be running any SysEx applications.)

6. Save both the compatibility setup and the studio setup and make them current.

At this point, you have several choices; leave OMS in the system, replace OMS with *FreeMIDI*'s OMS emulator, or remove OMS entirely, by dragging the

OMS System Extension out of the Extensions folder. The option you should choose depends on your situation.

The only reason to leave OMS in your system is if you frequently use the *Studio 5*'s MIDI processing features (like controller remapping, and so on) and often change its internal processing settings using the *Studio 5* setup software. Otherwise, you'll find it more convenient to replace the OMS system extension (by dragging it out of the Extensions folder) with *FreeMIDI*'s OMS emulator extension, which you install by running the *FreeStyle* (or *FreeMIDI*) installer and selecting the Custom install option. Under emulation, OMS programs use *FreeMIDI* instead, which allows them to share the serial ports with *FreeMIDI* programs. They also share *FreeMIDI*'s studio setup document. If you don't use any OMS-reliant applications, you don't have to bother installing the emulator.

If you do choose to keep OMS in the system, remember to make this generic setup current when using *FreeMIDI* programs. This generic setup should work with the Opcode *Studio 4* as well.



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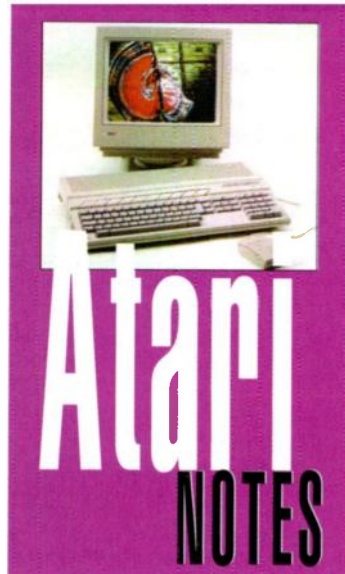
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**VIC LENNARD**  
*considers the current  
 plight of the humble  
 MIDI File library.*

**B**efore any of you write in to *Sound On Sound* complaining that this is not Atari-specific, I'll hold up my hands and admit it. But the issue is unlikely to be covered elsewhere in this magazine, and is so big that I feel duty-bound to run it past you.

I doubt whether there is a single Atari computer owner who hasn't loaded up a MIDI File at some point. In fact, it's fair to say that the Atari ST kicked off most of the MIDI File libraries. I've interviewed Joe Ortiz of Heavenly Music and Dave Clackett of Hands On MIDI Software in the past, and both started their sequencing habit on an ST. But if the powers that be get their way, the independence exhibited and the quality of product produced by both of these musicians (and many others), will be a thing of the past — and quickly.

Prior to January 1, 1995, anyone could contact the Mechanical Copyright Protection Society (MCPS) and obtain a licence to produce and sell MIDI Files. What is the MCPS? Essentially, it's a *Who's Who* of music publishers that upholds the rights of its members, and acts as a collection house for royalties on sales of any mechanical items, such as records, cassettes,

enhancing this area.

Printing isn't covered in the MCPS licence, and publishers such as EMI brought this to the MCPS's attention some time ago. A letter was circulated by the MCPS to MIDI File libraries in 1992, warning them that an extra royalty might be due directly to individual publishers. The situation rested there, until now.

Earlier this year, EMI contacted all libraries, and informed them that an extra royalty of around 12.5 percent was due on all of its titles, backdated to the start of 1994. The MCPS then increased royalties by a similar amount, but without any backdating (EMI does not rely on the MCPS to collect its royalties, preferring to use its own in-house system. Bearing in mind that EMI controls around 30 per cent of the music publishing market, one can understand why this is the case).

There are many issues here, not least of all that a number of MIDI File libraries claim never to have received a letter from MCPS, or to have understood the implications of it. While it can be claimed that ignorance is inexcusable, what we are talking about here is a tax on the *possibility* of printing a score from a MIDI File. If it were

possible to print a perfect score, with lyrics, then one could understand the publishers' concern; such a scenario would cost them revenue in lost sheet music sales. But have many of them actually *tried* to set up and print an accurate score? I doubt it, and if they were to try this, they would appreciate that the score layout and printing sides of most sequencing packages leaves much to be desired.

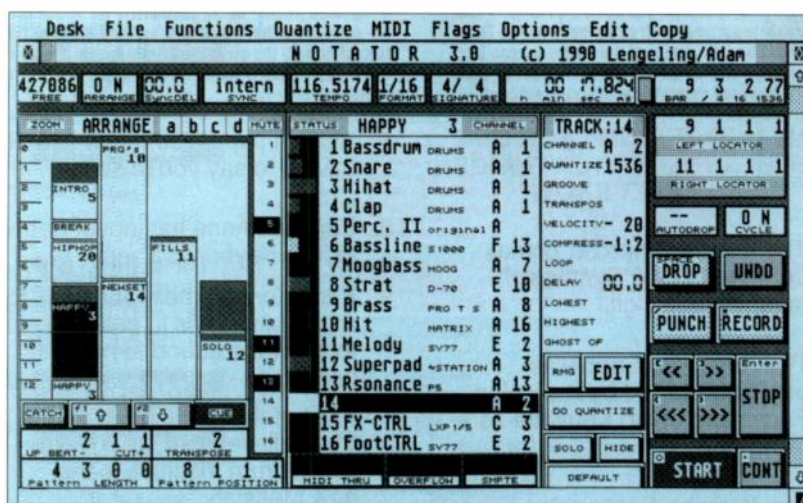
This appears to be a knee-jerk reaction to available technology, and is not consistent with the reaction to other developments. For instance, a program exists that allows sheet music to be scanned and converted to a MIDI File, a situation that should horrify most music publishers, and have copyright managers rubbing their hands. Yet I doubt whether

many publishers are even aware of this program's existence.

## ARTISTIC INTEGRITY

The second area of contention is one that will always raise its head in a competitive market — sub-standard product. If I had just had a number one hit [*you wouldn't be writing this column — Ed*] and my manager said "here, have a listen to this MIDI File of your song", I would be appalled if it bore little recognition to my masterpiece. But be honest — how many *really* good MIDI File renditions have you heard? It's unlikely to be many...

This is not a blanket slugging off. I've had dealings with most of the UK's libraries, and



*C-Lab's Notator, c.1990 — the program that made the copyright of printed scores an issue, by offering one of the first comprehensive score printing facilities.*

CDs and MIDI Files. A MIDI File library makes various returns to the MCPS, and then pays, typically, a 10 percent royalty on the sales of all Files. This is then distributed among the members. Sounds fine, you might say — but there are two key problem areas.

## PRINTING

Back in the early days of Steinberg *pro 24*, Hybrid Arts *MIDItrack* and C-Lab *Creator*, the issue of score printing didn't raise its head, as none of these early packages provided such a feature. However, C-Lab *Notator* changed the picture drastically, offering a comprehensive score print facility. In fact, many of the upgrades to this program over the years have concentrated on

## ABOUT THE AUTHOR

Vic Lennard has been an Atari enthusiast since 1987. He is currently editor of both *Atari World* and *Mac Action* magazines, runs Club Cubase UK along with Ofir Gal, and is author of *The MIDI Survival Guide* (available from the SOS Bookshop) as well as co-author of *The Music Technology Reference Book*.





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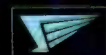
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# Atari NOTES

► many of the proprietors know that I hold their work in high esteem — but there are some dire examples out there. And rather than get drawn into the issue of piracy, let's just say that the tens of thousands of Files residing on various bulletin boards and Internet sites don't really help the situation.

With this in mind, it's not surprising that a number of artists have apparently stated that they do not wish to have their works converted into MIDI Files,

including Andrew Lloyd Webber, Billy Joel, Haddaway, Vangelis, Pet Shop Boys, Peter Gabriel, Dire Straits, and Mike Oldfield. I say 'apparently', because such messages have come from publishers and managers, *not* the artists themselves.

## FUTURE MOVES

Things are getting to a point where a MIDI File creator has to obtain an individual licence for each song. Imagine this situation: a programmer has to spend a couple of valuable days creating the File to present it, without any guarantee that a

licence will be granted. Additionally, should programmers attempt to create their own arrangement of songs, or as accurate a transcription as possible? Which will the publisher find more acceptable? Talk about walking on eggshells!

Royalties from MIDI Files are a mere drop in the ocean of the revenues generated from music, and yet MIDI Files keep alive a number of creative businesses. Perhaps the larger music publishers, who also have a hand in the sheet music trade, would prefer to have the entire pie to themselves, rather than allow a small slice of it to drop into entrepreneurial hands. There certainly seems to be a financial backdrop to this, and as my father keeps telling me: "where there's money, there's villainy".

One thing's for certain: there will be far less MIDI File libraries at the end of 1995 than at the start of it. Hardly any of 1995's hits have been licensed, and most libraries are producing backing track-style Files to keep money coming through the letterbox.

Worst of all, there doesn't seem to be a solution, as the publishers hold all the cards. In time, I wouldn't be surprised to see some of them setting up 'official' MIDI File libraries for their products...

SOS

Mike Oldfield  
— one of the  
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reputedly do not  
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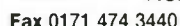


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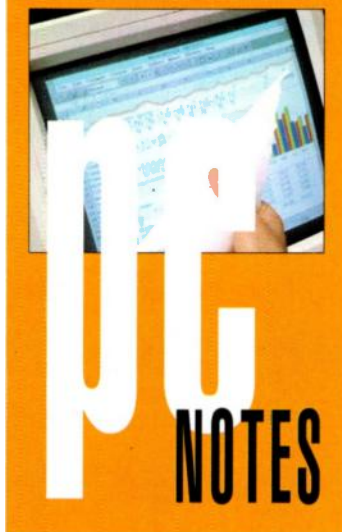
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**BRIAN HEYWOOD**  
explains what a busy  
month his PCs have  
had, and takes  
another look at the  
PC's potential for  
multimedia.

I've had a busy time this month, with four projects that would have been difficult, if not impossible, without the aid of my trusty PCs. The last of the four involved the synchronisation of an ageing Tascam 38 multitrack to no less than *three* PCs using both SMPTE and MIDI Timecode (MTC). While I won't go into the details of the work (at least, not here), it is interesting to note that the common feature of these projects was that they were all entirely different! This statement might sound a bit paradoxical, but it does highlight the biggest advantage that the computer-based musician/producer has over one who uses dedicated hardware — flexibility.

By its very nature, the computer is a general-purpose tool, adaptable by the application of suitable software to a number of different tasks. These might be as prosaic as running a word processor and a spreadsheet, or as complex as using a high-powered digital editing suite. The point is that using a personal computer doesn't limit your options, it expands them. As digital audio becomes more common (and affordable) in the computer environment, this will become ever more the case. So, in the morning, you might be mastering for CD, and in the afternoon you may be generating some sequences for the track-laying session you have scheduled for the next day. Need to remove noise from a track? No problem — just go out and buy a 'de-noising' software package, and do it in the digital domain.

While this is a very 'rosy' view, the basic principle is true, and applies to any computer you may have, not just the PC. Oh well, enough philosophising, down to business...

### THE MASTER KEYBOARD QUESTION

One of the most frequently-asked 'computer music' questions I am confronted with is how to go about finding a cheap MIDI keyboard for note input into soundcard-equipped PCs, and in past columns, I have mentioned a few with full-size keys. However, there are certain circumstances where you can't use a normal-sized keyboard — either due to space or budget constraints. Recently, I've come across a couple

of keyboards that use the 'mini' keys much loved by the budget end of the home keyboard market, and these keyboards may be suitable for anyone with limited space and/or credit card facilities! Both keyboards connect to the PC via MIDI, so you'll need an external MIDI connection to use them.

#### • YAMAHA CBX-K1

From Yamaha comes the CBX-K1, a compact 37-key MIDI keyboard with a comprehensive MIDI



*The new Yamaha CBX-K1 gives the computer musician a comprehensive MIDI specification in a compact package.*

spec. The keyboard allows you to generate almost any kind of MIDI data, so you can not only enter the notes, but also nuances of a real performance, like pitch bend or modulation. The keyboard features two control wheels, one which can generate a number of MIDI controllers (for example volume, modulation and stereo pan), and the other for pitch bend. The range of the keys can be shifted up

and down by four octaves, allowing almost any MIDI note to be generated.

As the keyboard uses 'mini' keys, it's not really suitable for learning to play the piano, but the keys are velocity-sensitive, so you can 'play-in' dynamics. The CBX-K1 is a very neat solution for getting a musical performance into your PC when you have limited space available. The recommended retail price is just under £130, but you might find a better deal if you shop around. To get more information about the diminutive keyboard, call Yamaha's information line on 01908 369269.

#### • TERRATEC MIDI MASTER

Developed by UK company Evolution, the MIDI Master dispenses with the controller wheels present on the CBX-K1, but gives you an extra octave of keys, and a sustain pedal input — something the Yamaha keyboard lacks. The keyboard is not velocity-sensitive, but it does allow you to set the 'default' velocity of the notes generated using the keypad on the front panel, which can also be used to send MIDI program and bank change messages. There are even a



*The MIDI Master from Terratec is a petite MIDI keyboard at a budget price — and it's wired for sound as well.*

couple of demo sequences built in, so you can test that the MIDI connection is working. The package also contains a free copy of Evolution's Procyon Windows-based MIDI sequencer.

One interesting non-MIDI feature is the MIDI Master's built-in 3W stereo amplifier and speakers, which allow you to plug the output of

### CYBERSPACE CORNER: MIDI ON THE NET

In past PC Notes columns, I've talked about commercially available MIDI files, but the Internet is also quite a good source of both original music and arrangements of pieces in the public domain. On CIX, for example, the route66 conference has a topic called 'midfiles' which acts as a clearing house for computer musicians that fancy displaying their compositional or arranging skills. There are also World Wide Web

sites that have MIDI files or other application-specific sequencer files available, though it can be a bit of a pain to find them. One FTP site that has a lot of MIDI files (as well as other information specific to the Gravis UltraSound soundcard) can be accessed via the World Wide Web using the following address:  
<http://wuarchive.wustl.edu/systems/ibmpc/ultrasound/sound/midi/files/>



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► your sound module or PC soundcard into the unit. Like the CBX-K1, the unit can be powered from either an external power supply or internal batteries — so it could be used with a portable PC, provided the latter is fitted with a MIDI port. The MIDI Master can even be used live on stage if desired, as it comes with fittings for a strap. The Terratec unit is cheaper than the Yamaha, weighing in at just under £100. For more details, contact the Keyboard Company on 01582 476105.

## SPEA SHOWTIME

Last month, I mentioned Creative Labs' RT300 capture card; since then I've been playing around



*The SPEA Showtime allows you to capture real-time video and save it as a Windows .AVI file.*

with another card, made by the German company SPEA. The Showtime Plus video card does just about everything that you might need in the video line of work; it acts as a graphics

accelerator and MPEG1 decoder, as well as being able to overlay live video onto the screen and re-scale .AVI files. Interestingly enough, it also has an audio capability, being able to replay 16-bit digital audio, but only when replaying MPEG files (at least at the moment). The card is supplied with a set of MCI drivers and an application called *Media Station* that allows you to create .AVI files from either the card's composite video or S-Video inputs. You can also replay .AVI and various types of MPEG file, including VideoCD.

In some ways, Showtime's all-in-one approach is quite attractive — it means you don't end up filling your PC's expansion slots with various specialised cards, as the Showtime Plus can provide the equivalent functions of a graphic accelerator, a video overlay card, an MPEG1 decoder and a video capture card, all from one expansion slot. Obviously, you lose out on some of the advanced features that you'd expect to find on a dedicated card like the RT300; for example, you are limited to the software compressors that Video for Windows provides. However, the SPEA card is a very compact solution to a number of video-based tasks that you might come across when authoring for multimedia.

This card also serves to illustrate the current 'state of the art' as far as computer-based video is concerned. The relative 'youth' of the technology means that software support is a bit patchy. For example, the .AVI driver supplied with the card doesn't support sound replay, either via the Showtime's own audio hardware or using an MPC soundcard. I found this annoying, as it meant that I lost a capability that I had previously had; namely the ability to hear the soundtrack of an .AVI file. So if you want a completely stable video system, it might be better to wait until the technology matures a bit.

SOS

## TURTLE POWER

Following on from Panicos Georgiades' article in last month's SOS, I thought I'd add something on the subject of the Tropez soundcard. One of the problems with getting a soundcard for creating multimedia sound is that you have to be able to address the many different requirements that your potential audience is likely to use, and this is especially true for the MIDI element of the sound. For instance, you need to be able to hear what your music will sound like with a good General MIDI sound set, as well as the OPL3 synthesizers found on a lot of SoundBlaster-compatible soundcards. The inclusion of the OPL3 synth is useful, as it allows MIDI file developers to test any compositions with both the Basic and Extended MPC sound standards. On the digital audio side, you need to have high-quality analogue-to-digital converters, so that your samples can achieve that elusive CD quality. Finally, the ability to create your own sampled instruments using a RAM-based wavetable

synth is extremely useful, both for general music applications and for creative multimedia sound.

The Tropez satisfies all these criteria, as well as adding an IDE CD-ROM interface and games ports (for those rare idle moments in one's busy schedule...). As Turtle Beach came into the soundcard market

from the professional audio world, you'd expect the quality to be pretty good, although it is dependent to a certain extent on the quality of your PC's power supply. The Tropez's CD-ROM interface is of the enhanced IDE type (AT-API), allowing you to take advantage of the low prices of these units. For external MIDI, there is not one, but two MPU401-compatible MIDI interfaces, as



*The Tropez card's comprehensive audio facilities make it a good choice for the multimedia musician.*

(including loop points) in preparation for downloading to the SampleStore. WavePatch then allows you to take the samples you've created using Wave SE and configure them so that they combine to create a sampled instrument.

The Tropez is priced at just under £250 — for more information, contact Et Cetera Distribution on 01706 228039.

long as you buy the optional cable set. The card comes bundled with the usual cast of supporting software, including a CD-ROM full of games, and a multimedia magazine.

As Panicos mentioned in his article, the important Tropez-specific applications are Wave SE and WavePatch. The first is a program for editing samples



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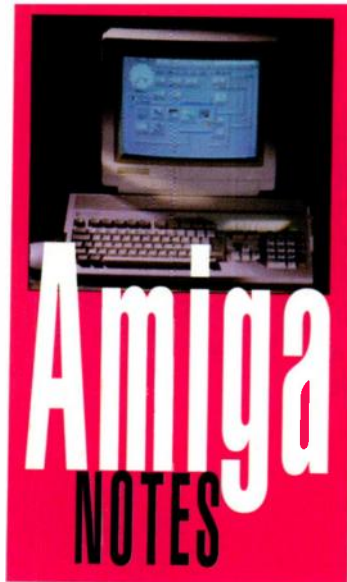
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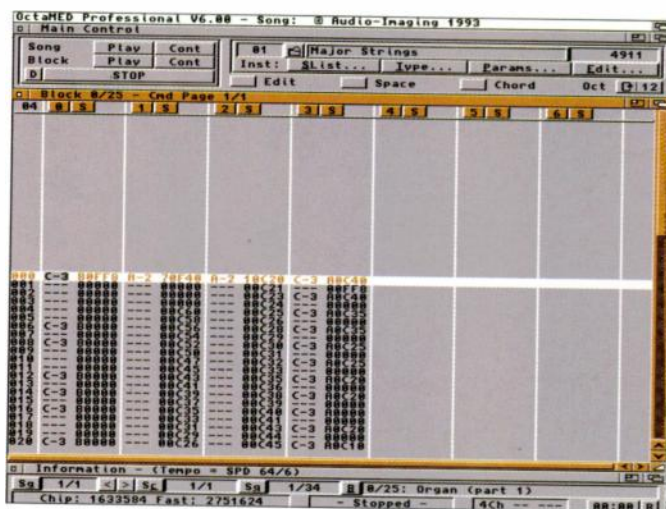


*There has been plenty happening on the Amiga scene this month — not least final confirmation of Commodore's buyout.*  
**PAUL OVERAA**  
*explains...*

**D**uring the last few weeks, the news has arrived that every Amiga owner in the world has been waiting for. Commodore has been sold, and the future of the Amiga now looks safer than it has done for a long, long, time. Escom, the German company founded by Manfred Schmitt (and one of the biggest PC manufacturers in Europe) have saved the day, and snapped up the previously ailing Commodore operations for a cool £10 million. Admittedly, there are still various details to be ironed out, including the future of the stock currently held in the Philippines, and the future of the UK Commodore division, but basically, the deal is signed, sealed, and delivered. Escom have even provided general outlines of the path they will follow to get the Amiga on the road to recovery again. As well as producing sound and MPEG cards, they've indicated that they'll be re-launching the A1200 and A4000 models, and perhaps even a very low-cost A600. In the longer term, an Amiga-compatible PowerPC is also being considered, but, needless to say, it's far too early to start getting excited about developments of this sort. Getting existing machines back in the shops must obviously be Escom's first priority, and the chances are that they'll be doing this with a vengeance!

The fact that Escom were able to outbid Commodore UK is, in hindsight, not surprising. They are a massive organisation that already have an annual turnover of over £500 million. It was of course Escom who recently purchased the Rumbelows store

One worry that has already been aired is that Escom's organisational muscle could mean uncertainty about the future of CBM's UK division. Escom is clearly capable of handling the UK marketing operations on their own, but they do in fact have three options available. They could take over the existing UK operations and staff as they stand, set up a new UK leg utilising some ex-CBM staff, or they could go it alone and start from



*OctaMED's new display arrangements actually make the program easier to use.*

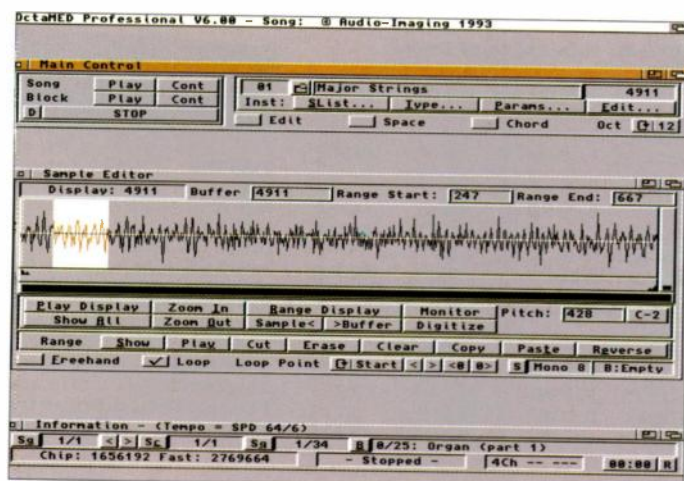
scratch with their own people. For my money, the worst case scenario, namely the total non-involvement of the CMB UK division, will not come to pass. In fact, I suspect that the reason the UK team pulled out of the bidding process so quickly was that some sort of deal had already been concluded to secure the future of a large chunk of the existing CBM UK operations. Whether this hunch is correct or not remains to be seen, but preliminary discussions between Escom and Commodore UK have certainly already taken place.

Of course, getting the basic Amiga wheels moving again after all the delays is going to take time. In fact, it will probably be at least August before any real signs of movement are seen in this respect, and much longer before any new products arrive. But what is important now is that the future of the Amiga is safe (probably safer than it was originally) and that, for most Amiga owners and developers alike, means that the biggest obstacle has been overcome!

## OCTAMED v6

The new version of *OctaMED Pro* has now officially arrived, and although there are a variety of extra facilities thrown in, the big attraction is proving to be the program's improved user interface. You notice the changes as soon as the program loads, because the screen is now split, with a main control window, and separate tracker editor and information windows. The tracker editor display has undergone several changes, including the addition of scroll bars and a sizing gadget, whilst the bar equalizers, which were previously part of the tracker display, have now been given their own separate window.

One new feature of the latest release is that it



*OctaMED's new sample editor display.*

chain, gaining over 250 additional retail outlets in the UK alone. When you consider that the company already has twice that number of outlets throughout Europe (along with substantial direct sales facilities), it becomes clear that this is a company with an awful lot of financial and marketing power.



can handle both 8- and 16-bit sound samples. Options for temporarily freeing up the Amiga's audio channels have been added (so that other music programs can be run without having to quit OctaMED completely), and those long-awaited MIDI file type 0 saving and MIDI file type 0 and 1 loading options have also arrived. There are new file compression facilities (XPK and Powerpacker), and provision for saving modules as executable files, as well as support for MAUD, AIFF and PC .WAV samples, a Toccatà Capture window for users of Toccatà soundcards, and improved internal buffer arrangements. A tempo operations window has also been added to allow easier tempo conversion. It's not just the program itself that has seen changes, either — the new package now comes with a printed tutorial manual!

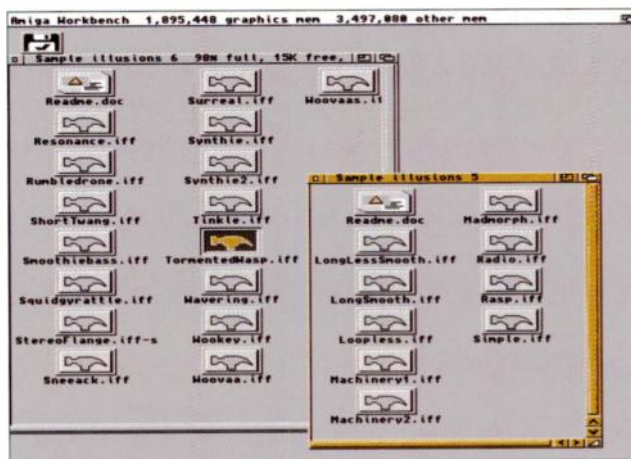
One of the most important new features, however, is the provision of ARexx support within *OctaMED Pro* itself (the stand-alone player program has of course been controllable via ARexx for a long time). The new ARexx commands are quite exciting, because external ARexx macro links will now enable users to perform very sophisticated edit operations automatically.

In the main, the changes are clearly for the better, and it's quite obvious that a lot of work has gone into the new version. In the UK *OctaMED Pro* v6 costs £36 (including postage). *OctaMED v5* users pay only £26 (including postage). Other price arrangements are available for MUG (Med Users Group) members — full details can be obtained from Seasoft Computing on 01903 850378.

## MORE ILLUSIONS

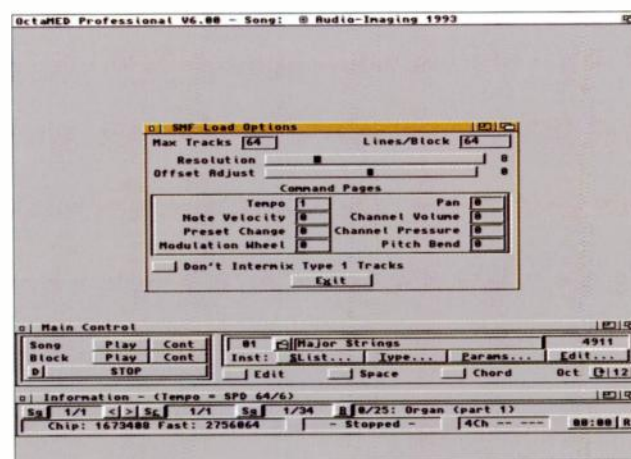
You may remember that a few months ago I mentioned quite a useful Amiga sample editing program called *Aural Illusions*. Nicholas Blatchford, the program's author, has informed me that a fairly substantial upgrade (to version 2) has recently been carried out, and this is almost ready for release. To the best of my knowledge, the new offering will be made available as a free upgrade to users of earlier versions of the program, but watch this space for further details!

Nick has, incidentally, also recently released six public domain sample disks created with the *Aural Illusions* program. The disks themselves are a fairly



typical collection of sounds, with a healthy smattering of nice chords, twangs, effects like helicopters and hurricanes, and some even stranger noises. As always, some sounds are likely to be more useful than others, but the interesting thing about this collection is that none of the samples have actually been 'sampled' in the conventional

*Just some of the samples available on the new Sample Illusion disks.*



sense. All sounds have been created from within *Aural Illusions* itself, and then saved as standard non-compressed 8-bit IFF voices at 28.185kHz, so they provide a good indication of what *Aural Illusions* can do. The disks are entitled *Sample Illusions* (vols 1-6), and are again available from Seasoft Computing (tel: 01903 850378).

*The new MIDI file support is a very welcome addition!*

## AMIGA NEWS IN BRIEF

### • GOLDEN OPPORTUNITY

Golden Image have recently announced some hefty price cuts on certain pieces of Amiga hardware. The Multiface III card for the A2000/A4000 is now £69.95 (from £129). The Octagon SCSI2 A2000/A4000 controller is down to £89.95 (also from £129), and the Tandem CD/IDE controller price has been cut from £69 to £49.95. Finally, the AlphaPower IDE controller for A500/A500+ machines falls from £99 to £74.95. For details of these and other offers, call Golden Image on 0181 900 9291.

### • DISKSALV GOES COMMERCIAL

A commercial version of Dave Haynie's popular *DiskSalv* program, called *DiskSalv 3*, has recently been

released. This disk backup/recovery program (which started life as a public domain offering) can be used for checking disks, recovering data from disks after a crash, and a variety of other tasks. The program costs £30, and further details can be obtained from Almathera on 0181 687 0040.

### • ALMOST FREE SOFTWARE

There still seem to be a lot of Amiga users who don't realise that the Commodore *amigaguide* hypertext reading system, now an integral part of the Amiga's system software, can be obtained separately for the price of a PD disk. If you get hold of the Fred Fish No. 920 disk, you'll find the *amigaguide* library, all the

various tools and files needed to make the *amigaguide* system work, and some documentation and examples. So, if you didn't get this hypertext software with your Amiga, then providing you have a machine running *Workbench 2* or greater, you now know what to do!

### • WORDSWORTH INFO

The third issue of the free *Wordsworth* newsletter has just been mailed to users of Digita's popular Amiga word-processing program. So, if you are a registered user and have not received your newsletter copy by the time you read this, then give Digita a ring on 01395 270273.







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# Heavyweight

## YAMAHA CS80 POLYSYNTH

**RICHARD CLEWES explains his fascination for this hernia-inducing sound machine from days of yore.**

**T**he Yamaha CS80 is one of the most enigmatic synthesizers ever made. Those who experience a brief encounter with this monster often come away babbling about incredible performance controls, bizarre ring-modulated noises, and a space-age control panel. They are also quick to mention the CS80's 'weight problem' and its apparent aversion to staying

professional players, most notably Vangelis (who has played the CS80 on all of his albums since 1977), Klaus Schulze, and Eddie Jobson. Luckily for Yamaha, when the CS80 was launched in 1976, Sequential's Prophet V and Moog's Polymoog keyboard were yet to hit the market. However, the annals of history show that it was these two upstarts, along with Oberheim's costly Eight Voice, which prevented the CS80 from becoming the most popular polysynth of the Seventies.

### THE FLOP FACTOR

Aside from the competition and its retail price, there are several reasons why the CS80 was never a smash hit. Firstly, the weight. The

have it fully serviced; but failing that, keep it in one place, and treat it with due care and affection.

### JUICY FEATURES

Having dispensed with the 'notorious' side of the CS80, it's time to celebrate all the sonic goodies that made musicians readily part with their cash back in 1976. The best starting point is the keyboard itself. This is an unusual weighted design, with polyphonic aftertouch. The feel is 'clunky' but definitely solid, and the range of features controllable via aftertouch is highly impressive — modulation speed and depth, volume and brightness, are all at the mercy of your fingers. There is also a control called Initial Pitchbend, which introduces a slight 'twang' to a note as it slides up to its proper pitch. This can be used to produce excellent harmonica or saxophone type sounds, as ably demonstrated by Vangelis on 'Blade Runner Blues' from the soundtrack to Ridley Scott's filmic masterpiece.

The rest of the performance controls display a laudable design philosophy of having things which make a vast difference to sounds readily at hand. For instance, the two levers labelled 'Resonance' and 'Brilliance' can totally transform a sound such as the chunky 'Bass' preset into a delicate harpsichord. Similarly, the 'Flute' patch (used extensively by Steve Winwood) can easily be turned into a rasping trumpet. It seems Yamaha had this morphing business licked before anyone had ever dreamed of it!

For the best entertainment, turn to the ribbon controller and the Ring Modulation section. Neither of these were unique features, but yet again Yamaha seem to have thought of the best possible way to implement them from a performing musician's point of view. Unlike pitch-bend wheels and the Moog ribbon controller design, the CS80's ribbon has no centre position. It is therefore possible to have an incredibly smooth pitch-bend, over a range of one octave upwards if you place your finger to the left of the ribbon and move it to the far right. Alternatively, by going in the other direction, it is possible to move from the keyboard's highest pitch right down to a sub-audio frequency.

### PERVERSE PRESETS

Unfortunately, the CS80 falls short in what is now laughably considered the most important aspect of any new synthesizer — its presets. Despite having a generous 8-note polyphony (compared with the Prophet's five), the CS80



Photo courtesy of the Museum Of Synthesizer Technology.

in tune. However, it is precisely this combination of musicality and unreliability that has built up the CS80's reputation as the most formidable analogue dinosaur ever to roam the classified ads jungle.

It seems ironic now, but the CS80 was actually introduced as a more portable version of an even bigger synth, Yamaha's GX1. While famous names like Stevie Wonder and Keith Emerson were happy to stick with this digital mammoth, few people could fork out the £30,000 needed to buy one. The CS80 itself was expensive, coming in at a hefty five grand, but it found wider acceptance among other

CS80 weighs an obscene 100kg. Admittedly, this includes the built-in hard case, but the CS80 really needs to be transported in a full flightcase in order to protect its highly delicate voice circuitry. The most sensitive parts of all are the tuning trimmers. As Mark Vail explains in his excellent book *Vintage Synthesizers* [see SOS Bookshop], if an unprotected CS80 is transported in an 'upright' position, with its rear panel pointing to the floor, you may start your journey with a machine that's in tune but you definitely won't end it with one! To be honest, the only way to ensure that a CS80 will stay in tune for as long as possible is to



# Champ

has a meagre 26 (non-programmable) presets. This factor did the synth no favours in the early Eighties, when much lighter and more reliable keyboards such as the Juno 60 appeared, offering more than double the number of sounds. However, it is possible to store four patches in the CS80's limited 'memory' — a curious collection of sliders lurking beneath a cover on the front panel. What is also worth bearing in mind is that

many of the CS80's presets sound alike anyway, once you start messing around with the Brilliance and Resonance controls.

The sheer quality of the CS80's sounds makes up for many of these limitations. The presets are arranged in two banks, which can either be selected independently, or layered together. When similar types of sounds, such as 'Brass 1' and 'Brass 2', are layered and detuned, the CS80 really starts to sing.

Coupled with the flexible aftertouch, this makes the CS80 an ideal instrument for expressive solos, despite the fact that it is a true polyphonic synth (unlike some of its lesser competitors, which relied on home organ technology). In fact, the CS80 could almost be thought of as two polyphonic synths, because there are two independent 8-voice sections available. These boast a comprehensive filter section, which — despite being unable to summon forth a storming Moog-style bass — is invaluable for precise control of sonic clarity.

## VERDICT

So, has the Yamaha CS80 been the victim of a long-running smear campaign? To be honest, I think you must really love the sounds and features of the instrument in order to justify spending the £800 that they typically sell for at the moment. The terrible weight and huge bulk of the CS80 require a great deal of effort (in every sense) to come to grips with. Yet as soon as you start detuning the sounds and use the ribbon controller, polyphonic aftertouch, ring mod, etc... it is easy to see why fanatics such as myself keep hold of the things. Now if only Yamaha would stick a ribbon controller on the front of their next synth (even if it's just a 'virtual' one) and fill it with cement, we could get back to the good old days!

SOS

## RING MOD TRICKS

The CS80's Ring Modulation section is the best ticket to way-out audio fun and games that I have ever come across. There are five controls at your disposal: Attack, Decay, Depth, Speed, and Modulation. Despite initial appearances, the Depth control does not have any bearing on the amount of ring modulation effect; instead, it sets the amount by which the Attack and Decay levers can affect the

modulation speed. When the latter controls are fully employed, it is possible to recreate the memorable ring mod 'scream' heard at the beginning of the old *Doctor Who* theme (anorak wearers of the world unite!). When approached with more restraint, the ring mod section can also yield some subtle shifts in the volume of a sound, almost giving the impression that the synth is 'breathing'.

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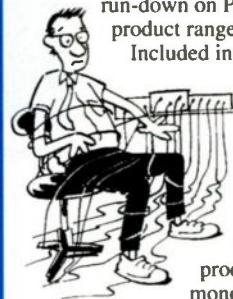
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# Hit or Missile...?

## KORG TRIDENT MULTI-INSTRUMENT KEYBOARD/POLYSYNTH

**Vintage synth collector and self-confessed Korg fanatic ALEX CLARKE waxes extremely lyrical about the early '80s Trident — a hybrid of polysynth and string machine.**

**K**org are one manufacturer who have, over the years, and in one way or another, kept the interest in their early instruments alive. It's only when you put the company's achievements into a list that you can really appreciate the work they have put in to keep musicians entertained and content. All sorts of Korg synth milestones spring immediately to mind: the Mini 700 series, the PS3300/3200/3100s, the MS10, MS20, and MS50, the Delta and Sigma, the BX/CX3s... — and these only take us up to 1983. The other special reason why I have personally always held an interest in Korg equipment is that you don't have to be up at supergroup status to obtain one!

In amongst my collection of instruments is an underestimated and undervalued but nevertheless trusted friend, my Korg Trident, and I feel it's deserving of a mention. I have found that because the Trident doesn't fit into any immediate category, it's been a little overlooked, even though it is physically huge, weighing in at nearly 24Kg. I know it's not quite the kind of instrument one would build a temple for (unlike the Oberheim Matrix 12, which I don't possess... yet!), but it does nevertheless have its place, and this page of SOS will do just fine.

### TRIDENT HISTORY

First, a little history. The Trident is not just a synth, but a multi-instrument machine divided into three distinct sections: strings, polysynth

and brass, all of which have an output mixer.

Born in 1981, the first Tridents have 16 patch memories (arranged in two banks of eight), three preset sounds, 8-note polyphony, a 61-note splittable keyboard, and a whole array of jack socket Ins and Outs for connections to other Korgs (such as the MS20, the PolySix, and so on). The synth section has dual VCOs independently tuneable to settings of 16', 8' and 4'. VCO1 has plenty of waveforms (including PWM), and the VCF has standard functions (cutoff, envelope generator and resonance) — although a lot of the bass response tends to drop out of the filter when the resonance is turned up too high.

The string section has the same pitch options as the synth (16', 8' and 4'), an envelope and equaliser, and vibrato, ensemble, and bowing effects — although the so-called bowing effect just seems to give the attack a subtle brightness.

Finally, the brass section has only 16' and 8' pitch options, but does sport a full VCF and ADSR. Any of the three sections can be assigned



The Korg Trident (MkII version pictured).

to the flanger, which is the only real effects system on the Trident, and is jolly useful for those really complex phased sounds. Talking of which, it's time for some words on just that subject.

### THE SOUNDS

The Trident can generate a wide range of sounds. My favourite 'Fat Pads' tend to be a mix comprised of outputs from the synth and string sections, with a light flange on the strings, and the ensemble effect in action. Using just the string section and flanger, you can re-create some of the sounds used in Ultravox's 'Vienna', Visage's 'Fade to Grey', and many tracks by OMD and others from the early '80s synth pop era.

For me, though, the Trident is useful for creating the sort of large and complex string, brass, and surreal synth sounds that other instruments struggle to achieve with enough solidity and depth. I have the String Pad From Hell stored in memory location three on mine, but it's the silky string and synth combinations that I like most of all about it. Furthermore, although it's an instrument with a lot of scope for sonic creativity, it still manages this without being festooned

### TRIDENT GUIDANCE

If you are looking for a Trident for musical purposes, check potential purchases over thoroughly. Some problems are simple and some can be highly expensive. I've found it's worth waiting for a good Trident to appear — I took over three years to find mine! Some have unstable tuning when hot, so it pays to leave one switched on for a while when examining it before a possible purchase. If you find one with the odd broken or missing key, don't worry — that's easily fixable. Prices vary; I've seen both versions going for as low as £300, but as high as £800. Finally, it's worth mentioning that some stands have difficulty with the bulk of this hulk. 'X' stands are best — without the extensions fitted. Happy Hunting.

with knobs. When external effects are added, the sky is the limit, but as with many analogue beasts, you really shouldn't expect *instant* aural gratification from the Trident — the programmer has to really get to know the machine before it will realise its full potential. Like a lot of aged units, the Trident also has its days when it will only play F#m sus 13 — but a light thump on mine usually corrects the problem!

### ECCENTRICITIES

Every keyboard has its foibles, and this one is no exception — but then, I haven't encountered a keyboard yet that hasn't. Many of my older synths have one hang-up or another, and some of them can be terribly unstable during long recording sessions. I've heard many tolerant, worldly musicians lose all self-control when their synths decide to adopt a surreal alternative tuning, or find the lost chord right in the middle of a gig. These anomalies we must endure.

Neither MkI or MkII Tridents have MIDI, and I've not heard of one ever being retrofitted... but then, why would you want to? The best and easiest way is sample the sound you've created, and use it over MIDI that way — and you don't get any tuning problems then either.

### SUMMING UP

The Trident wasn't regarded as a world-beater, but then I don't think it was designed to be one. All synths are instruments in their own right, and have different functions to perform. Any synth will do some things well and others badly, and this is certainly true of the Trident. It excels at producing heavy pad sounds and phased string sections, but won't be much cop at producing a Rhodes piano or ethereal bells. There are other synths for those tasks — but then they can't do what the Trident can!

### THE MKII

In 1982, the MkII version of the Trident became available, featuring some subtle differences. Editing sounds on the MkI meant starting with one of the sounds already in memory. The MkII allows you to start with a 'blank page', and gives you 32 patch memory locations, arranged in four banks of eight, exactly as on the Korg PolySix.

A moderate amount of extra heat-sinking and a slightly beefier power supply were added, which put a stop to some of the original system's thermal problems. The MkII is a lot more stable, but sounds generally the same.





# VISCOUNT RD800

## MIDI DATA FILER

### the small print

1. Only one entry per person is permitted.
2. Employees of Sound On Sound Ltd, Viscount, 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 organisers wish to make a personal presentation.

Up for grabs this month is this powerful, yet easy to use, MIDI data filer from Viscount Professional. Worth £459, it offers direct to floppy disk recording of any MIDI data, whether sequence or System Exclusive; compatibility with MS-DOS format double- or high-density floppy disks, providing instant access to commercially available songs in MIDI File Format.

The RD800's features include the ability to read Standard MIDI Files in Format 0 and 1; it records in Format 0. You can temporarily or permanently transpose sequences, loop songs or sections of a song, and mute individual tracks — useful, for example, if you want to mute individual parts or a lead line as well as for 'music minus one' educational operation. MIDI songs can be chained, and the data relating to chains can be stored to disk; up to 99 chains are available.

On the MIDI side, individual songs can be selected with Program Changes, and MIDI Clock is sent and recognised. SysEx, Control Change, and Program Change data can all be filtered from the MIDI stream if desired.

The most exciting feature of the RD800 is the Virtual Disk. This consists of 1Mb of Flash RAM, expandable to a very useful 4Mb; songs stored here remain permanently in RAM, without needing battery backup. This makes the RD800 ideal for on-stage operation, especially since it even offers disk-free operation, courtesy of its Flash RAM. If you use MIDI equipment of any kind, a MIDI data filer such as the RD800 offers many computer-like facilities at reasonable cost — for example, easy access to commercial MIDI Files and convenient storage of SysEx dumps (saving on RAM cards). And if you use a MIDI hardware sequencer, whether stand-alone or as part of a workstation, an RD800 could also add 16 extra sequence tracks — simply synchronise your workstation or sequencer to the RD800.

So what are you waiting for? Answer the questions, break the tie, cut out the coupon and send it in. Your entry should reach us no later than **31st August 1995**.

**Prize kindly donated by Viscount Professional/Titan Music (Italy) and McCormacks Music (0141 332 6644).**

## QUESTIONS

1. Which of the following are NOT Viscount products?

- a. RD70
- b. MDF1000
- c. RD800
- d. EFX-2

☐  
☐  
☐  
☐

2. Which country does Viscount gear hail from?

- a. Germany
- b. England
- c. Italy
- d. Netherlands

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3. How many digits does the RD800 LED display have?

- a. One
- b. Two
- c. Three
- d. None

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☐

4. In computer terms, what does the acronym RAM stand for?

- a. Really Awful Memory
- b. Rotten And Mouldy
- c. Random Access Memory
- d. Random Add-on Memory

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## TIE-BREAKER

Re-arrange the letters of the following phrase to come up with as witty and entertaining an anagram as you can: **"Viscount MIDI Data Filer"**  
(Note: you must use all letters in your entry).

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.....

.....

Name .....

Address .....

Daytime tel. no .....

Post your entry to: **SOS RD800 Competition, Sound On Sound, Media House, Burrell Road, St Ives, Cambridgeshire, PE17 4LE.**



We're clearing the shelves in preparation for stock-taking and alterations to our Charing Cross Road premises. If you'll ever need one of the items listed here, you'll never find it this cheap again.

**Commences 7.00pm 'til Midnight Friday 30th June**  
and then if there is anything left, through till the end of the next month.

Spendor 4 way studio monitors (needs some attention)  
 Atari 1040 + SM124(needs some attention)  
 Bluepoint 4 octave controller keyboard (needs attention)  
 Vestax MR300 4 trk(needs attention)  
 PG Music Powertracks Lite (disk & manual only) PC sequencer  
 Danger 1 CD loop samples  
 SoundBlaster compatible MIDI kit  
 HyperFlex 20 Mb SuperFloppy drive  
 Big Noise Cadenza (DOS or Windows version)  
 Voyetra AudioView PC hard-disk recording software  
 Macintosh MIDI interface  
 Music Quest Note/1 parallel MIDI interface (PC)  
 MPU compatible IBM PC MIDI interface  
 Denon DRM44HX three head mastering cassette deck  
 Hitachi External SCSI CD-ROM drive  
 RRI MIDI Lite MIDI to light convertor (8 channel)  
 Goodmans 80w powered monitors - compact active speakers  
 Shure SM58 still a standard !  
 Sennheiser 531 top quality vocal mic  
 Audio Technica TM1000 unbelievably cheap all-round condensor mic  
 Beyer DT100 industry standard headphones  
 Big Noise MaxPak 3.2 total MIDI solution software (PC)  
 Korg Audio Gallery General MIDI module plus PC interface  
 Waldorf EQ-27 2by7 band MIDI controllable graphic EQ  
 Mac Classic 2/40 entry level Macintosh complete system  
 AudioTrix Pro PC Sound card with Yamaha sound chip  
 Zoom 1202 semi-programmable 1U true stereo reverb and effects  
 Roland PC200 4 octave Master Keyboard with pitch bend and modulation  
 Alesis SR16 classic drum machine still going strong  
 Apex type C-2 the original exciter now better than ever with bottom end enhancement  
 AKG C1000 standard stage and studio condensor mic  
 OpCode Studio3 2 in, 6 out Mac MIDI interface plus SMPTE time code  
 Alesis 3630 Compressor with loads of features  
 Niche 8 channel VCA MIDI controllable automation system for any desk.  
 Spirit Absolute2 current top-selling monitor  
 Function Junction + the ultimate MIDI patchbay  
 Alesis RA100 75w channel studio power amplifier  
 AKG C3000 budget large diaphragm studio condensor microphone  
 Roland U110 original sample-playback module still sounding good.  
 AKG Diversity wireless / headset Sw200 as used by Madonna !  
 Roland A30 76 note semi-weighted mother keyboard  
 Novation BassStation Analog mono synth  
 Novation BassStation Rack as above !  
 Korg 05R/W General MIDI module  
 Korg M3R almost an M1 in a rack  
 Technics SL1200MkII the standard turntable  
 Audio Media LC hard-disk recording for all Macintosh LCs (not 630)  
 Tascam 424 high speed, high quality portastudio  
 Kurzweil MicroPiano the best sounding piano module  
 JLC Cooper Datamaster lock your Adat to anything  
 Tascam 122 Mk2 Industry standard professional cassette deck  
 Sony DTC750 Budget DAT machine  
 Korg X5 General MIDI synth with 5 octave keyboard  
 Korg Wavestation SR Highly original sounding synthesizer with loads of sounds  
 Alesis Quadrasynth 7 octave super-synth wity 64 note polyphony  
 Foxtex R8 (no remote) Most popular budget 8 track  
 E-mu Vintage Keys Get your favourite analog sounds in a digital rack  
 Tascam 488 Cheapest ever 8 track using dbx cassette mechanism  
 Sony PCM2300 Rugged and reliable DAT as used by the BBC  
 Roland JD800 Manually editable digital synth with individual parameter sliders  
 Akai S1000 One of the best selling samplers ever produced  
 E-mu E11xp 8 Meg sampler with multiple outs  
 Soundcraft Delta-8 20:8 Well respected pro desk  
 Alesis ADL Best selling digital 8 track recorder  
 Yamaha VA-1 Breath-takingly realistic synth  
 Foxtex RD-8 Adatwith knobs on plus all the sync options you'll ever need  
 Soundcraft Sapphyre 28:8:2 Superb quality large format in-line recording console  
 Soundcraft DC2000 32 channel unbelievable value moving fader plus MMC desk

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## Hard-disk Recording

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Whilst Audix microphones are little known in the UK, they are one of the USA's top selling brands used and endorsed by acts like Bruce Springsteen, Red Hot Chili Peppers etc. The UK distributor has given up the line, enabling us to offer these high quality microphones at huge discounts, well below wholesale prices! Most are brand new and boxed, and all are fully guaranteed. Once in a lifetime chance!

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## Multi-tracks

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Alesis Adam 8 Tk Digital Rec.	£ 2,149
Fostex-Rd8 8 Track Adat	£ 2,999

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Boss-Tm3 Line Training Module	£ 12
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Symetrix-Sx202 Sx202 Mic Pre Amp	£ 99
Viscount-ER256 Signal Processor	£ 99
Waldorf-Eq27 Miniworks Eq27 Prog 7band	£ 129
Symetrix-Sx204 Sx204 Headphone Box	£ 149
Akai-Me3si Midi Trigger	£ 169
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## Portastudios

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Fostex-K18h Portastudio	£ 159
Fostex-380 Porta Studio	£ 619

## Samplers

Peavey-Dpmx Peavey Sampling Expander+Sesi	£ 169
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Roland JS30	£ 699
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Soundl-H12ev Pa Speaker Cab	£ 165
Viscon-Rd800 Viscount Rd800	£ 399

## Spares

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Unbelievable clearance offers on virtually all Anatek products. MIDI problems? - problem solved!

MIDI Match	long-distance MIDI amplifier	£ 5
Pocket Pack	(Phantom powers other Anatek devices)	£ 5
Pocket Curve	Velocity scaling	£ 5
RAM card	256k RAM for Pocket Sequencer	£ 5
Pocket Panic	MIDI reset / all notes off	£ 10
Pocket Pedal	Converts pedal to continuous controllers	£ 10
Pocket Record	15,000 MIDI event recorder	£ 10
Pocket Thru	1 in, 3 out	£ 12
Pocket Sequencer	16 track hand-held sequencer	£ 19
Pocket Mac	1 in, 2 out Mac interface	£ 29
Pocket Filter	Filters out various types of MIDI data	£ 29
Pocket Mapper	Maps MIDI data from one type to another	£ 39
Pocket Plus	2 to 1 merge, plus mac interface	£ 50
Pocket Sync	Smart FSK to MIDI clock / SPP	£ 59
SMP16	2U everything box, includes MIDI programmable 16x16 audio patchbay, 7x8 MIDI patchbay, SMPTE to MIDI synchroniser, and Macintosh interface or with RT120, MIDI lader box	£ 249
		£ 279

Fostex-8750 Interface For Sony	£ 5
Fostex-9201 Sync Cable	£ 5
Time-Next What's Next Demo Cd	£ 10
Korrom-O3rw/Vc4 03rw Rom Card	£ 10
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Sound Sampling Collection 1 Sample Cd	£ 15
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Kawram-K4/Vc1 K4v1 Ram Card/K4	£ 15
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Yamaha-Sy85 Synthesiser Card	£ 20
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Oed-Suppressor Mains Suppressor	£ 20
Tascam Rc30p In/Out Switch Remote Control	£ 20
Akai-lb101a Interface For S900	£ 25
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Philrees-5x5 Midi Switch Box	£ 29
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Anatek-Pocfile Anatek Pocket Midi Filter	£ 35
Philrees-V10 Midi Thru Box	£ 35
Akai-U1 Tuner	£ 39
Fostex-8544 R8 Remote Ext Cable	£ 39
Soundc-Blue Fader Sapphyre Dual Stereo Module	£ 49
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16 Track Head Block	£ 50
Pr-Pd40 Patchbay	£ 59
Signex-Cp44j Isopatch Cp44j Rear Jacks	£ 65
Emu-E111 Cd Rom	£ 69
Roland-Vewv1-Voice Poly Expansion Board	£ 69
Tascam-Ge20b Graphic Equaliser	£ 79
Roland-Vejv1 Voice Expansion Board	£ 99
Akai-Conner213	£ 149
Roland-Pk5 Roland Dynamic Midi Pedal	£ 249
Emu Emmaxi 6mb Ram Upgrade	£ 269
Emu2216 Memory Exp For Eii	£ 269
Akai-Exm008	£ 329

## Speakers

Jbl-Gs115 Monitors	£ 25
Arbiter Sp-80 Speaker (K8000)	£ 39
Soundtrack 110tx Karaoke Speaker	£ 45
Spendor Bc111 Speaker	£ 49
Yamaha-Ys 1x10 Speaker Brkn Speaker	£ 49
Mac-Ms1speakers	£ 69
Yamaha-Ms101ii Powered Speaker	£ 69
Boss-Ma12c Multimedia Speaker	£ 75
Acoustic Research-Partners Monitor Spkr	£ 79
AKG LSM-50	£ 85
Fender Sidekick 30 Keyboard	£ 99
Jbl-4206 Monitors	£ 99
Jbl-Control 1c Monitors	£ 135
Jbl-Control 5 Monitor	£ 139
Bose-803c-802 Controller	£ 169
Alesis-Monitor1 Speaker	£ 265
Jbl-M350 Pa Cab Jbl Pa Cabinets	£ 395
Waldorf-Emes white 2 Way Nearfield Monitor (each)	£ 399
Waldorf-Emes blue 2 Way Nearfield Monitor (each)	£ 499
Waldorf-Emes red 2 Way Nearfield Monitors (each)	£ 749

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Harman-Td212 cassette deck	£ 49
Teac V375	£ 65
Harman-Hk2000 Cassette Recorder	£ 75
Teac-X2000 2trk Recorder	£ 149
Fostex-Mc102 12 Into 2 Mixer/Cassette	£ 169
Aiwa-Hds1 Strasser Dat	£ 255
Sony-Cdk3000p2 Cd Jukebox	£ 259
Jvc-Xdz505bk Dat Recorder	£ 459
Sony-Dic750 Dat Recorder	£ 499
Sony-Pcm2300 Dat Recorder	£ 1,029

Please note: Most items are ex-demo, some are new, boxed.

# PLEASE NOTE

All prices include 17.5% VAT. Everybody is guaranteed at least one item at 1/2 price or less. XXX means price cannot be quoted before the sale has commenced.

Products are sold on a strictly first-come first-served basis. Personal callers on the evening of June 30th will take precedence. The first received telephone, fax or mail order (which must include full payment + £9 P&P) will be held until Saturday 11th July and then only cashed if the item is still available. The item (or your cheque if you are unsuccessful) will be sent to you to arrive no later than the following Saturday (cheque clearance allowing).

The bigger the reduction, the more likely it is that the item will be sold on the night of the 30th. Please don't waste your time enquiring about the £1 items.



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

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## KEYBOARDS

**ANALOGUE MONOSYNTH** £100

• Gavin 01256 701470 (Hants).

**ARP 2600 Mk1** (grey and white), plus keyboard model 3604P. Recently serviced and calibrated. In excellent condition. £1500. • 0171 265 8131 (London).

**ARP ODYSSEY Mk1** White model, excellent condition, £375; Moog Opus III, excellent condition £180. • 0191 584 1417.

**ARP ODYSSEY** White-faced model. Works but needs repair to make perfect. Owners and service manuals included for £150; SCI SixTrak, boxed, manual, £300; Maplin 5600S, £300. • 01274 620004.

**BOSS DS330** Dr Synth sound module, £220; SH075 guitar pitch to MIDI converter pick up £250; Midicon 2-octave touch-sensitive keyboard (8-octave capability) with modulation and pitchbend, £70. • Welly 01656 786737.

**CASIO CZ1000** — great bass sounds, £110. • 01298 814681.

**CASIO CZ3000** Great sounds, £200; Fostex X18, used twice £190; Yamaha QY10 £100. Will sell as one for £450. Perfect starter studio, cables included. • Andrew 01592 715441 (Central Scotland).

**CASIO CZ3000** £180; Yamaha CS60 analogue polysynth with patch memory, £280. Will post. • 0114 248 2760 eves and weekends.

**CASIO CZ5000** with manual and ST editor, £195; Yamaha DD11 MIDI pads with drumsticks, manual and PSU, £70; RX21, £45; Dr T's original DX7 editor, with manual, £26. • 0181 644 9745.

**CASIO VZ10M** rich sounding digital synth, £200; ART Multiverb LT, barely used, £90; Kawai VHM module, £100 with original manuals and boxes. Buyer to collect. • Andy 01284 762672 (Suffolk).

**CHASE BIT 99** MIDI polysynth — digital oscillators, analogue programming, velocity sensitive keys, 99 patch memory, flightcase and manuals, £250 ono. • Chris 0161 8605795.

**CHEETAH MS6** synth module, home use, manual, £250 ono; Philip Rees 2M MIDI merge unit, boxed with manual £30 • Phil 0589 732289 after 5pm. May deliver (Notts).

**CRUMAR BRASS/STRING** synth — oldie but goldie. Needs slight attention — sounds distorted. Offers? Buyer collects, or pays postage. • Andy 01162 692623.

**EMU MPS** keyboard, as new, boxed with manuals, home use only, £500 ono; Dacs MIDI patchbay, £60 ono. • John 01434 603031 (Northumberland).

**EMU PROTEUS ONE** multitimbral sample sound module with orchestral upgrade making this a Proteus One plus Proteus Two in same box, pro quality, £425. • Tim 01623 845868 or 01623 846882 (Notts).

**EMU PROTEUS TWO** £340; Emu Performance Piano Plus £140; Roland SRV three dimensional reverb £430. Save £200 on shop prices, as new. Sony DTC750 DAT, full size, boxed, just used twice, remote, £340. • 0151 339 1167 (Cheshire).

**EMU VINTAGE KEYS** £550 ono. South London collect • Dominic 01304 615458.

**ENSONIQ TS10**; Roland Juno 6, 60, D5 and D50, plus cards; Commodore 64, plus cards; RS101; SH2000; SA09; RS09; Korg Micro Preset, Trident Mk1, MS10, Mini700; Kawai K1, K5; Casio CZ1000, plus cart; VZ1; VZ10M; Yamaha TX7, QX1, CS5 and CX5M. Roland RE201 Space Echo, excellent condition, £275; RE501 Chorus, VGC, £325. Also Roland drum machines: DR55, DR110, DR220E, TR707. Call for details • 01670 523363.

**ENSONIQ TS12** Excellent condition, 10 months old, home use only, with

flightcase and manuals, beautifully weighted 76 note keyboard, 2Mb RAM, 24-track sequencer, reluctant sale £1,300. • Mark 0114 268 0869 after 6pm (Sheffield).

**GEM S2** workstation with turbo kit, reads samples off Akai S1000 and S01 disks, loads of excellent sounds, powerful sequencer, amazing all-rounder, try it! £1,250 ono. • Dave 01543 682095 after 5.30pm (Staffs).

**GEM S3** workstation — 76-key, superb sounds and huge sequencer with disk drive. Home use only, cost over £1700, bargain, first £1000. • 01661 822593 (Tyneside).

**GEM S3** workstation with flightcase, manuals and disks, excellent condition, £1,200. • Gary 01942 709527 (Wigan Area, North West).

**GEM S3 TURBO** — 76 keys, plus latest software, 2 months old, pristine condition, £1300. May part exchange for Roland E86. • 01332 841719.

**HAMMOND AURORA 8222** Drawbars, pedals, two manuals, on-board Leslie, chorus, repeat, reverb, arpeggiator, amp input, external Leslie connector, built 1976, good condition, full working order, righteous sound, £400 ono. • 0161 429 7717 (Stockport).

**HUGE CLEAROUT!** Clavinet D6 £300; Planet T £150; Casio CZ3000 £175; Expanded Akai SO1 £550; Atari STacey 2/40 £750, also Atari games, offers. All ovno. • Adrian 0114 274 6190 (Sheffield).

**JEN SYNX 508** — 5-octave big brother to SX1000 analogue synth. No sync/CV/Gate/MIDI etc, but looks the part, £175 ono; Yamaha RX11, £100 ono. • Arron 01375 851306 (Essex).

**KAWAI K1R** programmable sound module, plus 2 RAM cards, £199. • 01432 268543 (Hereford).

**KAWAI K4**, £350. • Gareth 01704 878698 (Merseyside).

**KORG DW8000** synth. Analogue meets digital for great basses, classic dance and texture sounds and sweeps. Includes MEX8000 memory expander, good condition, £330 ono. • Shaun 0115 9520140 (Nottingham).

**KORG 01RW** Immaculate condition, home use only, with original box plus RAM card, £800 • Paul after 6pm 01939 232489 (Shropshire).

**KORG 01W PRO** 76 key classic workstation, excellent sequencer, 6 months warranty left, 4 months old with box, manual and disks of extra sounds and drum loops, mint, £1,400 ono. • Tony 0114 268 2522 (Sheffield).

**KORG 03** synth keyboard, with interactive backing sequencer and built-in disk drive, £1275, including stand. • 0113 268 5082 (eves) or 0113 243 3005 (days).

**KORG M1** £650; M1 full flightcase £80; M1 Valhalla sound card £30; Roland U220 £300; Roland U220 trumpet and trombone card £25; Yamaha DX7 and 3 ROM £325; original DX7 full flightcase £100; Boss SE50 £250; Sony DTC750 DAT, hardly ever used £390; Peavey Unity 1000 18.2 mixer £200; Peavey 24U rack cube on wheels £65; Boss Vox keyboard sustain pedal £20; Boss stereo volume pedal, boxed, £40; Roland metal piano sustain pedal, £40 boxed. All the above gear was bought from new by myself and is in excellent condition with all the original manuals. • Pasky 01733 66232 days, 01733 578148 eves (Cambs).

**KORG M1** with PCM card, flightcase, stand, foot pedal and manuals, £625. • 01628 25799 (Berks).

**KORG M1** boxed with manuals, three sound cards and RAM memory card, £650. • Jonathon 01846 660643.

**KORG M1**, plus two PCM ROM cards and one ROM card, £550. •



01524 844394.

**KORG M1** £600. ▣ John 0171 561 1396 (Finsbury Park).

**KORG M1** Very good condition, with box and stand, £550 ono. ▣ Ian 01482 473507 (Hull).

**KORG M1**, boxed as new, home use only, all manuals and video with extra sounds on Atari format. Boss expression pedal also included. Bargain at £700. ▣ Claire 01467 681282 (Aberdeen).

**KORG M1R** £520, excellent condition. ▣ Martin 01733 327008 evenings (Cambs)

**KORG M1R** sound module plus RAM card, Atari editor/librarian plus hundreds of extra voices on Atari disk, includes manual, mint condition, £600; Awards MB10 universal direct box optimised for electric guitar £80, mint condition, includes manual ▣ Dave 0181 902 9784 (N W London).

**KORG M1R**, plus six sound cards and instruction video, £500 ono. ▣ 01423 712484

**KORG MONO POLY**, boxed with manuals, mint, £400; CZ101, £120; Poly 800, £130; Korg MS20, £400; Casio CZ1, £110. ▣ Phil 01782 48493 eves.

**KORG MS10** analogue synth with patchbay and patch leads, mint condition, £150. Will send by post. ▣ 0114 248 2760 eves (Sheffield).

**KORG 01W/FD** plus extra sounds on disk, mint condition, boxed and manuals, £950 ▣ Steve 01909 561169 evenings (Sheffield).

**KORG 01/W**, good condition, with full flight case, £800. ▣ Matt 01293 531676.

**KORG 01W/FD** for sale. Mint condition, manual, excellent workstation, flightcase. Bargain at £1,050 ▣ Spencer on 01273 383609.

**KORG 03/RW** 32-voice sound module with General MIDI, RE1 remote controller, sound cards, and manuals. Boxed in perfect condition, £600; Roland D10, VGC, £375. ▣ Paul 01227 361089 work (Kent).

**KORG POLY 6** analogue polysynth, very good condition, £225. ▣ Neil 01629 734125 (Derbyshire).

**KORG POLY 61M** £220; Yamaha FB01 £100; ARP Quartet £130. All in excellent condition. ▣ Nigel 01724 711629 (S Humbereside).

**KORG POLY 800** Reversed black and white keys, includes hard case, £175. Sony PCMS01, digital audio processor, creates digital mastering with VHS or Betamax video £100. ▣ Andy 0121 444 0594 (Birmingham).

**KORG POLY 800** with MkII ROMs, (SysEx sound control etc), £160 ono; Also Casio HT700 digitally-controlled analogue synth/home keyboard with MIDI £70 ono. ▣ Chris 01274 560243.

**KORG POLY 800** keyboard with power supply, manual, boxed. £140; Tascam GS30D guitar amp simulator £25 ▣ Carl 01507 606956 (Lincs).

**KORG WAVESTATION**, pristine condition, limited home use, all manuals, card, box, etc. Powerful synthesis capabilities and excellent master keyboard control options for £850. ▣ 0161 861 7261 (Manchester).

**KORG WAVESTATION** including case and 2 RAM cards, £700; Audiomeia LC board, including Sound Designer II, £500. ▣ 01582 761446.

**KORG WAVESTATION A/D**, mint condition, boxed, manuals, £750 ono. ▣ 01423 712484.

**KORG WAVESTATION SR**, VGC, boxed with manuals, £590 or exchange for 01/WFD, JV90 or SY85. ▣ Geoff 0116 284 1997.

**KORG X3** workstation, good condition, £725; Yamaha QY20 sequencer, good condition £245. ▣ 01462 451142 (Herts).

**KURZWEIL MICRO PIANO** The best piano and organ sounds available, latest model, £375. ▣ 0113 268 5082 eves, or 0113 243 3005 days.

**KURZWEIL PX1000** professional rackmount version of the legendary K1000 keyboard, and still one of the ultimate multitimbral modules for piano, strings, choir, vibes etc £400. Yamaha EMT10 piano module (piano, strings, choir etc) £95. Both in excellent condition, boxed, with manuals. ▣ Jason 0973 533484 (mobile, all hours).

**MOOG POLYMOOG** keyboard, one owner since new, two divider chips not working otherwise immaculate, offers. ▣ Wendy 01948 830680 office hours (Wrexham).

**OVERHEIM 4-VOICE** serviced with manuals, VGC, £1,700; ARP 2600, grey model with mono keyboard, VGC, £1500; Prophet 5, classic, £875; Digidesign ProTools, 4 or 8-track, basic system £offers; Moog Rogue, £200. ▣ 0171 221 2214

**OVERHEIM** Matrix 6R £450; Yamaha PS70, mother/piano, full FC £450; Kawai K1 keyboard £220; also Roland SC55, Fostex 260 4-track, Carlsbro combo, Yamaha mixer, Roland drums, Boss chorus, goodies, offers? ▣ 01923 824684

**ROLAND D20** with manual, extra sounds on disk, excellent condition. ▣ Des 01803 298016 (Devon).

**ROLAND D20** workstation. Excellent condition, 8-track sequencer with disk drive, home use only, £350 ▣ Andrew 01874 625451 (Wales).

**ROLAND D20** LA synthesis workstation with built-in drum machine, sequencer, reverb and disk drive. Flightcased with manuals, one owner only, £500. ▣ Lee 01707 272550.

**ROLAND D50** synth, mint condition, flightcase, manuals, PG1000 programmer, two ROM cards and stand, £500. Roland Octapad II with manuals £250. ▣ 01705 511489 (ask for Bruce).

**ROLAND D70** 6-octave, 32-voice multi-timbral synth with superb studio/MIDI capabilities. Immaculate condition with expansion cards, original box and manuals, £650. ▣ Nick 01527 874098.

**ROLAND D70** £825, Roland U220 £285; Yamaha DX5, rare, £700. All mint, plus manuals, Tax bill forces sale. ▣ Ian 01785 816481 daytime (Stafford).

**ROLAND D110** with manuals and editor, mint condition, £225; Fatar 4-octave velocity-sensitive MIDI keyboard with PSU, mint, £75; Korg 707 multitimbral, velocity-sensitive synth with aftertouch, VGC, £200. ▣ Dave 0191 372 2621.

**ROLAND JD800** Immaculate condition, with flightcase and manuals £1,100. ▣ Martin 01456 476364 (Inverness)

**ROLAND JD800** Excellent condition, fully operational and getting progressively rarer. £1,100 or offers. ▣ Ian 01277 220603 days, 01277 220325 eves (Essex).

**ROLAND JD990** Expanded rack module of a JD800, excellent sounds, only used once, boxed, £990 ono. ▣ Graham 01767 692806 (Beds).

**ROLAND JUNO 6** polyphonic analogue synth, swap for Roland SH101/MC202 or sell, £200 ono. Contact H Cowie, Stuffhouse, Burnbank Place, Glasgow, G20 6UH

**ROLAND JUNO 60** Programmable polyphonic synth, mint condition, home use only, bargain at £260 ▣ James 0161 445 2034.

**ROLAND JUNO 60** £350 ono — classic early polysynth, a sad farewell; Casio CZ101 (no PSU), £150 ono; Roland Cube 60 keyboard combo, £80 ono. ▣ John 01342 842420 (answerphone).

**ROLAND JUPITER 8** with manual, £750. ▣ 01274 620004 (W. Yorks).

**ROLAND JV30**, excellent condition, with hard case and manual, £500; Alesis MMT8 sequencer with manual, good condition, £100. All reasonable offers considered. ▣ David 01475 723847 after 6 pm.

**ROLAND JV80** plus case £725. ▣

Graham 01494 461117 (High Wycombe).

**ROLAND JV880** £495, Roland memory card £45, three AKG pop shields £17 each; Alesis Quadraverb Plus £269. ▣ Paul 01302 538304.

**ROLAND JV1000** workstation, immaculate with GS board and flight case £1100 ono. ▣ 0181 517 9293 eves.

**ROLAND JV1080** sound module, brand new, two weeks old, £950. ▣ 01245 264417 9.00am - 5.30pm and 01376 513993 after 7pm (Essex).

**ROLAND JX3P** synth. Excellent condition. £250, Alesis MIDverb II £120, ART Multiverb LT £110. ▣ Roland 01243 830697

**ROLAND JX3P** MIDI analogue polysynth with 64 memories, £200; Crumar Multiman 5 string/brass/piano synth with 5-octave keyboard, and built-in flightcase, £100 VGC. ▣ Stuart 01905 640889 (Worcester).

**ROLAND JX8P** analogue synth, VGC, £470, Roland TR707 drum machine, £120 ono, Ensoniq EPS sampler with double memory, Atari graphic editor and stand, mint, boxed, £525. ▣ Tim 01229 583746

**ROLAND JX10** Super JX synth — fab MIDI mother kbd, with Go West-type fat sounds, lovely strings and deep Van Halen 'Jump' sounds, £700, cased, ovno. ▣ Tony 01706 378141.

**ROLAND KR500** digital keyboard with touch sensitivity, 32 styles etc, etc. Cost £1,500 new, will sell for £650. ▣ Mark 0117 965 2871 (Bristol).

**ROLAND SH101** grey, immaculate, manual, accessories, £180; MID/VCV converter, boxed, unused, still under guarantee, £75, £230 the pair. Write to: Chris Lawrenson, 47 Kingsway, Leamington Spa, Warwickshire, CV31 3LG

**ROLAND SH101** MG1 modulation grip set — strap button and original shoulder strap with gold embossed logo, £40, duplicate manual, £5; Korg MS10, £150; Roland R70, £400. ▣ 0114 248 2760

**ROLAND SH101** with manual and service notes, in VGC, £250. ▣ Derek 01354 695239/01843 835280 (if no reply from first number).

**ROLAND U20** £400; Emu Proteus 2, £400; Tascam Portu 07, £250; Yamaha YS200, £100; MC500 MkII sequencer, £300; Shure SM5, £50; ART LTFX, £100; Pico Ram Mixer 12,2, £250. ▣ 01676 532906.

**ROLAND U20** synth keyboard, immaculate condition, includes hard case, stand, sustain pedal and extra PCM cards. Perfect first MIDI keyboard or extra sound source for MIDI setup, £450 ono. ▣ Alistair 01247 466250 (County Down).

**ROLAND U20** with hard case, £400; Emu Percussion, boxed, £400; Roland D110, boxed, £150; Elka CR99 Data Filer including MIDI merge, unused, £175; Atari 1040, £90. ▣ 01903 694807.

**ROLAND U110** and MT32 together all in one module — yes, it's called a Roland CM64 £250. ▣ or Fax Ian 01702 616961.

**ROLAND U110** sample module, plus extra cards and editor librarian. Mint condition, £250; Roland R8 cards, Power Drums USA and Contemporary Percussion, £25. ▣ 0113 278 7180 (Leeds).

**ROLAND U220** MIDI module with two sound cards, mint, boxed, £300 ono. ▣ Stephen 01603 504461 or email s.bennett@uea.ac.uk

**ROLAND U220**, £345; Yamaha QY20, £275; Roland D5 with dodgy note and flightcase, £275; Yamaha CP30 classic electric piano — a few notes need repairing, therefore £90. ▣ Kevin 01628 663980.

**SEQUENTIAL PRO** One £350; ARP Odyssey £350, Roland gear including TR808 £300; SH101 £150; MSQ700 £100; TR606 £65. ▣ Luke 0161 303 9585 (Cheshire).

**SOLTON MS50** workstation, boxed, never been used, £1400 ono. ▣ 01903 694791 or 0860 875775.

**TECHNICS KN2000** keyboard, full specification, velocity touch keys, full MIDI control, LCD display, excellent condition, includes manuals and cover, must sell, £1,200 ono. ▣ Mark 0181 770 7842 (Surrey).

**YAMAHA CLAVINOVA P5P100** portable digital piano. Excellent condition, makes versatile master keyboard, great feel and sound, £1200 ono. ▣ Phil 01923 824991 (near Watford).

**YAMAHA CS30L** for sale. Rare classic early '70s analogue monster, featuring two VCFs, two VCOs, VCAs, five envelopes, external sound input facility, superb sounds, good condition, manual, £375 ono, or swap with Quasar Quasimid and cash adjustment. ▣ Daniel 0121 544 2656 eves/wkends (Birmingham).

**YAMAHA CS60** analogue polysynth with memory patch, £320; Roland R70 drum machine, brand new, cost £679, accept £400, Korg MS10 patchable synth, £150. ▣ 0114 2482760.

**YAMAHA DOM30** sound module and 16-track sequencer, 16 part multitimbral, can use the Clavinova, £300 ono. ▣ Vas 0181 292 8473 or 0589 197071 (Enfield).

**YAMAHA DX7S** Immaculate condition £350 ono, Akai X7000 sampler keyboard £250 ono. ▣ Paul 0181 660 6965 evenings (London SW/Surrey).

**YAMAHA DX21** with stand. £180; Yamaha Q2031 graphic equaliser £200; Yamaha SPX50D £150. All in good condition with manuals. ▣ Patrick 01223 512018 (Cambs).

**YAMAHA DX7IID** with E1 board, four on-board sound banks, sequencer, multitimbral, RAM and ROM cartridges, £525. ▣ Fred 01633 266647 after 6.00pm.

**YAMAHA ELECTONE ORGAN** twin keyboard, B75 £300 ono. ▣ 01763 838320.

**YAMAHA EMT10** with box, mint condition, £100 ono. ▣ Paul 01323 841414 (Sussex).

**YAMAHA EMT10** piano module. Excellent condition, manual, box and PSU, £110 or swap for Yamaha TX81Z. Buyer collects. ▣ Jeremy 01222 567175 (Cardiff).

**YAMAHA PSR6700** 76-note keyboard with 100 presets, 100 programmable voices, 8-track sequencer with disk drive, £700. Exchange for Jupiter 6 or 8, Sequential Prophet 5 or Oberheim OBXA. ▣ 01524 382873

**YAMAHA PS5795** multitimbral synth with full MIDI spec. Ideal computer add-on with 100 AWM2 sounds, 100 rhythms and 28-note polyphony, £95 ono. ▣ 01298 814681.

**YAMAHA SY55** synthesizer workstation. Very good condition, includes stand, case and hundreds of sounds on disks. £495 ono. ▣ 01628 473076 (Bucks).

**YAMAHA SY77** synth with on-board sequencer, excellent condition, £825 ono; Emu Emax Sampler with 44.1kHz sample rate and loads of disks, £600 ono. Can deliver. ▣ 01429 265270.

**YAMAHA SY85** with manuals, stand, pedals and hundreds of sounds. Home use only, excellent condition with upgraded memory, £750. ▣ Jeremy 01244 350502 (Cheshire).

**YAMAHA TG500** module and Alesis SR16 drum machine, both boxed as new. Offers? ▣ Lou 01708 449757 (Hornchurch).

**YAMAHA TX216** two DX7s in a module, £350; Roland MKS30 (JX3P) module, £350; Yamaha RX5 drum machine, includes three waveform ROMs and aluminium flightcase, £300; Chase BT 99 analogue synth, £200. ▣ 01493 603614 (Norfolk).

**YAMAHA V50** workstation. Hundreds of sounds, drums and

easy sequencer — I've made lots of great tracks with this. Great buy at £450, boxed. ▣ Simon 01386 750076.

## RECORDING

**ADAMB1** fully programmable MIDI cube bass preamp. Excellent condition with latest software upgrade. £400 ono. ▣ Garry 01239 615361.

**AIWA XDF1100** DAT machine, as new £650, Tascam 32 mastering machine, very good condition, £300. American Fender Strat, 1994 anniversary edition, mint, £650; ▣ Pete 0161 681 7304 (Manchester).

**AKG D222 SNARE MIC** £70. ▣ Nev 01603 765112.

**ALESIS 1622** mixer, £350; Tascam Porta One mini studio, £200 ono; EVS1 Evolution multitimbral synth, £80 ono. ▣ 0191 388 6329 (Durham).

**ALISH 3630** dual-channel compressor gate, PSU, manuals, mint, £155; Phonic PCL3200 dual-channel compressor gate, PSU, manuals, mint, £145; Tandy P2M mic, £19. ▣ Dave 0191 3722621.

**ALESIS MICROVERB**, £85, Alice mic preamp, mono worth £150, accept £100; eight new acoustic tiles worth £110, accept £70; JBL TLX13 monitors, £130. ▣ Eugene 0181 469 3241

**BEHRINGER AUTOCOM** and Mic/Line amplifier, model MIC502. Unwanted purchase, never used, £250 ono, may split. ▣ Paul 01323 841414 (Sussex).

**APHEX MODEL 700** Studio Dominator, excellent quality, only £200; Simmons SDS9 console and 5 pads, £200 ono. ▣ 01562 825491 eves.

**BOSS BX8** mixer, £80; Pro 24 v3, £15; Marantz SD45 twin tape deck, £85. ▣ 01925 291805 office answerphone

**BOSS SE70** multi-effects processor, 48kHz quality, 2 separate effect channels, 35 effects in 45 combinations, boxed, immaculate, £350. ▣ 01392 219332 (Exeter).

**CREAMWARE TRIPLEDAT** £850 ono, MIDI express (PC), £350 ono, Cakewalk v3.0, £150 ono. ▣ Sean 0171 424 0194.

**FOSTEX 4030** synchroniser, £500; Fostex 4010 timecode generator/reader, £500; Fostex 4011 timecode inserter, £400. All three in good condition. ▣ 0171 793 7376.

**FOSTEX E16** 16-track recorder, plus 4050 autolocator, cable and loom, £2,000 ono. Fantastic condition as E16 bought fully serviced from reputable dealer. Less than 10 hours use since purchase, plus receipt. ▣ Dave 01978 853869 (Wrexham).

**FOSTEX M80** 1/4 inch 8-track, recently serviced, includes 9 reels of 3M 996 tape, £700; Roland M160 16-channel line mixer, £350; Cheetha M56 multitimbral synth, £200. ▣ Hamish 01442 870681 (daytime) 01442 822466 (eves).

**FOSTEX R8** Recently serviced with MTC1 remote cable, box and manuals, £800. ▣ John evenings 0181 505 6782.

**FOSTEX R8**, Fostex 450 mixer; Bokse synchroniser and wiring looms, all VGC, complete with manuals, £999 buys the lot. ▣ 01603 787152.

**FOSTEX R8** with looms, remote, light home use, excellent condition, £800. ▣ Steve 01706 44628 (Lancs).

**FOSTEX 2016** line mixer. Four auxiliaries, 16-input, four-output, good mixer to expand current desk or for MIDI keyboardist £150, offers accepted. ▣ Steve 0181 682 2885.

**FOSTEX 280** excellent condition, used mainly as mixer, all manuals inc, 10 months old, only £450 ono. First to witness will buy. ▣ Aaron 0171 703 1871.

**FOSTEX 812** mixing console, 12:8:2 plus manual, two aux sends and good EQ, MIDI muting, light home use, immaculate condition, £750. ▣ Steve 01706 44628 (Lancs).



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## 8 & 16 Track

In true Turnkey 'Hands On' tradition, all the popular decks and recorders are on permanent demo. Don't take the so called 'advice' of the cardboard box snifters; - Choice of these items is highly personal. Please come and listen for yourself.

### TASCAM M-1508 + 2385

**£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 multi-to-real machine alone. The 2385 is based on the transport of the £1000 plus 122 pro mastering machine and with the addition of the ground breaking Dolly S noise reduction gives superb recordings time after time. Other features include record 8 tracks at once, shuttle control, optional MIDI machine control, large bargraph meters, digital counters, auto punch in/out. The M-1508 mixer features up to 22 inputs at midspan, 3 band mid sweep EQ, 3 aux sends, direct outs, insert points and the clean signal path makes it an ideal partner for the 2385. Yes, this price does include 2 x 8 way journal. Huge reduction from a total RRP of £2667. Hurry!

### XRi systems XR300

**£159**

Long the synchronizer of choice in professional studios, we now exclusively bring you the industry standard unit at an unheard-of price. Features include true SMPTE at all standard stripe-rates, MIDI clocks / Song Pointers or MTC for compatibility with all MIDI sequencers. Large LED time-code display. Merged MIDI input. Straight-forward operating system. Full 19" rack unit. RRP £299

### SPIRIT STUDIO & AUTO

**£109**

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 £4999.

**DIGITAL 8 TRACKS. We will not be beaten on price.**

Allen & Heath GS1 in stock **NEW**

## MIDI hard ware

### The West End's Exclusive E mu Centre

### E-MU PROTEUS FX

**£POA**

### E-MU CLASSIC KEYS

**£POA**

### E MU FORMANCE+

**£POA**

### YAMAHA RY30

drum machine **£299**

In our opinion, the best drum machine ever made. Superior quality 16 bit samples, 16 part multi-timbral, resonant filters etc. Realtime wheel gives fantastic control over sounds' pitch, decay, filters, timing etc. This is what the RM50 is based on. Small quantity only - order now!

40% OFF - SECOND HAND & EX DEMO - UP TO 10% OFF			
SYNTHESISERS			
Arrival Quadraphony	£799	Roland JV88	lowest
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G-mega LX	£249	S550 7th hand	£99
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## MASTERING DAT PRICE CRASH!

### SONY DTC60ES

**£669**

Massive bulk purchase allows us to offer you the excellent machine at an unbelievable low price. The DTC60ES features 44.1KHz analogue recording (as well as 48 & 32), optical and co-axial digital ins and outs and Sony's incredible Super Bit Mapping gives significant improvements in sound quality. Also available with internal SCMS removing Destroyer modification for only £269.

### SONY TCDD7

**£399**

Another unbelievable deal on the only reasonably priced portable on the market making it the cheapest DAT available anywhere. Ultra compact but sturdy build, includes back-lit display, long play mode, carrying case and micline inputs. Buy now while it's still available.

### SONY DTC690

**£549**

We have secured a small quantity of the last ever DTC690. This is still the cheapest full-size machine on the market. Sony have no plans to introduce a replacement machine at this price point - this is your last chance! Available with SCMS removing 'Destroyer' modification for only £599.

### PHILLIPS DCC951

**£249**

DCC now has 18 bit sampling at 48 kHz. It includes data reduction techniques. The DCC951 is a full-size machine in a sturdy but case. It features Philips new Turbo drive high speed mechanism, time recording, full indexing & location facilities, SP-DIF ins and outs, full remote, plays analog cassettes with Dolby B & C noise reduction, auto-level optimisation and microphone input. Portable DCC170 also available at £249. Unbelievable deals exclusive to Turnkey. Sound-on-Sound say 'Digital' compression makes life or no subjective difference to the recorded result. In fact recording sound frequency similar to DAT. Check one out today!

### SONY TCD07

**£399**

Removes the SCMS code from a digital signal 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, 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. Digitalool also available with extra features at £129.

### DIGICON

**£129**

or only £99 if bought with any new DAT machine. Removes the SCMS code from a digital signal 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, 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. Digitalool also available with extra features at £129.

### Optical leads only £24.95

### ROLAND R-8 Mk2

**£549**

It would be difficult to design a better drum-machine than the R8 Mk2 - 200 on-board 16 bit sounds including the essential 808 and 909 sounds, plus extra sounds available on 8. 16 Velocity and aftertouch pads, extensive 'human rhythm' programming facilities such as tune, nuance, decay time etc. 10 separate outputs, tape sync, large display with very easy user interface. The flagship machine is now too expensive to make - snap it up while they're still around! RRP £949

### ROLAND MS-1 sampler

**£379**

Records straight from your sequencer or plays back type 0 and 1 MIDI files from DD or HD MS-DOS disks (from 1040STE, PC and Mac). Programmable playback similar to top CD players. Internal or external sync. footswitch start/stop. Access direct to disk storage for very large note capacity. Stores Synch dumps. R8000 as RD70 but with 1 Meg (expandable to 4) of battery-backed up memory giving you instant song play no break between songs. Instant loading, channel mute tempo change, transpose stored with song.

### VISCONT R070 / RD800 data filer

**£239**

R070 Records straight from your sequencer or plays back type 0 and 1 MIDI files from DD or HD MS-DOS disks (from 1040STE, PC and Mac). Programmable playback similar to top CD players. Internal or external sync. footswitch start/stop. Access direct to disk storage for very large note capacity. Stores Synch dumps. R8000 as RD70 but with 1 Meg (expandable to 4) of battery-backed up memory giving you instant song play no break between songs. Instant loading, channel mute tempo change, transpose stored with song.

### YAMAHA RM50

**£399**

The ultimate drum module - over 1000 sounds, 16 part multi-timbral, 32 note polyphony, 456 voices, 9 drum kits, huge display shows full editing of resonant filter etc from front panel. 3 high-quality effects simultaneously from a vast selection. Also General MIDI compatible, stereo audio outputs, built-in Mac/PC interface. Includes full-down computer editor for your choice of Mac/PC/AT. Bestest best price! RRP £899

### WALDORF MICROWAVE

**£1099**

The Waldorf Microwave has genuine analog synthesis including resonant filters. It has 16 oscillators, 8 part multi-timbrality and 6 independent outputs. Sweep through up to 64 different voices, controlled by LFOs, envelopes etc. Devastating bass, totally unique sound! Also available on a final beta, please enquire - once you've tried this, you won't want to go back!

### MARION PRO-SYNTH by Tom Oberheim

**£699**

This new machine, designed by Tom Oberheim, uses the technology of the multi-accelerated Maricon Systems MSR-2 Modular Synthesizer, but priced substantially lower. Classic Analog sound, 400 patches, 8 part multi-timbral resonant 2 or 4 pole VCF filters, voltage controlled panning, extensive matrix modulation. Tom reckons this sounds better than a Matrix 121. Call us now for further details or to get your order in - initial stocks limited. 'The Marion is such an expressive synth that even an absolute beginner will be programming up lively patches in no time'. 'The sounds themselves are amazing'. 'To hear the full thrilled roar of an analogue synth with no unstable lunge is a delight'. 'Editing is a breeze'. 'This could be the only box you'll ever need to produce some of the most stunningly original sounds around'. Mix Review, June 1995. Call us if you want a copy of this review.

## DJ Producer

### GEMINI GM40

**£99**

Massive saving on this producer machine! 2 on-board pro line factory. Replicable cross-fader LED channel displays for left and right signals. Inputs switchable from line/CD to phono levels. Balanced microphone input with separate fader. Also includes variable echo for the mic signal. **DJ STARTER PACKAGE £399** - GM40 mixer, 2 x B1900 decks.

### E-MU E64

**£POA**

The E64 is 64-note polyphonic and uses the same operating system as the E-V (new version includes around 15 different filter types), 16 part multi-timbral, 8 balanced outputs, SIMM memory, 2 SCSI ports, AES/EBU and SP-DIF digital I/Os. Come down for a demo now and test the difference!

### E-MU ESI-32

**£POA**

Featuring 32 note polyphony, 48 polyphonic, G-chip resonant filters, huge quality library, (Akai and Emulab compatible), Super-Easy Proteus-style operation. Time-stretch, double FX, parametric EQ, sustain etc. All E-mu samplers come with free access to our enormous sample library (we have all the EMI library on CD-ROM) and excellent tech support (many staff are owners).

### ROLAND JV50ex

**£699**

The Roland JV50ex is literally two different synthesizers in one. You have the full sound act from the JV-1000 90/90 providing the power and dynamics of the top-of-the-range synth and also the industry standard GS chip as used in the highly successful JV3035. Using both together, you have an incredible 736 on-board sounds with 56 note polyphony and 16 part multi-timbrality. All of those sounds can be edited using dedicated sliders for filter-cutoff, resonance, envelope etc. There are also 9 drum kits including electronic, rock and orchestral. Two editative effects at once - choose from reverb, delay, flange, chorus etc.

Also includes comprehensive data filter which records and plays back types 1 and 0 MIDI files, SysEx data etc. Ideal for backing up your computer / multi modules or for playing live. RRP £1349, save £550. End-of-line exclusive deal - These will sell out very quickly.

### ROLAND JV-880

**£469**

This is the synth which the JV1080 is based on. Fantastic sound quality and built-in effects with a wide range of fully editable and usable sounds, 4 outputs, 28 note polyphonic, 2 card slots and also accepts Roland's current series of excellent expansion boards which triple the built-in ROM. Buy with any of these, for only £699.1 Choose from Vintage, Dance, Orchestral, World Pop and Piano. Limited stocks only available. Almost 50% discount (RRP £849).

## PA Systems

### SOUNDRAFT 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 2x350w amplifier, dual 7-band graphic and a built-in Lexicon Axi! Check out these amazing package deals: Powerstation + 2 x JBL M825 **£1749**, Powerstation + 2 x Peavey Hysys2 **£1699**, Powerstation + 2 x JBL M330 **£1599**, Powerstation + 2 x Bose 802 **£2299**. Add 4 SK50s + stands, speaker stands and cables for £499.

### OBERHEIM MATRIX 1000

**£369**

Now almost 10 years old, and still sounding as fresh as the day it was released. The Matrix 1000 is essentially a Mariner in a rack - 6 note polyphonic, 2 oscillators per voice, true analog VCF filters with 8 modes, 'Matrix' modulation with 20 sources and 32 destinations, raw gutsy analog sounds. Why 1000? The 1000 presets were generated by Matrix owners worldwide in response to a competition to find the best analog sounds on the planet. You're sure to find the perfect patch for virtually any application. Group mode allows creating of up to 6 units to create a true monstrosity. Fully editable via MIDI, Mac, PC or Atari editor (available for only £49). RRP £599, available exclusively through Turnkey.

### BassStation Rack

**£399**

### ROLAND S-760

**£1399**

With CD-ROM drive & disk MAGAGEAU! - incredible new price from Turnkey including free SCSI CD-ROM drive and disk.

### BOSS DR550 MK2

**£169**

Fantastic little beat-box with nearly 100 sounds including Latin and the quintessential vintage Roland sounds, reproduced faithfully at 16 bit CD quality. Makes a great drum sound module as it's velocity sensitive over MIDI. RRP £265. Last stocks ever!

### AKAI CD3000i

**£2199**

The CD3000i is featured almost identically to the CD3000 - 8 outputs, stereo analog sampling, 8 Meg (expandable to 16), SCSI interface, built-in CD-ROM drive (also allows sampling from audio CD's), 5 free CD-ROMs - the entire Time & Space library is also available. RRP £2599 - £500 off! Exclusive Deal at Turnkey. Limited quantities only.

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Studio 49 4 oct **£119**, Studio 610 5 oct pitch & mod wheels **£249**, Studio 610+ 5 oct with after-touch **£329**, CM561 5 oct computer station **£299**, Studio 900 88 notes, weighted action **£599**, Studio 1100 88 notes with zoning & a touch **£849**

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## COMPUTER

### SAMPLITUDE PRO & AUDIOTRIX PRO

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Samplitude is a very fast real time wave editor, hard disk-recording, sampling and multimedia program capable of handling all aspects of multi track recording on a PC, running Windows 3.1 with any 16-bit soundcard. Create and edit samples, Crossfade, then dump to Sampling-Keyboard (SDS) or export it to a Standard Wave File. Also re-sampling, time-stretching, up to 100-level undo, echo, reverb and normalizing MIDI files can be integrated. Synchronise sound with video £249

### AUDIOTRIX PRO

16 bit digital audio and synth card from Multimedia Specialists MediaTrix. Choose from 16-bit PCM or compressed AD-PCM (4 to 11 audio, both with delta-sigma AD and D/A converters. Also includes a Yamaha OPL4 General MIDI interface chipset, an MPU compatible MIDI interface (cable included), and optional daughterboards for 16 bit effects processing, RAM, sample playback and CDROM interface. Our total price for both products just

**£399**

### MIDI QUEST version 5.0

Universal Editor and Librarian packages

**£235**

### THE WIDEST MIDI DEVICE SUPPORT AROUND

### SPLENDID NEW VERSION FOR WINDOWS

Now supports 255 MIDI devices, including JD990, Vintage Keys Plus, Kawai K11 & 2-Mega, Westwood SR, X3, 2 and 3, Waldorf Microvare, JV90, JV1000, SY85, TG500, Morpheme, UltraProba etc £45 upgrade for existing owners. SoloQuest 5 also available

### Audio View

**£39**

soft FREE ware

ROLAND SK50 bundle

**£499**

The ultimate PC (or Mac) Plug and Play solution - The all-in-one Sound Canvas keyboard featuring the industry standard General MIDI / GS chip. Built-in stereo audio input built-in PC/Mac MIDI interfaces, limited offer. RRP £799! Includes free PC Powertracks Lite worth £48

### SAW / Tahiti £LOW

### CUBASE FOR WINDOWS

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Cubase MusicStation (styles) **£199**

Cubase 2.5 (everything except printing) **£339**

Cubase Score (full version) **£429**

Digidesign Sample Cell II PC **£999**

Sample playback card

Music PC MP400-H **£85** MQX32m SMPTE **£199**

KEY MS124 serial **£139** MQ SP75SE **£139**

KEY MP128R parallel **£175** MQ MP128R **£175**

MQ MP128X parallel **£175** MIDI Express PC **£299**

MQ MP128X parallel **£99** SoundBlaster compatible **£99**

MQ MP128X parallel **£99** MIDI adapter kit **£29**

### STUDIO hard ware

TM1000 condenser mic **£119**

Nearly all microphones in this price range are dynamic mics with a heavy coil, moving with a magnet, or vice versa. Whilst this is the simplest method of microphone design, it usually produces a far from flat frequency response falling off anywhere between 11 and 15 kHz. Using over 40 years of experience in selling microphones, Turnkey have specified the TM1000 condenser mic to be built by Audio-Technica, makers of the legendary ATM4003. The TM1000 has a flat frequency response from 30 Hz all the way up to 21 kHz ±3 dB making it ideal for vocals and instruments with delicate harmonics such as acoustic guitar, piano etc. Built-in pop-shield, battery power means no phantom supply required. On/off switch, all metal casing. We think it's the best sounding mic under £200, if you don't agree, we'll take it back against any other mic with 14 days. Price includes heavy duty clip.

### JBL 4206 / 4208 £249/£299

### SPIRIT Folio 10 & 12 £POA

The Spirit Folio 10 and 12 are probably the best-selling monitors in the world, and it's not hard to see why - 3 band mid-sweep EQ, 2 auxiliaries (1 switchable pre/post fade) professional grade Neutrik connectors, superb clean signal path and compactness make them unbeatable value for money, phone for unbeatable price!

### 20% OFF - SECOND HAND EX DEMO - END

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Macos 1202 **£299** Yam. NS10m new **£295**

Alcacia Adal x dem **£1899** JBL 585 new **£295**

Foster RDR **£2495** AKG C1000S **£199**

JLC dslameter **£499** AKG C3000S **£299**

Alcacia Monitor 1s **£299** Galt UM70 **£499**

Alcacia RA100 **£299** Shure SM58 new **£35**

Tannoy PM845 **£299** Sanyo 28 **£999**

FOOTPRINT OMNIPHONICS FOOTPRINT **£279**

Superb quality 75w per channel power amp from top studio amp manufacturers omniphonics. Balanced inputs, emergency cut-out and bridgeable to mono, 100-ohm case. These are flying! RRP £299.

### Sibelius PACKAGE Acorn £499

We also sell Acorn RiscPC computers

Why are we promoting an expensive score package which doesn't work on Windows or the Mac? Because for professional notation type-setting and engraving, nothing else comes close. "In a totally different league from anything else" - Paul Patterson, Royal Academy of Music Future Music Platinum Award London Education Showroom

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### MUSICATOR 2.1 WITH WAVE RECORDING

Still only **£299**

The program that seamlessly integrated sequencing and notation now becomes the first ever software to permit integrated hard-disk recording with any PC sound card. Built-in GS editor, 10 levels of Undo, full SMPTE syncs, automatic part extraction (with preview) Musicator handles things many other so-called score programs don't like quantiles and multiple parts per staff

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### YAMAHA CBX-T3 MODULE/INTERFACE/SOFTWARE "HELLO MUSIC" BUNDLE

The great starter kit includes Yamaha CBX-T3 sound module **£139!**

The General MIDI sound module is basically a TG100 (Original R.R.P. £399), except with separate LED lights for each MIDI channel it is 28 note poly, 16 part multi-timbral, has 10 drum kits, and on-board reverb controllable for each channel separately. A great money saver is the built-in MIDI interface for Mac or last PC, which works via the computer serial port.

STEINBERG (cable included). The package also includes Steinberg's famous Cubase Lite (Mac or PC version) free, to get you off to a great start with software from one of the world's leading music software houses. Also includes Steinberg Music Box MIDI file player and editor, and song disk (20 well-known titles). If you don't use a computer, give the software to a friend and use with your MIDI synth keyboard or Master Keyboard 1st come first saved

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**FOSTEX X28H** home studio. Used for a very small period only, excellent condition, genuine reason for sale. £200 only. ☎ Carl 01443 755195 eves (Mid Glam).

**HOME STUDIO** for sale. Tascam 388 8-track and desk £990; NS10 monitors £200; Yamaha P2075 amp £275; AKG C1000S mic £135; P3 piano module £70; TX5 keyboard with flightcase £195; Yamaha F801 module £60; Rex50 effects £110; Octapad Pad80 MkII £295; Tascam PortaOne 4-track £160. ☎ Geoff 01244 815651 (Clwyd).

**JBL 4312A** control monitors, 23 1/2" x 14 1/4" x 11 3/4", studio black. Cost £900 new. Boxed with manual, only £475 ono. ☎ Luke 01227 768007.

**JBL CONTROL 1** monitors £100; Wasp and Spider sequencer plus PSU, heavily customised £200; Akai ME30P MkII MIDI patchbay £100; Yamaha DD5 dumpdrums and PSU, £60; AKG D202EB microphone £150. ☎ Louis 01869 245309 (Bicester).

**JK COOPER PPS100** MIDI/SMPTE synchroniser/event generator. Mint condition. £170 ono. ☎ Malcolm 0191 565 4334.

**JVC XDP1** professional portable DAT plus digital M/S stereo mic. SCMS free, rechargeable battery, boxed, £995. Soundcraft Spirit studio, 16:8:2, mint, £1495. Alesis RA100 amp, clean sound, £195; Digitech 256 XL studio effects unit £220 ☎ Jazz 01811 552 5414 days, 0181 552 4579 eves.

**LA GEAR 2-channel** noise gate, only one month old! Boxed as new, only £150; Citronic SM250 sampling DJ mixer, as new with manual, £220. ☎ Graham 01803 617033.

**MACKIE CR1604** 16-channel mixing desk, hardly used, manual, boxed, excellent quiet desk, £700 ono; Yamaha R100 reverb with manual £100. ☎ Phil 0589 732289 after 5pm (Nottingham - may deliver).

**MACKIE CR1604** mixing desk, as new, £550. ☎ Charles 01255 425550 (Essex).

**MILAB LC25** mic, £295, £500 new, immaculate and fabulous, plus mains 2-channel phantom power supply, £95. If you want a Neumann and can't afford it, then buy this! ☎ Tony 01706 378141.

**OKTAVA MK219** condenser microphone hardly used, £200; Sony Pro Walkman recorder, £145; Beyer DT100 studio headphones, unused, £55; 32-way 2V patchbay, £40; larger items available. ☎ 0113 268 0331.

**PANASONIC SV3700** DAT machine, 6 months old, mint condition, shows error correction rates, analogue, 44.1 SCMS, hour meter (so far unregistered), manual, remote control and rack mounting kit. Recommended retail price £1644, £1,095. ☎ 01442 876086.

**REVOX B77 7.5** or 15ips, full remote and varispeed, £500 ono; SM58, £80; SM57, £80; two MD421s, £200 each; PCC160, £150. All in good condition. ☎ John 01342 842420 answerphone.

**ROLAND A880** MIDI patchbay, perfect condition, manuals, etc, £140 ono; also EMI 1 inch tape, uncut, unworked, £20. ☎ 0181 997 1867.

**ROLAND M60** super quiet rack mixer, £425; Akai memory for S3000/S2800, genuine 8Mb board, £350 ono; digital board, £200. ☎ Russ 01432 840649.

**ROLAND M120 1U**, 12-channel mixer £295. ☎ Henderson 01444 440055 (W Sussex).

**SECK 18:8:2** mixing desk in excellent condition with brand new road case. £550. Owner moving overseas. ☎ 0171 357 0334.

**SECK 18:8:2 MkII** mixer. Excellent condition, boxed, with manuals, £660 ono. ☎ Chris 01943 602203

(W Yorks).

**SECK 18:8:2 MkII** mixing desk, 3-band EQ, mid sweep, two aux sends, talkback mic, phantom power, excellent sound and condition, £600. ☎ Rich 0117 9671067.

**SIMMONS SPM8** mixer, £190; ART Multiverb, £210; BBE322 Sonic Maximizer, £125; new acoustic tiles, £70; 16U rack, £15. ☎ Eugene 0181 469 3241.

**SMPT Synchroniser XRI** Systems. XR300. Excellent condition. £110. ☎ Spencer 01273 383609.

**SONY DTC750ES** DAT machine. Spares or repair. £120 ono. ☎ Mick 0121 525 1832 (Birmingham).

**SONY DTC750DS** DAT machine. Spares or repair £120 ono. ☎ Mick 0121 525 1832.

**SOUNDCRAFT SPIRIT** auto mixer 16:8, £2,500; Neumann U87A, £1400; JL Cooper data sync, £300; Philip Reeves MIDImerge, £50; brand new, never used with guarantee. ☎ 0171 263 0116.

**SOUNDCRAFT SPIRIT FOLIO**, 18:2 mixer, as new, home use only, £375. ☎ Paul 01256 471258.

**SOUNDCRAFT SPIRIT AUTO** 24:8:2, £2,750; Soundcraft Power Station, £895; Soundcraft Spirit Live 8:2, plus F/C, £395; Tascam MM1, £325; C Audio RA3000, 1250 watts, £495; Roland Juno 60, £295. All mint. ☎ 01977 557560 or 0374 936769.

**SOUNDCRAFT SPIRIT LIVE** 16:3 £750; Fostex M80 plus four reels of unused Ampex tape £700. Both as new. Very light home use only, boxes and manuals. ☎ 01268 726953 after 6pm (Essex).

**SOUNDScape** multitrack PC hard disk recording system, 500Mb, hardly used, emigration sale, cost £3000 new, best offer over £2200, no time wasters or dealers. ☎ Brad Hough 01734 782140 (Wokingham).

**SOUNDTRACS CM4400** 32:12:24, £3300; Fostex E16, £1600; Soundcraft 762, 2-inch, 24-track, £2500; Tannoy Gold Monitors, £400; Akai S1000, £1400; Alesis ADAT, £1600; Zoom 9010, £400; MIDI PC24, £2000. ☎ 01923 267733.

**STUDIO CLEARANCE** Roland SP700 and S760 samplers; SE50 effects; Studio Master 16:2 mixer; Alesis Monitor 1's; AKG microphone; CD-ROM etc; Rotel amp, rack and stands. Ring for details. ☎ Mike 0181 365 9045.

**STUDIO CLEAROUT** Mixers: Tacblue 16:8:2, (2-sweep mid EQ, 4 Aux) £700; Alice 16:4 with limiters, £500; Audix 9:4, £100; Tascam 6:2, £50; Tascam PE20 parametric EQ, £50; FormulaSound graphic EQ, £100; Casio R21 sampling drum machine, £80; Boss DR550 £80; Atari 2.5Mb plus greyscale monitor, £250; MIDEX, £100; Plasmecc ADAS stereo hard disk recording for Atari, £300; huge amount of Atari software disks, £100 the lot; Bel 8-channel dbx noise reduction, £100; ☎ Justin 01767 631544.

**STUDIO SELLOUT** Fostex M80; Teac 2-track with dbx; Oktava MK219; Beyer DT100; Yamaha RX5; instrument amps; Remo piccolo snare; Patchbays; Sony Pro Walkman; all as new, bargain prices. ☎ 0113 268 0331.

**STUDIOMASTER SERIES II** 16:16:2, pro mixing desk MkII MIDI mutes, £1,500. Tenor saxophone Cous pro model, nice, £550. ☎ Ashley 01252 374417 daytime.

**STUDIO RESEARCH** 16:2 mixing desk, two aux, line and balanced inputs, brand new, still boxed, £300; smoke machine, remote control, as new with fluid, £100. ☎ 01582 765220.

**TASCAM M3500** 24-channel mixing desk, cost £7000, accept £3200; Emu Emax II Turbo, cost £3500, accept £1600; Yamaha SPX990, £450; JV1000, £1000;

Akai S1000 standard, £1400. ☎ 0850 781696.

**TASCAM MM1** 20-channel mixer, 4 auxillary sends and returns, excellent condition, boxed, £350, can deliver. ☎ 01429 265270.

**TASCAM PORTA TWO** £175 ono; Alesis Microlimiter, £75 ono; Yamaha QY10 with custom case, £115 ono; Philips DCC recorder, 3 months old, £110 ono. ☎ Steve 0171 594 7523.

**TASCAM 224** 4-track recorder, good condition, manual, tapes and remote, £300. ☎ Rob 01572 770038.

**TASCAM 38**, well looked after with tapes and leads, £650 ono. ☎ 0161 439 0963.

**TASCAM 38** half-inch 8-track recorder, plus wiring loom, home use only, £800. ☎ Richard 0181 291 3367.

**TASCAM 688** 8-track MIDI studio, Rolls Royce of portastudios, mint, boxed, £1,300; Alesis 3630 compressor gate, £185; Alesis MIDverb II £150; Audio Technica ATM31 £50. ☎ John 01428 644625 (Surrey).

**TASCAM 688** 8-track MIDI studio, 20 inputs, MIDI muting, FSK sequencer Sync In, virtually unused, immaculate, boxed, plus digital reverb and Roland TR505 drum machine £1,400 ☎ Graham 01767 692806 evenings and weekends (Beds).

**TASCAM 688** MIDI Portastudio for sale. Home use only. £1,250. Alesis Midiverb III £170. ☎ 01562 822236 after 6pm (Kidderminster).

**TASCAM 688** MIDISTUDIO, mint condition, £1000. ☎ 01423 712484.

**TEAC A3340S** reel-to-reel 4-track £200; Sessionette guitar combo, 75W with 2 x 10 inch Mosfet speakers £150. Both in good working order. ☎ 01332 296690 (Derby).

**YAMAHA DMP7** mixers (three), £600 each; Lexicon LXP5, £200; Digitech IPS33 Smartshift, £150; Drawmer M500 compressor/limiter, £400; Roland GS6, £100. ☎ 0171 584 0166.

**YAMAHA MT100** 4-track cassette multitracker, DBX noise reduction, hardly used, £140; Cubase for Windows, complete with Midiman 401 interface, bargain at £120. ☎ Paul 01202 398537 (Bournemouth).

**YAMAHA SPX900** multi-effects, VGC, includes manual, etc, £395. ☎ 0161 232 1787.

**ZOOM 9120** multi-effects processor, excellent condition, £185. ☎ Gary 01239 615361.

## SAMPLERS

**AKAI S01** sampler, £475; Phonic 16:2 rack mixer, £475; Alesis SR16 drum machine, £150; Simmons 8:2 MIDI rack mixer, £140; Atari STE 1Mb, £100. ☎ Jonathan 01977 556334.

**AKAI S950** sampler 1.2Mb, immaculate condition, £700. ☎ Chris 01902 753344.

**AKAI S1000** 8Mb, plus SCSI and rackmount DAC (Syquest) 44Mb removable disk system, 5 cartridges and disks, £2000 ono; Atari 1040 STFM, SM124 Monitor and Creator v3.0, £230. ☎ Rob 0151 638 0286.

**AKAI S1000** 20Mb, SCSI, digital in/out, manuals, v4.3 software, excellent condition, home use only, £2300 ono. ☎ Raj 0171 935 3918.

**AKAI S1000** sampler, 10 outputs, 4Mb memory, digital and optical interface, plus v2.0 software, includes time-stretch, £1500. Will send by courier or deliver. ☎ 0114 2482760.

**AKAI S1000** 2Mb board, £75; Akai ME35T MIDI drum trigger, £235. ☎ 0161 232 1787.

**AKAI S1000HD** sampler, 6Mb RAM, internal hard drive, SCSI board for external CD-ROM etc, loads of samples, v4.4 operating

system, also Drawmer DL221 compressor, will accept sensible offers. ☎ Mark 0860 148395.

**AKAI X7000** sampling keyboard, 12-bit 6-part multitimbral, 25 disks, excellent condition, £250; Alesis HR16 16-bit drum machine, boxed with manual, £100, or £300 for both. ☎ Stu 0121 602 6011.

**EMU EMAX I** sampler, £550; Nomad 8:2 rack mixer £95; Matrix 1000 £350; Roland SRV2000 reverb £300; Atari 1040 STFM with high res monitor £200. ☎ Kenny 01424 421814 (E Sussex).

**EMU EMAX SE** good condition, disks, boxed, swap for Atari with monitor or multitrack or good GM module, ie. Korg 05RW. ☎ 01900 870773.

**EMU EMAX I HD SE** keyboard sampler, excellent condition, includes manuals and large disk library, £650; Alesis Midifex, boxed, as new, £70. ☎ 01274 620004 (W. Yorks).

**EMU EMAX II** turbo keyboard/sampler. 40Mb hard drive, 8Mb memory. Complete CD-ROM library plus drive, only £1950; Behringer Ultraflex II EX3100 professional enhancement processor, £195; Tannoy system, 8 monitors, boxed, £395; DT150 studio headphones, £95. ☎ Jazz 0181 552 5414 days, 0181 552 4579 evenings (London).

**EMU EMAX II** keyboard sampler, 8Mb, VGC, 16 stereo voices, manual, boxed, £950; Emax II CD-ROMs, various titles, all VGC. ☎ Paul 01227 361089 work (Kent).

**EMU EMAX II** 16-bit stereo sampling keyboard, expanded to 8Mb, mint, £1250; Yamaha SY85 with 2.5Mb RAM, sounds, sample library, £900; Boss DR660, £230. ☎ Mark 0121 352 0732.

**ENSONIQ ASR10R** sampler with v3.0 software, hardly used, boxed with manuals, still under warranty, £1500. ☎ 0161 773 0483.

**ENSONIQ EPS** keyboard sampling workstation, double memory, graphic editor for Atari included, £500 ono. or swap wavestation (cash adjustment); Roland JX8P analogue, £465 ono. All VGC. ☎ Tim 01229 583746.

**ENSONIQ EPS16+** rack sampler, huge library, SCSI interface and hard drive, 2Mb, 8 outputs, effects, manual, home use only, Waveboy disks, £850 ono. ☎ Graham 01522 531800 anytime (Lincoln).

**ROLAND S330** sampler module, complete with monitor, eight separate outputs, multitimbral and lots of (resonant) filters to play around with! Selling for £440 for quick sale. ☎ 0121 453 5918.

## COMPUTERS/SOFTWARE

**AMSTRAD COLOUR MONITOR**, medium resolution, suitable for Atari ST computers, £75 ono. C/W connecting lead for Atari. ☎ 01298 814681.

**APPLE MACILSI 5/40** with Apple Colour Monitor, mouse, leads and RAM doubler software, £600 ono. ☎ Shailesh 0181 654 4808 (Croydon).

**ATARI 1040 STE** computer with SM124 hi-res monitor, complete sequencing system from studio 'thinning out process', £250 complete. Backup power supply so power cuts are no longer a problem. ☎ 01884 257487.

**ATARI 1040STE** 4Mb, SM125 monitor, external FDD, 20Mb HD, 40Mb HD, Steinberg Midex+, Olivetti Printer, Cubase v3.0 and dongle, £875. ☎ Alan 01379 676670 eves, 01603 592453 days.

**ATARI FALCON** 4Mb RAM, 200Mb internal hard drive. Cubase Audio, the latest 16-track version with Falcon digital interface, external hard drive, 270Mb RAM, superfast quantum with Falcon cable, VGA high resolution colour monitor with Falcon adaptor. The

lot for £1,500 or will split. ☎ or Fax lan 01702 616961 (Essex).

**ATARI FALCON with 4Mb RAM**, 65 Mb hard drive, £500, as new. ☎ 0171 272 8344.

**ATARI ST** with high resolution monitor, mouse and sequencer software, £195; Dr T's X/OR universal editor and librarian for PC/Windows £95. ☎ Henderson 01444 440055 (W Sussex).

**ATARI STE** computer with Atari hi-res mono monitor — excellent for sequencing and editing music, £260. ☎ 01908 233520.

**ATARI STE** music studio setup. Includes Atari hi-res SM124 monitor and leads — complete setup to get recording, £250; Memory upgrade and colour monitor also for sale. ☎ 01884 257487.

**ATARI STE 1Mb** RAM, Mono Monitor, plus 660Mb hard disk and Pro 24, £450. ☎ Paul 01256 471258.

**ATARI STE 2Mb**, plus SM124 hi-res monitor and Cubase v3.0 software, £475. ☎ 01332 841719.

**ATARI STE 1Mb** computer, plus SM124 hi-res monitor and music sequencing/editing setup, £250. Studio backup power supply for use with Atari and monitor, £60. ☎ 01884 257487.

**ATARI ST 1Mb** with high resolution monitor, mouse, DSD, word processor, sequencing software, all leads, cables and connections, boxed in mint condition for quick sale £280. Wanted: Roland TR909. ☎ 01252 370550.

**EMAGIC NOTATOR V3.3** — plus Atari 1040 monitor, mouse. Excellent condition, £300. ☎ Simon 01453 884008.

**EMAGIC LOGIC v2.0** for the Apple Mac, as new — disk still sealed, complete with dongle, manuals and blank registration card, free update to v2.5. ☎ James 01606 43828.

**EMAGIC NOTATOR Logic** Audio v2.0 for Macintosh. Brand new, unused, unopened, genuine reason for sale, £550 ono. ☎ Dave 0141 331 2209 (Glasgow).

**EMAGIC UNITOR II SMPTE** code generator for the Atari, £250 ☎ Ardy 0171 938 2386.

**PERFORMER** sequencing software v4.2 with Unisyn Universal Editor/Librarian for the Mac. Transferable Registrations, £400. Contact J. Schofield, Bruce House, Barn Top Wath Road, Pateley Bridge, North Yorks, HG3 5PG.

**PHILIPS COLOUR MONITOR** CM8852. Excellent condition £65 or swap for Atari high res monitor. ☎ Glen 01303 256807 (Kent).

**QUAD** 4-track hard disk recording system plus wave SE, inclusive of manual and box £195 ono. ☎ Roger 01792 368786 (Swansea).

**REPLAY 16** for Atari inc DAT samples, disks, all boxed, £65; Moog Rogue analogue synth, £155; Roland CM32L MIDI Module, £115; Siel Analogue MIDI expander, £90. ☎ 01275 332957.

**SAMPLITUDE PRO** 8-track, 16-bit, direct-to-disk recording software for all PCs, absolutely brilliant, boxed as new, £190 ono. ☎ or Fax lan 01702 616961 (Essex).

**SOUNDScape** multitrack PC hard disk recording system, 500Mb, hardly used, emigration sale, cost £3000 new, best offer over £2200, no time wasters or dealers. ☎ Brad Hough 01734 782140 (Wokingham).

**STEINBERG MIDEX** MIDI expander/key expander. Mint condition. £185 ono. ☎ Malcolm 0191 565 4334 (Sunderland).

**STEINBERG SYNTHWORKS** editor for Korg M1, Atari format with over 2000 sounds. Fatar Studio 90+, 88-note weighted keyboard, £495. ☎ 0589 487345 (mobile).



## DRUM MACHINES

**ANALOGUE DRUM PAD** with sweepable filters, £100. ▀ Gavin 01256 701470.

**BOSS DR550 MKII** excellent rhythm machine, with 96 quality drum and percussion sounds, including TR808 and 909. VGC, with manual and power supply, £150. ▀ 0171 241 3028.

**KAT DRUMKAT 3.0** Pedals, leads and stand plus DrumKat case £650. ▀ Gordon 0181 968 0095.

**ROLAND CR78**, boxed with manual, £300; Korg DDM110, boxed with manual, £60. ▀ 01462 731736 eves.

**ROLAND PAD 8** Octapad. Swap for drum machine or analogue gear. Open to any offers. Contact: Keith Salmon, Flat 2, 20 Alhambra Road, Southsea, Hants, PO4 0RL.

**ROLAND RS** 16-bit quality drum and bass sounds with full MIDI support. Hardly used, boxed as new, £180 ono. ▀ Darren 01689 856470 (Kent).

**ROLAND R8** Drum machine with TR909 and CR78 cards. Immaculate condition with box and manual, £360 ono. ▀ Ian 01736 753057 anytime.

**ROLAND R70**, mint condition, £300 ono. ▀ 01423 712484.

**ROLAND R70** drum machine. Brand new, cost £679, accept £400 for quick sale. Will post. ▀ 0114 248 2760 eves.

**ROLAND TR606** analogue drums, £95; Yamaha RX11 digital drums £95. Both excellent working order with manuals. ▀ Kevin 01353 663613 5pm-8pm only (Cams).

**ROLAND TR727** with PSU and manual, £90. ▀ Nick 01782 563088 (Staffs).

**ROLAND TR808**, boxed with manual and original perspex template covering front panel, £350. Will send by post. ▀ 0114 248 2760 eves.

**ROLAND TR909**, boxed, with manual, excellent condition, offers. ▀ Derek 01354 695239/01843 835280 (if no reply from first number).

**ROLAND VINTAGE** analogue drum machine, £50. ▀ Gavin 01256 701470.

**YAMAHA DD10** digital drum bank with 100 presets, 8 pads, pedals and MIDI. Boxed bargain at £55. ▀ Andy 01162 692623.

**YAMAHA RX5** immaculate, boxed, as new, plus 3 ROM cartridges, £300. ▀ 0181 997 1867.

**YAMAHA RX7** drum machine. Mint condition in box, £225. ▀ Alan 01484 452548 (Huddersfield).

## MISCELLANEOUS

**BIG FLIGHTCASE** suitable for 32-channel mixer, excellent condition £130 ono. ▀ Mr Grant 01923 679773.

**CHEST STYLE** flightcase, £50; Flightcase wardrobe £30; Bulldog 28U rack flightcase £180; Bulldog Atari ST chest style flightcase £130. ▀ Rob 0151 638 0286 (Merseyside).

**ELECTRO VOICE S200** PA speakers, excellent condition, £975. ▀ Veronica 01865 375236.

**ELP** 25th anniversary convention, 9 September 1995 in Birmingham. Two bands, auction, quiz and stalls. Send SAE to Trilogy 28 Stonebanks Manor Road Walton on Thames KT12 2QE.

**EMU EMAX I** and Akai S900 sample disks for sale, £3 per disk. Keep those machines alive! Brilliant sounds for brilliant samplers. For catalogues ▀ 01476 64626.

**ENSONIQ MIRAGE** Sound Disk Library, 110 different disks, list available. Also sounds for SY77, DX9, Juno 60, Poly 800, DW8000 from my personal collection. ▀ Kevin 01628 663980.

**FOR SALE** Two RMS2000 audio

radio microphones. Frequencies 176.4/177.2, 173.8/174.1. £800 per channel. Newly serviced. ▀ Mike, Newport 034 86382.

**GIBSON EPHIPONE SG**, fixed neck, new, unplayed, £190, or swap for Atari ST1040ST with monitor. ▀ 01733 315833.

**HELP!** Proteus 1, 2 and 3 users — does anybody have original Proteus 1XR voices? I've lost mine! I will provide disk, if you can help. ▀ Dave 0161 865 0248 eves.

**INTEGRITY STUDIO** sub-bass, very high quality, unused with 30Hz - 250Hz 400W RMS per cabinet, ideal for large studio/cinema/AV facility, £700, the pair. ▀ Laurence 01752 267649.

**LANEY KB120** keyboard amplifier, 120W 3-channel combination amp with reverb, FX send/return. Excellent sound and very loud. Absolutely immaculate, £215 ovno. ▀ 01869 347204 (Oxfordshire).

**MASSIVE SOUND LIBRARY** for Korg M1 on Atari disk. 2500 sounds per disk (3 disks), £15 each or £40 for all three. Also Synthsworks M1 Editor for sale. ▀ 01303 257714.

**MIXER STAND** very sturdy, suit 24-track desk, £90, Marshal JCM800 500W split channel valve head £250. ▀ Neil 01273 494502.

**MULTICORE CABLE** 16-channel, 4-return. 20 meters long. Box on input end, all XLR on desk end. Never been used, still as good as new. Offers in the region of £300. ▀ Andy 01788 817739.

**MUSIC MAGAZINE** back issues, Sound on Sound 1988-1994, Music Technology 1989-1991, Q magazine 1992-1993. Any offers? ▀ Malcolm 0191 565 4334.

**ONE HUNDRED AND NINE** Akai sample disks for S1000 including master disks. £70 ono. ▀ Duncan 0121 444 2681 (Birmingham).

**PEAVEY PA** system. Consists of Unity 16:2 Desk; 2 Hysis4s; 2 CS1000s with DDT and active crossover, £2200 ono. ▀ Chris 0151 630 6004 or 0151 609 0637 anytime.

**PETERSON** 120W EV equipped combo amp. Twin channel, 3-way switching, built-in reverb effects send return, compact and powerful. £900 new, £450 ono. P/x WHY. ▀ 01422 356214 (Halifax).

**ROLAND JD990** sounds on two ROM cards, £28 each; Korg 01W piano PCM/ROM card set, £75; manual for C-Lab Creator, £25. ▀ 01475 630181.

**SWAP** my Philip Rees 2M MIDI merge unit for your wave station synth plus time slice PCM set. ▀ Andrew 01454 772237 (Bristol).

**TWO STUDIO** trolly racks. One open 12U heavy duty, black, suitable for multitrack etc, and one closed 9U, light grey, alloy, suitable for patchbay etc. Would swap for any musical items, especially modules or effects, or will sell. Original cost for pair £164 50, will sell together for £90. ▀ Carl 0171 286 3330.

**TWO RMS2000** audio radio microphones, with 176.4/177.2 173.8/174.1Hz transmission freqs, £800 per channel, newly serviced. ▀ Mike 01348 811382.

**WERSI RACKFOX** MIDI expander for sale. 128 sounds plus rhythms all to accompaniments, £180 ono. ▀ Dave 01623 755052 (Mansfield).

**YAMAHA SY77** sound library, 512 sounds per disk, seven disks at £6.50 each. Also sounds for Ensoniq Mirage; DX9; Poly 800; Juno 60 and DW8000. ▀ Kevin 01628 663980.

## PERSONNEL

**FANTASTIC SINGER** frontman REM; signed songwriter. Into REM; Beatles; Verve; U2; Tom Petty; Scott Walker; Led Zep and Depeche Mode, recording imminent. ▀ 01656 659524.

**FANZINES/DJ'S/JOURNALISTS!**

The Cage is promoting industrial/gothic/experimental releases from around the globe! Contact us for Promos. Martin Bowes, 7 Radcliffe Road, Coventry, CV5 6AA. ▀ 01203 672288.

**GUITARIST** obsessed with Zawinul, seeks fluent synth/keyboard/organ player into Weather Report and Jazz, for recording and playing. Guildford area. ▀ John 01483 301223.

**INSPIRING**, new talent with material, vision and purpose, sought by established London record label. Send demos and biographies to the A&R Department, PO Box 675, London, SE99 8AA.

**PLEASE HELP** Semi-professional vocalist seeks keyboardist and guitarist to work with serious intentions on recording project. Please ▀ Chris or Angie on 01420 22626 (Surrey).

**PRODUCER!** Use a natural drummer instead of drum machine loops. No R&B, laid back, rock feel! Coast to coast. Reasonable rates. For more info: ▀ 718 782 1079 (New York).

**PRODUCER/REMIK** wants revolutionary artists who create revolutionary music to send demos and/or info (if no demo available) to: David Winwood, 28 Woodlands Road, Cookley, Worcs, DY10 3TL.

**REMIK** with studio available. Most styles covered. ▀ 01275 817122.

**ROLAND SAMPLER** users group, monthly newsletter, free access to over 1000 sample disks, new S760 owners welcome. Write to Xfade, 4 Godwin Bungs, Godwin Road, Cliftonville, Margate, Kent, CT9 2HQ.

**SONGWRITERS/MUSICIANS** wanted to compliment guitarist / keyboardist / vocalist / programmer interested in developing a writing and gigging pop combo. My passion is good 3.5-minute pop songs. ▀ Mick 0181 203 6085.

**TALENTED** 24-year old composer/assistant producer seeks employment with jingle company. ▀ Kevin 0181 942 1140.

**TECHNO PRODUCER** seeks collaborator from industrial to gabba to trance. Open-minded, reliable and motivated people, in London area only. ▀ 0181 543 5370.

**THE MUSICIANS GUIDE** to getting signed is packed with essential information, tips and advice not found in any other publication. Send SAE for free info to PO Box 407, Cambridge, CB5 8BY.

**TWO FEMALE OR MALE** R&B singers required to form a quartet. Influences must be new jack swing past and present. Commitment essential. Contact Neil on 0121 436 7717 (Birmingham).

**TWO TALENTED COMPOSERS** need versatile vocalist composer to complete rock-based song writing team. If you've the passion to help write great songs ▀ Bob 01268 288286.

## SEQUENCERS

**ALESIS MMT8** 8-track sequencer, excellent condition, still in box, £190. ▀ Gordon 0181 968 0095.

**BERHEIM DSX** sequencer, will drive your OBXa/OB8, plus 8 other analogue monosynths featuring CV/Gate! Excellent condition, includes manual, plus 37-pin connection lead and flightcase, £150. ▀ 01274 620004 (W.Yorks).

**YAMAHA QY10** Hardly used, mint condition, £115. ▀ Alan 01932 231617 (Walton on Thames).

## WANTED

**AKAI MPC60 MKII**, cash waiting. ▀ 0860 482 822 or 0181 883 4329.

**AKAI S1000** plus upgrade if possible, Yamaha ProMix 1 desk,

K2000 keyboard (with 2Mb or more if possible). Cash waiting. Best offered will definitely buy. ▀ office hours 01132 431533 ext 406 or home 01274 611343 contact Mark.

**AKAI S1000** can pay, £1350; Korg M1, £500; Juno 106, £300; SH101, £125; MC202, £150; TB303, £250; TR909, £400; Quadverb or SE50, £150, cash waiting. ▀ 0973 123965.

**AKAI S3000** 8Mb board up to £200. Digi board up to £150. DBX120P boom box, Ultraflex II up to £130, Oberheim Matrix up to £180, RY30 dance cards, hip hop and dance up to £15 each. ▀ Dave 0181 902 9784 (N.W London).

**AKAI S3000** digital I/O board and 8Mb board, Quadverb Plus, ▀ Andy 01482 448674.

**ALESIS D4** and Cheeta MD16R in VGC, preferably boxed and with manuals, cash waiting. ▀ Stuart 01905 640889.

**ALESIS MICROVERB Mki** Good working order. Ask for Michael. ▀ 01386 584539.

**ANY OF THE FOLLOWING:** DX7 cartridges wanted. C-Lab XRAM one and two, Sound Source SX ROM 1285 one and two, SkySlip ROMs four and five ▀ Duncan 0121 444 2681 (Birmingham).

**BIASED ROM CARTRIDGE** for DX7. ▀ Duncan 0121 444 2681 (Birmingham).

**CASIO CZ1000** synthesizer wanted with manuals and stand. Will pay up to £100. Must be in good condition. Also Yamaha SY85 sounds wanted, preferably analogue and analogue drums ie Roland CR78 etc. ▀ Lee 0161 792 6824.

**CASIO 'PLASTIC SAX'** MIDI wind controller, either model, cash waiting. ▀ 01298 814681.

**CELESTION SR1** cabs and SRC2 controller. Swap Yamaha RX7 Drum machine and Yamaha FB01 or offers? ▀ Spencer 01253 826023 or 0850 820766 weekends.

**CHEETAH** monitor interface for Cheeta FX16 sampler. Will pay good price if with monitor. ▀ Steve 01782 660969.

**CHEETAH FX16** expanded, also cheap multitimbral module. ▀ Steve 01375 390679 (Grays).

**CHEETAH MS800** waveform module, must be in good condition. ▀ 01274 878626.

**CIRCUIT DIAGRAM** or component overlay for Octave CAT synth. ▀ Reg 0115 9504052 eves.

**CIRCUIT DIAGRAMS** for my Moog Source. Nobody seems able to fix it without, so if anyone can help, please call. ▀ Kevin 01425 611200.

**CUBASE** or similar software package for Amiga, also any info on Amiga Midda and Project studio applications. ▀ Charles 0161 343 7603.

**CUBASE FOR ATARI** wanted. Version 1.0, 1.5 or 2.0. ▀ 01234 267806 (Bedford) eves and weekends.

**DATA DISK** wanted. Fair price paid. ▀ Roy 01353 740101 (Cams).

**D-DRUM SNARE** or similar electronic drum pads wanted. ▀ Geoff 01244 815651.

**DIGIDESIGN PRO TOOLS II**, eight channels or more with system accelerator card. Cash waiting. ▀ 0860 482 822 or 0181 883 4329.

**DIGIDESIGN SOUND TOOLS DAT I/O** (digital interface) wanted urgently. ▀ Bob Ames 01487 814227 eves and weekends or 0171 477 8275 days.

**ENSONIQ 4 x MEMORY EXPANSION** and SCSI, with hard drive if possible, for EPS sampler. ▀ Steve 01387 721486.

**HARD DRIVE FOR ATARI STE**, plus MIDI channel expander for same, any considered. Also wanted: cheap analogue junk of dubious condition, any considered. ▀ Dave 01753 541818 (Slough).

**HOHNER D6** Clavinet wanted. ▀ Richard 01256 53457.

**I AM BUILDING** a home studio and require sampler; DAT; mixer; FX; Atari computer; keyboard, etc. Anything considered, especially Korg; Akai; Roland; Emu, cash waiting for unwanted items. ▀ 01276 31010.

**KORG DF8** patch cards. ▀ Paul 01377 270897.

**KORG X5** Must be mint condition. £500. Exchange my Atari SC1435 colour monitor for £50 and your Atari FM144 monochrome monitor. ▀ 0151 606 9763, Mark.

**KAWAI 100F** analogue mono synth wanted. Please call Rob ▀ 01727 811881 or 01727 812665 (Brighton).

**KURZWEL K2000R**, cash waiting. ▀ 0860 482 822 or 0181 883 4329.

**OBERHEIM MATRIX 6R** Cash waiting. ▀ Kenny 0141 942 5958 (Glasgow).

**PLEASE HELP!** Bokse XM-9 time code events controller and synchroniser. Need a manual. Can pick up. If can help, contact Vas ▀ 0181 292 8473 or 0589 197071 (Enfield).

**REPLAY 16** cartridge with documentation and software for Atari STE. Cash waiting. ▀ 01268 415157.

**ROLAND A80** master keyboard controller. ▀ Winston 0181 699 5613.

**ROLAND JD800** wanted in exchange for an immaculate example of a Korg M1, boxed, as new, with cash incentive, will deliver and collect. ▀ Nick 01382 730551.

**ROLAND JUNO 106** or any analogue synthesizer. Would like to swap for Roland D20 multitimbral synthesizer with sequencer in good condition with manual. ▀ Kenny 0141 942 5958 (Glasgow).

**ROLAND R8M** drum module wanted, also 909 and dance cards. Must be immaculate. Preferably boxed with manuals. Cash waiting. ▀ Alex 0131 552 6881 or 0589 327535 (Edinburgh).

**ROLAND R8** drum machine with cards if possible, cash available. ▀ Chantal 0114 275 7586 (Sheffield).

**ROLAND S330** sampler wanted, will pay £400 if in good condition. ▀ Andy 0161 445 1090.

**ROLAND TB303** bassline urgently required. Will pay £400 - £500, depending on condition. ▀ Ed 0181 942 5490.

**ROLAND TB303** wanted, even broken. Cash waiting. ▀ Alex 0171 704 8525.

**ROLAND TR909** drum machine, cash waiting, and will collect. ▀ Ian 01703 268817 (Southampton).

**ROLAND U20** keyboard with cards if possible (I'm desperate, Alan!). ▀ Paul 01323 841414 (Sussex).

**ROLAND W30** sampler, will pay up to £700. Contact: Robert Corker, 27 Hawthorne Street, Barnsley, South Yorks. SY0 1QQ.

**ROM CARDS** or ST disks for Roland U220, new sounds needed. ▀ 01229 431957 after 7pm, ask for Gary (Cumbria).

**SERVICE MANUALS** (Photocopies) for Moog Rogue, ARP Odyssey, Sequential Pro One. ▀ 0131 611 9967.

**SOUNDS FOR KORG 01/W** wanted on card or disk, will buy or swap your collection for mine. ▀ 01308 456 945 eves.

**WANTED URGENTLY** Atari STacey portable computer. ▀ Amanda 01239 615361 (Dyfed).

**WANTED** Kawai KC20; K4; Roland U20; Ensoniq SQ1+; Rhodes 760; Yamaha SY55 or similarly blessed module with 5-octave keyboard. Will swap for Yamaha SY35 with manuals and PSU, or £400. ▀ Daniel 01889 583347.

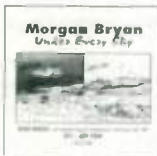
**ZOOM 9010**, Drawmer M500, Drawmer 1961 EQ, TLA valve EQ, Roland JV1080, Ensoniq DP4. Cash waiting. ▀ Paul 01302 5388304.



## readers' tape exchange

### DUB FOUNDATION PART 1 by Universal Sound.

Serious dub roots to inspire and elevate. Strictly conscious vibes, dub reggae inna roots warrior style. 1995 sessions, direct from Lionheart sound studio. 45 mins approx, 9 tracks, CrO2 tape £3 (inc p&p) from: 'Lightships', 4 Rossiter House, Sennen, Cornwall TR19 7AD.



### UNDER EVERY SKY by Morgan Bryan.

Over 1 hour of filmic, atmospheric, ambient instrumentals on CD, for just £9.99. Cheques to: Morgan Bryan, Dox Music, 28 Joseph's Road, Guildford, Surrey GU1 1DW.

**MAX TRAX EP** by Ardcore Choonz. Fast hardcore ragga techno and commercial dance tunes with remixes. 4 rockin tracks, on vinyl, 20 mins. Cheques only

for £2 to: Lee Ascroft, 48 Gilnow Road, Bolton, Lancs BL1 4LJ.

**IT'S ONLY MONEY** by The Fosters. Debut cassette single 'It's Only Money' c/w 'It's A Heartache' CrO2 tape, available by mail order only. £2.50 (+ £1 p&p) payable to: Quadriga Music Ltd, 79 Wharfedale Gardens, Thorntay Heath, Surrey, CR7 6LE.



**WAITING EP** by All Living Fear. Exeter-based gothic stylists now release their first studio-recorded 4-track EP. 20 mins, cassette £2.95 to: Fetish Records, PO Box 29, Exmouth, EX8 2YU.

**RUSTLES AND WAVES** by Noctern. Innovative ambient music, 2 tracks, 37 mins, CrO2 tape — £5. Cheques to: Andrew Gooding, 95 Hambro Road, London SW16 6JP.

**HANGOVER** by Hangover. Nice boy punk rock, 3 songs of home recording in the vein of Green Day and Superchunk. 6ish mins on cassette for a breathtaking

£1.50 (inc p&p). Cheques to: L Bodnarchuk, Flat 3, 102 Fitzroy Avenue, Belfast BT7 1GX.



**CURVES AND JARS** by Barry Lewis. "Fractal Dice Music". A series of fractal studies, containing melodies generated randomly by dice algorithm.

Computer music with a friendly face. 20-track CD, £11.75 (inc p&p) from MPS Music and Video, Rosegarth, Hetton Road, Houghton-le-Spring, Tyne & Wear DH5 8JN.

**MEMORY LOSS EP** by Prole Synthesis. Hard underground dance music. 5 heavy-duty acid and industrial-strength techno tracks. 25 mins, on 12-inch vinyl, £3.50 (inc p&p) to: R Anderson, 7 Nunnington Terrace, Armley, Leeds, LS12 2PH.

**WEB OF DECEIT** by Jimmi Cranch. 8 songs, all live takes, recorded live to DAT. Blues/rock and roll ballads, 30 mins. Great for driving — get one in

your car today! Send POs for £2 (or blank tape of your choice plus postage return) to: Jimmi Cranch, 67 Hunts Drive, Writtle, Essex, CM1 3HQ.

**THIRD EYE** by Third Eye. Positive, potential trance, ambient and experimental. The future now. 37 mins, 6 tracks, CrO2 tape, £3.50 (inc p&p). Cheques to: D Appledore, Rotor Studio, 7 Pendennis Close, West Byfleet, Surrey KT14 6RX.



**CONTRASTS** by Carey Nutman. A mix of contrasting electronic studies, some serious, some not, composed between 1989 and 1993. 11-track CD, £11.75 (inc p&p) from MPS Music and Video, Rosegarth, Hetton Road, Houghton-le-Spring, Tyne & Wear DH5 8JN.

**IN THE LAP OF THE GODS** by Merge. Progressive techno with heavy-riffing synths in the style of Tangerine Dream, Schulze, Kraftwerk, The Orb, Pink Floyd.

## 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 424025**.
- 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. Llewellyn Communications Ltd CB2 3LR.



**1 CONTINUUM** by Active Loop Zone. ALZ have gigged with Zion Train, Children Of The Bong, Timeshard and µ-Ziq. This is an excellent 90-minute 12-track CrO2 cassette of ambient

dub trance. Only £4.75 from: Rick Lomas, 48 Old Mill Gardens, London Road, Berkhamstead, Herts, HP4 2NZ. • Well-produced trance with superb analogue-style effects (mostly produced using the filters of the group's Akai 2800). The stated dub influence is not actually that evident — this is pretty much undiluted techno, but very accomplished.



**2 REALMS OF THE CLOUD KING** by The Amulet. 57 mins of fantasy rock, 11 diverse tracks, each one an emotional trip from acoustic to full-blown, with atmospheric keyboards, soaring guitars, and powerful

vocals. CrO2 tape, £5 from: Two Rivers music, May Cottage, Church Lane, Hampton Bishop, Hereford HR1 4JY.



**3 MORNING FLIGHT** by Brian Marshall. Nine very melodic tracks, featuring voices, guitar, piano and synths. Laidback grooves, subtle and memorable themes. Evocative,

atmospheric, relaxing, uplifting. A must for any collection. 45 mins, CrO2 tape, £5 to: Brian Marshall, Sutton Court, Tenbury Wells, Worcs WR15 8RJ.



**4 THE VIEW FROM MY WINDOW** by Emily's Chair. 4 songs, 26 minutes, CrO2 tape of ambient music tinged with moments of

serenity and intensity. Cheques for £3.50 payable to: Jeff Knightly, 14 North Road, Bosham, Sussex PO18 8NL. • Laid-back rock with washes of keyboards. The tape's been well produced, and the colour cover is very attractive, but the tape's slightly hissy in parts. Worth a listen though.



**5 MAGIKO** by Aquabats. Natural ambiances with improvised percussion, voices and flute makes earth music. 73-minute CD £10, CrO2 cassette £6. 14 excursions. SOS Demo Doctor's top tape, March '95. Like nothing you've ever heard before. Cheques to: Aquabats, 6 Peel Place, Oxford OX1 4UT.

• Highly unconventional improvised recordings based around unorthodox ethnic percussion, ambient 'found' recordings, flute, and vocal chants. Intriguing and diverting, and superbly recorded.



**6 THE THORN** by Kate Campbell. 4-track CD, 20 mins. Heart- and soul-baring songs, extensive radio play and

considerable following. £4 payable to: Kate Campbell, PO Box 407, Cambridge CB5 8BY.

• Folk-tinged MOR rock centred on Kate Campbell's powerful, expressive voice. Interesting blend of instrumentation,

including acoustic guitar, programmed drums, sax and mandolin.

**7 TRANCE FOR A PROBLEMATIC WORLD** by DSP. Trippy tribal trance dance. C60 CrO2. Dolby 'B' £3.50 each (inc p&p) from: C Medd, Jah Cottage, 2 Kirby's Lane, Canterbury, Kent CT2 8AG.

**8 RAW ELEMENT** by Mankhwala. Ambient global techno grooves. Six choice tracks on a CrO2 C40. The real stuff — highly original, unusual rhythms. £4 (inc p&p) from: A Scott, c/o 13C Goldsmith Rd, Hove, East Sussex BN3 1QA.

• Evocative electronica blending North African samples (percussion and chants) with synths.



**9 SHABDA** by Marcus Corbett. Highly original acoustic guitar-based hybrid folk with atmospheric strong tunes.

Indian-influenced vocal, genuine accompaniment, piano, flute, and percussion. 10 tracks, 53 minutes. CD £9.99, TDK SA cassette £7.50 from: Marco Music, 25 Dorchester Court, London SE24 9QX.

• Beautifully packaged and produced CD featuring the unconventional folk style of Marcus Corbett. Vocals delivered in Indian style but to a backdrop of off-the-wall acoustic guitar.

**10 EAGLE EYE** by Earthflow. New age songs of nature and dreams. Haunting, evocative soundscape of eagle, sea, river, wolf, spirit, land, beyond. Soothing, powerful. 7 tracks, 55 mins. CrO2 tape, £5.50. Cheques payable to: S Davies, 4 Oakwood Park, Nutley, East Sussex, TN22 3NB.



Over 100 copies of demo tape sold through this column. Free T-shirt to first 10 orders received. 50 minute-CD, £10 to: Ian Pearson ('Merge'), 78 Elgar Road, Reading, Berks, RG2 0BL.



**COMING OUT** by Red Ash and the Love Commandos. 10-track, 49-minute CD. "Not a different kind of cider — it is Red and

there's a fair bit of (indie) rock in it. £6 (inc p&p), 14-day money back guarantee. Cheques to: M. Rigler, 35 Beresford Road, Poole BH12 2JR.

**THE STORM WITHIN** by Secret Archives of the Vatican. Dark ambience based on 12th century Japanese court music. Isolationist electronics. Beautiful, strange world music. C60, 12 tracks, CrO2 tape, colour cover, £5. Cheques to: Vince Millett, 3 Royal Circus, London SE27 0LT.



**EYES ROLLED BACK** by Harmonic 288. 45 mins of ambient dubscapes and organic textures. 7 tracks, CrO2 tape, £3, available from: Chris Harrad, 85 Canbury Park Road, Kingston, Surrey KT2 6LQ.

**HALF LIFE** by Phil Cory. 8 guitar/guitar synth rock songs influenced by Lou Reed, Steve Reich, Pink Floyd, 40 mins playing time, £3. Cheques payable to: P Cory, c/o Helen, 20 Freemans Close, Hungerford, Berks RG17 0QR.



**WARPED CD** by Various. Over 77 mins of various indie, grunge, pop, ambient and techno artists.

20 tracks for £5. Beautiful colour sleeve. Cheques/POs to: *Purge Records*, 38 Chancery Lane, Nuneaton, Warks CV10 0PD.

**GUILT EP** by Viral Technology. Vicious techno metal. NIN, Krupp, Ministry, KMFDM with attitude. ADAT-recorded, DAT-mastered, pro-duplicated, CrO2 tape, 3 tracks, 15 mins, £2.50 from: P Davies, 13 Burnham Way, London W13 9YE. All previous titles now sold out — thanks!

**THE DREAM** by White. New age synth music on C60 Eight great tunes and a new cover, £7. Cheques to: DJ White, 53 Listowel Road, Kings Heath B14 6HH.



**NIGHT OF PASSION** by Ricky Fentone and the Flat Top Cats. Country rock blues mix. 32 mins, 10 tracks, Fe tape, £3. Cheques to: Harvey, 9

Kingsbury Place, Cwmaman, Aberdare, Mid-Glamorgan CF44 6LH.

**FRINGE FIDDLER** by John and Nina Bennet. Violin, vocals, bodhran and keyboard. Popular classics and folk. Family fun music making, 48 mins playing time 19 tracks, CrO2 tape, £4.80 (inc p&p) Cheques to: John Bennet, 6 James Road, Wellingborough, Northants NN8 2LR.

**7 TRACKS TO HARD DISK MELTDOWN** by Remote Control. Second demo tape with dance, techno

and experimental tracks. 30 mins, CrO2 tape with Dolby. Send 10 Dutch guilders to: Vincent Cuijpers, Stiemensweg 193 PO code 6591 MD, Gennep, The Netherlands.

**SONG FROM THE BEST INTENTION** by Various. First compilation from Infectious Brother Arts, includes work by Aphasia, Secret Archives, and more. CrO2 tape, 60 mins, 15 tracks. £3 to: AA Elsdon, c/o 486A Brighton Road, South Croydon, Surrey CR2 6AP.



**DREW** by Drew. Commercial pop 48-track pro studio recording from singer/songwriter, 55 mins playing time. 12 tracks, CrO2 tape, professionally duplicated. £5. Cheques to: Quidoza Music, Flat 3, 105 Onslow Square, London SW7 3LU.

**OVER THE LIMIT** by Frank Torpey. Original guitarist with 'The Sweet'. 10 tracks on CD featuring Terry Sullivan on vocals. No frills rock/blues. guitar-based £8 (inc p&p). Cheques payable to: FE Torpey, 8 Hawthorn Drive, North Harrow, Middx HA2 7NX.

**FRACTAL LAND** by The End Quartet. New CrO2 tape, colour cover, 30 mins, string quartets with a difference. Cheques for £3 to: AA Elsdon, c/o 486A Brighton Road, South Croydon, Surrey CR2 6AP.

**MAGIC MALVERN** by Paul White and Mike Simmons (The Lentils Of Delirium). Guitar and synth instrumentals (thrash 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.

**LAF** by LAF. Original and innovative pop music played on real instruments. Five go mad in the spare bedroom. 51 minutes playing time, CrO2 tape, £4 from: Phil Matthews, 8 Stanstead Road, Mickleover, Derby, DE3 5PP.



**NATURAL INSTINCT** by Elegant Simplicity. New album of prog rock in the vein of Camel Oldfield Ozrics Porcupine Tree. Other albums available. Fe tape, 56 mins, colour cover, digitally mastered, £2.50 to:

Steve McCabe, 27 John's Avenue, Lofthouse, Wakefield, WF3 3LX.

**SET ME FREE** by Solid State. 12-inch 4-track vinyl EP. Happy house jungle rhythm by John Bunyan and Craig Easterbrooks. 22 mins, glossy cover, £4.99 payable to: Bayslip 251 Austin Crescent, Plymouth PL6 5QT.



**FACE TO FACE** by Coupe D'Etat. Funky latin jazz, strong grooves, burning solos, 43 mins playing time, 7 tracks, CrO2 tape, features silicon mallet, £5. Cheques to: Louis Borentius, 90 Bridge Lane, London NW11 0EL

**T**he 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. SOS reserve the right not to run material considered unsuitable for inclusion in the Tape Exchange.

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 (0181 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. The note 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 Sound On Sound Ltd 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: ☐

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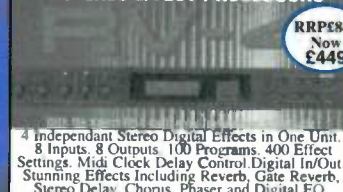
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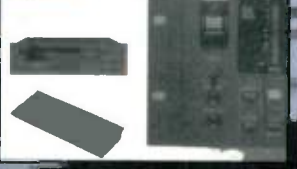
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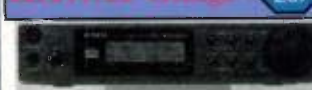
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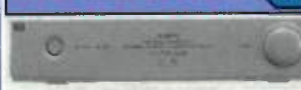
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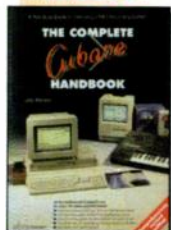
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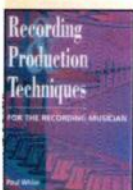


by Udo Weyers  
After a short break, the definitive Steinberg Cubase Handbook is back in print. This new edition is once again filled with real world applications and down to earth explanations of how to use all the powerful features offered by Cubase in

all its many forms. The book is now relevant to all three platforms (Atari, Mac and PC), and the main attraction of the revised text is its focus on Cubase Score. The Complete Cubase Handbook is a not-to-be-missed purchase for users of Steinberg's highly popular software.

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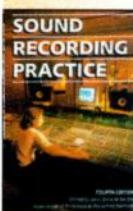
### RECORDING & PRODUCTION TECHNIQUES



by Paul White.  
This highly informative book by SOS's own Editor demystifies the techniques used by professionals in the recording of contemporary music. It reveals how to make full creative use of all manner of studio effects and signal processors. These techniques can be utilised both in the home and commercial studio. The book concludes with an invaluable section on master tape formats and an overview of the various processes and vinyl records.

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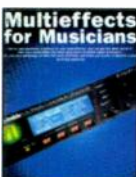
### SOUND RECORDING PRACTICE (4th Edition)



by John Borwick  
This now classic text reaches its Fourth Edition, and has been enlarged and revised to cover up to date developments in the recording industry. The contents of this 600+ page is too diverse to summarise in such a short space. Suffice to say that every serious recordist, whether amateur, semi-pro or professional should have a copy of this book.

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**MUSICIANS**  
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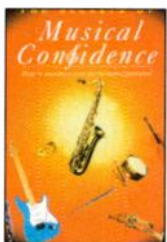
written & compiled by Annie Cunning



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.

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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

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(4th Edition) By Yasmin Hashmi  
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by Gadrir Wilkie

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by David Miles Huber



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by FA Wilson

Volume 6 of the Elements of Electronics series, Audio offers a comprehensive guide to the physics of sound, its recording and its reproduction. There is a lot of physics used in the book - in fact, this aspect makes the book a good basic text for those with a serious interest - but the text in between the formulae is clear and informative. Not bad value for £3.95 - a total of 308 pages.

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### ALL YOU NEED TO KNOW



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by Donald S. Passman

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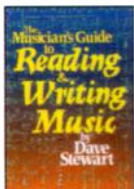
## HOW TO PITCH AND PROMOTE YOUR SONGS

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 as your own publishing business.

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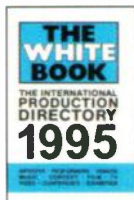
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The layout is logical and an index makes fact finding an easy task - altogether an indispensable 864 pages. The new edition once again comes with a complementary copy of *The Little White Book*, which distils the contents of the larger volume to a pocket-sized list of names and phone numbers.

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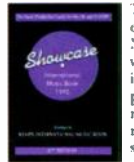
by Sheila Davis



If you want a textbook, this is it: 250 pages of serious, intelligent insight into songwriting. Loads of good advice and a friendly tone make this a useful read to anyone, whether beginner or seasoned pro. The focus is firmly on lyric rather than music, and the prominent references to poetry terminology shouldn't really be a surprise. Use Davis' 40 strategies and you could soon be 'designing distinctive songs'.

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by Marta Woodhull

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by Paul Zollo

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The new Musicians' Directory from Arc Publishing aims to provide all things to all musicians: whatever your style of music, the comprehensive listings offer you the contacts you need, whether it's labels, studios, venues, music shops or management - and

that just scratches the surface of the dozens of topics covered by the book. Apart from being a directory proper, the Handbook also includes a selection of useful articles, including subjects such as how to be a session player (by SOS's very own Paul White), music publishing, releasing your own record, copyright protection, accounting, legal advice and more. The Musicians' Directory offers over 380 information-packed pages for little more the price of a new CD.

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by Dan Walker with Gregg Perry

A two-part work, the first part covering all operational aspects of the RY30 direct to 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.

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## MIDI

### MUSIC TECHNOLOGY REFERENCE BOOK

by Peter Buick & Vic Lennard

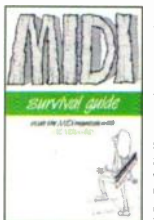


Written by Peter Buick and Vic Lennard (author of SOS's Atari Notes column), this book offers information at your fingertips and is an indispensable reference source for the musician or sound professional in the recording, broadcast, live, video, computer, multimedia, post

production and theatre industries. It includes comprehensive MIDI spec, General MIDI, MTC, MSC, and SyEx information. It also includes charts, check lists, useful hints, tips, and ideas, plus a glossary, list of contacts and a comprehensive indexed, it is also organised into convenient sections. 150 Pages.

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### MIDI SURVIVAL GUIDE



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**  
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### MIDI FOR THE PROFESSIONAL

by Paul D Lehman and Tim Tully

Co-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.

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### 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.

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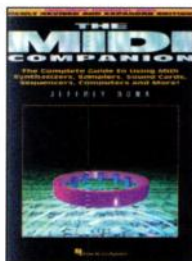
### A BEGINNERS GUIDE TO MIDI

by RA Penfold

The title says it all: all aspects of MIDI are explained, and many common beginner's problems are discussed.

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### THE MIDI COMPANION



By Jeffrey Rona

A breezy 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.

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### MIDI: A COMPREHENSIVE INTRODUCTION

by Joseph Rothstein, Product Review Editor, Computer Music Journal

Series Editor: John Straum

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.

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## Synthesizers

### THE MUSEUM OF SYNTHESIZER TECHNOLOGY



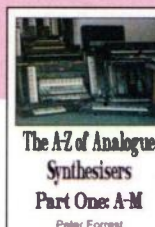
by Martin J Newcomb

If you liked our feature on the opening of the Museum of Synthesizer Technology in October, but haven't got the time or the cash to visit in person, then the next best thing has to be the museum's guide book. This 118 book is printed on

glossy paper and contains full-colour pictures of a large selection of exhibits from the museum, together with some descriptive text and company backgrounders. The text reads a little like a fanzine, but the hardcore synth fanatic will want this book for the pictures. In these pages you will glimpse instruments that you are unlikely ever to experience in the flesh: an exceedingly large Roland System 100 modular set-up, an EMS Synthi 100, an ARP 2500, a large Emu modular and what must be the comprehensive collection of Moog equipment anywhere. The Museum of Synthesizer Technology book is yours for £24.95, plus postage.

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### THE A-Z OF ANALOGUE SYNTHS PART ONE: A-M



by Peter Forrest

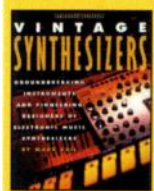
The author has aimed to make his book a complete rundown of all the major analogue synths and keyboards ever made, and on the evidence of this first volume, he seems to have succeeded. The book is useful and detailed, and shows evidence of

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 pictures of classic instruments.

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By Mark Vail



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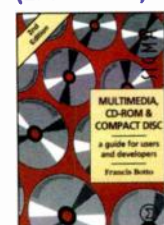
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Postage: UK £1.75, Europe £4.95, R.O.W. £6.95

## YAMAHA QY20 MUSIC SEQUENCER VIDEO MANUAL



by Tom Robinson  
Yamaha's popular QY20 portable sequencer's sound source is a deceptively simple device to use; if you think you might like some insight into getting that little bit extra out of the device, then look no further. Produced in co-operation with Yamaha, the video features mobile musician Tom Robinson showing you how to get the best from this portable marvel. Tom, who has used the QY20 extensively as a writing tool on the road, says: "I never leave home without it".

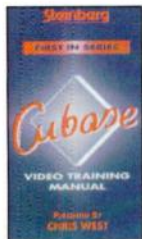
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# SOS Videos

## STEINBERG CUBASE



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 in the comfort of your home, until you can use Cubase like a true pro.

Topics covered include: the main screen, customising names and outputs, copying and pasting between arrangements, MIDI filter, cycle mode recording, the tool box, all edit screens.

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Practical guide to Cubase for Windows covers all the basic functions, ideal for the new user and those who need added insight into this



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Composer Don Muro presents six lessons that demonstrate how to create a multitrack 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. The tape is not dedicated to any one sequencing package - the information is valid no matter which sequencer you use.

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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 SOS contributor Julian Colbeck. The tape opens with synth pioneer Bob Moog making the inaugural speech and officially opening the museum, followed by a nostalgic run through one of his old modular systems. Analogue Heaven makes diverting viewing for anyone interested in vintage synths, represents good value, and offers the perfect companion to the Museum's guide book, also available from SOS Bookshop.

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## EMAGIC NOTATOR VIDEO TRAINING MANUAL



This video manual is detailed and helpful, and is presented in a most friendly and approachable manner by session musician Tim Walter, whose tone throughout the video encourages and inspires confidence. If you are new to Notator and are still in awe of its power, this is the video to bring you down to earth. An introduction and 28 tutorials take the user from the

absolute basics - including plugging in the dongle - to working with Unitor and SMPTE, and synchronising to video. As well as actual recording of MIDI data and sequencing, comprehensive coverage is given to using the score layout and printing facilities that are so much a part of Notator. Topics covered include: sequencing page, score editing, lyrics and text, graphic arranger mode, hyper edit, the printer page, using the part box.

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## THE EMAGIC LOGIC TUTORIAL VIDEO VOLUME 1

Produced by Emagic themselves, this video once again sees Tim Walter (featured on the excellent Notator video) in the tutor's chair. There are plans for a series of videos which become ever more detailed and informative, but for now Volume 1 takes you through the first steps of getting the software up and running, and covers virtually all the controls you'll need. This video is valid for all versions of Logic, whether being run on an ST, Mac or PC. Presentation is rather intriguing, with a mobile camera that helps to hold the interest more than the average training video and some interesting graphics that aid comprehension and help to quickly find specific tutorials and bits inside tutorials. Contents as follows:

- Tutorial 1: The Arrange window and basic sequencing
- Tutorial 2: Playback parameters & Toolbox
- Tutorial 3: Controlling MIDI data flow
- Tutorial 4: Manipulating sequence data
- Tutorial 5: Moving around in Logic
- Tutorial 6: Windows and key commands
- Tutorial 7: More sequencing
- Tutorial 8: Score
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- Tutorial 12: The best of the rest (HyperEdit, Matrix Editor, Cycle Mode and more).

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## BOSS DR-5 DRUM MACHINE

Presented by Nick Cooper (Roland UK Product Specialist) this video covers all the functions of the DR-5 in a clear and concise manner. Produced in association with Roland UK & USA. By using the information gathered from Roland 'helplines', particular attention has been paid to the areas that many users find most difficult in. This makes it of interest to beginners and experienced users alike. Nick imparts the information with ease and a professional manner, making it enjoyable and entertaining.

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## YAMAHA QY300 VIDEO MANUAL



Complete overview of Yamaha's new QY300 sequencer/sound source. Presented by Joe Ortiz of Heavenly Music, the video offers a hands-on tutorial on what is potentially a very powerful piece of hardware. Starts off with a runthrough of QY300 features, followed by a clear, step-by-step tutorial that introduces you to creating your own sequences and styles. As a bonus, the video comes with a free disc loaded with 6 new QY300 styles and 6 demo sequences.

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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.

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This video is packed with information and professional tips on advanced MIDI applications in the home studio, including interfacing with sequencers, which sync code is best for which application and why. Hit producer Martyn Phillips (Erasure, London Beat) discusses modern recording techniques, and top programmer

Paul 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.

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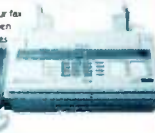
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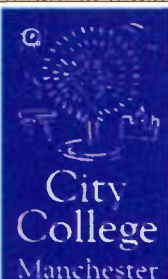
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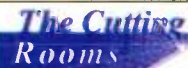
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# PRODUCTION lines

By Sue Sillitoe



## PETER JONES

It is obviously very important to match the right engineer and producer with the right artist, but one thing that fascinates me is how this choice is

made, especially as there is often a mismatch between the artist and the production team.

What it boils down to is that producers are chosen either because they are the current flavour of the month, or because they have been typecast, and are only being asked to work with certain types of bands.

I can understand why a top producer is in demand, and equally, I can understand why, if a

ought to be up to the artist to decide who he or she works with. Nevertheless, there are times when the choice of producer is left up to the A&R man, perhaps because the band is young and inexperienced, and in these cases, A&R departments tend to pick the producer who is currently in vogue, rather than one who would actually have something interesting to offer.

A&R men are bombarded with information about producers, and they don't

have time to sift through it all — they would rather go for the top ten factor and pick a producer who is a known quantity, because that will help them to market the band. It's an understandable phenomenon, but the drawback is that it doesn't really inspire creativity.

The other side of this is typecasting, which is something many producers struggle to avoid. You really don't want to be typecast because it is so limiting, yet it is easy to end up in that situation. All you have to do is produce one successful album, and suddenly you find yourself in demand from similar bands who all want to work with you. Before long, people start to assume that you are only capable of producing one type of music, and this will eventually narrow your choices quite dramatically.

Engineers coming into the business can

business today are not getting that level of hands-on training, and are having to develop their own skills in their own time, because so few studios actually train their staff now.

At the moment, I'm working closely with Steve Lovell, and between the two of us, we have tackled a wide range of projects, from dance and pop through to indie and rock. We both feel it is important to maintain a wide range, but like all producers, this has to be tempered with the economic realities of a business where one is rarely spoilt for choice.

These days, with the business contracting, even highly successful producers have to take what they can get, and because of this it's not surprising that the music we are creating is often so predictable. It would be much better for everyone if band managers and A&R people experimented more with the producers they choose. One only has to look at labels like Zomba to see how interesting the results might be. Zomba was prepared to put a dance producer with a rock band and a rock producer with a dance band to encourage a cross-flow of ideas, and introduce different styles and techniques.

A bit more inventiveness and creativity in the choice of studios would also be a good idea. Many bands would love to work in different environments, but record companies tend to channel artists into studios they know, and won't take risks, which ultimately is not good for creativity.

There are projects around that are at the cutting edge when it comes to creativity, but these projects have enormous difficulty getting off the ground, because the general atmosphere is so conservative. Take Towering Inferno, for example. Their album, *Kaddish*, is getting rave reviews, and is being hailed as a modern classic by the likes of Brian Eno, yet it took them eight months to get a recording deal, because what they were doing was so different. They managed in the end, and are now reaping the rewards, but it goes to show how little truly alternative music is out there at the moment, and how difficult it is to be innovative in the current climate.

505

*According to successful freelance engineer and producer Peter Jones, the marriage between the producer and the artist is far too important to be left to chance. Here he argues the case for a more targeted approach that would allow for some interesting cross-fertilisation.*

producer is known for a certain style of music, a band that feels it fits the same genre would want to work with him. However, I think there should be more thought given to who works with whom, because so often projects end up sounding much the same, when a different approach to production might have resulted in a more interesting end result.

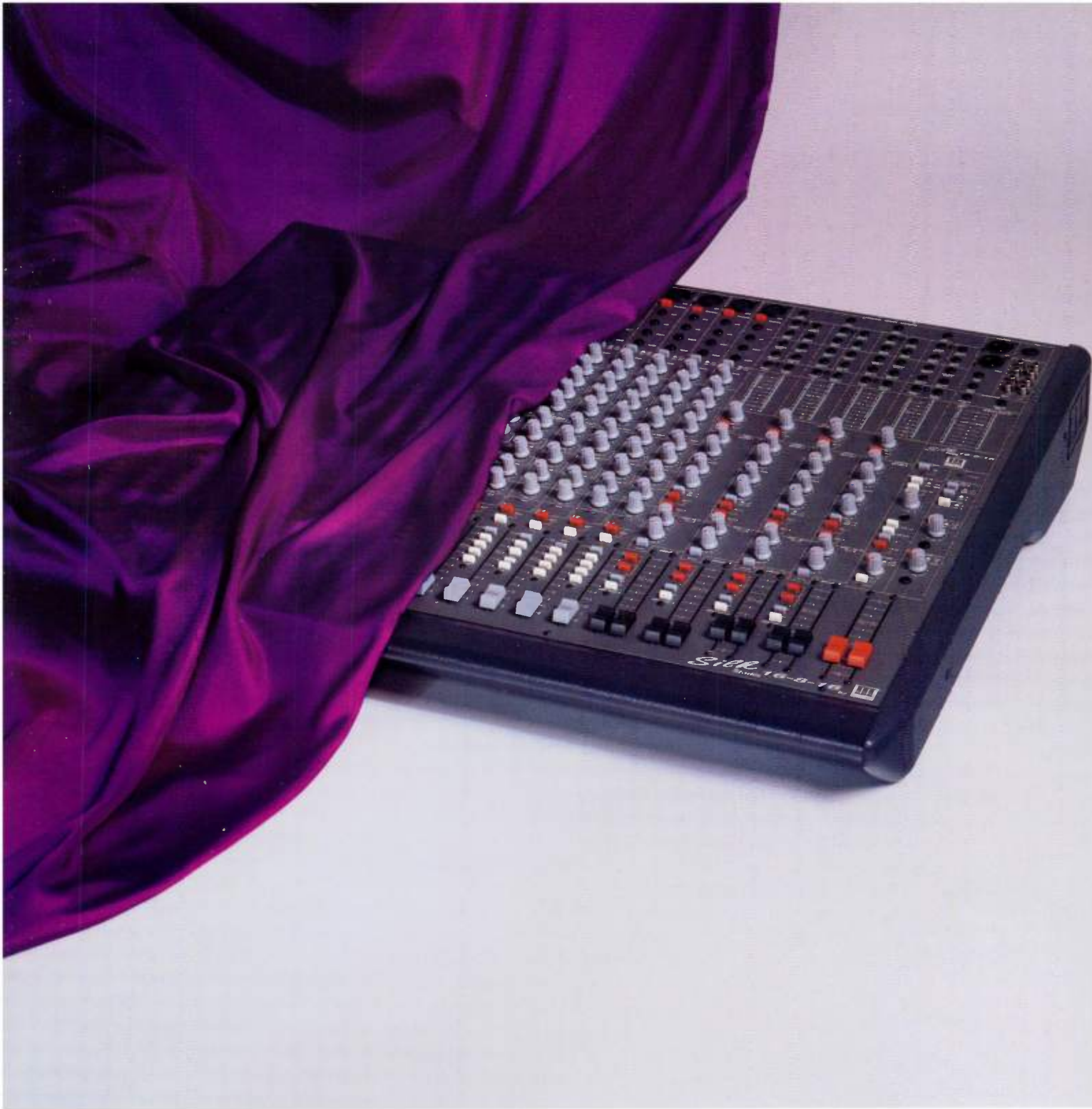
Generally, these days, bands choose the producer they want to work with, and really that's how it should be. Record companies shouldn't impose a producer on the band — it

avoid getting stuck with one genre, by finding a project that interests them, and playing around with it in their own time. You have to be prepared to work on as many different projects as you can, in order to gain experience.

I've been lucky enough to work in a number of different studios, including Marcus, Westside and Kim Wilde's own studios, before going freelance eight years ago. As a result, I have engineered and produced a wide range of music, and feel comfortable with virtually all genres. Many of the young engineers coming into the

Peter Jones has engineered for many major artists and producers over the last 10 years, notably Morrissey, Madness, Julian Cope and Eurythmics, and has earned an excellent reputation for his work. Pete has also produced several up-and-coming acts, including The Bluetones. He is increasingly in demand as a producer, although he still maintains a very busy engineering schedule, with a large number of clients.





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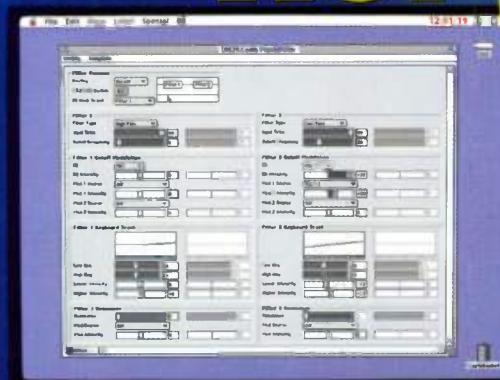
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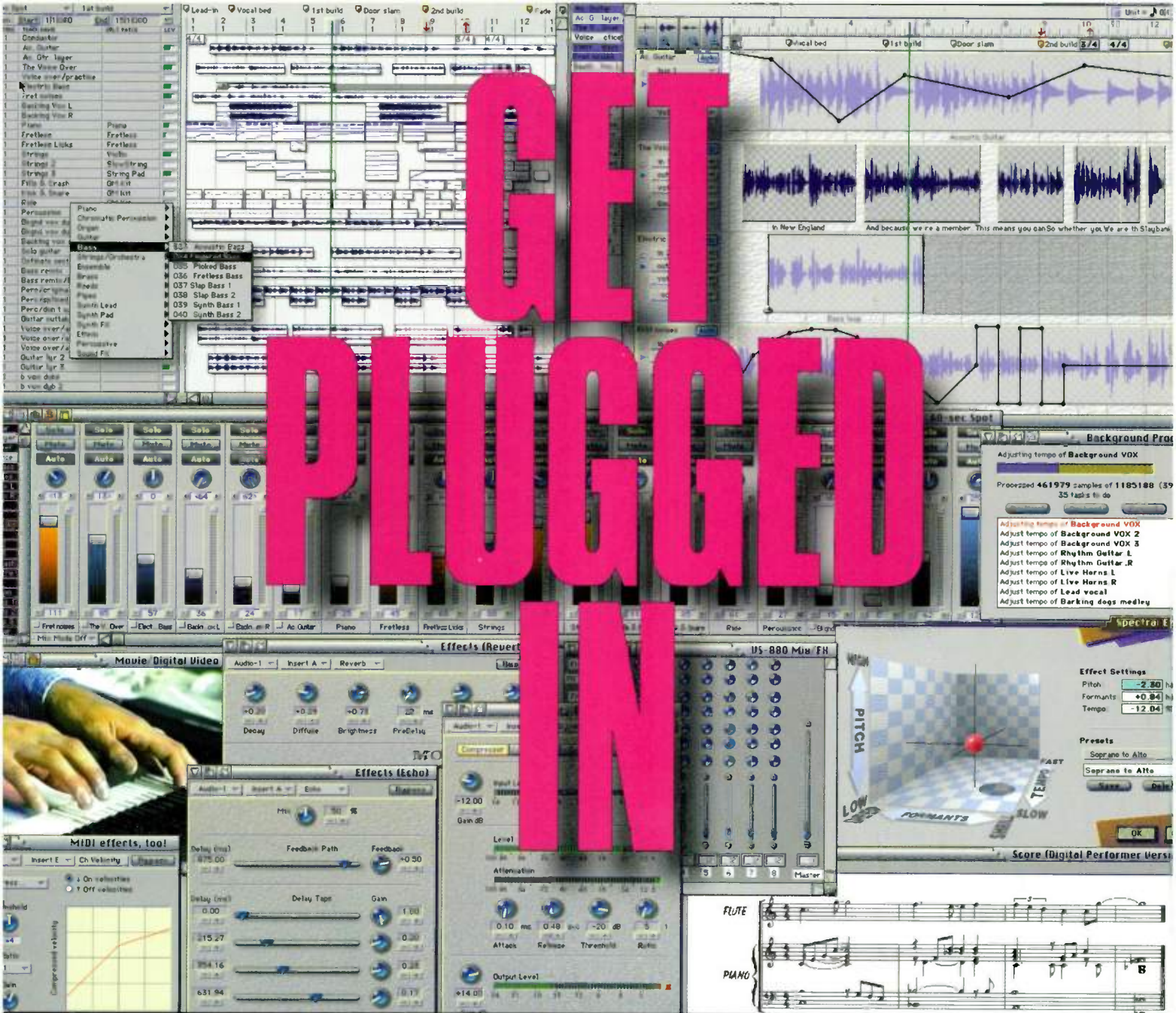
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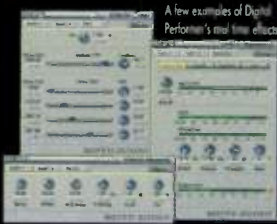




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**T**here's an old saying that you should be careful what you wish for, because it just might come true. A few years ago, when analogue tape recorders were the mainstay of multitrack recording, we wished for the purity of digital sound, and when ADAT brought us that, we went on to wish for tapeless recording systems with random access editing. They came along too, but are today's MIDI + Audio sequencers all that we'd hoped for? One problem is that everyone wants a low-cost system, and low-cost usually means running a computer with an audio soundcard in it. I don't know about you, but I've never yet heard a soundcard with analogue inputs and outputs that's anywhere near as clean-sounding as the analogue tape machines we were so keen to replace. External converters will do the trick, of course, but they tend to cost more money.

Then there's another threat to our pristine digital audio quality. This comes not from the audio hardware or soundcard, but from the computer itself. For me, the whole point of a desktop studio is that you can get on with making your own music without needing a lot of space, but when you're working with a computer, space — or more precisely, distance — is exactly what you do need, and lots of it. The MIDI side of the equation is no problem, but try to record an electric guitar and the chances are that the hum and buzz picked up from the computer's monitor will completely wipe out all the spec-related benefits of digital recording, and in extreme cases you may not be able to get far enough from the monitor for the result to be usable at all. An LCD display might be the answer, but unless you're using a laptop, LCD monitors are currently hard to come by and expensive when you can get them.

The next problem shows up when you want to record vocals, or an acoustic instrument such as guitar or flute. Put your headphones on, set the record levels, and what do you hear? Even before adding compression, the probability is that the disk drive and fan in your computer will be unacceptably loud, and once you patch in your compressor it's like recording in a hovercraft test centre! Forget the noise your soundcard adds — that's peanuts compared to the acoustic noise from the system.

Unfortunately, if you're working on your own, you probably can't get as far away from the computer as you'd like, because you still need to see the display and use the keyboard. Some systems allow you to use keys on your MIDI keyboard to start and stop recording, which might at least help you work at the other end of the room, but the only complete solution is to record in a separate room and get somebody else to operate the recorder. This, of course, completely negates the concept of the one-person, one-room studio. We shall be looking into practical solutions or workarounds to some of these problems in the near future, but, in the meantime, it's a sobering thought that the only serious sequencing computer you can put in your studio that makes no noise whatsoever is an Atari! There's no fan and no disk drive, and though audio software support for the Atari is poor, you could always sync up a Fostex D90 and use the extension lead to locate the disk section in the next room. Mind you, even then you still have monitor buzz to deal with if you record electric guitar. Perhaps those unbearably smug people using hardware sequencers with tiny LCD windows got it right all along — they can sync up to a remotely located hardware direct-to-disk recorder and have the best in digital audio quality as well as an almost total absence of acoustic noise. Maybe the future of the desktop studio doesn't lie with the computer after all — what do you think?

**68**  
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Paul White Editor

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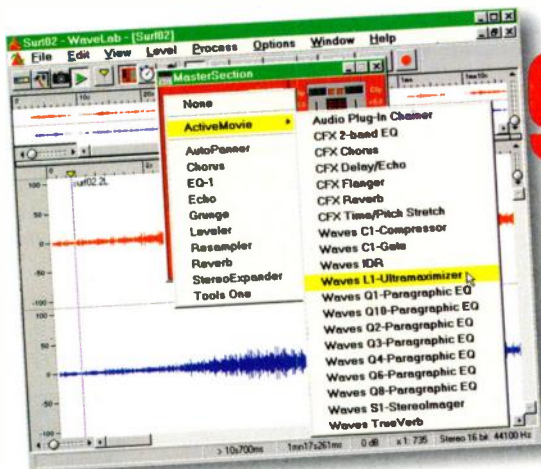
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