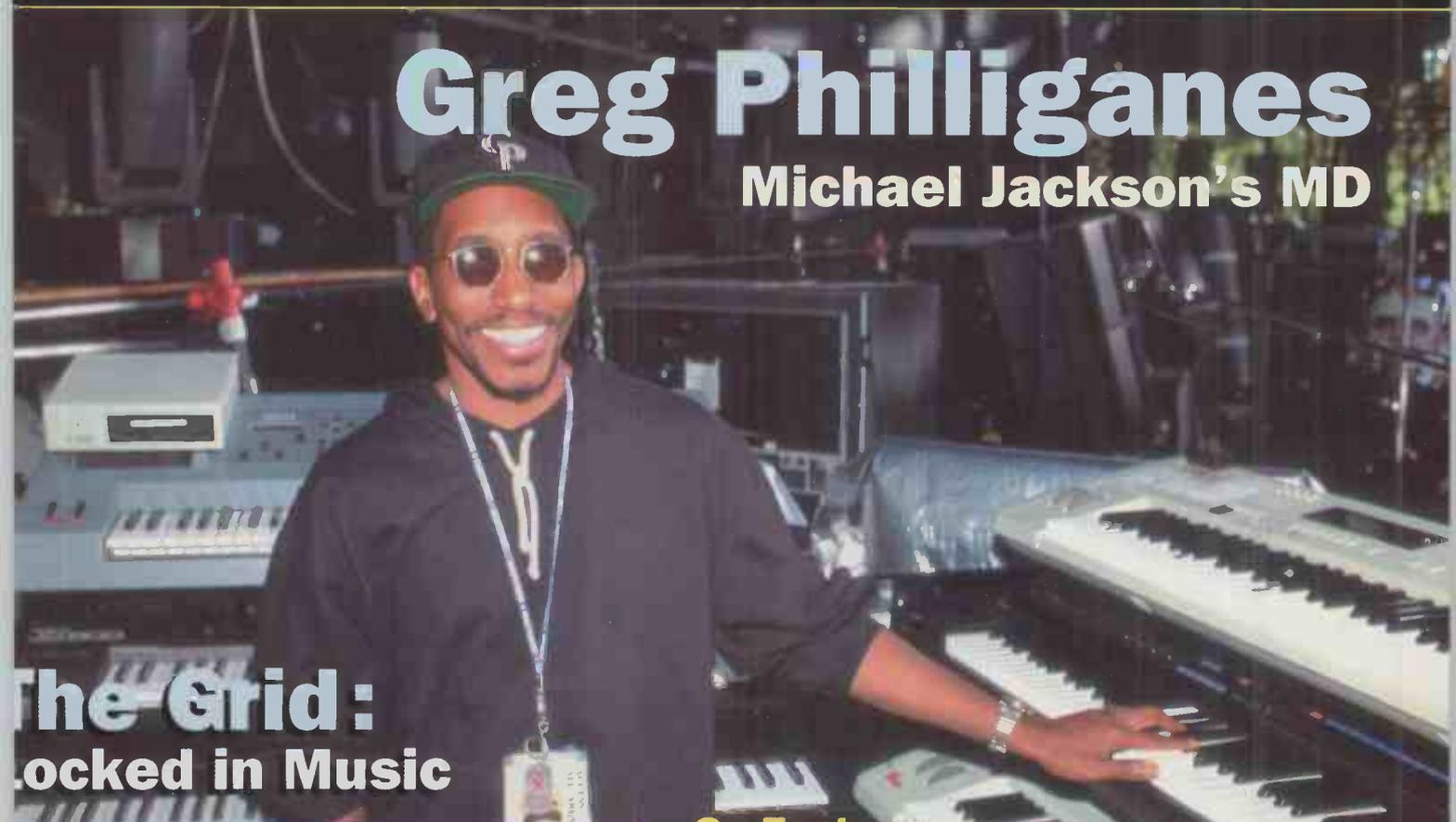


THE  
**MUSIC**  
**TECHNOLOGY**  
MAGAZINE

November 1992

£1.75

**Greg Philliganes**  
Michael Jackson's MD



**The Grid:**  
**Locked in Music**

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Aphex Compeller pro limiter.....	£650	Yamaha SY35.....	£525
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Yamaha MT120 portastudio.....	£335	Star LC2420 printer.....	£199
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Some shops can service equipment. A few even do it while you wait. The difference at THATCHED COTTAGE is if your multitrack breaks down on a Sunday morning or your sampler blows up on a Bank Holiday Monday you CAN ring us, we'll be here and we WILL do something about it - 365 days a year. Have you ever needed help and advice outside shop hours? If you are serious about your music you will know that it is quality of service that makes the difference and at THATCHED COTTAGE it's only a phone call away. If you are thinking of buying a package try calling the shop on a Sunday - some day you may need to!

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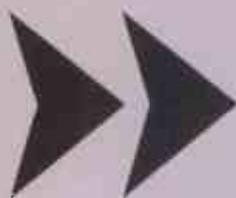
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*Anthony Braine*



In the two years before the release of the seminal New Order single, 'Blue Monday', I read many articles on the subject of drum programming, each by some self-declared expert writing in the kind of language designed to convince you that their's was the only effective method of producing a worthwhile drum track. In each example, a transcription of the drum track from 'Blue Monday' might well have been included as the perfect illustration of how not to do it.

Perhaps even more disturbing was the fact that two years after the release of the single (and many others like it) I still seemed to be reading venerable tracts on the subject claiming that 'machine gun' bass drum programming (for example) was the cardinal sin and to be avoided at all costs. Thankfully, none of this had any effect on the sales of 'Blue Monday' which, I believe, still holds the title of best-selling twelve inch of all time.

The problem is that of received knowledge. To those brought up listening to conventional drummers playing conventional drums, programming a rhythm track in this way seemed wrong. And if someone was prepared to listen when they pointed out how wrong it was, so much the better. But of course, this wasn't a conventional drum track - neither was it intended to be - and for the four members of New Order doodling on their MXR machine, such received knowledge had no relevance. Hence their release of an extremely successful record with an instantly recognisable drum track.

It may seem somewhat self-defeating for the Editor of a magazine in the business of disseminating information to be advising people to be on their guard against received knowledge, but it's not something I am at all uncomfortable with. The onus, I believe, rests with the reader: take what is written in the magazine as a starting point for your own creativity and you won't go far wrong. Treat what we or any other magazine says as immutable law and you won't come up with a genuinely creative idea no matter how long you try.

Obviously, here, I'm referring to matters of technique and approach rather than plain facts. If we claim that a certain piece of equipment has problems transmitting MIDI SysEx data to a certain other piece of equipment, you can rest assured that this is indeed the case. But where we seek to offer advice on the best way to use any of this equipment, treat it as what it is - advice: the starting point for your own investigations.

If you do find us becoming overly prescriptive, please don't hesitate to let us know. We're in the business of firing imaginations not formulating dogma - that's what we elect politicians for. NL

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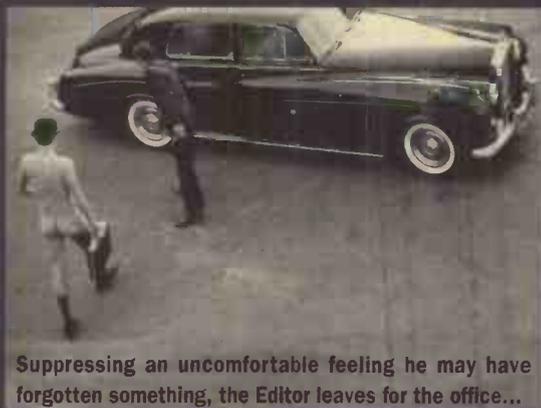
*Vic Lennard*

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Suppressing an uncomfortable feeling he may have forgotten something, the Editor leaves for the office...

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The other half of the World

*Neville Farmer*

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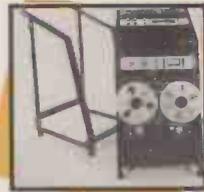
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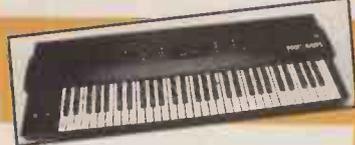
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**Dear MT,**

In the news item entitled 'Manchester Hitman' (September's MT), Pete Waterman talked of kids beating a path to his door at Vineyard Studios. Well, they might have got to the door but I doubt whether they got past reception. I phoned Vineyard and asked for the name of someone in the A&R department so that I could send them a demo tape, only to be told that they didn't have an A&R department. My own planned journey to Pete's door was abruptly scrapped.

Is there any way you could obtain the name of an understanding person within the company who might be prepared to listen to any demo I might wish to send in? Thanks for your time.

**R. Dwight  
Cholesbury**

**PS.** What about a regular monthly piece which gives us some info on record labels that specialise in various styles of music?

Not much we can do really, Rene. Perhaps if you tried disguising yourself as an ornamental carp...

As regards coverage of specialist record labels – this comes pretty close to an idea we've been mulling over. Watch this space – NL.

**Dear MT,**

Brian Aspirin is spouting a right old load of cobblers (MT October '92). Someone should tell Mr Headache that there's no sell-by date on good music. Mozart, Beethoven and Mahler have all been dead for sodding years, but that doesn't stop people wanting to listen to their music. Similarly, if people want to keep on buying records by the likes of Yes, ELP and Camel – and clearly they do – it must be because

the music these groups made has lasting appeal. Quite frankly, if no-one bought the CD reissues which Mr Migraine so despises, the majors would soon stop releasing them – they're only feeding a demand which is already there.

What's more, Aspirin me ol' mate, it's not only the so-called 'boomers' who buy the reissue CDs and go to the reunion concerts. Plenty of today's youngsters are into sixties and seventies rock music, and you can't accuse them of trying to relive their youth. And how do you know that some of the people who buy old ELP and Led Zep albums aren't buying records by new groups, too? I say this as one self-confessed 'boomer' who isn't totally blinkered to what's going on musically today (I do read MT, after all).

If the majors are more interested in recycling their back-catalogues than they are in nurturing new talent, as you seem to be suggesting, maybe that's no bad thing. Personally, I think today's music is best nurtured by small record labels, because they're typically run by people who understand and even love the music they put out and are willing to give the musicians freedom to experiment – something the innately conservative majors are loathe to do.

That's all I have to say on the matter. Now I'm off to listen to Pictures At An Exhibition, or maybe Ex:el...

**Donald Porter  
Evesham**

Just as long as it's not *Tales From Topographic Oceans* (see page 75) – NL.

**Dear MT,**

I am writing to congratulate you on your new look magazine. I particularly enjoyed Phil Ward's interview with Vince Clarke and Simon Trask's interview with Michael Brook. How much I enjoyed them can probably be judged by the fact that I went straight out and bought the albums! Just a point though. I think it would be interesting if you asked your guests what it was that inspired them to get involved with keyboards and technology in the first place. For me it was the synth line from the

Magazine track 'Definitive Gaze' from the Real Life album. One listen and I just had to have a synthesiser!

**Robert Hardacre  
Plymouth**

Yes that was a pretty glorious track- and a much missed band, too. Well, I miss them anyway. The 'inspiration' idea sounds OK to me. I'll pass it on to Messrs Ward and Trask.  
-NL

**Dear MT,**

Thank you for producing a most enjoyable magazine – keep up the good work.

A couple of points raised in the 'News Of The World' interview with Ryuichi Sakamoto (MT July '92) have led me into action for the sake of information accuracy and cultural awareness.

First point: "There are stories of Westerners living in Japan being able to furnish their homes from the mountains of Japanese castoffs." Well, stories are exactly what they are. Although, if you don't mind living with a 20-year-old VHF TV, disassembled bicycle, doorless wardrobe, knackered Pioneer hi-fi system – the sort of items that most self-respecting English folk would send to the tip – you might just be able to do it. A friend of mine found an acoustic guitar in the rubbish once, but it had a severed neck – very useful.

Second point: "When you consider the role currently played by Japan in the development and production of hi-tech music equipment, however, it's disturbing to recognise how small their contribution of musicians to the world music market is". Now this one even had Mr Sakamoto stumped. However, the answer is quite simple. You see, in Japan they don't speak or sing in English, they use Japanese – surprising, eh? Due to the fact that 99.5% of the world's Japanese speakers live in Japan, it's not surprising that Japanese music is not an exportable product. After all, if you can't understand the lyrics, you won't understand the meaning of the song. Nevertheless, there is plenty of good original music in Japan – you've just got to look for it. Some of it is promoted

# Communiqué

overseas, but not enough. If Mr Sakamoto and the Frank Chickens keep up their good work, maybe one day we'll have a Japanese record in the English Top 10.

Final point: "A strange observation, given the Japanese reputation for spiritual awareness and the contrasting British ignorance". Sounds like somebody has been reading too many 'flowery' guide books. In a country where borrowed religions are bent and twisted to fit specific occasions, the Japanese are just as ignorant of the "spiritual things", if not more so.

As you probably know, the main religion of Japan is Shinto, which is really a cult thing, with harvest festivals and Emperors that descended from the Sun God. It also makes lots of money. A Shinto priest can make £50 for just 30 minutes work blessing some new house foundations.

Anyway, before I digress too far (okay, I have already), congratulations on the new MT format (August issue). I do like the yellow cover. Suggestion: on the Communiqué page, why not have a star letter each month? Last month's was definitely the M.Moorhouse /Cubase scenario.

The Delaying Tactics article was very

good. Can you test some more equipment and publish the results in the future? Do you not think that manufacturers should confess that their so-called multitimbral devices may start to slow down when all 32 voices are in use?

Interesting interview with Vince Clarke, too – still, with all those delay problems and thigh-length silver boots, who needs MIDI?

Can you explain what's going on with the Cubase distributors? Is it Harman Audio, or is it Evenlode?

A suggestion for equipment reviews: instead of just relying on paragraph breaks, put some small headings into the text – you know, Front Panel, In Use, Conclusion etc. This would present the reader with small, digestible chunks of information which encourage reading, make it easier to find your reading place, break up some very large expanses of text and make the flow of the review more obvious. Just an idea.

Also, in the Readers' Ads section, make the first line of each ad bold, or put an indicator (dingbat, etc) next to the first line. The August ads look like one continuous stream of text – confusing.

Finally: good luck, new Editor. It's good

to see that all our favourite music mags have settled down after a year of 'editors' chairs'.

Yours faithfully,

**P. Findon**  
**Hamamatsu-shi**  
**Japan**

Thanks Paul, for that fascinating insight into Japanese life. I was particularly interested to find out what the people of Japan do with their rubbish. Perhaps now someone might care to let us know what the Russians do with their dead pets and what the Government should do with Norman Lamont.

To answer a few of the questions you posed:

'Star' letters? They're often difficult to spot.

Manufacturers confessions? Not.

Who needs MIDI? Vic Lennard.

Cubase distributors? Harman.

Small Headings In The Text? Subheads we call 'em. They are often only relevant for about three sentences, then you need new ones. Result: too many subheads.

Bold lines in the Readers Ads? Done.

All our favourite mags? You mean there are others? – NL.



## A CYNIC WRITES...

**Comment By Brian Aspirin**

TECHNOLOGY: WHAT'S IT TO YOU?

The music industry has been infected by a computer virus. Information is being eaten by invisible silicone microbes and systematically replaced by gibberish. To an increasing number of carriers, exclusive knowledge of this gibberish is far more important than any wider understanding of it, and worse still, far more important than music. Who cares what it's all for as long as you can recite the upgrades for the latest version of Cubase? Never mind the quality, feel the bandwidth. Turn the music down, I'm trying to read this manual. And don't you dare set foot inside a recording studio without a physics degree.

It has always been immensely convenient for aesthetic cowards to don the armour of jargon. Faced with the fire-breathing dragons of opinion, judgment, assessment, controversy, or good old-fashioned

taste, what could be easier than side-stepping the whole issue by drawing attention to unchallengeable technical minutiae? People do it all the time, professionally. So the more technical minutiae we have, the easier it is to avoid the emotional arena. More power to the timid. Safety-catch on.

I blame computer programmers. Throughout the last three decades, these social inadequates have been designing the psychic architecture of our lives. Most of them are incapable of normal conversation; many wear open-toed sandals and socks. So deliberately hermetic is their language that all we can do is nod in awe. And they love it. Thanks to hugely expensive advertising campaigns, the public image of the computer is unassailable. Transcendent. With clear explanation wilfully stifled by the twin vested interests of competitive male bonding and smokescreen salesmanship, these bastards are engaged in a daily attempt to stitch up commerce, transport, communications, politics and finance. What we do is called the arts. And we're next. ■

## Totally In Control

Allen & Heath have updated their GS3 Series mixing consoles with V4.04 software to give what the company call Total Control over console/MIDI integration.

V4 Plus software already gives users control of their MIDI sequencer from the GS3's console 'function' keys. Now V4.04 implements control of the console's

own mute sequencer from a MIDI keyboard or sequencer, making fully bi-directional programming available for the first time. The new software also improves the console's MIDI implementation with such features as deletion of active sensing data and increased synchronisation accuracy with a wider range of MIDI sequencers.

GS3 owners in possession of consoles below the serial number 571411 can obtain the Total Control replacement EPROM and accompanying manual free of charge on request from their dealer.

Allen & Heath's new GS3V automated console includes all the features of Total Control "and more".

For further information contact: Harman Audio, Mill Street, Slough, Berkshire SL2 5DD, Tel: (0753) 576911, Fax: (0753) 535306.

## Stereo Masters

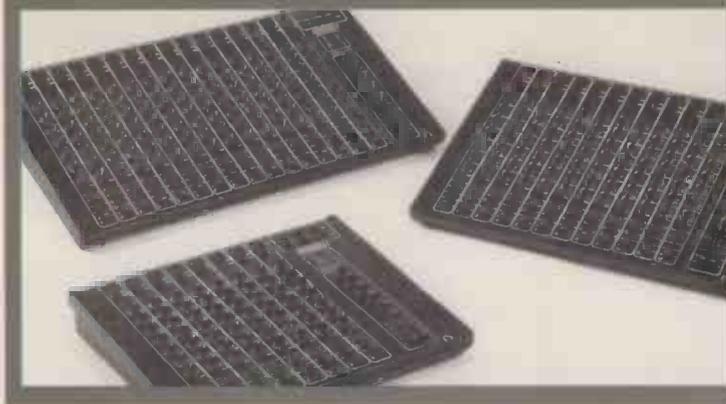
New from Amptech is the Gigmaster series of stereo mixers, consisting of 8:2, 12:2 and 16:2 versions together with 8:2 and 12:2 powered models (providing 300 watts per side of output power).

Each mixer channel has balanced mic and line inputs

and a gain control with associated peak LED indicator, along with three-band EQ, two aux sends (one pre, one post), a pan control and a 60mm smooth-action fader. The soft-touch control knobs fitted on each mixer have been colour coordinated for operational clarity, and there's also stereo headphones output for monitoring.

Prices, which including VAT, are as follows: 8:2 £289, 12:2 £399, 16:2 £499, 8:2 (Powered) £679, 12:2 (Powered) £799.

For further information contact the distributors: Sound Music Products Ltd at Unit 15T, Askern Industrial Estate, Moss Road, Askern, Doncaster, South Yorkshire DN6 0DD. Tel: (0302) 702512, Fax: (0302) 702496.



## On Course For Learning

Islington Music Workshop, the London-based educational charity with its own recording studio complex, runs a number of inexpensive recording, MIDI and music industry courses throughout the year, providing musicians with an opportunity to learn about the technology and the business of making music in the company of fellow musicians.

A Sampling/Sequencing/MIDI course described as "a taster course for all club and upfront dance ravers and anyone who wants

to know how it's done" runs for three days in each month at a cost of £25 plus VAT (unwaged), £55 plus VAT (waged) or £40 plus VAT (Islington residents). Upcoming dates are: November 17, 18 and 19, and December 8, 9 and 10. There's also a women-only course on November 3, 4 and 5.

Other courses available at similarly inexpensive rates include a 24-track recording course (November 24, 25 and 26, and December 15, 16, 17), a 24-track/MIDI weekend course (December 5 and

6), a backing vocal course (Tuesday nights for five weeks from November 17) and 'Industry Buzz - Marketing Your Talent' (Saturday 21 November).

As part of their commitment to equal access for all abilities, IMW also runs a program of outreach workshops for the disabled in Islington.

For more information contact IMW at 44 Peartree Street, London EC1V 3SB, Tel: 071-608 0231.

## Dreams on CD

Now in its third year of operation, the New Age Music Association continues its program of promotions, news services and live events with a compilation CD entitled *Lucid Dreaming*. Featuring 15 artists drawn from the 50 or so small labels, individual artists and music distributors who are currently members of the Association, the album has been collaboratively funded by the artists involved. These include Symbiosis, Annie Locke, The Anti-Gravity League, New Age Radio and Earth Orchestra, with compositional styles ranging from solo piano pieces to melodic uptempo tracks to experimental, meditational epics.

Annual subscription to NAMA costs £12 and gets you a copy of the membership list, regular newsletters and admission to monthly meetings. New members can pay £1 for each month remaining in the current year, allowing renewal to fall, conveniently, in January '93.

To order a copy of *Lucid Dreaming*, send a cheque or PO for £10.74 made out to FAME to Future Age Music Express, PO Box 387, London N22 6SF.

For further details of NAMA's activities, write to membership secretary Mark Powell at: 9, The Beeches, Pattishall, Towcester, Northamptonshire NN12 8LT, or Tel: (0327) 830249.

## drumKat - Not As Cheap As That!

In our review of the drumKat in the September issue, the price was inadvertently quoted as £487 excluding VAT. We have been asked to point out by Zlidjian Music Ltd, that the actual price is £887 including VAT. Our apologies to all for the error.

# Incoming Data

## ENSONIQ GET HEAVY

Tired of playing lightweight synth keyboards? Longing for a keyboard action you can really get your teeth into? If so, Ensoniq's new KS-32 Weighted Action MIDI Studio may be just what your molars need. Featuring a newly designed, weighted-action keyboard offering both velocity and channel aftertouch response, the new instrument aims to combine the capabilities of a synth workstation with the dynamic feel of a real piano.

The KS32's 180 sounds include a variety of acoustic pianos, electric pianos and organs along with various orchestral, solo wind and pop sounds. Also provided are 20 dedicated drum kits which support both Ensoniq and General MIDI methods of

drum mapping. Other features of the new instrument include 32-note polyphony, a 24-bit effects processor offering 13 effects algorithms, and a 16-track on-board sequencer with an 8500-note memory expandable to 58,000 notes with the optional SQX-70 memory expander. A button labelled 'Make Default Preset' provides one-touch control over up to 16

internal and external sounds complete with keyboard splits and layers.

The KS-32 is priced at £1699 including VAT. For more information, contact: Sound Technology, Letchworth Point, Letchworth, Hertfordshire SG6 1ND, Tel: (0462) 480000, Fax: (0462) 480800.



## Bitten by the Bug

A new miniature 'tagging' device known as the BUG could make it easier for stolen musical instruments to be returned to their rightful owners in the event of them being recovered by the police. About the size of a matchhead, the tiny micro-processor could easily be hidden away inside an instrument; once in place, it gives that instrument a unique electronic identity.

The BUG is maintenance-free, has no running costs and requires no batteries or other power source. The asking price includes lifetime entry onto the LINK database, together with a transferable Certificate of Identification which can contain a colour photograph together with full details of the instrument. Also supplied is a warning sticker which contains the telephone number of the security company that, in collaboration with the police, provides the recovery service.

Sole distributors to the music profession are the Musicians' Instrument Agency, who can be contacted at 24 Cathedral Road, Cardiff CF1 9LJ, Tel: (0222) 786435, Fax: (0222) 786666.

## Get An Ography In Sampling

Latest sample CD to emerge from the AMG hit factory is top programmer Pete Gleadall's *Samplography*, the sixth CD in the company's HitSound Producer Series.

Gleadall, who has worked with the likes of the Pet Shop Boys, George Michael, Soul II Soul and Sly & Robbie, has put together a CD which runs for over 75 minutes, providing a host of samples including high-quality synth, drum, bass, Hammond strings, hits, guitars, percussion loops and "loads more". Also

included is an S1000/S1100 data section featuring string and loop sample sets.

A supplementary collection of Gleadall's samples can be found on *Now That's What I Call Sampling!*, a compilation sample CD which is available free to anyone who buys one of the Producer Series CDs.

*Samplography* is available directly from AMG for £49 inclusive of VAT. For more information contact AMG at Hurst Lane, Privett nr. Alton, Hants GU34 3PL, Tel: (0730) 88383, Fax: (0730) 88390.

## THE WINNING SCOTSMAN

Among the hordes of musicians who packed out this year's Scottish Music Show one lucky attendee was the recipient of a free Yamaha RY10 drum

machine courtesy of a competition run by Radio Clyde. Congratulations go to Alan Stobo of Glasgow - get busy on those pads, lads!

## Expanding Zone

Those well-known suppliers of mammoth press releases, Zone Distribution, have taken over Music Pro Imports UK and merged the MPI catalogue of software and hardware together with their own under the Zone banner. At the same time, the company have decided to stop selling directly to the end-user - although they will still be offering technical support services directly. From now on, Zone products will be available solely through their dealer network.

The expanded Zone catalogue now includes products from Dr T's Music Software (for the ST, PC, Mac and Amiga), Blue Ribbon Soundworks (Amiga), Midiman (mixers, sync boxes, various MIDI interfaces and processors), Yes Audio (power amps, VCA automation), Big Boss (PC and ST software), Sound Source (third-party sounds) and Invision (M1 soundboard).

Zone are also the UK source for the Band-in-a-Box auto-accompaniment software (PC, Mac and ST), Feeling Partner arranger software (ST), Jazz Chord chord-learning software (ST and PC) and JBF 3D RSS sample CD.

Two new products of particular interest are the Dream GMX1, a £235 General MIDI-compatible desktop sound module offering 16-bit PCM samples, 20-voice polyphony and an onboard MIDI interface for the PC, Mac and Amiga, and Invision's £295 Plus 1 board for the Korg M1, an internally-fitted board which adds a further 4Mb of samples to the synth.

In another new move, Zone will be releasing their own PC Windows sequencer, SeqWin, in November. Written completely in the UK, SeqWin is described by Zone as a high-spec, low-priced sequencer which has been designed for the sequencing novice as well as the experienced sequencer user. Features include unlimited tracks, full graphic editing, phrase-orientated song construction, an Instrument Map which defines your MIDI setup, and automatic backup of data to hard disk as you work. Price is £99.

For more information, contact Zone at Unit 6/70, EuroLink Business Centre, 49 Effra Road, London SW2 1BZ, Tel: 071-738 5444, Fax: 071-924 0950. >>>

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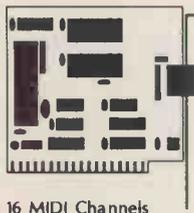


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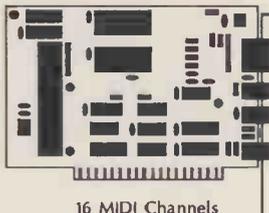
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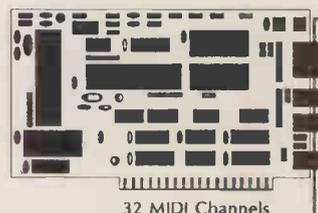
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Professional Chase Lock Tape Sync  
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32 MIDI Channels

Fully MPU401 compatible.  
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MIDI & Audio Out metronomes  
Wide software support  
Flexible, easy installation  
Includes MIDI adaptor cables  
FREE Utility & Diagnostics Software  
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## THE ROAD TO WEMBLEY

808 State will be making a special live appearance at **The London Music Show** at Wembley Conference Centre, performing their unique brand of electronic grooves, and showcasing material from their new ZTT/WEA album *Gorgeous*. They will be joining a host of leading manufacturers, musicians and special guests at the UK's largest show of its kind. Other attractions include a live Demo Forum in which readers of *Music Technology* and *Home & Studio Recording* will have their own demos reviewed by a celebrity panel, with mouthwatering gear going to the blushing producers of the best tape.

The dates for your diary are **Saturday 28th** and **Sunday 29th November**, so use bright red ink, don't forget and join 808 State, *MT* and *H&SR* staff and everyone who is anyone for a feast of the latest and the greatest in contemporary music.



## Notator Updater

A new update for C-Lab's Notator program, taking the software from V3.1 to V3.15, both 'fine tunes' many existing features and adds several new ones. Among the updates and additions are larger Segno symbols, 'wrap-around' of crescendo/diminuendo and slur symbols on print-outs, separate settings for the Clef and Key logic in the Printer window, improvements to the chord-tie direction logic, and additional characters, notation symbols and chord fonts.

As well as the new Notator program disk, users will receive a *Symbols and Chords* font disk which features a large number of additional notation symbols and complex chord descriptors.

Notator V3.15 is available both as a full package and as an update for existing users. If you're a Notator user but you haven't registered with distributors Sound Technology, contact Mark Gordon to get yourself on their list.

Incidentally, the 3.15 update applies to Notator only – the latest version of Creator is still 3.1.

For more information, contact Sound Technology at Letchworth Point, Letchworth, Hertfordshire SG6 1ND, Tel: (0462) 480000, Fax: (0462) 480800.

## Systems Expansion

Pro audio equipment supplier Systems Workshop have recently increased the range of services they offer by setting up the Systems Workshop Service and an in-house digital editing suite and 24-track production facility.

With the establishment of the Systems Workshop Service, the company claim they can now service everything from multitracks and outboard gear to computers and hard-disk recording systems. The service is also mobile, and can operate anywhere in Britain.

The new production facility is based around a Tascam M3700 automated desk and "a mountain of outboard", while the editing suite utilises an Apple Quadra running Pro Tools, Alchemy, Sound Designer and Studio Vision software with five gigabytes of combined hard disk/optical storage. Monitoring in both rooms is to choice but includes Dawn Patrol speakers, which are distributed exclusively by Systems Workshop themselves.

For more information contact Systems Workshop at 24 Church St, Oswestry, Shropshire SY11 2SP, Tel: (0691) 658550, Fax: (0691) 658549.

## Storming the PC

Media Vision's Thunder Board for Windows is a new card for the PC which lets you take full advantage of all the new sound support built into Windows 3.1, including synthesised sounds and digital audio. The Board combines 22kHz digital audio recording with an onboard FM synthesiser which can deliver up to 11 simultaneous instrument sounds. As it's compatible with both AdLib and Sound Blaster, it works with the many DOS applications and games that use the digital sound channel to add anything from voice annotation to sound effects.

Applications which come supplied with Thunder Board include a

waveform editor, an animated talking calendar (which has 'Jeeves' the butler popping up to remind you of appointments and meetings), and a demo version of Master Tracks Pro with added sound samples.

Thunder Board can run on any PC which runs DOS 3.0 or higher and Windows 3.1 (or 3.0 with multimedia extensions), and which has at least 1Mb RAM fitted (2MB recommended).

Price £85 excluding VAT. For more information, contact UK distributors PC Connections at Lee Barn, Rawtenstall, Rossendale, Lancs BB4 8TA, Tel: (0706) 22988, Fax: (0706) 222989.

## Sampling Clarity

The ever industrious Microdeal are set to launch several new computer-based sampling packages during the next couple of months.

Following on the heels of their Replay 16 stereo 16-bit sampler for the Atari ST, the company have an Amiga version, Clarity 16, due for release on December 1st for £149.95. Like Replay, it's a combined hardware and software package which provides not only stereo 16-bit 44.1kHz sampling and playback but also plenty of sample editing facilities. Among these are cut, paste, overlay, insert, mix, fade in/out, normalise and loopfade together with digital filtering and the ability to add effects such as echo, flanging and reverb.

A MIDI keyboard emulator allows you to assign samples to individual keys across a seven-octave range for triggering; alternatively, you can chain samples together in a single-track sequence using a list-style editor – great for doing your own remixes.

Clarity's hardware cartridge plugs into the serial and printer ports of the Amiga, and so can be used with the whole range of Amiga computers. Included is a MIDI interface which is compatible with leading commercial MIDI sequencers.

Other packages due from Microdeal are: PC Master Sound, a PC version of the company's Master Sound sampler for £49.95 – 4th November. Videomaster, a combined video digitiser and sound sampler in ST and Amiga versions for £69.95 – 16th November. Rave Sampler, an eight-bit mono sampler in ST and Amiga versions for the amazingly low price of £19.95 – 7th December.

All prices include VAT. For more information contact Microdeal Limited at PO Box 68, St Austell, Cornwall PL25 4YB, Tel: (0726) 69692, Fax: (0726) 68020.

## » Learning Young

Yamaha are continuing their long-established commitment to musical enjoyment and education through their Music Schools with the launch of a new Junior Music Course.

Taught to children aged between four and six years old, the course is based upon modern Japanese teaching methods, and as such represents a major break from traditional British music education. These teaching methods concentrate on recognition of sound and pitch, with highly structured lessons focussing on keyboard playing, singing, rhythm training, note reading and group playing.

The idea behind teaching children at this young age is that it's a crucial development stage in their lives, when their ability to learn is at its highest. The human ear is undergoing rapid development and children naturally and instinctively pick up more knowledge through their aural sense. Consequently the course aims to lay a foundation for musical ability and appreciation which will last children for the rest of their lives.

For more information, contact Yamaha-Kemble Music (UK) Ltd at Sherbourne Drive, Tilbrook, Milton Keynes MK7 8BL, Tel: (0908) 366700, Fax: (0908) 368872.

## Jarve In Print

Fans of Jean-Michel Jarre eager for any information they can get hold of on their hero will be interested to learn of a British magazine, *Conductor of the Masses*, devoted exclusively to the French musician. Published by Conceptual Publishing, it's a glossy, colourful 32-page small format magazine published quarterly at a cost of £2.50 per issue or £10 for an annual subscription.

The latest issue (no.8) includes the first in a series of articles detailing the behind-the-scenes story of the



Destination Docklands concert, a round-up of latest J-MJ-related news from around the world, information on the man's upcoming activities and – of particular interest to *MT* readers – an article on his studio together with a complete equipment list (even down to the all-important coffee machine!).

For more information, contact Conceptual Publishing at: 296 Newton Road, Rushden, Northamptonshire NN10 0SY, Tel: (0933) 55273, Fax: (0933) 411108.

## Competition Results

Following a splendid response to our recent Readership Survey/Yamaha competition we are pleased to announce the winner - drawn from a veritable sackful of entries. He is Mr D. Arnold from Hastings in East Sussex

and he's now the proud owner of a superb Yamaha SY85. That should keep him busy during the long winter nights...

If you'd like to know exactly how good the prize is that he's won, check

out our review of the synth in this issue. Meanwhile, on behalf of all the staff here at *Music Technology*, I'd like to express my thanks to Jim Corbett at *Yamaha-Kemble UK Ltd* for their kind donation of an excellent prize.

## Yamaha's Double Vision

Due in early December from Yamaha is the QY20, a more sophisticated yet only slightly larger and heavier companion for the company's immensely successful QY10 Walkstation. With the emphasis still being on portability, the new machine provides both mains and battery powering options. Yamaha have given the 20 a two-octave polyphonic keyboard consisting of non-dynamic rubber buttons, together with a larger LCD screen. The new instrument has

much higher quality sounds than the 10, and provides a selection of drum kits together with General MIDI compatibility.

Yamaha have kept the QY10 arrangement of four-track patterns and eight-track songs. The new QY has 100 preset and 100 programmable patterns each consisting of six variations (including intro, ending and fill-ins), with musical styles ranging from '50s rock 'n' roll to the latest dance beats. Single-finger chord playing and auto-

accompaniment selection via MIDI have been implemented, so you'll be able to take advantage of the new instrument's auto-accompaniment options from a remote keyboard or sequencer.

Apparently, UK company Novation will be providing a companion MIDI keyboard for the new QY, as they did for the QY10.

The QY20's asking price will be in the £350-400 range.

For more information, contact Yamaha-Kemble Music (UK) Ltd, Sherbourne Drive, Tilbrook, Milton Keynes MK7 8BL, Tel: 0908 366700, Fax: 0908 368872.

## Disc Breaks

Described by its makers as "a new opportunity for music teachers and students", Piano Disc is a new system designed to bring sequencing capabilities to the acoustic piano. A series of sensors located under the piano keys detect every characteristic of a performance ie. notes, timing, duration, touch, and pedal depression. This information is then sent to a control unit and stored on 3.5" floppy disks.

On playback, the sensors trigger the keys in an exact recreation of the original performance. With 128 levels of expression per note, it's claimed that all the "subtle nuances, feeling and richness" of a performance are reproduced.

With the Piano Disc system in place, students can record practice sessions or lessons and review

fingering, timing or pedal control on playback. They can also record one hand and add the other as it plays back. Similarly, teachers can store a performance for students to listen to, or play just the right or left hand so that the student can add the other hand.

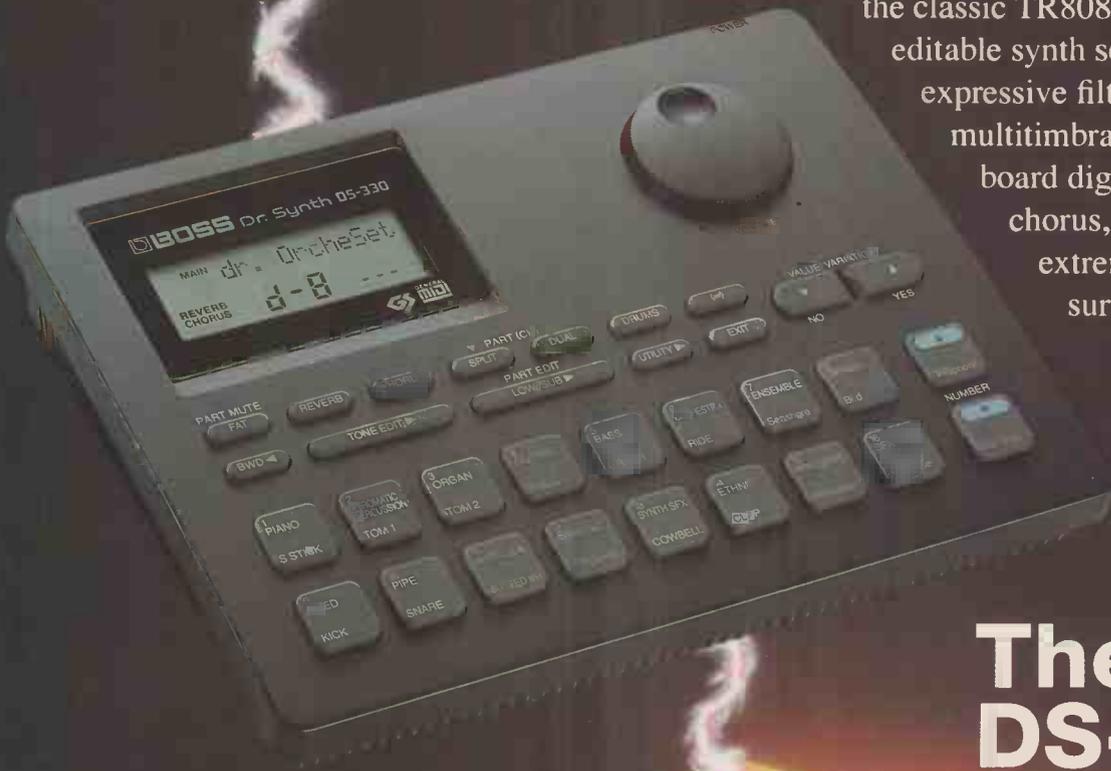
The makers also claim that Piano Disc would be ideal for providing live accompaniment without the need of a player (so cocktail bar pianists had better watch out that the owner isn't secretly recording them!).

Only available from Dawson's Music in Education, Piano Disc can be fitted in less than two days. For further information, contact Dawson's Music at 65 Sankey Street, Warrington WA1 1SU. Tel: (0925) 32591.



# A Minor Miracle

Take 156 of the very best GM compatible sounds, add 8 high quality drum kits (including all the classic TR808 sounds), give it an editable synth section with a warm and expressive filter, make it 16 part multitimbral with comprehensive on-board digital reverb/delay and chorus, and finally give it an extremely easy to use control surface.



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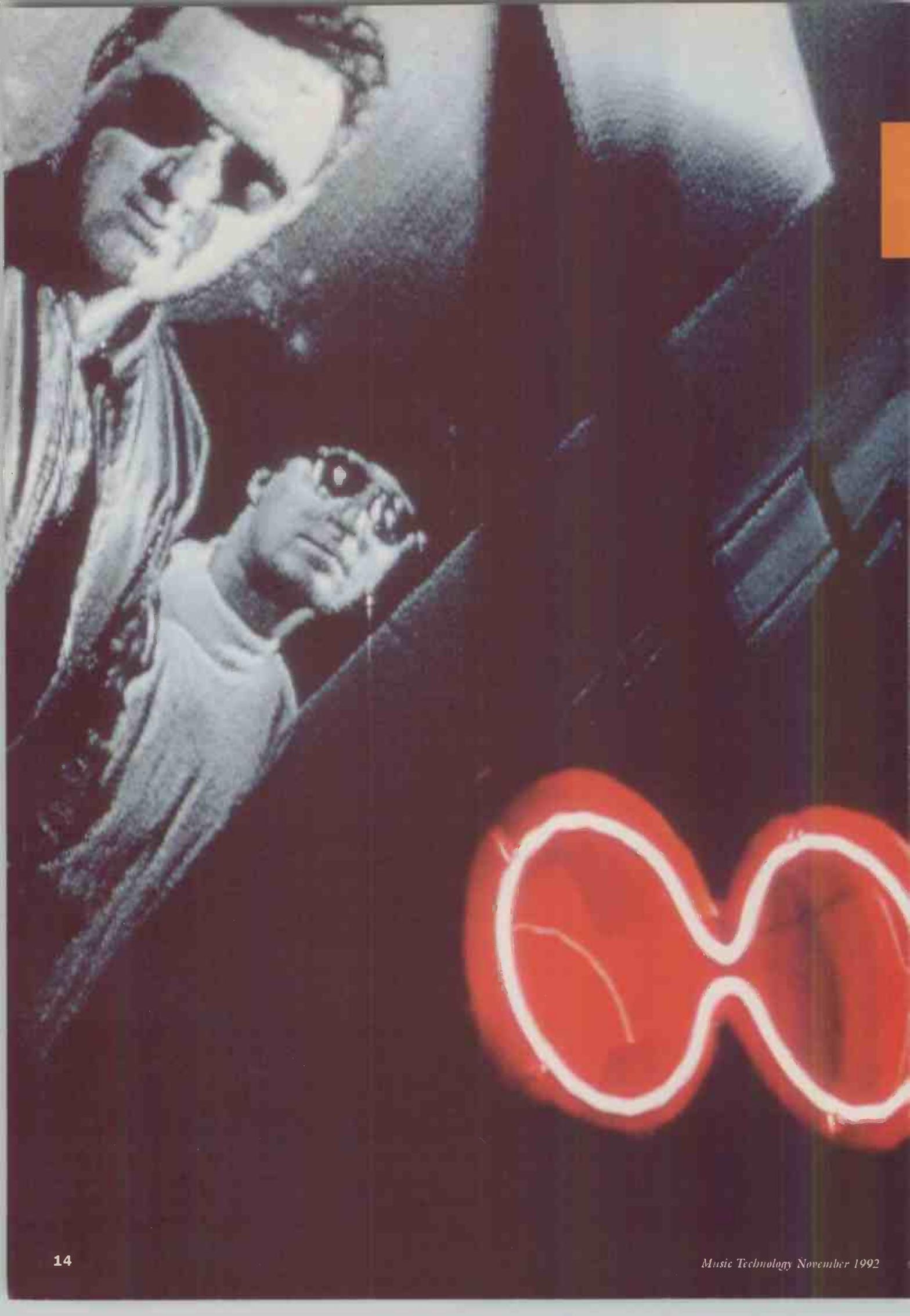
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# GRID PATTERNS

## FLOYD, ENO, GABRIEL... GRID?

The initial effects of Acid are beginning to wear off, and it's time to relax and reflect.

Anyone for Aspirin House?

Ampeg will be pleased. They've been supplying the reels of tape on which Pop Music as we know it has been recorded for decades. Their 456 brand of analogue tape is an industry standard, and recognition is here at last. For The Grid, otherwise known as studio-tanned mixers and matchers Dave Ball and Richard Norris, have bestowed upon it the honour of an album in its name, released in October. Like System 7, it's a tools-of-the-trade kind of a name; a technology-conscious title.

There's something industry-standard about The Grid, too. Forged from the combined talents of Ball – the 'synth' half of a classic synth-pop duo, early '80s vintage, name of Soft Cell – and Norris, erstwhile music journalist and record label employee, it's an act with the right blend of experience and enthusiasm to attract admirers across the board.

Remix and production work for the likes of Pet Shop Boys, Erasure, Boy George, Marc Almond and Happy Mondays combines with theme music commissions (BBC 2's *Def II*) and guest production at Peter Gabriel's 1991 Real World Recording Week in an impressive portfolio. On the album,

heavyweights like Robert Fripp, Dieter Meier and Andy Mackay make appearances. It certainly seems as if this Grid is generating the right amount of electricity.

And when I encounter them in the plush surroundings of London's Olympic Studios, it only comes as a mild surprise to learn that they are also now embroiled with a certain Brian Eno. On the SSL monitor is the title of one of his *Nerve Net* tracks ('Ali Click') and leaning thoughtfully over the desk is one of the duo charged with the task of remixing it for single release – Richard Norris "We wanted him to do a track for us – 'Heartbeat' – he said he'd do it if we did his next single, so we thought 'fair enough!'"

Sitting on an eight-foot-long leather sofa (I told you Olympic was plush), Dave Ball reveals the origins of the liaison. "Our manager used to manage Roxy Music, which is quite useful, really." "Yeah," adds Richard, "he was at EG and looked after King Crimson, T.Rex, ELP and all the rest of 'em. That's why there's a few people from that era on the album." You're not ELP fans, are you? "No." Just a thought. "But we have gone back to the Prophet 5, the Mini-Moog, and we've just restored a rebuilt VCS3..."

This rings a bell. Quite a significant one, too. With all the talk of post-Acid House pick-a-label techno chill-out album developments of late, there has been a short but orderly queue of acts waiting to become, for better or worse, the New Pink Floyd. The KLF started it with the grazing sheep cover of *Chill Out* (echoing the pastoral but dairy theme on the cover of *Atom Heart Mother*), and The Orb didn't help by not only sticking Battersea Power Station on the cover of their debut album *Adventures Beyond The Ultraworld*, but also toying with the idea of actually calling it *The Back Side Of The Moon*. Anyway, in this queue is also to be found, according to some marketing strategists, The Grid. And the original *Dark Side Of The Moon* featured more than its fair share of VCS3 sequences. With me?

"The people who made VCS3s originally," explains Richard, "are getting hold of old ones and reconditioning them, rather than doing a new version. I think The Synthesiser Company are doing a new one, but ours is the old thing with the keyboard and everything." "Apparently," adds Dave, "you can't retrofit them with MIDI. We did that with the Prophet and the PPG, but with the VCS3 you can't. You can get modular ones with MIDI, but this one we're getting will be a classic bit of non-MIDI hardware. Which means, of course, that we won't be sequencing with it. It means actually playing it." His eyes light up with ironic glee. "Sometimes we actually play our instruments. A novel approach, I know..."

"It's a mix between using C-Lab and a basic mono sequencer for quick stuff on things like the Juno 106. For drums we use a lot of samples and the R8, so there's loops and programming, but a lot of the percussion is live, played by ▶▶

Interview by  
Phil Ward

**Production**

**NORRIS/BALL/ORRIDGE**

Jack The Tab  
(compilation album, *Castalia* 1988)

**THE GRID**

Tenement Symphony - 3 tracks  
(MARC ALMOND, *Some Bizarre* 1991)  
Quality Street  
(WORLD OF TWIST, *Circa* 1991)  
I Will Cure You - 1 track  
(VIC REEVES, *Island* 1991)  
A Week In The Real World - 2 tracks  
(VARIOUS ARTISTS, *Real World* 1992)

**DAVE BALL**

The Moon Looked Down And Laughed  
(VIRGIN PRUNES, *Baby* 1984)  
Sex Vigilante/Man In Your Life  
(ENGLISH BOY ON THE LOVE  
RANCH, *New Rose* 1987)  
Tekno Acid Beat  
(PSYCHIC TV, *Temple* 1988)  
Novice  
(ALAN BASHUNG, *Barclay* 1989)  
Beyond Thee Infinite Beat  
(PSYCHIC TV, *Temple* 1990)  
Towards Thee Infinite Beat  
(PSYCHIC TV, *Temple* 1990)  
A Week In The Real World  
(VARIOUS ARTISTS, *Real World*, 1992)



Steve Sidelnyk. Plus, he's got loads of his own samples on the S1000, which he triggers from the Octapad. The live stuff is mixed in with the drum machine and the loops, just to give it more feel. It can get tedious with just a loop going on and on.

"There are certain things we have been doing which we've found have made a difference to the feel - particularly sampling actual drum fills. You listen to a lot of records and it just stays the same, or it just drops out and then it comes back in, but if you've actually got a good fill, or a crash cymbal - we've recently rediscovered those - it works, and a lot of people don't really use that any more. If you watch a drummer playing, it's always got those fills, so it was nice to get someone in actually playing. And he plays like a machine anyway..."

"On a lot of the tracks," Richard continues, "instead of using a programmed 909 snare he'll hit it on the Octapad; you can hear that on things like 'Face The Sun', which has a lot of triply stuff that would take us ages to program, but this way has a really loose feel, quantised very roughly. We'll record the whole performance on the Atari, and then just move it slightly, although most of the time his playing was so accurate we didn't even need to do that. We certainly didn't quantise it all to 16ths, or anything like that. Even though the music is fairly machine-driven, it's good to have the human element. We think of ourselves as a technological band, but not strictly as a 'techno' band. We'll use a lot of live instruments as well, with a kind of basis in electronics, just to get out of that purely technical thing that a lot of people are doing. To mix the two, really, make it a bit more human."

One such human element, of course, is the guitar. The album features contributions from Zodiac Mindwarp's resplendently named guitarist Cobalt Stargazer, Rob Marche of If and formerly Joboxers (and the best twang since Duane Eddy, in my book) and, as Dave puts it, "the one and only Bob Fripp. He was fantastic to work with. His setup is wonderful; everything's in stereo, and you say 'could you get a sound that's sort of like water?' and it takes him about two minutes, and it sounds like... water! We couldn't quite figure out how he does it, but he does these loops; he'll make a loop with one note, and build it up by adding a harmony on it, until it's this great sequence. He had a couple of digital delays, which were somehow connected so that he builds up this spiralling chord, and he gets it in time, too, which is the really clever bit."

Richard is equally enthralled: "There's a section in 'Ice Machine' where it drops down to what sounds like keyboard ambience in the middle, which is all off his guitar. It's a really distinctive sound. We initially asked him to play just on that one track, but when he came down he got really into it and stayed all day - contributing to three tracks in all - which was great." "Actually," Dave confides, "we've got plans to do an album with him. He said he'd like to do more stuff with us and we suggested maybe we could do something which is more ambient, like the stuff he's done with Eno - while he's really interested in doing stuff with beats, so we're really meeting in the middle."

I don't know about all this talk of Pink Floyd, but it seems as though the spirits of King Crimson and Roxy Music are having a much more direct influence as the dance boom chills out. Of course, it cuts both ways, and those elder statesmen of progressive rock who are not content with reliving past glories

**Remixes**

**THE GRID**

Hairstyle Of The Devil (MOMUS)  
Tainted Love/Memorabilia/What?/  
Bedsitter/Where The Heart Is  
(SOFT CELL)  
Loose Fit/Bob's Your Uncle  
(HAPPY MONDAYS)  
Waifs And Strays (MARC ALMOND)  
James Bond (ART OF NOISE)  
Saturday's Angels/IF (IF?)  
Sunarise (ROLF HARRIS)  
Bow Down Mister (JESUS LOVES YOU)  
Frontero Del Ensueno (REY DE COPAS)  
Am I Right? (ERASURE)  
DJ Culture (PET SHOP BOYS)  
Get Radical (RAGGED JACK)  
Nothing Alas Alak (VEGAS)  
Ali Click (BRIAN ENO)

**DAVE BALL**

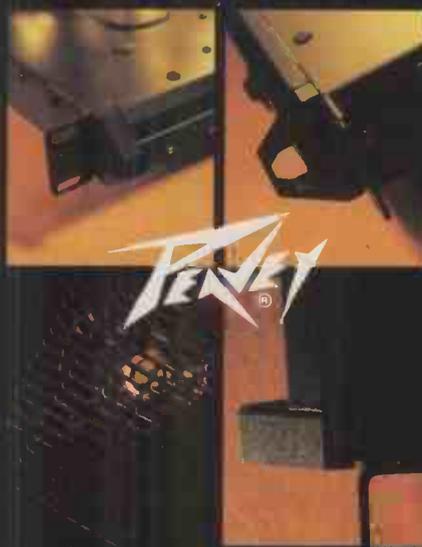
My Private Tokyo  
(VICIOUS PINK PHENOMENA)  
Je T'Aime  
(VICIOUS PINK PHENOMENA)  
Papal Breakdance (PSYCHIC TV)



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» in spurious reunion gigs are really getting into the groove. "That's certainly the case with Eno," says Dave. "On his new stuff there's all sorts of drum loops – and, of course, there's one particular drum track we've heard before... EMF, I think it was."

Well, there you are; sampling as the ultimate declaration of influence. Richard at this point identifies a seminal work which puts Eno's role in all this into sharp relief: "It's all very much *Bush Of Ghosts* territory, as well, which is quite interesting because so many people weren't up for that album at the time. Obviously they did it all with tape loops, you know, pre-sampling, so it's quite interesting to see what he can do now."

Dave begins to reflect on the kind of secrets which get unearthed during your average session with a legend. "It's amazing to think that a lot of those early ambient albums were recorded in an afternoon, you know, pop into the studio with a couple of Revoxes. It only took us a day to record Fripp's

setup, but, I suppose, it took ten years to get the sound. He's got some new delays, plus quite a few weird things like an Electro-Harmonix... I probably shouldn't be telling you this!" "He told us about this company," Richard observes, "who built something called The Fripp-In-A-Box, and he wrote asking them to send him one, and they wouldn't! They expected him to buy it."

"But it's great to be able to put his particular treated sounds against our treated sounds. It works really well, ours being more rhythmic and percussive, or Prophet/PPG sounds, and his being so ambient."

The Grid's treated sounds, it turns out, are courtesy of standard outboard effects such as Lexicons and AMS's, blended with the kind of jumble sale foot pedals you sometimes see lying around in the spare bedrooms of disillusioned cohabiting guitarists who have invited you round for dinner, wine and a rueful rummage through the old demo tapes. And sure enough, at one end of the aforementioned Olympic sofa lies none other than an

Electric Mistress Flanger/Filter Matrix. Electric Mistress? Phew, rock and roll.

"It's interesting using older effects," explains Richard, "instead of just using the digital racks. They've got so much more character and are much warmer. We use the Roland Space Echo a lot, too. When it works." "Yeah," says Dave, "it only seems to work in cheaper studios. Seriously, when we're in an SSL room it packs in, I don't know why."

Dave has kept every piece of gear acquired since the Soft Cell days, and following a period in the mid-'80s when his interest in new products sagged, he now identifies the advent of cheap sampling as the spark which has rekindled a broad sense of purpose for technology-based bands. "It's that in conjunction with MIDI," he says, "which has got me

interested again. All that Soft Cell stuff was pre-MIDI – it was all played, as I think you can tell if you listen to the records! I've always been into dance music, though; some of the stuff I used to do was quite dance-oriented, even if they were pop songs. The thing about using sequencers is that you do tend to write stuff which is more linear. If you think of the early sequencer bands, like Tangerine Dream, it is very linear stuff, and the sequencer does influence you in that way, this idea of repetition.

"We were keen at one stage to see if we could get a remix of Tangerine Dream, because there's so much stuff in it, it would be great to sort of update it. I'm not that keen on some of the later stuff, where they started using Fairlights and so on. It lost a lot of the charm of the original sounds. I mean, the people who make all the PPG stuff originally made custom equipment for them, before they were a commercial company. Kraftwerk and Tangerine Dream were the only people who used that gear. Now, of course, we've got the Waldorf Microwave: exactly the same sounds and only about a quarter of the weight."

Left to their own devices, as it were, Richard and Dave will play very happily for hours in the studio toy cupboard. They will also chat, in turn, in the same contented manner about methods and techniques that they have adopted along the way. All you have to do is sink into the sofa and listen...

Richard: "We do things like get a piano part and put it through, say, some FB01 programs, and then get two wah-wah pedals with us each playing one, and have that going in a chain so you get a sort of opening and closing wah-wah filter on it. And, of course, it doesn't sound anything like a piano... It's like playing the effect as an instrument rather than just sticking the signal through it. That's what we did on 'Fire Engine Red' – we started with a piano sound and it ended up sounding something like a Sly & The Family Stone guitar part. That's what's interesting: getting miles away from where you started from."

Dave: "I like to work things out on a piano before I go anywhere near a synth. It just feels more natural. Usually we'll work through chord sequences, see what works, what goes into what, and then we'll start putting it down into the sequencer. A lot of the time, the first things you put down you'll scrap, because the sequencing suggests different ways. It's always growing and changing."

Richard: "There's always a point in the mix when you take one particular sound, one particular effect or treatment, and suddenly it will take the whole thing in a different direction. That happened with this Eno mix yesterday, we were going down one route, and just put down one more thing which was basically Dave doing a new riff over the top, and that has sparked off loads of different ideas, so the mix could go somewhere else completely now."

Dave: "It's about finding that one central idea that really works. We were tending to be influenced by the original version of the track, which is very much in this funk style, and it became a question of how not to make it sound like just another funk track and more like a trance kind of thing. And we were just fiddling around and suddenly this one thing clicked."

## Recommended Listening

### Albums:

#### THE GRID

Electric Head

(*East West*, 1990)

456 (*Virgin*, 1992)

#### DAVE BALL

In Strict Tempo

(*Some Bizarre*, 1983)

#### SOFT CELL

Non-Stop Erotic Cabaret (*Some Bizarre*, 1981)

Non-Stop Ecstatic Dancing (*Some Bizarre*, 1982)

The Art Of Falling Apart (*Some Bizarre*, 1983)

The Last Night In Sodom (*Some Bizarre*, 1984)

The Singles Album

(*Some Bizarre*, 1986)

### Singles:

#### THE GRID

On the Grid (*EW*, 1989)

Intergalactica (*EW*, 1989)

Floatation (*East West*, 1990)

Origins of Dance (*Rhythm Kings*, 1990)

A Beat Called Love (*East West*, 1990)

Boom! (*Virgin*, 1991)

Figure Of Eight (*Virgin*, 1992)

Heartbeat (*Virgin*, 1992)

Given the topicality of Peter Gabriel's Real World Recording Week, which is only a few days away as we speak, the conversation turns briefly to their experiences at the event last year, as invited producers, and reveals just how flexible 'flexible' has to be under certain conditions. For Richard, one detail sums up the whole thing. "It was amazing to be putting down a drum track with a sequencer and a sampler, and to get this guy from Madagascar who's never recorded before, never left his village before. Never seen a sampler; never seen a Nintendo... some of the tracks have these shouts of glee from the corner, and it's someone playing with a Nintendo.

"All the chat, all these jokes are on the tracks because they didn't realise it was all being recorded. But that guy from Madagascar, who'd never heard a click track or anything, was so in time it was unbelievable. Absolutely spot on, completely natural. For us, being interested in beats and so on, it was great because there were so many amazing percussionists around. And we were there specifically to do numbers with grooves, while there were others from more folk/hybrid areas - purists who weren't sure about us at all. But living in London, the influences we're exposed to are things like Kiss FM, an enormous amount of record shops and gigs to go to, plus there must be about 20 different nationalities in my street. It's natural that we should be producing this sort of urban music with eclectic elements."

On cue, Dave picks up an exotic length of bamboo which has been lying hitherto unmolested next to the sofa, and which turns out to be a Malaysian rain stick. "And conversely," he says, "if you live in the rain forest, this is your state-of-the-art equipment, and it's brilliant..." He turns it through 180 degrees, and a million tiny beads cascade invisibly down the inside of the hollow stick making a sound, it must be said, just like rain. He grins. "Sampler ready...?"

The horizons are stretching even further. In common with other bands keen to expand both the vocabulary and the audience of post-rave technologically inspired music, The Grid are actually planning to play live. It's a move Dave considers important for more than one reason. "Obviously, we've got to promote the album, but also I think we're a bit faceless to people, you know, we just put out records and mixes. There is a difference if you go and see someone performing; it's like, they really do exist, they really are a band. So it's important to consolidate that. I think rather than tour night after night, we'll do maybe three gigs a week for so many weeks. There'll probably be some videos involved, and there will be other players. Like additional keyboards, sax player, percussionist, maybe a guitarist."

Richard expands on the visual theory... "We're planning very visual elements: projections, graphics, videos. We're also looking into having MIDI controllers for all the computer imagery, so you can actually see what you play as well as hear it. We'll probably use DATs for the backing tracks, or else the Yamaha digital 8-track - if they give us one..." "Which would be nice," Dave points out, "because then we would have SMPTE to link up with the videos. That is a problem at the moment, because in order to reproduce the whole thing

live we'd need fifteen keyboards or something, which would all have to be reprogrammed for every number. We'd like to get it to that stage, but initially we need to cut corners. Venues? Well, places like the Zap Club in Brighton - obviously not too big gigs, we'd hate to turn up and find two people in the audience. It's a first tentative dip in the water."

We can only dream of a collaboration between Fripp, Eno and The Grid, but Richard and Dave dream themselves of setting up a label for modern, ambient music much along the same lines as EG. "A lot of people are interested in ambient music again," thinks Richard, "but there aren't that many people doing it from the kind of hi-fi end of things, or from an avant-garde point of view, and it would be interesting to bring that element back into the field. I think we'd be looking to do collaborations, rather than signing up artists - we'd produce most of the stuff. For example, Michael Brook is another person we'd really like to work with. We're just thinking of people we'd like to collaborate with, we don't really know who, yet.

"People are getting into ambient music as a progression from the dance scene, not as a reaction to it. People are much more into sound than they used to be, because, since about 1988, they've been listening to more instrumental music in clubs, with its roots in dub and so on and based on sampling and electronics. You can see it in record shops - you know, people come in and say, 'Have you got that record that's got that noise on it...?' It's more to do with sounds than it is to do with, say, vocals or guitar, or songs. It's more mood, atmosphere, beats. And also the whole post-club sort of chill-out phenomenon, which is a reaction in a way, but it comes from the club scene where you have two rooms, one with beats and loud noise and one with pure ambience.

"I do a bit of ambient DJ'ing, and I did a night at this weird Elizabethan house near Brighton, doing about six hours of the EG catalogue, basically! It was a very strange setup; we had CDs, DATs, cassettes, turntables, but it was good just to hear those records in that context. It worked really well. The reaction was interesting; half of them thought it was brilliant, and were cheering, and the other half thought it was really awful and booed. The best audience reaction you can get, of course. But certainly one of the elements of ambient music is a purely functional element, and it works really well in that context. Socially, now is probably the best time there's ever been for it. It's getting to a hell of a lot more people than it used to. So it's about the right time to do those kind of records."



## Equipment List

Alesis HR16  
 Akai S1000, S1100  
 Atari Mega ST2  
 Boss effects pedals  
 Casio DA7, FZ1, Rapman, VZ10M  
 C-Lab Notator and Unitor  
 Dunlop Crybaby  
 Electro Harmonix Electric Mistress  
 E-mu Performance 1+  
 Fender Jazz bass,  
 Jazzmaster guitar  
 Gallien Krueger amps  
 Gibson Les Paul  
 Hammond C3 and Leslie  
 Korg 800DV, M1  
 MIDI Moog  
 Minirack M977 double-beam oscilloscope  
 MuTron C200  
 MXR pitch transposer  
 Oberheim Matrix 1000  
 PPG Wave 2.2  
 Roland R8, RE201 Space Echo, RE301 Chorus Echo, Juno 106, Juno 6, SVC350 Vocoder, JX10, Octapad, D50  
 Sequential Circuits Prophet 5  
 Enthoven Stick  
 Steinway Concert Grand  
 Selmer soprano, alto and tenor saxophones  
 Suzuki Melodion  
 SRC/AT synchroniser  
 Technics SL1200 Mk11 turntables  
 Waldorf Microwave  
 Yamaha CS5, FB01, WX7  
 MIDI saxophone

# **Yamaha**

# **SY85**

## **Music Synthesiser**



**Text by  
Ian Waugh**

When you've produced as many classic synths as Yamaha, it's easy to find yourself labouring under the weight of your own reputation. But it seems they still have a trick or two up their sleeves...

I sometimes think I'm the only muso in the world who has never owned a Korg M1. I can't tell you the exact reason why I didn't buy one – it probably had something to do with a pre-birth experience, but my analyst is having trouble digging that far into the past. Nevertheless, I did like the M1, yes indeed I did, and it is undoubtedly one of the most popular sample-based synthesisers ever.

By contrast, when Yamaha's SY77 came along it caught me at just the right time – musically and financially – and I bought one. It could virtually out-Korg the M1 itself and its combination of AWM and AFM sounds gave it an excellent

PHOTOGRAPHY: James Cumpsty



sonic repertoire. I was glad I'd waited.

Then came the SY99 with its ability to load new samples (woweee!) but that was too expensive. The SY77 has now officially been dropped from Yamaha's catalogue and can be picked up for around a grand – nigh on half the original price (and making the SY99 seem even *more* expensive in comparison). There's nothing like the hi-tech music game for hammering your investments is there? Okay, perhaps the house-buying game or the used-car game or the...

Anyway, now there's a new instrument to discuss with

our financial advisors – the SY85. It sits in the medium-to-upper price bracket and forsakes AFM altogether in favour of AWM2. But what it has lost on the swings (essentially, lots of 'orrible programming parameters) it has gained on the roundabouts with the addition of a wealth of goodies inside its sleek black casing. For example, it has 256 Voices (four times that of the SY77), 128 Performance memories which can consist of up to four layers of Voices (the SY77 can't directly layer Voices at all) and it's 30-note polyphonic (the SY77 has a maximum polyphony of 16 AFM plus 16 AWM voices, which in practice is usually far less than 32 notes).

The SY85 also has a pretty heavy set of digital filters and a spiffing DSP (Digital Signal Processor) with 90 types of effects which is similar to the DSP in the SY99. The built-in sequencer has only nine tracks, but it can store 10 Songs with a total capacity of 20,000 notes – which is quite a respectable amount for any stand-alone sequencer.

I suspect 99 percent of us select an instrument on the strength of its presets. Let's be honest, guys and gals, modern synths are just too bloody complicated to program. And why bother? Most synths come packed with excellent presets and there are always the musical anoraks who delight in creating new sounds which you can buy for a nominal sum 'off the shelf'. To anyone who says that the only way to make real music is to create all the sounds yourself from scratch I say *bollocks!*

The SY85 has some of the best 'play me' sounds I've ever heard. I was particularly impressed by the guitars: some of the electric voices out-Hendrix Jimi himself. The sounds are arranged in Banks by type so one Bank contains mostly acoustic pianos, another contains organs, another strings – and so on. The SY85 uses a two-letter prefix to identify the sounds – AP for Acoustic Piano, BR for Brass, GT for Guitar and so on. It's an excellent convention which has been catching on in various places. Wouldn't it be nice if all instruments used it?

Without running through a list of my fave sounds, let's just say that the presets are excellent and the instrument has a good sonic range. It has 6Mb of samples onboard which are a higher resolution than those in the SY77. They are divided into 16 categories – piano, keyboard, brass, wind, strings, acoustic guitar, electric guitar, folk (including dulcimer, harp and sitar), synth, choir, tuned percussion, drum, percussion (ethnic), sound effects and oscillators (a selection of waveforms).

## The Sequencer

The sequencer can store up to 10 Songs with a total capacity of 20,000 notes. It has eight 'Normal' tracks plus a Drum Track. Each Normal Track can control a separate instrument which is determined by the Multi Play setup and the sequencer track Transmit Channel assignments (it's easier to set up than it sounds). Normally, tracks one to eight will be assigned to MIDI channels one to eight and therefore control the Multi Play instruments assigned to channels one to eight – see, easy! Of course, you can alter the Track/Channel assignments if you want to. Each Song has its own Multi Play setup. You can assign a Voice or a Performance (great!) to each Track/Channel although if you use a lot of Performances you need to make sure you don't run out of polyphony.

There are four record modes – real-time overdub, real-time replace, real-time punch-in and step-time. Both real-time and step-time recording are straightforward. In step-time mode you select note durations from the voice select buttons and a display on the LCD shows you the position of the note in relation to the bar.

There is the usual selection of edit functions including Insert, Copy, Delete, Transpose, Quantise and Velocity & Gate Time modification plus a neat Crescendo function which applies a crescendo or decrescendo to a selected track over a specified number of bars. A really nice touch is the ability to use the eight Continuous Control sliders to control the volumes of the eight instruments, although there doesn't seem to be a way to record this into the sequence in real-time. If eight tracks aren't enough for you, you can mix down two of them to a third track – although you then start to lose some control over your material.

Drums are recorded drum-machine style using 100 Patterns which can each be up to four bars long. There are 100 Patterns on one of the supplied discs to start you off and they cover a good range of modern styles with some Latin patterns included for good measure (...ha-ha). You can record your own Patterns in real-time or step-time and you can insert tempo changes into the drum track.

Incidentally, all Song and Pattern data is stored when you switch off.

►► But the best is yet to come: included are 128 Performances which can contain up to four Voices in layers or splits. These really are the *crème de la crème* as Miss Jean Brodie would say (*did she own an SY85?* – Ed). The sound at position one is a piano backed by a chorus which comes in after a short delay. Talk about moody!

## Sonic Architecture

For all their good points, no one could accuse modern synths of being easy to program. The SY85 lacks the devious parameters of AFM – so that makes life and the art of noise a little easier. The character-based LCD, however, means envelope and filter shapes, for example, are shown numerically and not graphically as on the SY77. The SY85 sonic architecture follows traditional lines. Six parameters determine the fundamental sound of a Voice. These include the Waveform (one of the 244), Tuning, Note Range – and so on. You can also play the Waveform in reverse. Since each Voice only has one Element or Waveform (oscillator in analogue terms), programming is a little easier to understand than it is on the AFM machines, although there are still a lot of parameters to take on board.

The AEG (Amplitude Envelope Generator) has five programmable rates and two levels. You get a choice of two low-pass filters, a high-pass filter, a band-pass filter and a band-elimination filter. The filter even has its own Envelope Generator. The filters are excellent, by the way!

There are literally dozens of parameters for shaping the voice including a Pitch Envelope Generator, LFO and controller assignments.

Each Voice can also have an effect.

The next step up the hierarchical ladder is a Performance which consists of up to four Voices in layers or splits. This is where the power and brilliance of the SY85 really shine.

You can create your own drum maps by assigning any of the Waveforms and user samples across the keyboard. Each 'drum' can be given a pitch, tuned, panned and assigned an effects level. A drum Voice called GMIDI is the instrument's only nodding acknowledgement towards General MIDI, but at least it saves you setting up a GM drum map.

Some of the layers are real works of art. You know when a certain sound inspires you, suggests riffs and simply makes you want to play? Well the Performances are like that. Okay, not all of them – but a helluva lot of them. Run through them for an hour (don't park on a meter), say you're not hooked and then go home to your Jason and Kylie records.

Anyway, having confessed to being impressed with the performance, I guess I'd better take a look at the dashboard...

The SY85 has a 61-note velocity-sensitive keyboard including aftertouch with pitchbend and modulation wheels to do your widdly-widdlies with. A 2 x 40-character LCD keeps you informed about what the synth is up to. There are Quick Edit keys below this, edit controls to the right and function buttons to the left. A nice touch is the Mode Matrix which tells you which buttons to press to select various, er, modes without stepping through an endless corridor of menus.

To the left of the Matrix are the seemingly sparse sequencer controls and to the left of these, a disk drive. There are slots for Waveform and data cards and on the back are two sets of stereo out

sockets, a headphone socket, and jacks for foot volume, foot controller and sustain pedals plus MIDI In, Out and Thru ports.

The SY85 has half a Meg of RAM (volatile) which can be upgraded with two SYEMBO6 RAM cards to add an extra 1Mb of non-volatile RAM. You can also use 1Mb SIMM chips to add a further 2Mb of volatile RAM; in fact, according to Yamaha-Kemble it should be possible to fit two 4Mb SIMMs, which would give a maximum memory of 9.5Mb. Into this area you can load your own samples via a MIDI Sample Dump and save them off to disk. The demos on the disk supplied with the instrument contain samples (they take quite a while to load, too) and show how they can truly transform a sequence.

You can have up to 64 samples in memory at once, RAM permitting, and there are basic – but useful – edit functions including looping, volume and pitch. Samples can be grouped together as a Waveform and mapped to the keyboard as a multi-sample. It's a great feature, although of



course you need a sampler to get the most out of it. However, a budget computer-based sampler such as Replay 16 (to be reviewed) which supports MIDI Sample Dumps could prove a very cost-effective accessory.

The most impressive sample examples are vocal snatches which the demos use to the full. It's really strange to hear a keyboard doing vocal lines (even if they are more house than Pavarotti) – although this is more imposing and useful live than in a studio. The programmer can, of course, incorporate the samples into his or her own voices.

You get not one but two manuals with the SY85. The first is a 70-page *Getting Started* guide and it's really very good. I suspect many owners will prefer not to look at the second manual which is a *Feature Reference* manual written very much in feature-reference-manual style. It is a little daunting at over 300 pages, although you will certainly have to dip into it occasionally to look up the techie bits. ►►

## Driving It

Disk drives are an integral part of all modern instruments and allow easy, cheap and convenient storage of new sounds and – in the case of a workstation, sequences – too.

At the beginning of each new composition project, I usually run through the sounds I have (for whatever instruments I am using) and load those I think will be the most useful for the project. Oddly, the SY85 does not allow you to save or load individual Voices, which effectively makes it impossible to build up a collection of sounds from different disks. The only way around it is to use a RAM card for storage or else use a computer-based editor/librarian (I'm sure several will appear soon).

The system can't load or save individual Songs, either, although you can save them individually in MIDI File format. It's possibly something to do with the way the sounds are tied in with each other – four Voices making a Performance which can then be assigned to 10 Multis for use with the Songs. However, I don't think it unreasonable to be allowed to handle individual items. The synth could warn you that a Voice you are about to overwrite is being used in a Performance and then if you totalise your setup at least it's your own fault.

The sequencer can read Yamaha's custom NSEQ sequence format and you can save individual Songs in MIDI File Format 0, which is one way around the bulk Song save problem. The drive can also handle SysEx bulk dumps so you can store settings from other instruments on one disk (...don't forget to back it up, though!).

Finally, if you're thrilled by the prospect of a synth which can also handle samples (and a thrilling prospect it is, too) and are already considering a RAM upgrade, remember you won't be able to store 3.5Mb of sample data on a 713Kb floppy disk. A SCSI hard disk interface option would have been useful...

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►► The indexes could have been more comprehensive. As all the features are dealt with individually (as opposed to explaining how to perform a particular procedure requiring a combination of functions) it's not always easy trying to discover the bits of the manual you need to refer to. But there's also a Job Table reference sheet for the user and a MIDI Data Format booklet for the boffins.

people are dabbling with pre-recorded MIDI files these days and most files are now configured to GM.

**Quick Edit**

The eight Continuous Sliders and function buttons beneath the LCD are used to edit the parameters during normal editing procedures. Having so many controllers does make editing easier, as you can in most instances access several parameters at the same time – far better than selecting a parameter with cursor keys and then using just one slider to alter it.

These controls form the heart of the SY85's Quick Edit system, which lets you change parameters 'on the fly'. Their effectiveness depends on what sound you are playing at the time but they can be used to alter the envelope, the filter cutoff point and resonance, and to control the effects. Two of the sliders are completely user-definable.

Typical uses – without overtaxing my Imagination – include fading layers of sound in and out and performing manual filter sweeps. You could use the effects sliders to alter the distortion in a guitar sound or change the chorus in an electric piano. If you've ever had the desire to tweak some knobs during a gig (stand up those who still play their analogue synths), then these let you do so in a totally legal, honest and decent manner.



OK, let's get some niggly criticisms out of the way. For the sake of including an extra Bank button or two, you have to press the Internal buttons twice to access the second set of 128 sounds. Fine during recording, but I know from experience that live it's hard enough to hit *three* buttons to change a sound without worrying about whether or not you have to hit the Memory button twice!

I'm not a fan of built-in sequencers, although presumably someone's market research somewhere has shown that punters like all-in-one machines. My argument is that the majority of people buying a synth at this price will already have some sort of external sequencer whether they use it live or for recording. In such cases they are paying for something which they do not want and will rarely use.

However, I'm sure not everyone shares my opinion (and someone somewhere no doubt has some figures to prove how wrong I am). The sequencer on the SY85 does the job and it's fine when you know the arrangement you want to record, but I really wouldn't like to *compose* with it.

Finally, there's a General MIDI drum setup so why not include a GM setting as well? An increasing number of

heavily in the real-time performance department.

The SY85 is not a vast departure from the other SY synths but it has arranged the technology Yamaha is good at in a slightly different way. It's a step on from the SY77 in most departments and if you've been tempted by the 77's new low price, I'd urge you to save up a few more big ones and take a look at the SY85. ■

**The Effects**

The SY85 has a dual processor with 90 digital effects. These can be connected in series or parallel and offer a very wide selection from reverbs and echoes to pitch changes, ring modulation, distortion, phasing and flanging. There's even an aural exciter which is actually credited to Aphex and manufactured under license from them!

Each effect has up to eight parameters which differ according to the type of effect it is – now isn't that handy? You can alter each parameter using one of the Continuous Sliders. All the effects and their parameters are listed in the Reference Manual, which is useful if you want to tweak any of them.

The effects are of a very high quality – higher, I venture to suggest, than you would typically expect to find in a workstation. The eight parameters will be more than enough for all but the most ardent FX freak and you can do some creative effecting with them.

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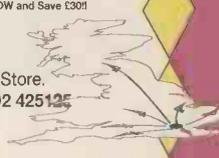
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# MIDI by example

## Part 3

Merging two sets of MIDI data simultaneously demands a little intelligence...

Text by Vic Lennard

Last month, we looked at how you could alternate between two MIDI Controllers by using a MIDI Switcher, a relatively cheap device due to its passive circuitry and simple design. In passing, it was mentioned that such a device would not allow you to have two MIDI Controllers active at the same time. This is a job for a MIDI Merger.

While it may appear that a MIDI Merger is a relatively simple device for combining the MIDI information from two MIDI Outs, its design actually calls for the use of a

microprocessor. The reason for this is that MIDI messages often consist of two or three parts and it is important to ensure that these are kept together. If they are not, the message becomes garbled. The MIDI Merger, therefore, has to be an intelligent device and as such costs far more than a MIDI Thru box or Switcher – typically around £80 for a two-into-one unit.

There are a number of situations which call for the use of a MIDI Merger. Let's look at a couple of examples. The first is where you need to share a sound module with another musician, each of you playing your own MIDI Controller. This is illustrated in **Figure 1**. For the sake of simplicity, two keyboards are shown, but really, they could be any type of MIDI controller – drum machine, guitar synth or wind controller – as long as they are capable of transmitting MIDI information from a MIDI Out port. The best results here will be with a multitimbral sound module which can play different instruments on different MIDI channels, and a pair of Controllers which can each be set to transmit on a separate MIDI channel.

Another situation requiring the use of a MIDI Merger is when editing the tones in a sound module using a visual editor on a computer. A two-way link between the computer and sound module needs to be established so that the computer program can request, and receive, information from the module. However, a keyboard also needs to be attached so that the edited voices can be played.

**Figure 2** shows how this is set up and how a MIDI Merger is connected into the system: the MIDI Out from the keyboard is merged with the MIDI Out from the sound module and then sent to the MIDI In of the computer. The visual editor is likely to have a 're-channelise' facility so that the notes coming in from the keyboard can be set to the MIDI channel of the sound currently being edited in the module – an important point when working with a multitimbral module.

**Next month**, MIDI By Example begins its examination of synchronisation with a look at how sequencers and drum machines may be linked together.

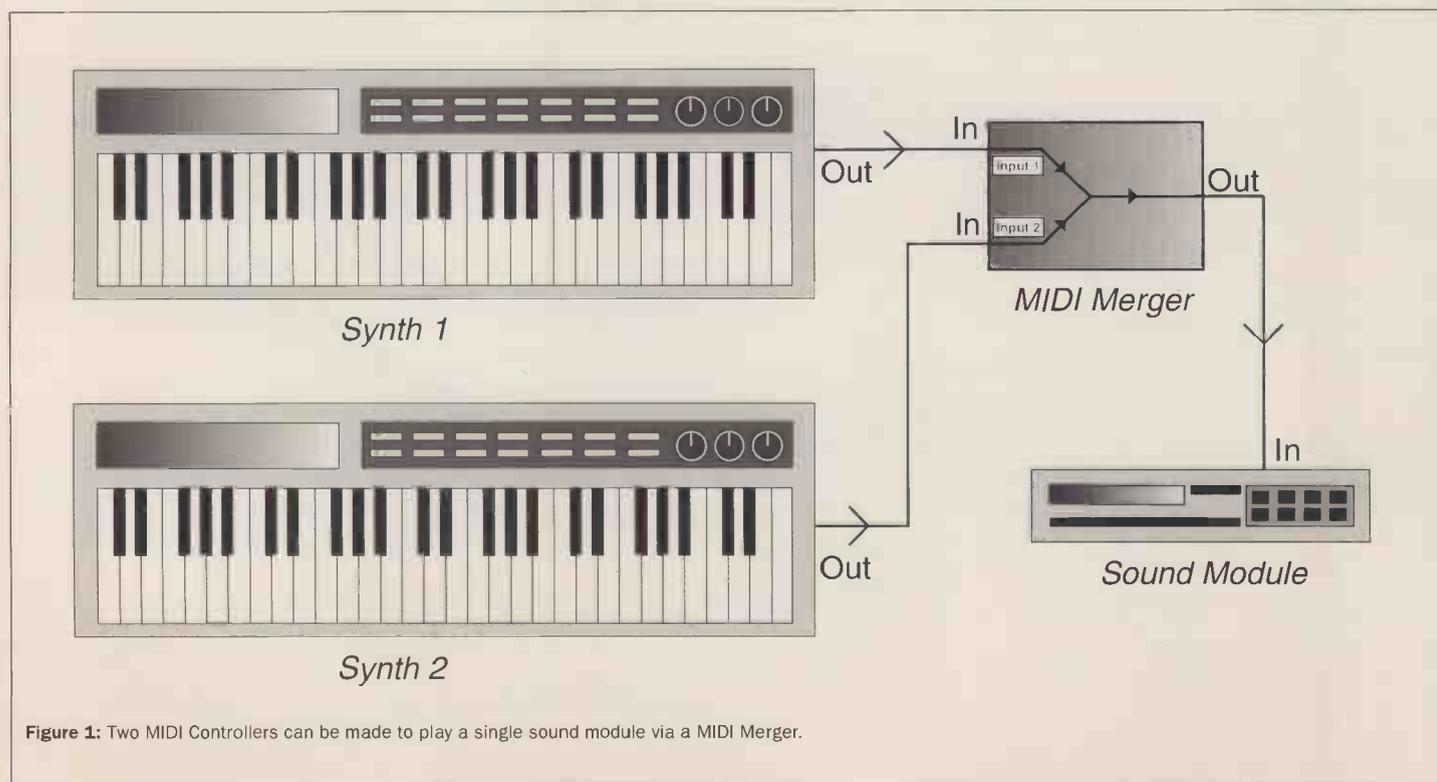


Figure 1: Two MIDI Controllers can be made to play a single sound module via a MIDI Merger.

# MIDI GLOSSARY

Two further additions to our glossary of MIDI terms...

## MIDI File

In 1987, various software companies decided that a common file format for the saving of songs on a sequencer was required. The Standard MIDI File, as it emerged, was passed by the MIDI Manufacturers Association (MMA) and implemented by practically every sequencer software writer, irrespective of the computer. MIDI Files have also now been universally accepted by all the major manufacturers and can now be found on the latest synths from Korg, Yamaha and Roland which have built-in sequencers.

This has led to a high degree of compatibility in the transfer of song data, although it should be noted that the inclusion of items such as tempo changes and time signatures are optional.

There are three types of MIDI File. Format 0 types consist of a single track and are used by many MIDI File playback devices such as the Yamaha MDF-2. Format 1 types comprise multiple tracks and are used most often when saving a MIDI File from a sequencer. The final type, Format 2, consist of multiple patterns but to date, have rarely been used.

Generally, a sequencer will not give you the option of saving as a Format 0 or 1 type file. If a song consists of multiple tracks and you need to save it as a Format 0 file, you have to merge all tracks into a single track.

Though a common three-letter extension for MIDI Files is used by Atari,

PC and Amiga computers (ie, .MID), problems can occur when transferring MIDI Files between different computers. In general, PC compatibles and Atari STs can read MIDI Files from each other's disks, but both Amiga and Apple Macintosh computers have to pass data from a PC or ST through a conversion program.

## MIDI Implementation Chart

One of these should be found at the back of every manual for a MIDI device. It outlines which of the various MIDI functions are transmitted and recognised by the device and how they are treated. Take the example of a keyboard: does it transmit Aftertouch? Can it transmit on all MIDI channels? Does it recognise MIDI Volume (controller #7)? What happens if you send it note numbers outside of the range of its sound generator? These questions, and many others, can be answered by knowing where to look in the chart and how to understand the comments.

A chart usually consists of four columns: Function, Transmitted, Recognised and Remarks. Function lists all of the various MIDI events, Transmitted and Recognised give listings of which events the device can send and receive, and Remarks explains any ambiguities with a 'O' being used for yes and a 'X' for no.

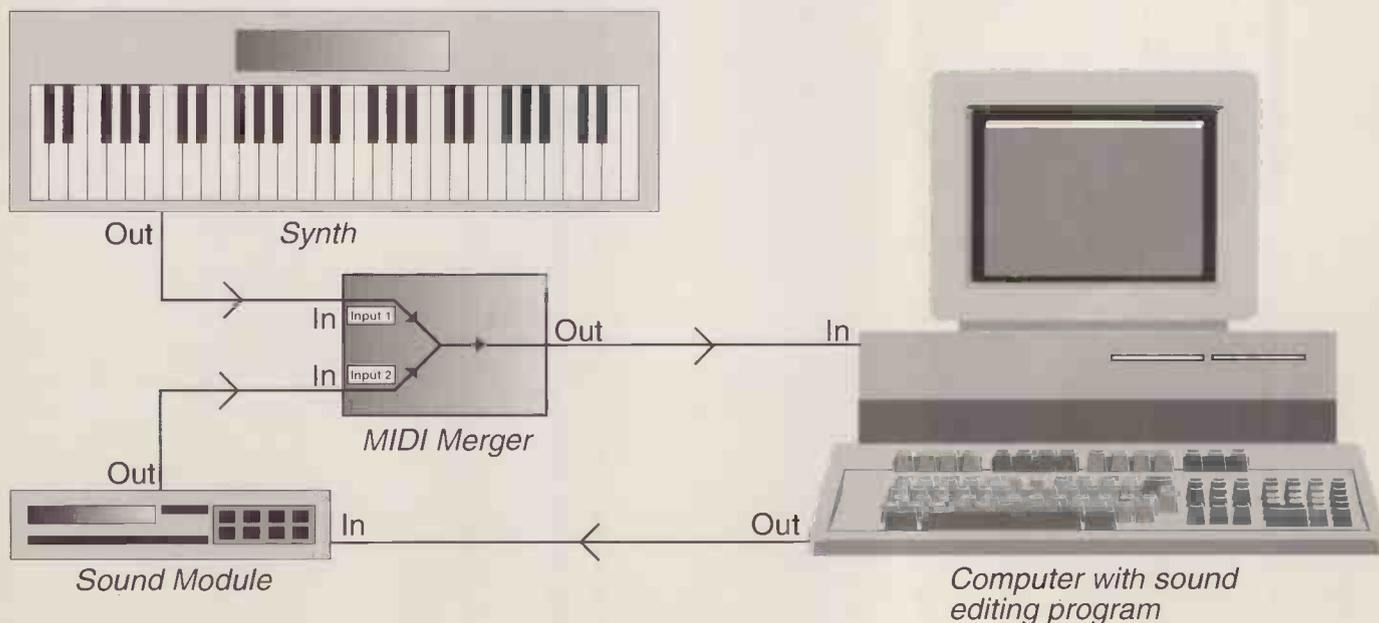


Figure 2: By using a MIDI Merger, you can edit the voices in a sound module via computer and simultaneously play the results via a keyboard or other MIDI controller.

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# Fractal Music

## Software For the Atari ST

Text by Ian Waugh

Is there a place for mathematics in your music? Need a little chaos in your compositions? It could be time to get Fractal...

Music has always had strong links with mathematics and many composers have experimented with the creation of music based on mathematical principles. It seems natural, therefore, that the relatively new science of fractals (born in the late seventies) and their fascinating combination of seemingly contradictory elements of repetitive form and randomness should also be pressed into service, too.

Fractal Music (review version 2.3) was devised and written by Chris Sansom and Laurence Glazier. Chris is a

them – Ed). The disk comes with your own User ID encoded in a file. Tamper with this and the program won't run.

The manual begins with a short tutorial which runs through the basic operating procedure but doesn't take you very far into the program – that's left up to the rest of the manual and a little judicious experimenting.

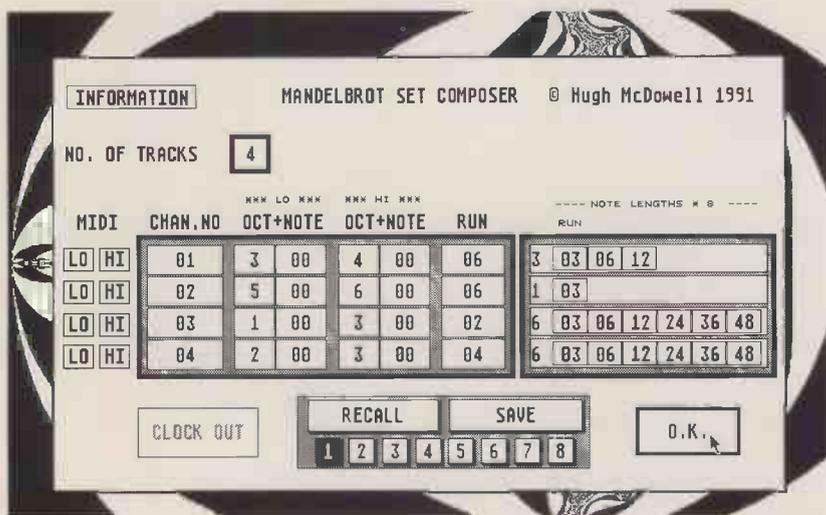
Fractal Music has one main screen, certain features of which will be familiar to sequencer users – the track list down the left-hand side (there are 16 altogether) and the Play & Stop buttons and tempo indicator above it. Actually, the Stop button is only there for show as the mouse is disabled during playback for improved timing. You stop playback by pressing Return. Rather more mysterious is the Fractate button – just to the left of Play – but more about this in a moment.

The rest of the screen is filled with horrendous-looking columns of numbers – the headings for which appear on their sides so you have to tilt your head to read them. Nothing, however, is as cryptic as it may at first appear.

You can name the tracks by clicking with both mouse buttons on the track name (wouldn't a double click with the left button have been more obvious?) and also mute and solo them. A triangle appears on the right of a track to indicate that it contains data, and numbers are also displayed on playback to show how many notes are actually being played. Parameter values are decremented with the left button and incremented with the right.

Okay, let's look at the columns. MIDI Channel is obvious – I hope, 'cause that's as easy as it gets! The next six columns are grouped in three pairs: Loops 1 to 3 and 'How Many'. The manual uses the analogy of a three-dimensional graph to describe these. I confess that I'm not sure this makes the concept any easier to understand, unless, perhaps, you're into 3D modelling. However, the loops act in a manner rather like nested loops in a computer program (...stay with it). Loop 1 is the innermost one and requires an entry in the How Many column to determine how many times it will loop or Fractate.

Now, if you put a value in the How Many column belonging to Loop 2 – say five – this will cause Loop 1 to do its stuff five times, which will produce 5 x 3 or 15 Fractations. You can probably guess what the How Many



Fractal Music main screen

composer and has had several works published and performed. Laurence provided much of the input during the development of the program.

It will run in hi or medium resolution and with half a Meg of RAM – but that leaves little memory to work with, so one Meg is recommended. The licensing agreement seems pretty horrendous and states that the software and manual remains the property of Datamusic although you are allowed to make a backup (*How very public spirited of*

column in Loop 3 does. It causes the other two Loops to, er... loop according to the Loop 3 How Many value. If it was set to four we would get  $4 \times 5 \times 3$  – or 60 Fractations.

Each How Many column can be given a value from 1 to 99, so the total number of combinations is  $99 \times 99 \times 99$  – or 970,299. The values in the Loop columns themselves determine the shape of the music – different numbers



Graphic representation of a rotation

produce different Fractations – so you can see that the number of variations is immense.

There's another column related to the Loops called Number Of Inner Loops and this determines the number of times the inner loop – Loop 1 – is repeated. It can take a value up to 999. It's actually to do the 'iteration' process so essential to fractal construction (see *MT July '91*).

Right, time to grasp one more concept – Version. If we go back to the concept of a 3D graph and think of Time on the x axis, Pitch on the y axis and Velocity on the z axis (the one which runs at you out of the page) then we can see that any value can be positive or negative. Pitches and velocities can change in either direction (going above or below the previous value).

Time, of course, can only go forward. So the program cheats a bit. If a negative number is generated it's turned into a positive number and the note is turned into a rest. Now, if Version is set to 'A', negative values become rests. If it is set to 'B', the process is reversed – negative values become notes and positive values become rests. Version C turns all values into notes so effectively you get a continuous stream of them. Well, that's the mathematics out of the way. The rest is relatively straightforward...

The Lower and Upper Pitch Limits are used to restrict the output to a certain pitch range. If a note is generated which would step over the limit, it is reflected back into it. You can also set the starting pitch of the Fractation. Two tracks with identical sets of parameters but different starting notes will produce parallel harmonies which can be very effective.

Most of the numbers generated by the program tend to be less than one and have to be multiplied up to produce values which are meaningful to MIDI. The Pitch Expansion column can take values from zero to nine and determines the multiplication factor. A value of zero will produce a

single pitch (but with varying velocity values) which could be used to generate a drum line, for example. A setting of nine produces pitches which leap about from one end of the note limit to the other.

The four rightmost columns do for velocity what the previous four did for pitch. These are Lower Velocity Limit, Upper Velocity Limit, Starting Velocity and Velocity Expansion. As well as their 'random' contribution to the music, you can use them to create 'ppp' or 'fff' passages.

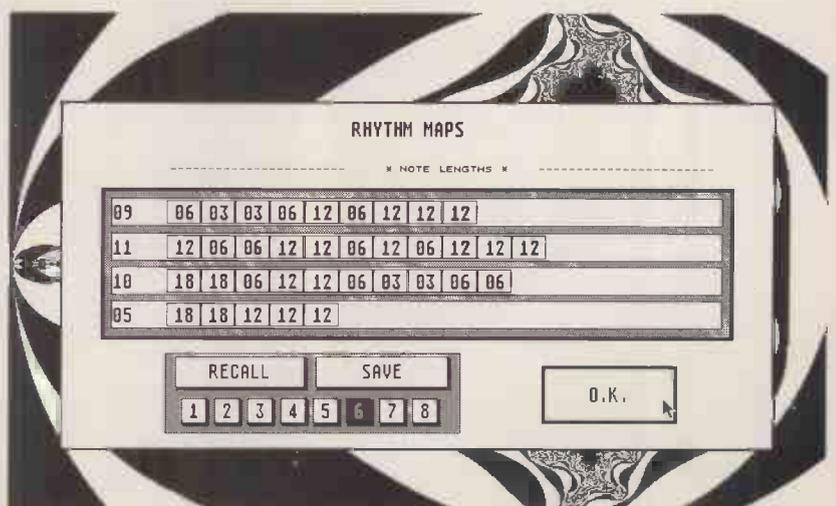
Okay, let's put things together and see what happens...

**F**ractation is the process of generating the music. When you activate Fractation, each time the program 'turns a loop' a note (or rest) is produced. You can Fractate any number of tracks simultaneously.

With exactly the same settings, exactly the same piece of music will be produced during each Fractation – the generation process isn't random, remember. Initially, it's probably a good idea to set the Loops 2 and 3 columns to one and experiment only with the parameters in Loop 1. Although the manual doesn't explain exactly what is happening, you can work it out with a little judicious ear work.

Set the How Many value of Loop 1 to one and set the Number Of Inner Loops to one and the program will produce one or two notes or rests (the program actually produces one more event than the number of loops but we won't let that throw us). Increase the Number Of Inner Loops to two, three, four and so on and the program will add an event (note or rest) for each addition to the loop.

Now if you increase How Many to two you'll get the set of notes you've just heard followed by a different set as



The Check Passes function showing the number of Fractations each track will perform

Loop 1 does another loop. This much is (relatively) easy to understand – especially if you try it – but if you work the other way round something different happens.

Set the Number Of Inner Loops to one and the How Many value of Loop 1 to one and you'll get the same two-event riff as before. Increasing the How Many value adds ➤➤

►► more events to the list although it will produce a different set of events to the previous ones.

Now if you increase the Number Of Inner Loops you'll get the same first couple of events but the following ones will be different. In fact, each time you add to the Number Of Inner Loops, the previously-generated events change. You may spot similarities in the rhythm and the directions in which the pitch moves, but I wouldn't bet more than a pint on it – even after a couple of iterations.

So far we've only been experimenting with Loop 1. Add Loops 2 and 3 into the equation and you can imagine how complex the whole procedure can become. But there's more...

Some of the column headings are highlighted – Loops 1 to 3, Version, Start Pitch and Velocity, and Pitch and Velocity Expansion. These parameters can be randomised either manually by clicking on them with both mouse buttons or through the program by highlighting them: if they are highlighted, the program randomises them before Fractation.

**B**y now, if you're still with me (...I'm sorry, did someone say something? – Ed), you'll be wondering what the output sounds like. Well, we're not talking TOTP or any kind of mainstream music here, but it can sound very like modern classical work – avant garde some would call it. But then, as much music of this ilk is composed using mathematical processes, this is perhaps not surprising.

To other listeners it may well sound like a collection of

random pitches – but it's not. It can lack the harmonic and rhythmic structure our Western ears look for, but it does have a form and this is discernible if you're sensible with the settings – Fractate all 16 tracks using different parameters and you can guarantee chaos!

A Check Passes function shows the nested loops and how many times each track Fractates. Set all values to their maximum and (at 120 bpm) the program would produce just under two month's worth of music! Theoretically, that is – you'd need far more RAM than the ST can support – and a very understanding audience! However, a more modest maximum of 50,000 passes (which would require one Meg of RAM) will generate about 80 minutes of monophonic music. Scale according to required polyphony.

Fractal Music can handle MIDI files so you can export your Fractations to a conventional sequencer for further work. It can also load MIDI files and this is where things really start to get interesting.

In the Edit menu you'll see the following functions – Quantise, Stretch/Move, Invert, Retrograde, Retrograde/Invert, Other Reflections and Rotate. You can apply these to 'conventional' music – and to fractated music, too. Relative quantisation lets you quantise by note values – 1/8 is a quaver, 1/16 is a semiquaver. You can also quantise to values in between by setting the denominator to any value from 2 to 96 – 1/7, 1/13, 1/87 and so on. Absolute quantisation lets you specify the quantise value in clock ticks – from 2 to 384.

Stretch/Move can move a track forwards or backwards in time, transpose it and stretch or compress it. You can move it in increments of a single tick and, among other effects, use this to produce echoes. It's possible to perform straightforward transposition but you can also specify the amount of transposition as a ratio – say 3:2 or even 124:29. This has the effect of compressing or expanding the pitches into a smaller or greater range. The music will retain the direction of movement, but the pitches will be different.

Stretching and Compressing a track also works with ratios. The program tries to push and pull from the centre of the piece so if you compressed it to half its size (effectively making it play twice as fast) it wouldn't start playing immediately but about a quarter of the way through. Obviously, if you stretch it and the track already starts at the beginning, the stretched version would start at the beginning, too.

Invert spins a track around a central pivot point, effectively turning it upside down. Inversion has been used by composers for centuries, but in its form here, lets you select the high and low note limits and the pivot point. It uses a box to show where the track sits in the scheme of your inversion. As we aren't doing anything particularly horrendous to the pitches and their relation to each other, this can produce very musical output (to Western ears).

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*"We're not talking TOTP or any kind of mainstream music here, but it can sound very like modern classical work – avant garde some would call it"*

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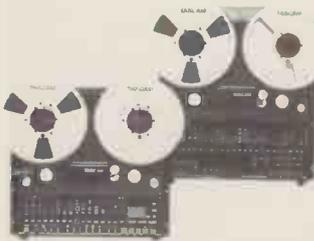
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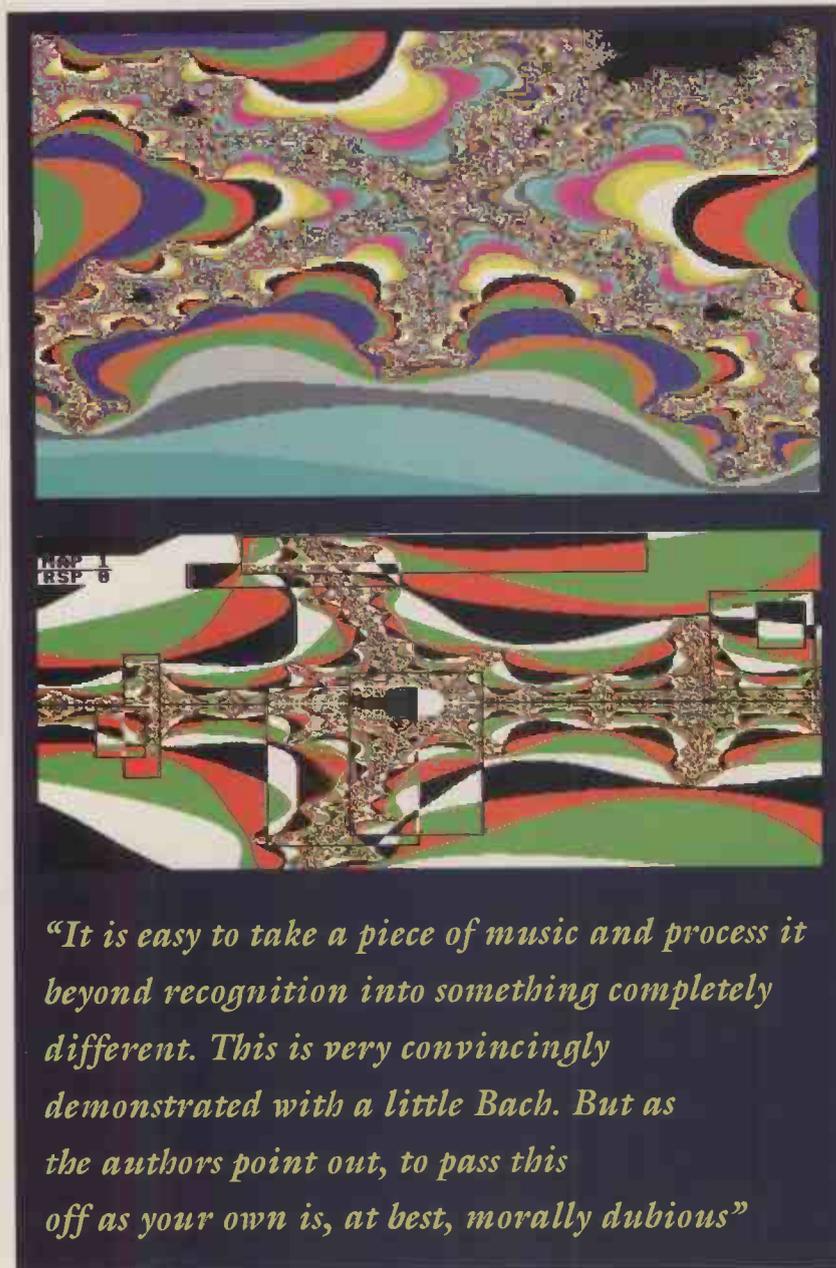
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*"It is easy to take a piece of music and process it beyond recognition into something completely different. This is very convincingly demonstrated with a little Bach. But as the authors point out, to pass this off as your own is, at best, morally dubious"*

» functions in one fell swoop although, to pre-empt those who try it, the manual admits the result is not exactly the same. But it's close and if you want it to be exact you can always perform the two functions separately.

If you think about it – and I'm not forcing you to do so at this stage – inversion is a reflection of 180 degrees around a horizontal axis, retrograde is a reflection of 180 degrees around a vertical axis and retrograde inversion is a rotation around 180 degrees. The Other Reflections and Rotate options let you reflect and rotate about any angle.

Now this can get a little hairy and I confess I couldn't even attempt an explanation without diagrams (a picture being worth a thousand words and all that) but this is clearly the job of the manual which does have diagrams and shows you what happens to the music during these reflections and rotations. The program, again, displays the music as a box and as you alter the reflection angle the box turns to, er, reflect this.

**Info**

Price: Fractal Music  
£65.00 + £2.50 P&P.  
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One of the outcomes of this type of operation is that the notes may overlap so you can get polyphonic music from a monophonic input. Think about it (yes, it's time to think, again): if you take a music score (or a display from a grid editor) in which the notes are strung out one after the other from left to right (the time domain) and then rotate it so the notes now run from bottom to top (the pitch domain), you're squeezing all those notes into a smaller time span.

The manual is very friendly and not without its humour – it has an index, too! The authors are clearly aware of the potential complexity of some of the operations; as they say: "After all that, you'll no doubt listen to the result and then go looking for a 12-bore and our address."

The Read.Me file on disk makes a very interesting and valid point concerning music which is generated using the program. It is easy in the extreme to take a piece of music and process it beyond recognition into something completely different. (This is very convincingly demonstrated with a little Bach.) But as the authors point out, to pass this off as your own is, at best, morally dubious. They also state that copyright should remain the property of the original composer, suggesting that Fractal Music may give rise to copyright issues which are not covered by existing law.

Clearly there is food for thought here, although I suspect it would only be the legal profession who would make any money out of a case.

Fractal Music is fascinating. I'm tempted to say that if you work in the mainstream it is not for you (and I feel the authors would probably agree with this), but some of the edit options such as retrograde and reflection can produce musical results which the more adventurous mainstream user might like to explore. A lot of it comes down to Western musical expectation; I'm sure the program could be adapted to work around conventional divisions of the beat, tonal centres and possibly harmonies which would produce more (Westernly) melodic output. Just a thought.

But this isn't the main purpose of the program. Fractal Music is intended to generate music based on mathematical processes – and that's exactly what it does. As such, it's on the other side of the musical playing field to M, not quite so far over as Fingers and hovering somewhere near Ludwig. And for a composition program it is surprisingly easy to operate – honest! – in spite of the mathematics behind it.

If you like the idea of computer (assisted) composition then you'll find Fractal Music very interesting. If you're into modern composition you'll love it! If you fit into either category – or are just plain curious – then send Datamusic a fiver for a demo disk. ■

# axemai

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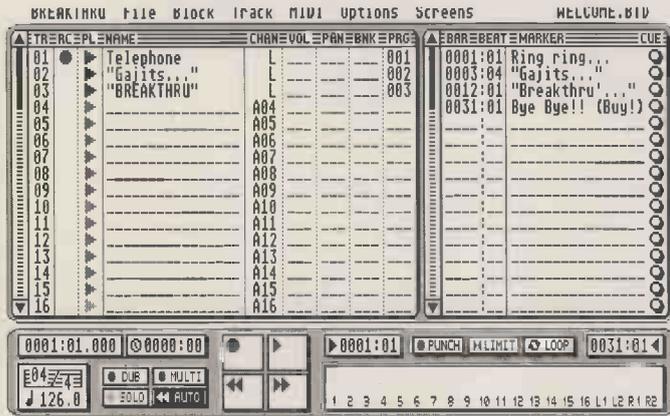
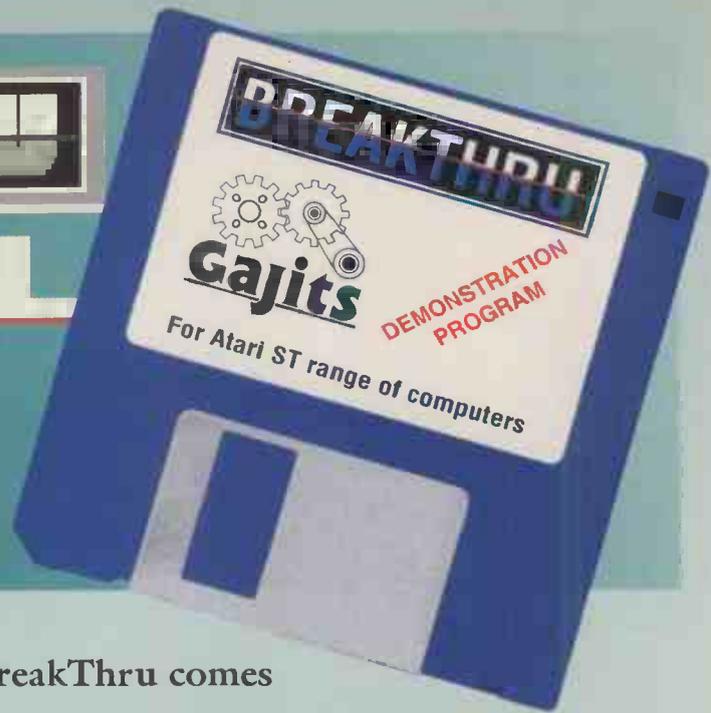
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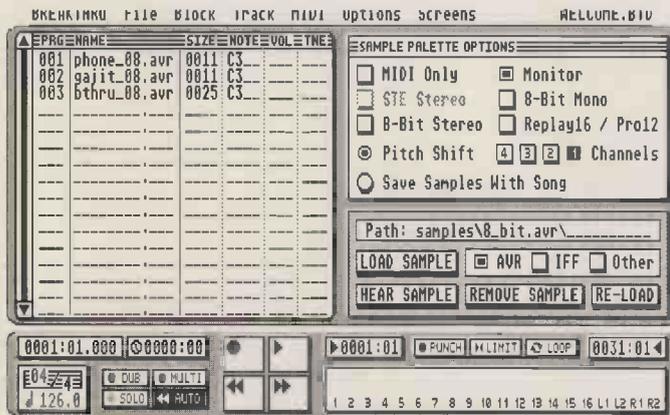
**BREAKTHRU**

# TUTORIAL

Getting To Grips With Breakthru – The Brand New Sequencer From Gajits – Demo Version Free With This Month's Music Technology!



The Track Screen showing track and cue information with the Welcome song currently loaded



BreakThru has a Sample Palette where 8 and 16 bit samples can be replayed through various sampling cartridges or even the ST's monitor speaker. Here we see the settings for the Welcome song

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BreakThru comes

from the same stable as Sequencer One and its upgrade, Sequencer One Plus, but takes Gajits' philosophy of power at the right price further than ever before. All you need is an Atari ST running at any screen resolution and 1 Mbyte or more of memory.

To begin work with this demo version of BreakThru, double-click on BREAKTHR.PRG and let it load. A few help screens will appear first, and it's worth taking the time to read them as they explain a number of important points. Once these screens have cleared, you'll be left with the Track Screen in front of you and you can start getting down to business.

BreakThru is a 64-track linear-based sequencer which means that it works in a similar way to a tape recorder. Tracks function independently of each other but you can freely move or copy recorded bars between them. Each track has space for a name along with a Channel (MIDI or Audio), Volume, Pan, Bank and Program Number. This means that you can set up the level and stereo position for each sound you use, and even select the sound itself from your synth. The right hand side of the Track Screen gives you 64 cues where you can enter the starting bar number for each part of a song and then click on the Cue button to set the song position locators to the correct place.

Most of the transport controls are similar to those of a tape recorder with the Record, Play, Fast-Forward and Rewind buttons in the centre; Right and Left locators (for working on a particular section of a song) to the right and Song Position Locators to the left, alongside the controls for tempo and time signature. The Level meters display the amount of musical data on each individual MIDI channel, with the four to the right being used for the sample playback facility offered by BreakThru.

## Playing the demo songs

The prepared demo uses sampled sounds. Using the Load Song option in the File menu, load WELCOME.BTD from the Songs folder (you'll see the on-screen cursor change to a clock while this is happening). Pressing function key F4 on the ST takes you to the Sample Palette screen where you have to set the Sample Palette options before loading the samples themselves. If you have a STM, STF or STFM machine, use the Monitor option; STE owners can use their machine's stereo option and connect up to a hi-fi or monitoring system. If you own any of the Microdeal or AVR sampling cartridges, select these as required. Click on Pitch Shift, 1 Channel and then the Load Sample box to load up the samples. Finally, click on the Play button to listen to the demo – remembering to adjust the volume level on the monitor if necessary. Press the

right mouse button to stop at any time.

If you go back to the Track Screen (via the F3 function key), you'll see the track and cue lists in use. Feel free to have a look around at the various screens provided.

The second part of the demo involves the use of another Breakthru facility – the Juke Box – accessed via F10. This allows you to put together an 'album' of songs and control the time interval between them. To try it out, click on Load Album and load DEMONSTR.ALB from the Songs folder. The three demo songs on the disk will then be loaded into memory and you can set the Song Delay to the required length and playback via a MIDI sound module.

## The Editing Functions

Various examples are included on the disk, including MAPLERAG.BTD. Load this from the Track Screen and check through the important notes that appear on screen. The Program Changes are preset for a Roland CM-64, but you can alter the PRG numbers for each instrument to suit your particular MIDI set-up. Also note the way that the Cue Sheet is used – practically as a notepad for information. Play through the song and listen to how it sounds.

To enter Step Edit mode, hit function key F5 on the ST. Just beneath the grid, to the left, you'll see the Track Selector with a couple of arrows which are used to select the track you wish to view. Upwards from Track 1 takes you to the Tempo Map (also accessible via F9), which for MAPLERAG is fixed at 112 BPM and so is shown as a straight line (if you want to see the Tempo track in use, load in the other example, TOCCATA.BTD). Move to track 2, labeled 'Silly Voices' and you'll be presented with what appear to be a bunch of flags! Each 'flag' represents a note with the flagpole showing where the note starts and the length of the pole indicating the velocity. The length of the flag itself corresponds to the length of the note – as would be expected.

Next to the Track Selector is the same information as for the Track Screen, followed by note lengths for entering notes on the grid, Velocity and Gate Time. The latter sets the length of a note as a percentage of the full note value. Double-clicking on this with the left mouse button causes the numbers to reverse in colour and you can move the cursor up and down the screen to set the value. Alternatively, single-click with the mouse to increment (left button) or decrement (right button) the value. These methods can be used with all on-screen numerical values.

To the left of the grid is the toolbox. Zoom magnifies the grid while Info displays all the various aspects of a MIDI event. Del(ete) erases an event, Area allows you to grab a number of events, scrolling past the edge of the screen if needs be, while Keyb(oard) is used for step entry of notes. Edit allows you to change any attribute of a MIDI event. Select this and then move the mouse over a note, keeping the left button held down: four diamonds and a box will appear. Release the mouse button to select this note for editing. Grabbing and moving any of the diamonds affects the pitch, starting point, length or velocity of a note, while the box takes you to a menu for further editing. Click the mouse in the empty space to de-select the note. Still using MAPLERAG.BTD, press the ST's F8 function key and examine the Song Arranger

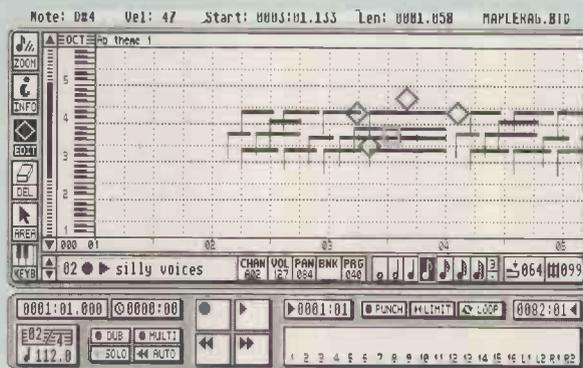
## Working With Breakthru

You can play and edit the examples included on the disk and record your own songs – the full version of which may then be saved. However, when you come to re-load the file, you'll find you only get the first 16 beats on screen – this is a demo version, remember! If you decide you like Breakthru and opt to buy the fully functioning version, any songs you have recorded will load in their entirety. If you edit any of the musical data of a demo song (four are included), make sure you save it to a separate disk otherwise the next time you try to load it, you'll only get 16 beats worth!

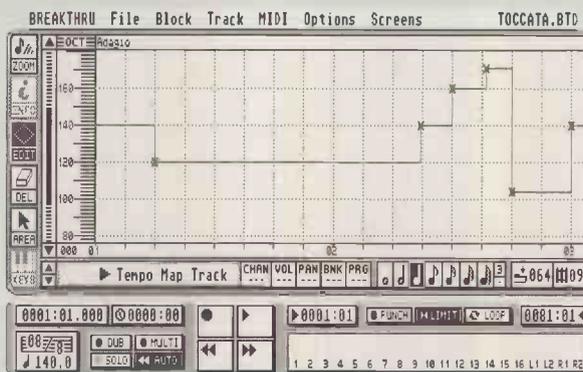
screen that appears. Each box represents a bar, a black box showing that MIDI information exists within that bar. Track names and numbers are to the left, cue names above and bar numbers below. You can grab a number of bars within a track with the mouse and 'Copy' these to memory (via the Block menu option) and then 'Paste' them in at some other point. If you choose the 'Select All' option in the Block menu, bars for all tracks are selected.

Two of BreakThru's editors are not implemented in this demo version of the program – namely the Score and Drum. However, you can get a fair idea of how each of these works by examining their respective screens. Pressing F6 takes you into Score Edit which should display a melody spread over a grand staff with the information at the bottom of the screen being the same as that for the Step Editor.

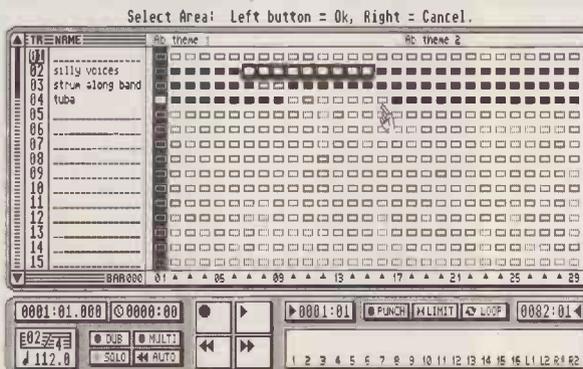
Pressing F7 calls up the Drum Editor which uses a fairly conventional grid system across which are placed diamonds, representing notes – the darker their colour, the higher the velocity value. It's all quite straightforward and many people find it by far the most convenient method of programming rhythm tracks.



Basic note and event editing is carried out in the Step Editor. Each of the red diamonds controls one aspect of the note while the blue box leads to a menu and further options



Tempo changes can be drawn in on the Tempo Map and viewed via the Step Editor as well



Using the Song Arranger, bars can be copied and pasted to other positions in a song. You can even copy groups of bars for all tracks

## SysEx Librarian

Easily overlooked in the MIDI menu, you'll also find an extra utility under the heading 'Sysex'. This is actually a System Exclusive librarian facility which allows you to store sounds from many of your synths. Connect the MIDI Out from a synth to the MIDI In of the ST, click on Fetch and start the data transfer from the synth. The Sysex Data Stored counter should clock round. You can save to disk with this version of BreakThru, but you cannot load back in.

## And finally...

Take the time to have a good look around the various screens and facilities included in Breakthru. You'll soon realise that this is indeed a professional sequencing package with many interesting and helpful features that really do make life easy for the working musician and producer.

## If There's A Problem With Your Disk

Your cover disk is duplicated to the highest standards. However, with such a large production run, a faulty disk may occasionally slip through. If you believe your disk to be faulty, please send it to the address below and it will be replaced free of charge. DO NOT RETURN IT TO MUSIC TECHNOLOGY'S EDITORIAL ADDRESS.

Before returning the disk, please make sure you have correctly followed the loading instructions and that your computer is compatible with the software. Make sure you also include your own name and address.

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# Boss

# Dr Synth DS-330

## Sound Module



PHOTOGRAPHY: James Cumpsty

**Not content with keeping us in shape rhythmically, the Doctor now has the perfect prescription for those hooked on Sound Canvas voicing but looking for accessibility and a bargain price. Has medicine ever tasted so good..?**

**D**uring the past year, Roland have been busy making the sound-generating technology they introduced on their Sound Canvas SC-55 module available across a wide range of instruments – from home keyboards and digital pianos to synths and computer-based sound cards. However, with the exception of the PC-compatible SCC-1 card, the line-up hasn't, to date, included a sub-£500 instrument – a significant omission in today's budget-conscious marketplace.

Cue: Roland's Boss division – as ever the impoverished musician's friend – and a budget, desktop version of the 1U half-rack Sound Canvas known as the Dr Synth DS-330. At £339 it's some £200 cheaper than the SC-55 and strong competition for Yamaha's budget General MIDI module, the TG100.

What you get for your money is a 16-part multitimbral sound module with 28-voice polyphony, 156 instrumental Tones (ie. patches), and some 100 drum and percussion sounds organised into eight Drum Sets. Sound Canvas owners may note with a touch of envy that the DS-330 actually has four more voices than its more

expensive relative; quite how the Boss design team have achieved this increase isn't clear, but achieve it they have.

Inevitably, some sacrifices have been made in order to achieve the new module's budget price (though not as many as you might suppose). For a start, the SC-55's bank of MT32 sounds hasn't been retained. The cheaper module also drops 27 of the Sound Canvas's 40 SFX Tones along with Church Bell, Italian Accordion, Chorus Guitar, Funk Guitar, Castanets and Concert Bass Drum. Among the drum and percussion sounds assigned to its Drum Sets, the Dr Synth gains two Jazz Kick drums but loses Scratch Push, Scratch Pull, Metronome Click, Metronome Bell and Bell Tree.

Also foregone in the name of economy are the SC-55's SFX and CM64/32L-compatible Drum Sets, along with its MIDI In 2 socket, remote control unit and stereo audio inputs. Additionally, the DS-330 omits the Sound Canvas' voice reserve feature, although it does at least implement a

voice priority ranking system for the 16 Parts. By assigning important musical lines to the higher priority Parts you can minimise the impact of voice-stealing, which occurs whenever the instrument's maximum polyphony is exceeded.

**U**nlike the Sound Canvas, the Dr Synth has two play modes: Single and Multi. When you select the former, the 330 effectively becomes a single-Part module, responding via MIDI either on all MIDI channels (Omni mode) or on a single channel. Single mode allows you to edit each Tone's filter, envelope and vibrato parameters, combine it with any other Tone in split and dual keyboard textures, and give it its own reverb and chorus settings.

In addition, Single mode allows you to take advantage of a feature known as Fat, which again is programmable per Tone. Drawing on the Fat and Octave key mode functions introduced by Roland on their JV30 synth, Fat, as you'd imagine, allows you to fatten up a sound by detuning it against itself or by adding notes one or two octaves below the played notes. It can be an effective feature, though of course it does eat into the polyphony, especially with two-voice Tones.

You can use Fat in conjunction with split and dual keyboard textures, though it can only be applied to the upper of the two Tones in each case – so you can't use it to thicken a bass sound in a split texture, say. Fat, Reverb, Chorus, Split and Dual can all be switched on/off from

**Text by  
Simon Trask**

### GS Format and General MIDI

Like the SC-55 Sound Canvas module and all the other Roland instruments which use the Sound Canvas chip, the DS-330 is a GS Format instrument. As such, it implements a standardised minimum set of 128 instrumental sounds (known as Capital Tones) and 47 'drum kit' sounds, and organises these sounds in a standardised way.

This minimum set and its organisation also conform to the General MIDI standard ratified by the two official bodies of the MIDI world, the MIDI Manufacturers Association and the Japanese MIDI Standards Committee. However, the GS Format spec allows an instrument to implement further instrumental sounds in the form of Variation Tones, together with more than one 'drum kit'. The idea behind these Variation Tones is literally to provide variations on the Capital Tones. From the DS-330's front panel, these additional Tones can be selected by pressing the Variation up/down buttons; via MIDI you have to transmit MIDI Bank Select controller data in order to select additional sets of up to 128 Tones, and then transmit patch change commands to call up the actual Tones.

In theory, a GS instrument could implement as many as 128 sets of 128 Tones – 65 sets preset in ROM (including one MT32 set) and 63 programmable in RAM. However, as this would mean it providing 16,384 Tones, it's unlikely to happen in practice! But the freedom to implement multiple sound sets does at least allow the number of Tones to be varied according to the cost of the instrument.

Roland's GS Format is therefore effectively an extension of General MIDI, making any GS instrument automatically GM-compatible – hence the inclusion of both the GM and GS logos on the DS-330's front panel.

dedicated front-panel buttons, so, for example, one moment you could be playing layered electric piano and strings with both Tones routed through reverb and chorus, the next moment you could be playing an electric piano/synthbass split with both sounds routed through reverb only and the electric piano Fat-tened up. Any on/off changes are automatically memorised by the 330, so you don't have to store them before selecting a different Tone.

Single mode, then, is really intended for live performance work. Multi mode, on the other hand, is for sequencing applications. Each Part can play one Tone or Drum Set and be assigned to a single MIDI channel; normally you'll want to assign Parts 1-16 to MIDI channels 1-16, but if you wanted to layer a couple of Tones you could assign them to the same MIDI channel. Alternatively, you could perhaps set up layer and split textures from your sequencer or MIDI keyboard. >>

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Multi mode is a Fat-free zone, while reverb and chorus settings in Multi mode are of course common to all 16 Parts – though you can at least program Part-specific on/off and level settings for each effect. Other Part-specific settings provided are Level, Pan and Transposition. Although you can't select edited Tones directly in Multi mode, it is possible to edit Tone parameters for each Part remotely by means of non-registered MIDI parameter numbers – though I suspect most DS-330 owners will have neither the time nor the inclination to go down this particular road.

The Dr Synth allocates voices to Parts dynamically in Multi mode, while in both Single and Multi modes sustained sounds can overlap patch changes – thankfully this latter feature is fast becoming *de rigeur* on new instruments. The Split and Dual buttons become Part up/down buttons in Multi mode, while the Fat button becomes a Part Mute button – dual functions which are clearly labelled on the module's front panel. Using these three buttons you can quickly select a Part and drop it out – a useful feature for 'music minus one' applications.

Pressing the DS-330's front-panel Drums button assigns a selection of sounds from the last-selected Drum Set to the module's 18 front-panel pads. You can then play (non-dynamic) rhythm parts, and record them into a MIDI sequencer, without the need for an external performance source. This, of course, isn't a feature you'll find on the 1U half-rack SC-55 – and is only available on the Dr Synth in Single mode, so you can't record rhythm parts from the pads while listening to other sequenced instrumental parts playing back on the module.

The Sound button, on the other hand, is active in both Single and Multi modes. Pressing this button triggers a single note using the currently-selected Tone, so you can check sound edits in Single mode or the assignment of Tones to Parts in Multi mode when you don't have a MIDI performance source to hand.

True to form, the Boss designers have come up with a straightforward, accessible, friendly user interface for the Dr Synth which should help to win the module a lot of friends – even if it is let down a bit by cheap rubber buttons and a non-backlit LCD. The 16 Bank pads and two Number pads are a master stroke. When not being used to trigger drum and percussion sounds, these respectively call up the 16 categories of instrument available on the DS-330 (see the Tone List) and the individual instruments/Tones within each category. Each Bank button is clearly labelled with its assigned instrument category, so whether you want a guitar sound, a bass sound or a synth lead sound you can quickly locate it.

In addition, Variation up/down buttons allow you to select variations on these Tones where they exist. Each Bank button can be made to select a particular Tone within its category when pressed, so you can easily switch between

any pair of Tones in different Banks – a particularly useful feature in Single mode.

Because Roland are using the same Sound Canvas chip in some 18 different instruments, all of which conform to the company's GS Format specification (see 'GS Format and General MIDI' side bar), there's a high degree of sonic compatibility across the range. Having compared the Tones on the DS-330 module and the JV30 synth (reviewed *MT June '92*), I can say that the cheaper instrument sacrifices nothing in the way of sound quality, and the sounds themselves are, indeed, exactly the same – with the sole exception of the Santur, for some odd reason.

The commercial implications here for MIDI songfile sales should be obvious, though anyone thinking of composing songfiles using the DS-330 should bear in mind two points: it has far less sound effects than the other GS instruments and its increased polyphony might lead you to program songfiles which 'overload' the other instruments' polyphony.

As always, it's possible to point to individual weak sounds (such as the sitar and the bagpipes) and to lament certain omissions (for instance, a hard-edged Rhodes electric piano wouldn't have gone amiss alongside the tinkly, pretty, electric pianos which are included), but the vast majority of the DS-330's sounds are very impressive in their quality, character and playability.

Digital clarity, sparkle and presence are the order of the day, along with equal facility in producing sounds which are sharp and punchy or full and smooth. Note attacks are mostly well captured, while the positioning and length of sample loops are such that the sounds are allowed to



## The Spec

**Tones:** 156  
**Tone parameters:** vibrato rate, vibrato depth, vibrato delay, filter cutoff frequency, filter resonance, filter and amplitude attack time, filter and amplitude decay time, filter and amplitude release time.  
**Drum Sets:** 8  
**Parts:** 16 (Multi mode), 1 (Single mode)  
**Polyphony:** 28 voices  
**Display:** 66 x 26mm LCD, non backlit  
**Connectors:** MIDI In, Out and Thru; L/Mono and R audio out jacks; stereo headphones output (mini-jack); AC adaptor jack  
**Power supply:** 12V AC (BRA AC adaptor supplied)  
**Dimensions:** 8 7/16" (W) x 6 1/8" (D) x 2 1/8" (H); 215mm (W) x 165mm (D) x 57mm (H)  
**Weight:** 1lb 7oz/650g

## Drum Set List

Standard  
 Room  
 Power  
 Electronic  
 TR-808  
 Jazz  
 Brush  
 Orchestra

## Effects List

Room 1  
 Room 2  
 Room 3  
 Hall 1  
 Hall 2  
 Plate  
 Delay  
 Pan Delay  
 Chorus

## Tone List

Planos: 11  
 Chromatic Percussion: 8  
 Organ: 11  
 Guitar: 14  
 Bass: 10  
 Strings/Orchestra: 8  
 Ensemble: 10  
 Brass: 11  
 Reed: 8  
 Pipe: 8  
 Synth Lead: 9  
 Synth Pad: 8  
 Synth SFX: 8  
 Ethnic: 9  
 Percussive: 10  
 SFX: 13

breathe and the loops aren't, on the whole, obtrusive. In addition, Roland's digital filtering is, as always, a strong plus point.

What it comes down to is that the DS-330 is a great all-rounder instrument, and the sheer quality, range and playability of its sounds coupled with its appealing appearance and friendly user interface make it *the* module to go for in the budget price range. ■

## Info

Price: £339 including VAT  
 More from: Roland (UK) Ltd  
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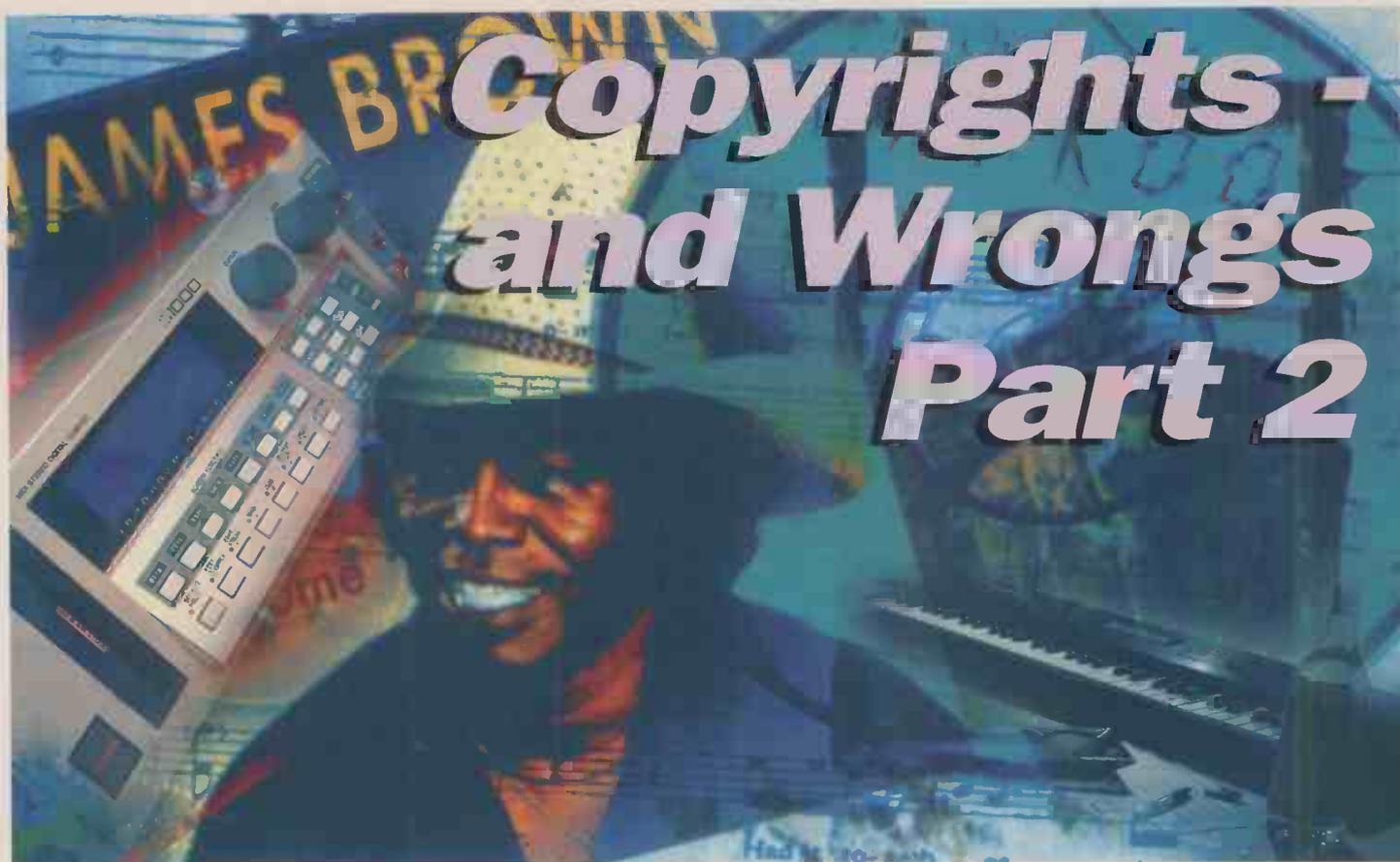
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**There are things you don't need to know about in life – like Brian May's taste in clogs – and things you do – like copyright and how it affects you. In the second of a two-part article, we look at the vexed subject of sampling and home taping...**

**Text by Anthony Braine of the MCPS**

Let's move now into the audio-visual world – and I use the term in its widest possible sense. Whether you are just about to embark on your first wedding video or David Putnam's latest venture, you may need to talk to us.

If you're a composer, you may already have composed music for an AV production of

some sort. At the bottom end, it may have been for a local production company producing a video for one of their corporate clients. At the other end of the scale, you may have written some pieces for the broadcasters. Whatever purpose your music has been commissioned for, it is typical, though by no means standard, that the company who commissions the piece obtains the copyright to it as well.

For this reason, we as a company (MCPS) tend not to get too involved in this area. If your only form of exploitation, as a composer, is supplying music to this sector, membership of MCPS may not be relevant (though it still will be for the PRS, especially if it's for broadcast). If, however, your music was for a broadcast production and the broadcaster decides to release it on video or record, then MCPS membership should be considered.

Let's now look at the situations where you may use music as a producer. I use the term producer here in reference to anyone making an AV production. As far as we are concerned, there are basically three types of music a producer can use in a production: commissioned, commercial or production/library music. Commissioned music was covered above and is usually an agreement between the producer and the composer. Commercial music is anything you can buy in a record shop; as any good record sleeve will tell you, re-recording a record without a licence is illegal. This applies to both the

music and the original sound recording. Even if you, as a producer, use it in the off-line stage (the rough edit) to see how the music fits the visuals, if you do not have the licences, it is theoretically illegal.

So how do you get a licence for the musical works? Firstly, you come to us. We have a team of Licence Negotiators whose job it is to negotiate between the producer and our member to arrive at, hopefully, an agreeable rate. Because we know who to contact and where to contact them, we can often save the producer a lot of time, trouble and even money. This is a service free to producers, but one we can only carry out on members' music. Be warned though: commercial music can take a long time to clear and can also be expensive as there is no fixed rate. A producer recently told me of a quote he was given to use a piece of music from the '60s. For 30 seconds it came to £40,000! This is an extreme example, and most tracks come in the hundreds rather than thousands.

Now let's complicate things a little. Last month, I mentioned that not only is there a right in the music but also in the sound recording. So, whenever you need to use a commercial record in a production, you will also need to get the permission of the appropriate record label. This will incur a separate fee to the label.

Now for production/library music. There are a number of companies up and down the

country who produce a wide range of discs of both music and special effects for use in AV productions.

So, how do you get to use it? Well, the vast majority of production music libraries are our members and we therefore license their works. If you want to use production music, you have to sign a code of conduct with us giving you permission to do so. This code allows you to record any production music into your production before you come to us for a licence. Once you have signed the code, you can approach the libraries for a selection of their discs.

These are supplied to you free of charge, you only pay for them if you use them. As for the charges, these are fixed depending on the end use of your production. For example, 30 seconds of production music on a video for showing to a non fee-paying audience (ie. your average company video) would cost £15 – which is somewhat less than £40,000.

One other point about production music is that we also control and license the sound recording right, unlike commercial music. Licensing the music through us also licenses the sound recording and incurs no extra charge.

ourselves and the BPI welcome any information from the public about anyone involved in these criminal acts.

And now: sampling! Hardly a month goes by without *Music Technology* printing an article on a sampler-based act. As we all know, samplers are very powerful tools offering many creative possibilities. However, these machines have no scruples and accept sounds from any source.

Although the new copyright act does not mention samplers, it does in general restrict the unlicensed recording of any recognisable piece of copyright music and sound recording. There is a widely held un-truth that as long as you don't copy more than eight bars, you are in the clear. Wrong! The important word here is 'recognisable', and as I often tell people, Beethoven's 5th Symphony can be recognised within four notes.

Pop music history is already littered with examples of out of court settlements as a result of unlicensed sampling. I have also heard, anecdotally, that there is someone gainfully employed at Polygram Records to listen to new releases for the James Brown 'scream' that's on just about every other dance record.

As a result, record labels and publishers are trying to get together some form of code of ethics on sampling. In the meantime, if you are releasing a work which includes samples of other people's records, get them cleared through the labels and the music copyright owners. Don't think that releasing it only through your local record shop is the answer – just ask DNA what happened when they tried it with their version of 'Tom's Diner' shortly before the A&M rep visited the shop. They may have got a number one, but it cost them.

I'll close the issue with this thought. You're in a band and you're in a 24-track studio making your first single. You've set up your drum kit and the engineer has spent most of the day miking it up to get you 'that sound'. Just think of the cost, time and effort of all that. Somebody in their bedroom studio then buys the record and in half a second or so loads the snare sound into their Akai S950 for the latest dance hit. How would you feel about that? (*Answers on a postcard – Ed.*)

If you have read your way all through this article, then I'm going to assume you are interested in membership. Don't worry, this won't take long.

Membership of MCPS is quite simple. All

you basically need is one composition fixed in any material form, be it record, tape, manuscript or any other, which can be commercially exploited by sales to the public. Obviously you also have to be the copyright holder of that work. Membership is free but we earn our living by deducting a small commission, between 5% and 15%, from any royalties we collect for you. The idea behind that is that if we don't collect any money for you, we don't get paid.

There are cases, though, where membership of MCPS is not relevant. For example, if you have assigned your works over to a publisher who is a member of MCPS, you wouldn't need to join us individually for those works. PRS, though, do require their publisher members to have their composers as individual members also. However, there are cases where a composer has individual MCPS membership, for compositions which are not assigned to any publisher.

Once you are a member, we will license the recording of your works. As you have probably gathered, that's not just a matter of legalising a record for sale in the shops. Once licensed, we will collect the royalties due and then pay them onto you. However, membership of MCPS is anything but a get-rich quick scheme. Royalties are out there, but they are not in the abundance that others would like you to believe.

If you feel you are interested in joining, please contact our Membership Department. They will be happy to assess your situation and advise as to whether membership is relevant.

And that's it! As I said at the beginning, copyright is rather a dull subject. But I also said it was essential and ignorance of it can be costly. I hope this article has shown why. If you want to take anything further, the following three contacts may be of use. ■

## Contacts

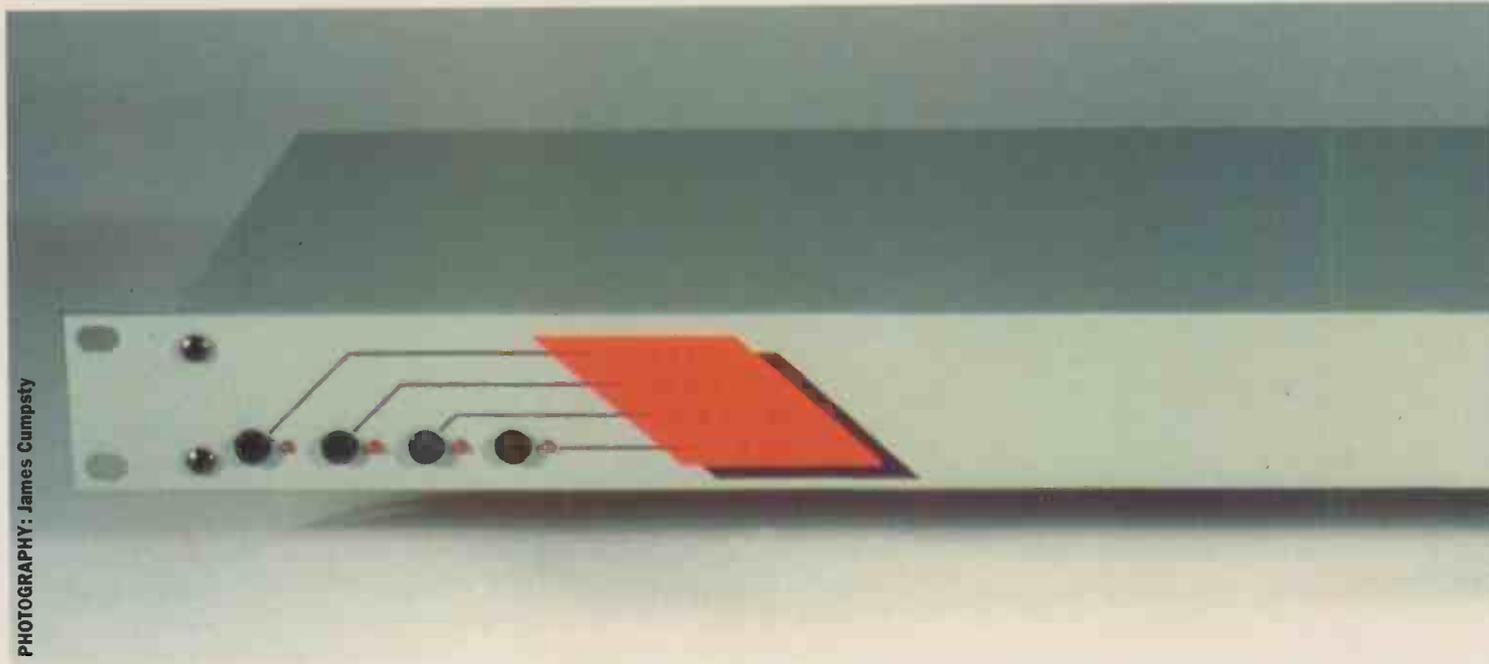
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Tel: 081-769 4400

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Tel: 071-580 5544

**Phonographic Performance Ltd**  
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Tel: 071-437 0311

# CM Automation

## MX-816



**Text By  
Vic Lennard**

**Why it's taken so long for MIDI control to be incorporated into mixing desks remains a mystery. But now it's here, choices have to be made: do you risk losing your shirt selling your existing mixer second-hand or do you bring it up to date with a little add-on automation...?**

**W**hilst it's great to see companies like Allen & Heath and Soundcraft now starting to incorporate VCAs (Voltage Controlled Amplifiers) into their recent budget mixer designs, it is of little comfort to those who could benefit from this kind of MIDI control, but who are saddled with conventional desks. There are, however, a couple of ways of overcoming the problem. The first is a VCA retrofit which, though generally giving excellent results, will probably cost more than the mixing desk itself (and it is doubtful whether the noise threshold of

most desks is low enough to justify such a retrofit).

The cheaper method is to use an external unit which connects to the mixer either through the line inputs or the insert points. One such unit – the MX-816 – has just been developed by CM Automation in the USA and brought over to this country by AMG – better known, perhaps, for their sample discs and sound cards.

As you might imagine from its rather utilitarian nature, the MX-816 is a fairly uninspiring piece of kit to look at: a standard, grey coloured, 1U rackmount – with few visual indicators as to its precise function. It is available in two versions – 8 and 16 channel – with the option of upgrading the 8 channel version to 16 through the simple addition of a circuit board.

Connection hardware includes phono In and Out sockets mounted in pairs on a plastic block with a single screw holding it to the rear panel. I say 'holding', but in fact, pushing phono plugs a little too hard can lead to the sockets disappearing through the rear panel! Perhaps the review model had been (mis)handled by various other people before I got hold of it, but relying on plastic screw threads to withstand the pressure imposed on phono sockets when inserting plugs seems a mite optimistic to me. Having said that, I suppose you could argue that once in place, the unit is unlikely to be connected and reconnected very often, so this problem shouldn't arise.

Power is via an external unit – presumably to keep noise

and hum levels to a minimum – the only other sockets being Sum Out and the mandatory MIDI In and Out. I was a little concerned to read in the manual that pins 1 and 3 of the MIDI In socket are used to provide 9VDC phantom powering for “future expansion”. Such a system is likely to be proprietary and certainly not part of the MIDI Specification. Consequently, great care must be taken to ensure that only correctly wired MIDI leads are used with the MX-816.

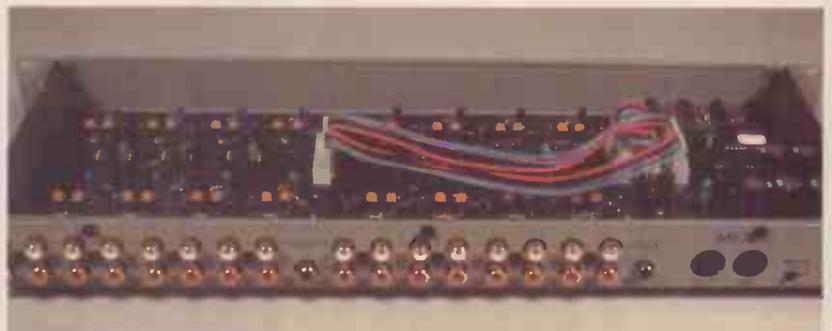
to set up all other channels for consecutive MIDI Controllers. Once done, you have your basic MIDI automation system up and running and ready to do your bidding.

**T**here are many occasions during recording and mixdown when you need to set up channel volumes and recall them instantly. To this end, the MX-816 has 100 Snapshot Scenes which will capture all current levels and can be recalled via the relevant MIDI Program Change number. Additionally, you can determine the fade time taken for current levels to change to the levels for a recalled patch. CM Automation have developed a rather clever system for this: once you have the levels as you want them, you press the second button to enter 'Patch' mode, and then hit any key on a keyboard as many times as you want the fade up time to last in seconds – to a maximum of 30.

Both the levels for a Snapshot and the fade time can be adjusted for an existing patch simply by entering Patch mode again. You can also clear the current memory, and return all faders to an open position by pressing and holding the 'Max' button for two seconds.

But while moving between snapshots and using the fade function may be fine for 'scene changes', what happens if you want to fade all channels in or out? What if, for instance, you require a 20 second fade out at the end of a song? Well, the MX-816 has 28 pre-programmed fades which act on all audio channels simultaneously and are accessed via MIDI Program Change numbers 101 to 128. Even-numbered Program Changes handle fade ins while odd-numbers deal with fade outs. Thus, Program Change #101 provides a two second fade out, Program Change #102, a two second fade in – and so on, in two second steps up to the maximum of thirty seconds.

What makes this a little awkward is the fact that a fade time is based on the full travel of a fader. In practical terms this means that the audio on some channels will disappear sooner than others,



dependent on the current fader position – although the high attenuation range of 98dB means that the effect of this is not all that apparent.

One particularly innovative idea is that of panning snapshots. By using the MIDI Controller directly above that

## Getting It Into Your System

The simplest way to connect the MX-816 is to route the outputs from your synths, multi-track recorder, effects units and so on, into the inputs of the unit, and route its outputs to the Inputs of your desk. As any noise generated by the unit will be amplified by the desk input circuitry, this method may produce slightly higher noise levels than would occur using your mixer's insert points as a means of connection. But in practice this was found to be negligible.

As for the front panel, this is a very sparse affair with just four function buttons and their associated LEDs to show you when each of these are active.

**T**he MX-816 is essentially a 'dumb' unit: it has to be sent MIDI Controller messages to operate the VCAs. These can be provided from a hardware unit such as the JL Cooper FaderMaster or from the relevant page on many sequencers which allows you to output MIDI information from the movement of on-screen faders. Either way, the MX-816 requires you to set up a number of faders (8 or 16) each with a different MIDI Controller number – the only proviso being that they must be consecutive.

To some MIDI users, this may prove a little difficult to get used to. Most MIDI Controllers have specifically defined applications. For instance, MIDI Controller #1 is defined as Modulation and MIDI Controller #7 is Volume. Where the MX-816 is concerned, however, it ain't necessarily so. But while the system used by CM Automation does appear to ignore the precedents established for MIDI Controllers, it has the advantage of letting you use low numbered Controllers which many sequencers are able to 'chase'. Consequently, you can start a sequencer in the middle of a song and have it send out the correct automation settings immediately.

Hitting the first button, 'Fade', and moving the fader for the first audio channel is all that is required for the MX-816

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Neil Conti may be familiar to you as **Prefab Sprout's** drummer but he is also one of the UK's most respected session drummers and a main mover behind London's Backstage jam sessions at the Borderline. He has worked with the likes of **David Bowie**, **Robert Palmer**, **Annie Lennox**, **Primal Scream**, **Thomas Dolby**, and many more. ■ This CD was specially recorded by Daniel Lazarus at London's famous **Metropolis Studios** and features some of the most serious breakbeats ever recorded. ■ These drums breaks have real attitude and are sure to become classics. ■ The CD also features specially extracted single hits that you can use in perfect context to customise breaks for yourself plus a selection of much sought after **hi-hat patterns** to inject a human touch into any production. ■ **Funky Drums from Hell** should be available by the time you read this for just £49 fully inclusive.

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JJ Jeczalik has pioneered the use of sampling in modern music. From his early work as part of **Trevor Horn's** team working on **ABC's Lexicon of Love**, **Frankie's Relax** and **Two Tribes**, **Pet Shop Boys** early LPs and of course his own successful career as a member of **Art of Noise** he has always worked at the cutting edge. Aside from his commercial success **Art of Noise's** 'Beatbox' even topped the US dance charts. His CD includes samples culled from his **Fairlight** library that have inspired a generation of samplers right through to new samples appearing for the first time. Expect the unexpected - due for November release.

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**Input Impedance:** 20 kohm

**Output Impedance:**  
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VCA chips: dbx 2150A

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for the highest numbered fader, a 'Joystick Fader' can be defined. When this Controller is set to its highest value (127), all levels are taken from the current scene; when the Controller has a value of 0, all levels are derived from the previous scene. Any value in between will set a balance between the levels for the two scenes.

Of course, the MX-816 can also be used as a straightforward MIDI muting device, and given the innate noise levels of some sound modules, this is likely to prove extremely useful in many recording setups.

Muting is carried out through the use of MIDI Notes On and Off. The final button on the front panel, 'Mute', allows you to set up one of three possible modes: Toggle Mode ignores Notes Off - a MIDI Note On mutes and a subsequent MIDI Note On unmutes; Gate Off Mode uses the Note On to mute and the Note Off to unmute; Gate On Mode has this the other way round and uses Note Ons to mute and Note Offs to unmute. The point of the last method is to allow you to effectively 'play' a device which you are trying to quieten. For instance, a noisy synth can be permanently muted and only unmuted when you hit, and hold, the note on the keyboard.

All three modes require you to set a Base Note for Audio Channel 1, after which all audio channels are numbered consecutively. The note above the highest one required is used for globally muting the entire unit.

All edits are saved to an internal EEPROM (Electrically Erasable Programmable Read Only Memory) chip which should hold data for ten years or more. However, all data (Fader and Mute Set-up Tables, Snapshot Scenes) can also be output to a librarian device either as a bulk dump or per snapshot (in the case of the snapshot scenes). Similarly, the current status for individual faders can be requested and this opens up the possibility of dedicated computer editors/controllers being written for the MX-816.

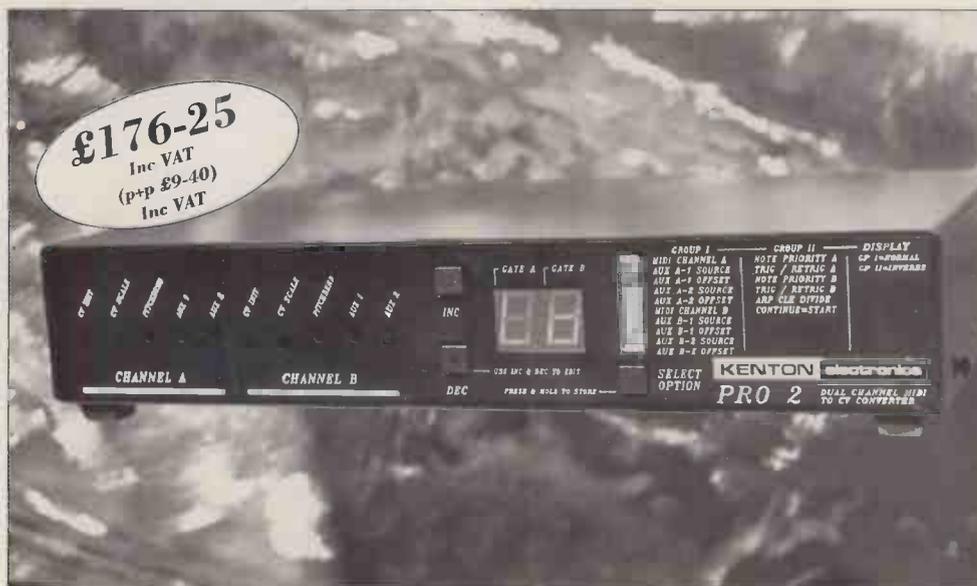
The MX-816 is not expensive for what it offers. The facilities included - and their implementation - are well thought out and easy to use in practical terms. If you have a particularly quiet mixing desk you will probably notice a slight increase in hiss level once the MX-816 is connected into the system, but if you are using a number of synths or sound modules, the level of noise is likely to be less than you usually have to put up with anyway!

As I pointed out earlier, for those with otherwise adequate mixing desks who watch with consternation the development of ever-cheaper MIDI-controlled designs, the range of options is not great and the MX-816 could well be the answer to their dilemma. Certainly, for anyone working to a budget, the ability to semi-automate an 8 or 16 channel desk for less, respectively, than the price of a typical expander or synth is not to be sniffed at.

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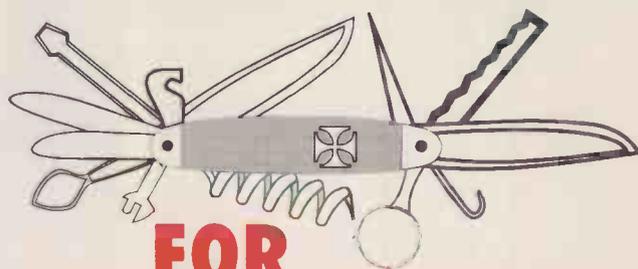
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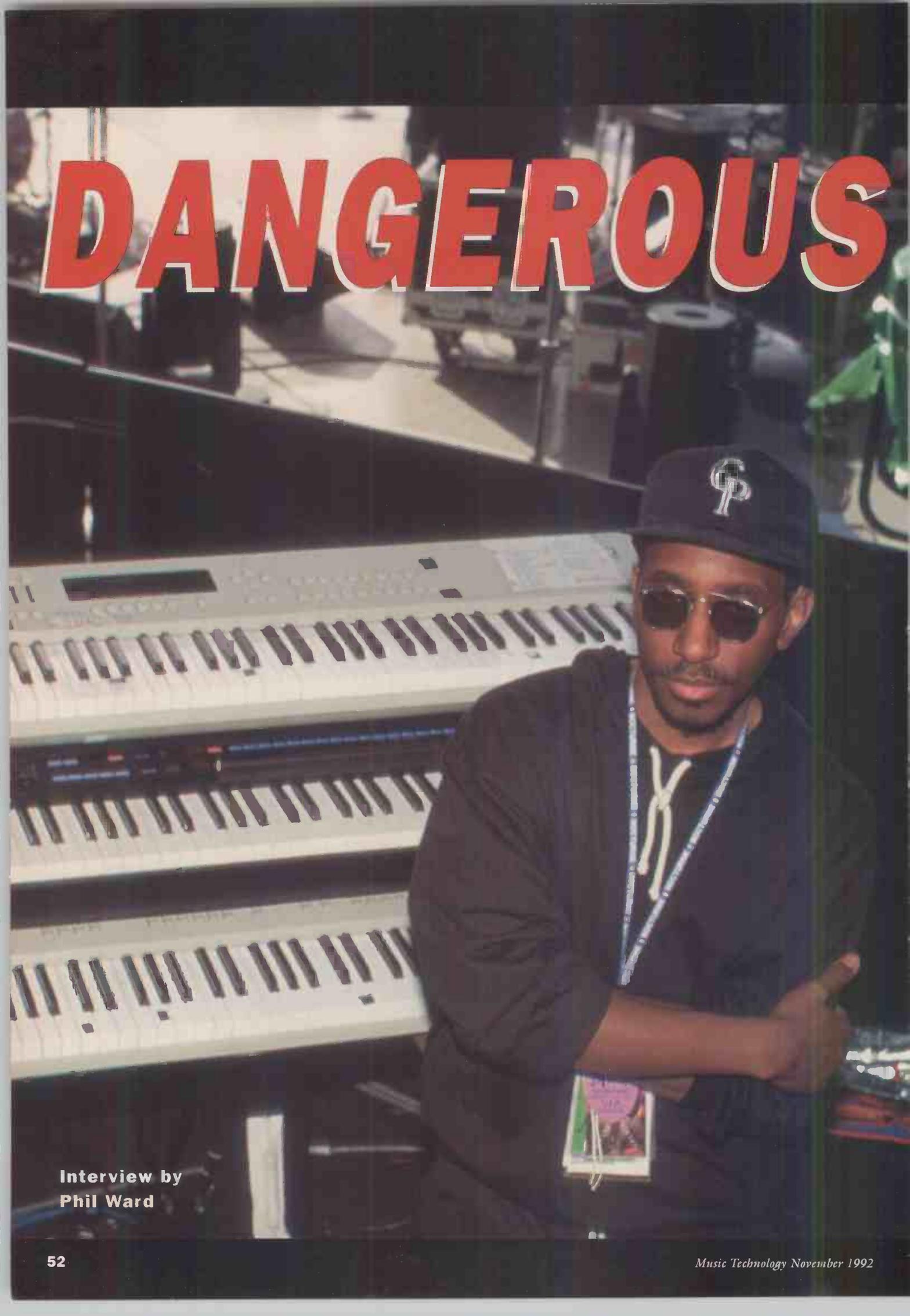


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# DANGEROUS



Interview by  
Phil Ward

# l i a i s o n

**You're the most successful pop star in the world. You're about to undertake one of the biggest tours in history. Who ya gonna call...?**

Wembley stadium, late afternoon. Teams of fit-looking men in shorts are running around. Managers look anxiously on from the sidelines. A battle of skill and stamina is underway, and there's some fancy footwork to be seen at one end of the pitch.

But, of course, there's no ball. The feet belong to the dancers, the shorts belong to the roadies, and the battle is literally to set the stage for the arrival of Michael Jackson in front of 70,000 adoring fans. It's one of those tours in which statistics begin to play a star role. 1,000 tons of equipment. 500lbs of laser projection units. 225,000 watts of power for the video system alone. 115 channels of sound. 180 cabinets. 10-15 miles of cable. 33 trucks, 13 tour buses, and 160 permanent crew. Meanwhile, somewhere in Fulham, a band arrives at The Swan with three Vox AC30s and a drum kit in the back of a Transit...

But this is no ordinary gig. The set list, for example, comprises a string of original numbers whose combined sales on record exceed 100 million. For each album, there is a set and costume change to reflect the different stages of Michael Jackson's recording career, including a nostalgic sequence dedicated to The Jackson Five. (For this, understandably, there are no costume or make-up alterations.) And for each note, each beat and each chord of the music, one man is ultimately responsible.

That man is Greg Phillinganes – a diminutive keyboard player who has developed a taste for the mega-gig on previous tours with the likes of Jackson, Stevie Wonder and Eric Clapton. And as the entire edifice takes shape before us, we sit in Block H, Row E, seats 12 and 13 and discuss Everton's use of the off-side trap. Or we would have done, but for the fact that Greg is an American and thinks that footballers are meant to wear crash helmets. So our conversation begins by my identifying him by his official title of MD...

“MD?” I ask, whatever that means... well, it could be a medical term, but in this case I am the Musical Director, which simply means that I translate whatever Michael wants musically to the rest of the band, and just kind of make a smooth line of communication between the two parties. It's a matter of making sure that all the parts are right, and that every song is ultimately the best it can be.

“It's mostly live, and the translation isn't difficult because even though a lot of the parts were sequenced on the records, we're not talking about difficult parts. They were sequenced, I guess, as a matter of preference, but that doesn't mean they can't be played live. And I figure if you have six

people on stage with instruments, they ought to be doing something. So that's my policy. Along with all the special effects and gizmos, all the extra stuff that goes on in the show, it's nice to have certain fundamentals of live playing still functioning.”

Considering his training as a classical pianist, performing with the Detroit Youth Symphony Orchestra, and his residency in the upper echelons of the LA session scene since joining Stevie Wonder's touring Wonderlove band in 1975, you can bet your buttons that Greg Phillinganes' fundamentals of live playing are, to say the least, still functioning.

“The record feels good, and you want the show to feel good. Some of the arrangements have been changed to protect the innocent. We've changed them mainly for the purpose of accommodating any extra dance routines, so we'll have extended sections in the middle of a song.”

At this point, the first of a couple of communication breakdowns occurs: I have with me a list of keyboard players on the tour, and mysteriously Greg is not one of them... “Really? Well let me assure you there are two keyboard players, and I am one of them. Here's the other keyboard player now.” At this point, our attention is distracted by the arrival of bits of the Thriller set. The crew are manhandling a huge polystyrene sarcophagus, on which rests the gaunt figure of a particularly gruesome skeleton. It's clearly been an exacting tour. Greg responds:

“He's been working a lot with the crew lately, but he's in great shape. Actually the other keyboard guy is Brad Buxer, and the last time I saw him he looked a lot better than that...”

“I'm using four keyboards on stage, and rackmounted equipment behind that. Brad plays most of the sampled sounds, and I play most of the main piano and keyboard parts – some string sounds, some horn sounds. Things are divided up pretty equally. I use a KX88 as the main controller; on top of that is an M1, and to the right there is what will be an 01/W Pro – I've been using just an 01 up until today, in fact, so this is hot news! On top of that is a D50, and then I have a rack of equipment behind me – sundry modules.

“The entire 01 line is just great, it really is. They have very effective

***“I am the Musical Director – which simply means that I translate whatever Michael wants musically to the rest of the band”***

sounds, and they're easy for me to program; if someone like me can program a synth, it really is easy, I can tell you that right now! All the patch changes I do from the KX88. If there's any problem I have my crack sidekick, Dave Benson, to back me up, ever at the ready. It's a crack team – as opposed to a team that's on crack.”

Heaven forbid. The phrase ‘mostly’ live prompts an inevitable question... “Yes, there is a click track which goes to Ricky Lawson (the drummer), and the things which are triggered are usually extra percussion sounds, but for the most part it's us. Ricky uses a lot of Akai stuff for the samples, and he takes care of all the drum and percussion sounds. But then, he's done this

» before, you know! We were both on the Bad tour.”

At this point in the conversation, we are confronted by communication breakdown number two: I begin to formulate a question based on the observation that Ricky Lawson MD'd that last tour... "What are you talking about? I was MD both times! Wrong information, Phil." In my defence, I produce the official press handout, which clearly backs me up. There is a pause, and then a very musicianly response from Greg: "Record companies. What do they know?"

**G**reg Phillinganes is indeed a musician. And he exhibits a musicianly caution when it comes to describing his craft in words. He also has that lingering trepidation of the musician when confronted by what might be conceived as encroaching technology. It takes a while to come to the surface, but in discussing the high-tech requirements of this tour he leads the conversation to a point where the lines are clearly drawn.

**Equipment List**

**Keyboards**

Korg 01W Pro, M1  
Roland D50  
Yamaha KX88

**Modules**

Korg M3R  
Wavestation AD, A3, Ex8000  
Akai S1100  
Roland D550, MKS70,  
MK580  
Yamaha TX816, TX802  
E-mu Proteus 2

*"Along with all the special effects and gizmos – all the extra stuff that goes on in the show – it's nice to have certain fundamentals of live playing still functioning"*



"In general, this kind of setup is no problem unless you – how can I put this – unless you don't know what you're doing, but I don't want that to sound arrogant. What I mean is that it can be a problem if you're not aware of certain ramifications. The thing is to know what you yourself are capable of playing, especially within the realms of what everyone else can play, so that you will know what you don't need.

"That way, you're not doubling parts, or doing extra things that will end up cancelling out others because you're doing too much of the same thing. Its just knowing what everyone's capabilities are so that you don't sound like you're playing to a click track. The click track – and the sounds that are synchronised with it – will be the icing, a luxury, but won't sound as if it's controlling everything."

Does everything become too mechanical if you do sound as if you're playing to a click? "It can, but that depends on the tightness of the band, and the kind of understanding that you have with them, and the mentality involved; the mentality of everyone in the band. It doesn't have to be that way. That understanding is the ground rule, the bottom line, between you and the rest of the band.

"Michael's music is becoming more and more street-oriented, but I don't think it's becoming based on technology. It's getting more of a raw edge to it, but the technology is about the same. It may be sounding more 'hip-hop', but that's to do with musical genres as opposed to technology. To me, there's no ground-breaking stuff going on technically – at least, not that I'm aware of. The technology that we're using is definitely sophisticated, but we use it only to embellish, really, what we're doing musically. I don't like being taken over by technology. I'm fascinated by it, it's great, but I only use it as an aid. It's not the primary ingredient.

"I don't think that hip-hop has come out of technology; it's come from combining different musical rhythms and then using the latest technology to bring that out. I think that the technology arrived at a point where it was more convenient for hip-hop musicians to work with, to adapt to their music, but not the other way around. Budding technology was around during the disco era – not at the level that it is today, but it was around, emerging more

just after that in the early '80s, and you could say that there are other genres that grew out of it, too; but I wouldn't agree. I think it's just that the technology has grown to a level of sophistication where it's more of a convenience.

"It's an advantage and a disadvantage at the same time, because more and more kids are going straight for the drum machines and the sequencers, and they're practising less. Before that stuff you had to practise. This is not to put down anybody whose playing ability may not be the same as another musician who practises, because it's a great tool. I'm just saying that, at the same time, you have to be careful that the technology doesn't take over.

"That's what I meant earlier, that's the down side if it. Yeah, it's a convenience, it gives you adaptability, and it's developing a closer relationship with whatever music you're doing, but... I mean, if there's any genre that's grown directly out of technology I would say it's techno music, stuff they were doing in Germany in the '70s and early '80s, groups like Kraftwerk. And there was Yellow Magic Orchestra, who were expanding on that too. Maybe some dance styles, like house music, go back to that, but not really Michael's music."



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Last Christmas.....George Michael	Merry Christmas Everybody.....Slade
Winter Wonderland.....Bill Spectre	Frosty The Snowman.....Bill Spectre

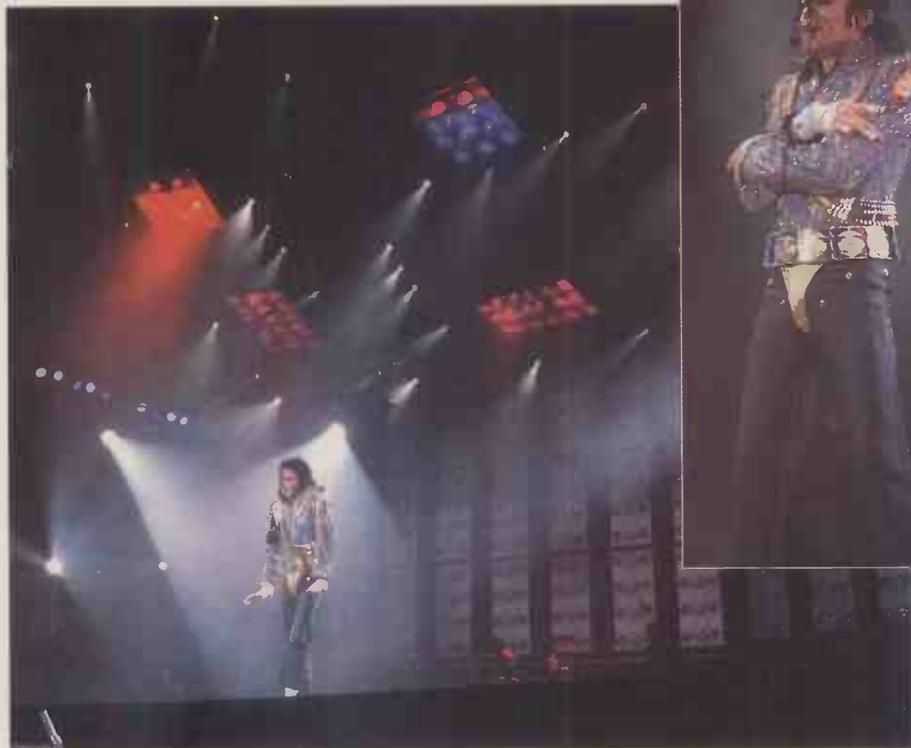
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*“Michael’s music is becoming more and more street-oriented, but I don’t think it’s becoming based on technology. It’s getting more of a raw edge to it, but the technology is about the same”*

» Our particular little corner of Wembley Stadium is gradually becoming engulfed in the kind of sounds you might expect with the construction of a stage 260 feet wide and 90 feet deep, and a PA system producing 240,000 watts of power. It’s easy to imagine quieter spots for an interview. The middle of the Blackwall Tunnel, for example. Greg raises his voice as a truck reverses by, full throttle.

“This is the kind of ambience we want! The noise of hard labour! Lots of sweaty guys running around! Lorries and fork-lifts everywhere! Steel! No girls, though, which is kind of sad. Hang on, there’s one I’ve seen before...” Yes, he has met her before – once or twice. It’s Jennifer Batten, the striking lead guitarist in his band. She and her hair-do are settling into a nearby seat for the purposes of another interview. No doubt about it, the Michael Jackson show has rolled into town. Between pantechnicons, Greg continues his analysis of running the most high-profile band of the moment.

“So it depends on the precedent that you set with the band; the goal that you want to attain. It doesn’t have to feel mechanical at all, it doesn’t have to have that rigid feeling. You can still develop a feel within a click track. People say ‘how can you play the same thing night after night?’ but it’s no different from any other job that you have to do repeatedly. If you enjoy it, you are able to expand on your own creative boundaries. It’s the same as a Broadway show; people do that night after night and there’s a discipline, quite frankly, which you get from that. Everything doesn’t always have to be loose.”

There is the faintest hint of defensiveness about Greg’s insistence that such a strictly choreographed show is still a worthwhile exercise for a musician. Perhaps this is the response of a virtuoso pianist seconded to a pop project occupying the most main of streams. Perhaps the tour has simply attracted too much non-musical interest. This is, after all, the second consecutive day on which The Daily Mirror

has published an unflattering front page photograph of the star of the show, whose reputation as a songwriter has long been eclipsed by his medical record.

“It’s different from playing with someone like Eric Clapton, that’s for sure. That’s a completely different thing; the music’s different; the band is different; the setup’s different. I’m not saying it’s better – it’s just different, like apples and oranges. So this is a slightly different challenge, but it’s still fun. People do try to make it sound as though this could be a bad tour to do, but if it was that bad I wouldn’t be here. I have a choice in this, you know. I wasn’t sentenced to it.

“I just like big productions; I like playing in stadiums, I like the whole ambience of it, the excitement of it. OK, we’ve done it 800 million times, but the audience is new in each city we’re in. They’re seeing something for the first time, and you want to give it that freshness; you want to display that kind of excitement. The show’s the same, but the crowds are different from show to show, and because of that you have areas of give and take. Those aspects will keep the show fresh, in general.”

### Recommended Listening

#### Sessions

- SONGS IN THE KEY OF LIFE  
*(Stevie Wonder, Tamla Motown 1976)*
- BISH! *(Stephen Bishop, MCA 1978)*
- HEART STRING *(Earl Klugh, Liberty/UA 1979)*
- GIVE ME THE NIGHT  
*(George Benson, Warner Bros 1980)*
- BLACK & WHITE *(The Pointer Sisters, Planet 1981)*
- EVERY HOME SHOULD HAVE ONE  
*(Patti Austin, Qwest 1981)*
- RAISE *(Earth Wind & Fire, Columbia 1981)*
- WHATCHA GONNA DO FOR ME?  
*(Chaka Khan, Warner Bros 1981)*
- IT THAT’S WHAT IT TAKES  
*(Michael McDonald, Warner Bros 1982)*
- THE NIGHTFLY *(Donald Fagen, Warner Bros 1982)*

- THRILLER *(Michael Jackson, Epic 1982)*
- HEARTS AND BONES *(Paul Simon, Warner Bros 1983)*
- FINDER OF LOST LOVE *(Dionne Warwick, Arista 1984)*
- WE ARE THE WORLD *(USA For Africa, Columbia 1985)*
- THE COLOR PURPLE *(Film soundtrack 1985)*
- BEHIND THE SUN *(Eric Clapton, Duck 1985)*
- AUGUST *(Eric Clapton, Duck 1986)*
- JOURNEYMAN *(Eric Clapton, Duck 1989)*
- COMPOSITIONS *(Anita Baker, Elektra 1990)*
- DANGEROUS *(Michael Jackson, Epic 1991)*

#### Solo albums

- PULSE *(Planet/RCA)*
- SIGNIFICANT GAINS *(Planet)*

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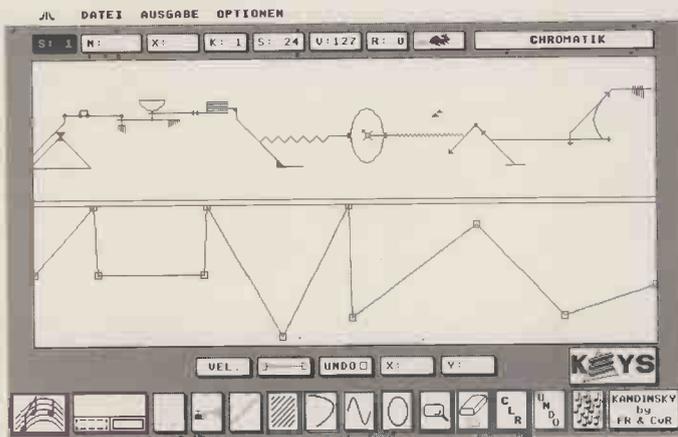
# Swift Halves

## Kandinsky Music Painter

Text by Ian Waugh

How much fun can you have for £2.80? If the answer's printable, write to the Ed; if it's not, write to me. And in any event write out a cheque for said amount and get hold of a copy of the Kandinsky Music Painter. What is it? It's a music drawing program for the ST; you draw shapes onto the screen (mono only) which it turns into music and plays over MIDI. Neat.

The program is written in German but there is an English translation on the disk in not one, but three, different formats – Ascii, Protex and Timeworks. There are two screens – Play and Draw – the top half of the Draw screen determining the note pitches and the bottom half the velocities. Parameters such as MIDI



Never mind the music, look at the score.

channel (it only uses one) and program change number are also set here and you can select various drawing tools including points, lines, a spray can, boxes, curves and ellipses.

As you move the mouse, one box shows the current note pitch and another shows the horizontal position of the cursor. And so you draw your musical masterpiece on the canvas of the world – well, onto your ST's monitor. Entering velocity values is carried out by clicking in the velocity area of the screen. This puts small squares into the display which the program thoughtfully joins up so that you can produce gradual velocity changes as well as jumps.

The drawings tend to look like avant garde music notation – and sound like it, too – although you can produce quite 'harmonic' results, verging on the melodic. When you go to the Play screen, the program replots your drawing from left to right, playing the music as it goes. You can alter the articulation here, too.

There are eight demo files altogether; the 'Ohms' ones tend to look the best but are not necessarily the best sounding. Some of the other files are much more melodic. The program's biggest drawback is that you can't save the result as a MIDI file – but what do you want for now?

Actually, you can save the results by using another program called MIDI Magnet (I found this on Goodman's disk GD915). This runs as a desk accessory and saves the MIDI output of a program as a MIDI file in format 0 or 1. The disk only contains a demo version of the program, however, and restricts the files to 8K in size. Still, that's not bad for a few bob.

Kandinsky itself is great fun and well worth exploring on a rainy day. So that's this weekend taken care of. ■

### INFO:

Price: Kandinsky Music Painter on ST Club disk MID 50 £2.80  
More from: ST Club, 2 Broadway, Nottingham, NG1 1PS. Tel: 0602 410241.

## Cheetah MD16 Sound Cartridges

Text by Nigel Lord

Though by no means lacking in onboard sounds, the Cheetah MD16 range of machines has, until recently, offered no means of expanding its base of forty-one voices covering basic kit sounds, Latin percussion and a couple of special effects. With the release of three new cards, however, MD16 owners now have access to a further eighty-five voices which expand the potential of their machine dramatically.

The cartridges are not all loaded with the same number of samples: *Total Percussion* has thirty-five, *Electro Kit* has twenty-four and *Kicks, Snares, Toms & Hi-hats* has twenty-six. There is also a substantial difference in price between *Electro Kit* and the other two.

Anyone familiar with the quality of the onboard sounds of the MD16s will no doubt be expecting the samples on the sound cards to be broadly similar, and indeed they are. But of course, when you move away from the more 'standard' sounds included on the machine itself, personal preference is bound to become a factor and colour your judgement.

That said, I can't imagine any one of the samples on these cards proving unpopular – unless you've grown weary with 808 or 909 sounds (and I wouldn't blame you if you had), examples of which are included on the *Electro Kit* cartridge. To set them off, this collection also includes a very useable Synth Bass voice, a nice rounded Orchestra Stab and an almost perfect Distorted Guitar Chord guaranteed to spice up any rhythm track.

A much more ambient feel is introduced on *Kicks, Snares, Toms & Hi-hats* – most of which have been recorded with effects to a greater or lesser degree. I particularly liked the Ambient and Monster Snares and the superbly unruly Bonzo Kick which appears to have a hi-hat tacked onto the end of it (or perhaps just left there). The toms are also impressive; beautifully dry and nicely tuned, they would be at home in any mix.

Of the three cartridges, I think my favourite is *Total Percussion*. Here you'll find all the voices you'd have liked on your MD16 but have had to do without. A full set of Low and High Conga voices – tone, heel and slap – together with Triangles, Guiros, Marimbas, Ocarina, Finger Cymbal – the list is long. Both tuned and untuned voices are covered and there's a nice selection of more off-the-wall

sounds such as Anvil, Plate Hit and Spike – all highly useable in a percussion track.

The sound quality of all eighty-five sounds is uniformly excellent and well up to the standard of the existing MD16 voices. And of course, the sound moulding possibilities opened up by the machine's



comprehensive programming facilities may be brought to bear on the cartridge voices in exactly the same way it is on the onboard sounds. The prices are perhaps a little on the high side, but if you use an MD16 as your primary percussion source, extending its sonic capabilities through the addition of one or more of these cartridges would make a lot of sense. ■

### INFO:

Prices: *Electro kit* £69.99 inc. Vat.  
*Total Percussion Plus and Kit, Snares, Toms & Hi-hats* £129.99 inc. Vat.  
More From: Cheetah International Ltd, Cheetah House, Bedwas Business Park, Bedwas, Gwent NP1 8DW. Tel: (0222) 867777. Fax: (0222) 865575

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# Akai S01 Sampler



**Text by  
Vic Lennard**

Seemingly coming out of nowhere, Akai's new sampler, the S01 has brought with it the promise of high quality sampling and a budget price. But is it the stuff that dreams are made of..?

Akai's name is synonymous with digital samplers. From the ground-breaking S612 in 1985 to 1992's flagship S1100 with its direct-to-disk recording option, the company have consistently been at the cutting edge of sampler design. Perhaps even more importantly, they've been responsible for this particular branch of technology becoming increasingly affordable. This may be due to research and development costs being shared between a series of similar projects, or (in part) to the current low cost of memory and processor chips.

Whatever the reason, the world of 'professional' sampling has just become a whole lot more accessible with the recent (and quite unexpected) release of a new, budget machine – the S01.

Given the power and the price of the other models in the 'S' range, the (relatively) paltry sum of £700 for this, the latest addition, would seem to indicate that it is some sort of cut-down S1000, or re-launched S700. But as we shall see, it is in fact neither of these, and ultimately, should only be judged on its own merits.

Finished in standard Akai grey, the 2U-high S01 has a distinctly professional look about it. Gone, however, is the ubiquitous LCD screen: editing has to be carried out on a much simpler three-figure LED display. The actual editing process takes place via a matrix-style parameter list printed on the front panel. This has seven columns with headings for the various editable 'areas' of the S01's processing system and up to four parameters per area. The first column, for instance, is titled 'Trim' and allows you to fine- and coarse-tune the Start and End points of a sample.

Movement between the various parameters is achieved by the use of just two buttons (for 'right' and 'down'



PHOTOGRAPHY: James Cumpsty

movements), and a Data Entry knob is used to actually change the parameter values. The S01 bears some relation to the S700 in its use of sample 'banks'; however, where the S700 had six banks, the S01 has eight.

The 1Mb of sample memory provided as standard on the S01 gives you 15.625 seconds of sampling time, at the instrument's fixed sampling rate of 32kHz. Adding the optional EXM01 memory expansion board doubles the sampling time to a more substantial 31.25 seconds – easily enough to get experimental with, although it doesn't mean you can load more than eight samples at once. Memory space is dynamically allocated between the banks; if you record a five second sample in bank one, the remaining 10.625 seconds can be split any way you like between the rest of the banks – two seconds for bank two, one for bank three – and so on.

The eight numbered buttons beneath the parameter list are responsible both for selecting the sample bank and playing back the sample in that bank – both functions actually occur simultaneously, so you know exactly what you are working on in what bank. The Record key next to these has two functions, the most obvious of which is to

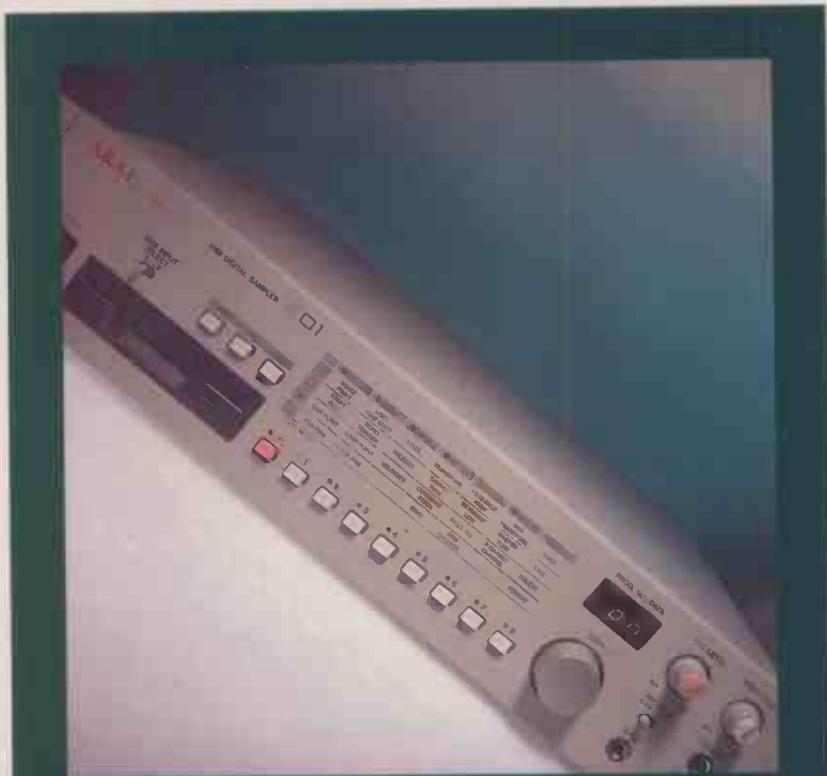
record the actual sample! Its secondary use is to operate the disk drive for loading and saving routines – accomplished by means of a set of parameters in the matrix.

Most of the features on the front panel are obvious, like the quarter-inch jacks for input, output and headphones, and rotary controls for volume and record level. The rear panel is similarly straightforward with four MIDI sockets (including two MIDI Ins, selectable from the front panel), trigger footswitch, audio out and IEC mains sockets.

**S**ampling is a very straightforward process on the S01. The sampler's audio input provides a choice of two gain levels, High and Low; High for mics, Low for line-level signals. To enter sampling mode, you simply hit the Record button once and set the Record Level control for ►►

### Spec

**Sampling Format:** 16-bit linear  
**Total Sampling Time:** 15.625 seconds with standard 1 Mbyte of memory, 31.25 seconds with optional EXM01 expansion board added  
**Number of samples:** 8  
**Polyphony:** 8 voices  
**Filter:** 8 x oversampling  
**Sampling Rate:** 32 kHz  
**Data Storage:** 3.5" double density/high density disks



## The Sample Library

'One of Akai's major strengths is the size of their sample libraries. The library for the S01 is currently being set up and by the end of the year should extend to some 250 disks, with more to follow. Even though S1000 samples are compatible with it, many new samples are being recorded specifically for the S01.

'Akai are also setting up a disk copying service for each dealer, who will be supplied with a set of master disks when these are released. Users can then either supply their own disks and copy library disks free of charge or buy pre-formatted disks from the dealer at a reasonable price and copy whatever samples they want.

►► optimum signal level, using the four vertical LEDs on the parameter list as a meter. As you can monitor the input signal via the output, it is also possible to hear when the input level is too high and causing distortion – so mistakes are easily avoided.

At this point, the display shows a threshold level between 0 and 100, which is used to dictate when the S01 starts recording. A value of zero puts the S01 into record mode the moment a sample bank is selected, while any value between 1 and 99 sets a 'threshold' above which the input signal must rise before sampling starts. A nice touch here is that the display flashes when the correct threshold has been attained, so allowing for very accurate setting up (important if the input signal has any inherent noise).

A value of 100 calls for sampling to be initiated manually, which is often necessary if the signal has a very fast attack that could be clipped in automatic recording mode. After setting the threshold, simply hold down the record button, select the sample bank that the sample is to be placed in and that's it – instant recording.

I'm sure some people will be rather concerned at the prospect of working with a fixed sampling rate of 32 kHz as this effectively restricts the audio bandwidth to between 14 and 15 kHz. But I have a feeling that a degree of pre-emphasis is at work here because the audio quality is excellent – clear and sparkling. Everything, in fact, you'd expect from an 'S' series machine...

Once the sample has been recorded, you can immediately play it back by pressing the relevant bank button (ideal for DJ's). However, attaching a MIDI keyboard lets you 'play' the samples in the proper sense of the term. This is an easy operation as there are only three parameters that have to be set – Keyrange High & Low and MIDI channel.

Editing samples on the S01 is a similarly easy process. Any unwanted audio signal at the beginning or end of the sample can be isolated using the Start and End Point parameters (both fine and coarse tuning is provided). And this of course means that only the exact part of the sample you want is played back. As you'd imagine, the S01 also allows you to remove the unwanted pieces completely – and there is an incredibly simple Truncate function for this purpose.

If a sample needs to be looped, the Loop Point parameter has to be set; the sample will play back from the Start Point to the End Point as normal – and will then return to the Loop Point, and play between here and the end point to form the actual Loop. (The looping can be set to on, off, or one-shot – meaning that the sample plays back for its full length regardless of how long you hold down the key.) Naturally, certain sounds are much easier to loop than others – drum and percussion breaks, for example, which I managed to get up and running in around ten seconds flat – it really is that easy.

Other sounds are not so cooperative when it comes to looping. Getting decaying samples such as a piano sound to loop is what one could term a black art, and it is in this area that there appears to be a serious omission. The one facility which made a good loop easy to obtain on the S900 was Autoloop, which with a little careful setting up gave excellent results very quickly. This was followed by Auto-Crossfade looping in the Version 2 software for the S900 (and continued in the S950) – making it possible to loop even when a natural glitch occurred. In fact, even the S700 had a basic autolooping facility. But not, I'm afraid, the S01: it's down to your own skill.

Once basic sample editing has been completed, various other parameters can be set. In the Level column there are options for adjusting the actual volume of a sample, which is useful for balancing the levels of the individual samples in the eight banks. The Release parameter can come in handy, too, and is particularly good for adding a 'pseudo-reverb' to certain sounds.

Pitch includes fine and coarse transpose, and constant pitch is also available – useful for placing hi-hats (etc.)

## Info

Price: Akai S01 £699 inc. VAT

More from: Akai Professional Musical Instruments Division, Haslemere Heathrow Estate, Silver Jubilee Way, Parkway, Hounslow, Middlesex, TW4 6NQ. Tel: 081-897 6388. Fax: 081-759 8268.

across a keyboard so that no matter which key you hit, the pitch is the same (...easier for those of us with large fingers). You can also determine whether or not a sample will respond to the velocity of an incoming MIDI note.

On the MIDI side, each sample can have its keyrange set. This allows you to define up to eight zones on a keyboard, each with a separate sample – an asset, clearly, for live use. And you can even set the keyrange by hitting the highest and lowest notes of the range you desire on the actual keyboard. Alternatively, each sample may be assigned an individual MIDI channel if you wish to use it as a fully-fledged multitimbral machine.

In addition to all this, each sample can be assigned a MIDI Program Change number. As different samples could be assigned the same number, you might use four samples for (say) a brass sound and the remaining four for strings – switching between them by sending single Program Change Commands from a sequencer or MIDI keyboard.

The S01 supports the Sample Dump Standard format for bulk dumping of samples via MIDI, so you can transfer to a wide range of samplers via programs such as Alchemy on the Macintosh and Avalon on the ST – if you don't mind the wait. Unfortunately, there's no SCSI port fitted.

**S**900 and S950 owners will no doubt be wondering if the S01 can read their sample disks. Unfortunately, the answer is no. As these samplers use a 12-bit format, and the S01 is 16-bit, they are incompatible. S1000 disks are supported, but because the S1000 uses 44.1 and 22.05 kHz sampling rates, the S01's coarse and fine transpose parameters have to be set to the relevant figures in order to replay the S1000 sample at the correct pitch. To this end, the S01 manual has a conversion table with various sampling rates and the necessary transpose figures. As tedious as this may be, Akai should be praised for keeping compatibility on the agenda and indeed, for supporting their machine with its own library from the start. They should also, I believe, be applauded for not showing it at countless exhibitions in prototype form simply to whet the public's appetite.

**A**kai are going to be selling S01s by the truck-load. If there ever was a machine released at the right time at the right price – this is it. It slots effortlessly into a range of different markets: there's the keyboard player who wants to get into sampling but who could never afford an S950. There's the DJ who wants an easy-to-use sampler which doesn't sacrifice audio quality. And there are the educational establishments who need to teach sampling, but not at the level demanded by the S1000. Finally, there are countless people who already own an Akai sampler and simply want more of the same! ■

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# E-mu Proteus 3 World



## Sample Player

Text By  
John Mercer

**What's nineteen inches wide, 1U high and reproduces the sounds of the Andes, the Serengeti Plain and the Australian Bush...?**

**T**he Proteus 3 is the latest addition to an already distinguished range of sample players with which E-mu seem to have cornered the market. Their first machine, the Proteus 1, broke new ground when it was released in 1989 – not least because of its sub-£1000 price tag. And when the Proteus 2 arrived, the general consensus amongst composers of classical/orchestral music was that at last their needs had been met.

Now E-mu have another specialist module which they have called (and those with a mathematical bent might have been able to predict this) the Proteus 3. Actually, its full title is the Proteus 3 World, which perhaps gives some clue as to the type of sounds it produces. Ethnic instruments – and lots of them. Over two hundred, in fact.

In many ways the new machine represents another leap for E-mu and one has to admire their courage in avoiding the temptation to develop yet another general sample/synthesis unit that includes the routine selection of electric basses, pianos and choir sounds. But then, it is having the confidence to make and sell specialist units such as this that has characterised E-mu's approach over the last few

years – in addition to the three machines in the Proteus range, there is, of course, also their excellent Proformance piano module.

**L**ike its brethren, the Proteus 3 is housed in a rather sleek 1U rack-mount grey plastic cabinet. Okay, the overall shape may be predictable – it has to be – but at least someone has put a little effort into making it more interesting than the usual black steel casing. It sports a fairly basic complement of hardware. On the rear panel there's a mains socket, MIDI In, Out, Thru and three assignable pairs of stereo outputs (one of which will drive stereo headphones). On the front there are On/Off, Master, Edit, Enter & Cursor buttons and two rotary controls – Volume and Data Entry. This latter control is of the stepped, continuous rotation variety and really does help make this an easy machine to edit/program.

Roughly in the centre of the front panel is a two-row, 16-character display of the type prevalent on many instruments these days and in use, somewhat akin to looking at a vast landscape through a keyhole. All the essential information is available, but you can only view it a bit at a time.

Proteus' basic sound architecture comprises some 211 instrument/waveform samples from which are derived 192 presets – 128 in ROM (ie. factory programmed) and the remaining 64 in RAM (ie. user programmed). In the XR version of the machine, the sample complement remains the same – as does the number of factory programmed presets – but there is twice the amount of onboard RAM.

In addition to the exotic range of instrument samples



PHOTOGRAPHY: James Cumpsty

(see sidebar), the Proteus 3 holds 22 harmonic waveforms, 21 single cycle waveforms and 24 digital waveforms – all sitting there waiting to be mixed with the instruments to produce the bizarre and often astonishing range of sounds this instrument is capable of generating.

The factory-programmed demo on the Proteus 3 is one of the most impressive I've ever heard. Though compositionally it's not likely to become one of the all-time classics, it does an excellent job of selling the unit (as all good demos should), and gives you a good overall impression of what can be achieved. But of course the only real test of what a machine can do is to connect it into a system and put it through its paces...

**T**he samples themselves are uniformly clear, rich in harmonics and really quite exciting – even when played as single repeated notes. This is particularly true of instruments such as the Tambura – an Indian drone backing instrument on which four strings are tuned to the Raga being explored by the main player. Because the Proteus has no built-in effects (apart from chorus) I found myself mixing in just a touch of reverb here and there to add a little ambience; some of the samples have natural reverb, of course, but I found a Large Room program (about 20%) improved them enormously.

As we have come to expect from E-mu, the samples are beautifully recorded, nicely topped, trimmed, looped, equalized – whatever. The real point is that they are convincing. I have spent many a happy hour (...or two, or three) in a certain shop in Neal St, London that specialises in the kind of instruments which are the source of many of

these samples, and was actually about to invest in a set of ringing bowls for a piece I am working on. This would have cost about £500 for a useable set of about eight. Guess what? They are included on the Proteus 3 – every semitone in clear crisp samples.

One thing very evident to me whilst playing the samples was the quality of the bass. I'd go so far as to say it is probably the richest and deepest bass I have heard on any sample player. Because a lot of it is rooted in the percussive samples, care is needed when editing – and also playing. Turn up the volume, hit a key with too high a velocity and you're likely to find your speaker cones shooting across the room. You have been warned!

The sound of a tabla is heard so often in music these days, I often wonder why it is not included as standard on most drum machines. Why, for example, it was left out on the Alesis D4 is a complete mystery to me. Anyway, here it is – every tap tap, tum tum, and whoop whoop – a competent set of voices that are very usable indeed. There are four basic sounds that can be played on the treble tabla and a combination of tone and pitchbends that comprise the bass or 'baya' sound.

As you'd expect, the slap and tone components have been sampled separately, so to use the instrument in the traditional way will involve learning a little basic tabla theory (or at least listening carefully to a good player to work out how these are used). Of course, like all the samples in this machine, there's nothing to stop you using them in whatever way you think fit – but you can't expect them to sound like the traditional instruments unless you know something of the way in which these are played. And to an extent, this is true of most instruments.

### Sound Structure

Each Proteus voice consists of two layers known as Primary and Secondary Instruments. Essentially, these are two complete sounds, either stacked or placed adjacent to one another, which can be layered, switched or crossfaded between. Additionally, each Preset can have up to three other Presets linked to it, allowing sophisticated multisplit and multilayer textures to be created. Each Instrument can be given its own volume, pan, coarse tuning, fine tuning, chorus and delay settings and can be routed through a Tone section (a basic filter controllable from velocity and key number), then on through a DCA whose level can be shaped by an AHDSR envelope. Up to six keyboard/velocity and eight real-time controller modulation routings can be programmed for each Preset, with virtually every Instrument parameter available as a modulation destination.



» As good as the basic sounds are, however, I can't understand why, like a number of the other instruments on the Proteus 3, tabla samples at different tunings weren't included. Okay, it is possible to transpose them, but this is seldom satisfactory, particularly at extremes of the natural pitch range.

Another tuning problem occurred with the sitars. As I am sure you are aware, these instruments use a lot of pitch bend to bring out nuances in the microtonal scales, and, whilst I had no trouble playing a very convincing solo with the thing, all the sympathetic strings which should just shimmer beneath it, actually bend with the string you're playing! There may be ways round this (using external instruments), but it seems a great shame they didn't get it right on the Proteus 3 itself.

It must be said, however, that this is something of an exception; most of the samples work very well, and I'm sure instruments such as the didgeridoo are going to find their way into many mixes. Percussion instruments are particularly well-represented with rich udo clay pot drums, Cuban bata drums (to name but two) and enough gongs to start your own Buddhist temple. Some of the special combinations were particularly impressive – the Punch Ocarina, for example – a combination of the lovely ocarina sound (which can be played like an Elizabethan organ with a few tweaks!) and a kick drum sample. Well, you have to hear it to appreciate it...!

The trumpet and horns section offers a relatively small range of sounds including trombone, trumpet and french horn. These, I feel, were a little unnecessary as they were included on the Proteus 2 and a great many other machines as well. By contrast, instruments like the shofars are wholly original in a hi-tech setting and help make the Proteus 3 the unique machine it undoubtedly is.

The santur was interesting too, but like the oud, mbira and a number of other voices, it is not based on a sample of a real instrument but was programmed from a combination of other samples and as such doesn't produce the characteristic ringing tone.

The plucked string section also provides some interesting additions to the collection – an excellent Jew's harp, psaltery, Celtic harp and dulcimer for example. Apart from anything else, these reveal that inspiration for this machine wasn't derived solely from the exotic east. E-mu haven't called it the Proteus 3 World without good reason and helping to broaden its appeal you'll find Irish harps, banjos, bagpipes and a medieval voice called Camelot.

If it's flutes your after, you won't be disappointed either. There are flutes in abundance here including neys,

ocarina and stereo siku. The closely-related pan pipes voice is probably the warmest sample of its type I have ever heard.

Apart from the aforementioned bagpipes, the Reeds and Keyboard section offers very convincing harmonium and shenai voices, and though I might quibble about the inclusion of yet more electric piano and clarinet sounds, there are undoubtedly some people out there for whom these would be welcome additions.

A number of fully-fledged synthesiser sounds have also been included. These have been created by blending samples and waveforms and then subjecting them to the gamut of Proteus synth and modulation treatments. Of these, 'On Land' deserves a special mention, as do Dream 1 and Dream 2 which make up in texture what they lack in imaginative titles. Film makers will almost certainly like them. In fact, many of these sounds could end up in film soundtracks with virtually no modification.

And speaking of sound-tracks there's the usual quota of special effects included in the list of presets. Like all such sounds, these are jolly good fun to listen to but generally of limited use when it comes to recording that difficult second album. That said, sounds like Fried Eggs,

Metal Cutter and Deep Sea Life do demonstrate the potential of the machine to manipulate sound in some quite amazing ways.

*"All things considered, the Proteus 3 is a pretty wonderful machine and should be of interest to anyone for whom the instruments of the world are simply colours on a broad palette"*

Programming the Proteus 3 is pretty straightforward – though no more so than the majority of current synths/expanders. Where it really scores is in duplicating the programming/editing system of the other models in the Proteus range so that everything you've learnt about operating one machine may be universally applied to all three. In these days of technological overkill and incomprehensible instruction manuals, the value of this is not to be underestimated.

The Proteus features 32-voice polyphony which allows you to take full advantage of its layering capabilities of up to eight sounds on each key. It is multi-timbral to the MIDI limit of sixteen channels – these being assignable to three stereo outputs for individual processing or configured as six separate polyphonic submixes.

All the Proteus sample players have a very elegant method of assigning voices to MIDI channels. In fact, it's so easy that going back to other equipment afterwards seems like hard work. Screens for each of the sixteen available channels show the MIDI channel you're working on, the preset's name and number, the volume setting and the pan position. Each of these parameters is

## Playing Techniques

If you want instruments to sound the way they were intended to in their original form you must make some effort to learn how the traditional instruments are played.

You must also know something of their sonic complexion. The ocarina, for example, sounds wonderful played as an organ, but it must be reproduced in mono. And the same applies to the Chinese erhu whose single string must also be played with lots of portamento to be at all effective.

One day somebody will invent an expression control that replicates the action of a bow. But until they do, we simply have to be very careful with the way certain voices are articulated and how modulators are applied. Like many sounds, those produced on ethnic/world instruments are often quite complex, sonically, and you will find yourself changing parameters and adapting your playing style if you are to make them sound in any way like the originals.

## Info

Price: Proteus 3 World  
£565 inc. VAT

Proteus 3 World XR  
£705 inc. VAT

More from: E-mu Systems Ltd  
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Eskmills Industrial Park  
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variable using the Data Entry control or via MIDI from your sequencer.

In the light of my comments about achieving a convincing result when using the kind of voices included in the Proteus 3, I did feel that a guide to the instruments, their playing techniques and their natural sonic range etc, was something of an omission. Unlike the Proteus 2 which is set up to play only the normal range of instruments, the Proteus 3 is capable of extending this considerably. Some background information on the character of each of the instruments would have been invaluable and would, I feel, have helped the user get the most out of this machine.

There are two adjuncts to the main manual which cover the various application notes associated with Proteus - MIDI, sequencing, patch dumps etc - and a complete index and description of the samples and the factory presets. But again, further information could have been included. For example, although you can look up a preset name on the list or find a particular sample, it is very difficult to work out which samples have been used with which presets - unless you check the composition of each individual preset on the machine itself. A cross-referenced

map would have been helpful.

But I suppose criticism of instruction manuals is usually a sign that you can find little else to quibble about in a product review. And this is indeed the case. As I said earlier, I would personally have been inclined to avoid the inclusion of the voices commonly found on other instruments in favour of a greater variation of those which are on offer. And I think perhaps there might have been a bit more research gone into the way a couple of the instruments were handled.

But all things considered, the Proteus 3 is a pretty wonderful machine and should be of interest to anyone for whom the instruments of the world are simply colours on a broad palette - in other words, anyone who feels unconstrained by tradition and free to draw on any instruments that convey the kind of emotion they are trying to express - whether it's for an orchestral work, a pop song or a TV commercial.

For anyone who has, up until now, found it difficult to get hold of these instruments, the Proteus 3 should prove a God-send. And who knows, it might perhaps awaken interest in the instruments themselves. I cannot help but feel great enthusiasm for this product and for the possibilities it opens up. ■

## The XR Version

The Proteus 3XR holds twice the number of sounds onboard and is configured rather more conventionally with the RAM voices occupying positions 0-255 and the ROM 256 - 383. Anyone using an external editor or SysEx MIDI dumps to store the RAM In Creator (or similar) might well consider the XR unnecessary. However, for ease of use, particularly when you are selecting the sounds you need for a piece of music, it makes a lot of sense to have them all available simultaneously.

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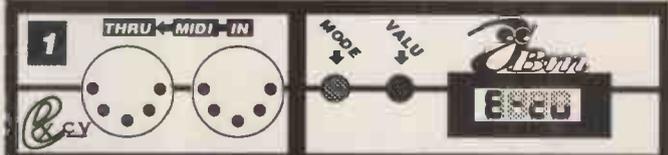
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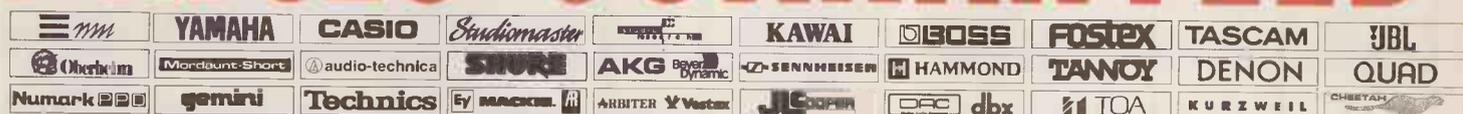
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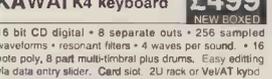
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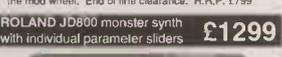
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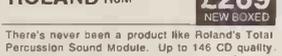
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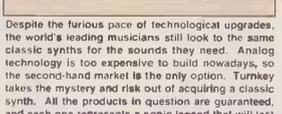
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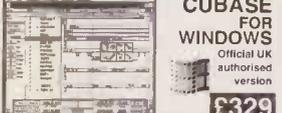
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6:2	12:2	16:2
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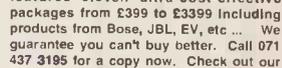
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## MIXERS

Available in 6:2 and 12:2 channel versions. Very quiet, great sounding EQ, rugged steel construction for good shielding etc. - Each channel has 1/4" line and XLR balanced input, gain, high, mid and low EQ, 2 auxiliaries, pan and long-throw fader + Auxiliary master gain, EQ and pan. Bar graph metering, headphone monitoring... Exclusive LD stocks. Includes FREE monitoring headphones and 24hr cage

6:2	12:2	16:2
<b>£199</b>	<b>£299</b>	<b>£375</b>
NEW BOXED	NEW BOXED	NEW BOXED

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## Technical Questions Answered by Vic Lennard

**Q** As a drummer and subscriber to both *Rhythm and MT*, I require some help and information regarding computers and their use in writing and composing music.

Having just completed a course in computer literacy using IBM-compatible machines, I have overcome my initial phobia and am now very keen to realise the benefits that they can probably offer in composition. What make of computer should I use? What other hardware is necessary? What software packages and how much? What does all the jargon mean? Are there any books on the subject?

When choosing a computer it would also be ideal if I could use the same machine for word processing. Are the 'music' computers IBM-compatible or can you obtain WordPerfect V5.1 software to run on these machines?

At present, the furthest I have delved into electronics is via my Roland R-8 drum machine!

**Jez Bottley,  
Huntingdon**

**A** Starting with which computer to use, my normal advice to people who are working to a budget is to make full use of what they already own – as sequencing programs exist for most computers. There is no such thing as a 'music computer' – any computer can be used for music as long as it has a MIDI interface which is sometimes built in, as with the Atari ST, or provided via an internal card or external box. If you are starting from scratch, you need to look at what other use you want to make of the computer, a question which, effectively, you have answered yourself.

Where the PC is concerned, there are two types of software, namely those that run under MS-DOS, the standard PC operating system, and those that require the Windows environment (an extra program) which is used to vastly enhance the visual side of programs. The *Sequencer Bible* published in last month's *Music Technology* gives you information on all of the sequencers, including the system they run under.

Sequencers running under Windows invariably require more memory (2 Mbyte or more) and an advanced processor (386 or

better) while DOS applications can run in 512 or 640 Kbytes of memory and happily on a 286-based PC. You need to consider the prices of the various PC systems before deciding on a DOS or Windows sequencer. However, the visual side of notation and other editing screens invariably means that they are better catered for in a Windows program. If you want to work with notation, you are probably going to have to buy a 386-based PC with Windows. It's also worth

noting that the latest version of Windows can handle digitised sound, an area you may wish to get involved in at a future date.

PCs do not have in-built MIDI sockets and so require a MIDI card which usually plugs into one of the slots on the rear panel. The cost of such a card depends on the facilities offered. For instance, a basic 1 MIDI In, 1 MIDI Out card starts from around £60 while one with multiple MIDI Ins and Outs – along with a time code generator for synchronising

**Q** I've been told that I need a MIDI Merge box because I use a pair of Roland keyboards live along with a couple of expanders and I need to play either expander from either keyboard. Is this correct? If so, could you explain how the system will be connected together.

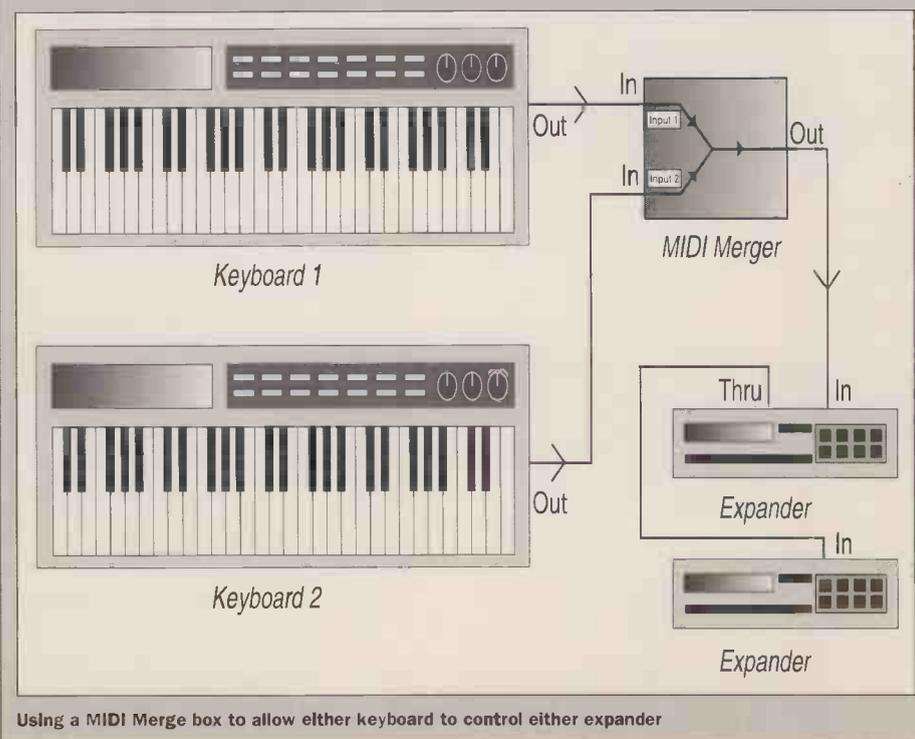
Why are MIDI Merge boxes so damn expensive? A two-into-one unit appears to cost a little under £100 and yet a two-into-one audio mixer cost me less than £5 a couple of weeks ago. Is there another way of dealing with this problem?

**David Elliot  
Bristol**

**A** Given your description of how you work live, the advice you received is correct. You do need a MIDI Merger; the MIDI Outs from your two keyboards will connect to the two MIDI Ins of the Merger, the MIDI Out of which will go to the MIDI In of the first expander. The MIDI Thru from here then goes to the MIDI In of the second expander.

This month's *MIDI By Example* looks at MIDI Mergers, and a read of this should give you an idea of why they cost so much. But briefly: mixing MIDI data together requires a micro-processor while passive mixing of a pair of audio signals only needs a few resistors!

By the way, be careful which MIDI Merger you buy. If you are using a pair of Roland keyboards, the chances are that a MIDI message called Active Sensing is being transmitted by each of these and you need to make sure that the MIDI Merger ignores these as combining them could lead to audible delays. The 2M by Philip Rees (0608 811215) will certainly do the job.



# Technically Speaking

to a tape recorder – can cost £300 and more. You don't mention in your letter whether you have any sound modules or not. If you don't, you could consider the SoundBlaster card which has a basic synth on-board, or even the Roland SCC-1 which is a Sound Canvas on a card. Both of these include the necessary MIDI sockets.

What does all the jargon mean? Good question and one which *Music Technology* is currently addressing (at least, in part) through our MIDI By Example series. On the books front, there are various good titles available. If anyone needs a booklist of such titles, please drop me a line at UKMA, 26 Brunswick Park Gardens, New Southgate, London N11 1EJ with a stamp-addressed A4 envelope and I'll send you a list free of charge.

**Q** I, like hundreds of your readers, own Keynote Software's excellent Chameleon Universal Librarian program for the Atari ST. Until recently this program formed an integral part of my MIDI keyboard

set-up as I used it in conjunction with my Yamaha DX7 and Roland U-20. However, I recently purchased a Roland JV-80 having sold my other keyboards and attempted to contact Ian Paterson, the author of Chameleon (and who is, effectively, Keynote Software), to obtain the necessary transfer instructions for the JV-80 and learnt that he had emigrated to France. I have written to him but without reply.

I wonder if any of your readers who are literate in MIDI language could give me the necessary transfer instructions for Chameleon so that I can download the JV-80's patches and performances into the Atari?

Many thanks and keep up the good work. MT is still essential reading.

**Dominic Beeton**  
Wimbledon

**A** It is an indictment of the times we live in that such a talented programmer as Ian has to go to Paris to find work in Paris – but anyway...

Having spoken with him recently,

Keynote are not currently supporting the writing of configurations for new synths. However, all is not lost. As many of you will be aware, I wrote many of the configurations for another generic librarian on the ST, namely Hybrid Arts' Genpatch on which Chameleon is based. Having just received the System Exclusive information for the JV-80, I'll endeavour to get hold of the machine, put together the relevant command set and send it to you. If anyone else would like a copy, please send a good quality blank disc and a suitable stamped, addressed envelope to the editorial address below.

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# Swift Halves

## Pro Music's Guitar Classics

Text by Ian Waugh

If you work in a music shop which sells guitars, I guarantee that at least once a week someone will say: "If I hear 'Stairway To Heaven' again I'll scream!". And if you're a keyboard player your patience is even more likely to be tested. Well now you can get your own back by playing 'Stairway' and many other Guitar Classics through a synth. In fact, there are 43 songs in Pro Music's current line-up to choose from.

What makes Guitar Classics so interesting is the fact that the guitar parts and solo lines were played in by a guitarist using a MIDI guitar. If you examine the parts you'll find loads of widdly-widdly pitch bends. I know, keyboard players can record pitchbend widdlies, too, but the theory is it's got to be a touch more realistic if it's done with a guitar. I won't argue.

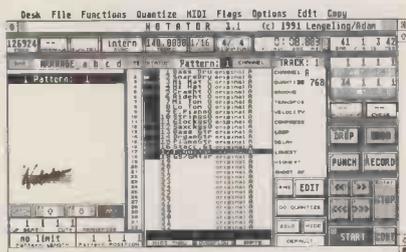
The drum parts have been quantised and the velocities tweaked a little – as have the instrument parts, though they still look (and feel) pretty real-time. The files are configured to Roland's GS standard and are as much a tribute to the GS sounds as to the programming itself (credit where credit's due, lads). In fact, all you need do is

whack up the volume, get out your old tennis racket, adjust the angle of your bedroom mirror and voilà – virtual reality!

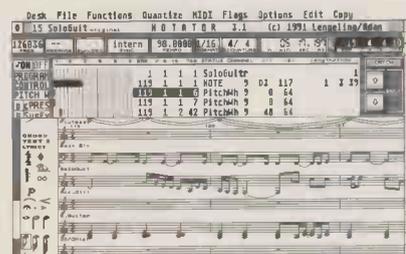
You get a track printout with details of MIDI channels, the sounds required (if you don't have a GS instrument) and so on. The files are available in Steinberg and C-Lab formats, for various hardware sequencers and in MIDI file format for the ST and PC. Some pieces actually use more than 16 tracks so you need a 16-track plus sequencer or version 3.1 of Notator, which has a 32-Track per Pattern option.

Pro Music sent a good selection of tracks for me to wrap my lugs around (including the inevitable 'Stairway') – 'Born To Run', 'The Final Countdown', 'Jump', 'Layla', 'More Than A Feeling' and 'Tom Sawyer'. They also included some of their more mainstream material (*what could be more mainstream than 'Born To Run'? – Ed*) – including 'When You Tell Me That You Love Me', 'Wuthering Heights' and 'SOS' (the Abba song). All are programmed to the same high standard.

My only gripe is the lack of a melody line. If you don't want it, fine, you can always mute it. But it's got to help anyone wanting to learn the songs for performance (and let's not forget those MIDI file aficionados who play the files just for the hell of it). Shame. That apart, I was more than a little impressed with this collection, particularly since the songs are licensed through the MCPS – so everybody wins and you have no performance liabilities. Now, when is someone going to do 'Smoke On The Water'?



CLASSIC 1: Born To Run ready to rock.



CLASSIC 2: Some of the pitchbend widdlies in the Stairway guitar solo.

## System Solutions' CartMaster

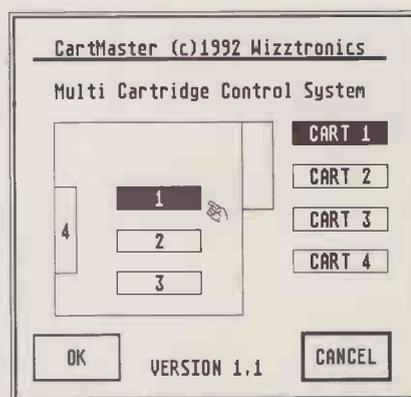
Text by Vic Lennard

The cartridge port on the left side of the Atari ST was originally intended to provide an effective launching pad for cartridge-based programs. While one or two such programs came out in the early days of the ST, the music software companies have primarily used the cartridge port for one or other of two purposes: copy protection and sampling. Consequently many users have two or more cartridges in regular use and continually have to insert and remove them from the port.

Apart from the hassle of having to re-boot the ST each time (cartridges cannot safely be removed or inserted while the ST is on), the quality of the metal contact is poor and this can lead to programs bombing through the misreading of data from the cartridge.

Wizztronics, an American company (*Is this serious? – Ed*), have surveyed the market and decided that there is a space for a cartridge port expander providing the price is right. The fruit of their labours – CartMaster – is designed to plug into the ST and offers you no fewer than four extra ports – enough, surely, for the most dedicated ST user. One of the ports is actually located on the side of the unit and is therefore perfect for connection of expansion hardware such as the Microdeal Replay range of samplers.

The others stand slightly proud of the expander and are designed to accept



The CartMaster desk accessory lets you select which of the four cartridge slots is currently active.

'standard' sized cartridges. Included with the expander is a disk with a desk accessory from which you can select which port is currently active.

The actual fit into the ST's cartridge port is a little sloppy – the circuit board connector could do with being a bit shorter – and it would be nice to have LEDs next to each socket to give immediate visual feedback as to which socket is active. But this aside, CartMaster works perfectly; I tried it out with ten cartridges including Steinberg, C-Lab and Hollis Research copy protection dongles, a Replay sampling cartridge and the Hybrid Arts FM Melody Maker synth cartridge and found no difficulties at all.

The price tag of £129.95 may appear to be a little steep, but this is nearly £60 cheaper than C-Lab's equivalent, the Combiner, and the Steinberg Key Expander is no longer available. If you regularly use a number of cartridges, CartMaster is well worth having.

### Info

Price: Guitar Classics and Soloist MIDI Files £4.95 each (minimum order of four)  
More from: Pro Music, 80 Meeting House Lane, London, SE15 2TX. Tel: 071 252 8573.

### Info

Price: £129.95  
More from: System Solutions, The Desktop Centre, 17-19 Blackwater Street, East Dulwich, London SE22 8RS Tel: 081 693 3355

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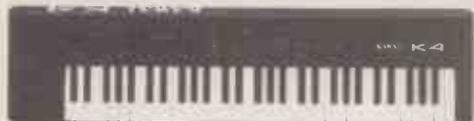
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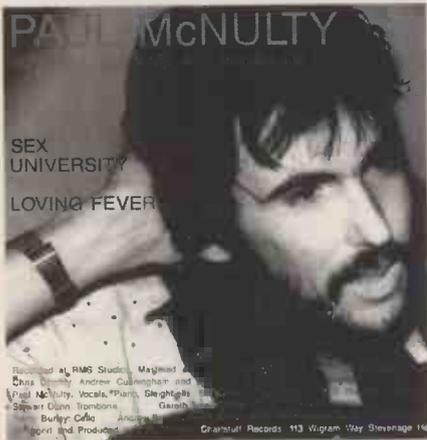
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# Demo Takes



**Artist:** PAUL McNULTY  
**Venue:** RMS Studios  
**Equipment:** Not specified; acoustic recording of piano, drums, strings, brass etc.

Like an increasing number of aspirant musicians, Paul has produced his own CD. Obviously this requires quite a budget and from his style I'd say Paul makes a steady living in piano bars. There's certainly an air of professionalism about the whole thing, and it's as clean as a whistle – so it should be, mastered at Abbey Road. But there's the rub. It's squeaky clean, as are the songs, which couldn't get much nearer the middle of the road if they were cat's eyes.

That said, Paul's CD does throw up a couple of interesting questions. Specifically: is willingness to experiment in recording a sign of originality? Or, can a demo be a completely neutral 'snapshot' of an artist's work? I think not, because recording itself has as many styles and techniques as music. The method you choose is as revealing as the material. In fact, it *IS* the material, to paraphrase Marshall McLuhan. But I suspect others, Paul included, might resent the intrusive demands of technological society. Answers on a postcard, please.

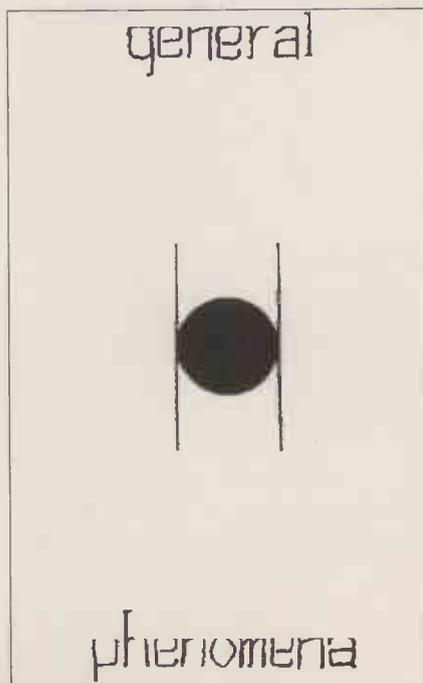
Meanwhile 'Sex' (for that is the title) is a consummate piece of songwriting, but of the wordy stage-musical school, and it's on the stage in musicals where Paul is likely to find his niche as a writer. To that end, this 'demo' is probably exactly what fat, cigar-chewing agents in Tin Pan Alley are waiting for: faithful, tasteful and breezy. But do they really exist?

**CONTACT:** Chartstuff Records, 0438 368206

**Artist:** GENERAL PHENOMENA  
**Venue:** Home  
**Equipment:** Yamaha SY22; Casio CZ5000; Roland R5; Amiga 500 (1Mb); AMAS sampler; Aiwa ADF410; JES A48 amplifier; Hitachi speakers; "home made" mixer

18-year old Mark Taylor shows a broad grasp of contemporary styles, with a rave tune, an African-flavoured instrumental, a "pop tune with Pet Shop Boys influence" (dead right, Mark) and an ambient piece. All are acquitted with panache and perception, and quite clearly a career in the music industry beckons. Catering assistant at The Performing Rights Society, for example. Just kidding. At the risk of sounding like a school report, I would say that Mark does show engineering potential, rather than writing promise, and the kind of open-minded range of ideas that is important in production generally. And he did ask, so there.

If there is a general weakness it's in the way he deals with rhythm. In the aforementioned rave track (called, with breathtaking objectivity, 'The Rave'), the percussion sounds are simply not loud enough, so that what should be a footgrabbin' brainstunnin' assault lacks the necessary force. 'Sunshine', the equatorial foray, is indeed summery but a little stilted, while the best rhythmic feel is in the ambient track 'Evolution', the one in which the groove is arguably least important. But the sounds



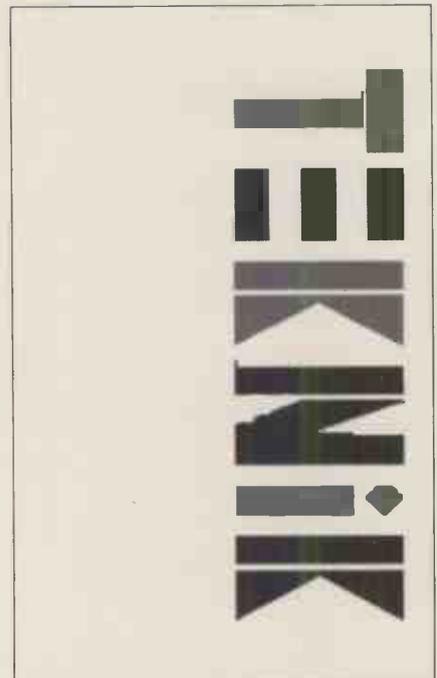
are all very good, very much in the mood which Mark sets out to create with each number.

Clearly an admirer of Jean-Michel Jarre, this is a refreshingly contemplative, and hopefully single-minded, young man. Having just finished his A-levels, maybe he'd consider one of the burgeoning courses in sound engineering and recording, at The Gateway School of Recording, or (nearer to home) Salford College of Technology. Come to that, maybe I should be a Careers Master.

**CONTACT:** Mark Taylor, 102 Silverdale Avenue, Guiseley, Leeds LS20 8PU

## TAPE OF THE MONTH:

**Artist:** TEKNIK  
**Venue:** Home  
**Equipment:** Amiga A500 (2.5Mb); Noisetracker V2.0 sequencer; "sixty quid sampler"; unspecified synths/beatbox



Another bright young whippersnapper with a only a few quid and a large helping of potential, 19-year old Jonathan Russell is Teknik. As the name suggests, our Jonathan is a big Kraftwerk fan, although he readily admits to being too young to remember "the early '80s music scene". Kraftwerk are a lot older than that, of course, and when Jonathan goes on to fete Vince Clarke and all things analogue you realise the tradition

to which he is responding and of which he is, indeed, a part.

All the tracks, culled from a whole series of "albums" which Jonathan has had no doubt hours of fun compiling in the privacy of his own bedroom, clatter and bleep along with utter conviction. It's a defiantly old-fashioned sound, technologically speaking, but that's the point. This is a style of music defined and refined just like the blues, and anyone who enjoys it will enjoy Teknik.

But apart from the industrial qualities of Jonathan's entirely instrumental demo, there is sufficient melodic invention to suggest the potential for a fruitful partnership - his very own Andy Bell or Alison Moyet, to be sure. Having no tape machine is the problem, so how about some budding singer out there (who likes synths) going halves on a 4-track with a promising programmer?

**CONTACT:** Jonathan Russell, 0273 464142

## Bring out your demos

*Demo Takes* wants YOUR demo for a very special occasion. On November 28th and 29th, Music Maker Exhibitions presents The London Music Show at Wembley Conference Centre. "Live performances by world class musicians" say the ads, "Gain hands on experience with the latest musical equipment." Great. But how about having your demo tape analysed by a panel of celebrity guests? How about being in the spotlight as the panel votes for the best tape? Have you got the bottle to accept an obscenely generous prize from a top exhibitor should you win? You have? Then what are you waiting for: send your tape now, to the address below, and mark the envelope "DEMO FORUM". Remember to include your contact details, and make sure your diary is free on the days in question.

Candidates will be chosen by Demo Takes and notified by **Monday 23rd November**, and will be treated to free admission and the odd Silk Cut if I've been to the newsagents. If you don't smoke, chewing gum will be provided.

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# THAT WAS THEN

Lost, gone, forgotten, or last seen at your local car boot sale...

## TALES FROM TOPOGRAPHIC OCEANS (YES) 1973

Double album (but only four tracks) featuring labyrinthine musical arrangements and awful cover painting by Roger Dean, eminent illustrator of the day with penchant for romanticised topography and anthropomorphic creatures. A sort of O-level Dali. Reflecting turbulent mood of 3-day week post-Watergate angry youth, album addresses starkly relevant theme of Shastric scriptures. Sleeve notes convey lead singer's blistering lifestyle: "I had a few minutes to myself in the hotel room before the evening's concert. Leafing through Paramhansa Yogananda's 'Autobiography Of A Yogi' I got caught up in the lengthy footnote on page 83..."

My copy got stolen during double Geography. Before that, I lost three different girlfriends in one evening by playing all four sides consecutively. When I got it back, the sleeve had been vandalised, and the section which reads "Hopefully we should appreciate that given points in time are not so significant as the nature of what is impressed on the mind" had been obliterated by the words "WARD EATS POO". PW



## CLASSIX NOUVEAU

In each of pop's most golden of ages, closet transvestism has always played its part. This is because, in adolescence, protagonists waited until parents were safely distant before ransacking the wardrobes for women's underwear, make-up and tennis rackets with which to affect grimacing guitarist-like poses before the family mirror. During the early '80s, an interesting variation on this phenomenon took place, which saw grimacing take a terminal drop in kudos, to be replaced by a series of fey and rococo postures inspired by Roger Vadim, Aladdin, Captain Pugwash and Sinbad The Sailor. It helped also to be a fully paid-up member of the Tufty Club.



To replace the sartorially intrusive guitar, synthesisers took up their right and proper place as the essential modernist *accoutrement*, acting as hygienic and labour-saving alternatives and occupying a similar spatial relationship to owners as, for example, a dressing-table. Fiddly analogue keyboard control banks were ideal for the discreet storage of small toilet bags, eye-liner, rouge, lipstick, hair gel and perhaps a well-thumbed issue or two of *Elle*. There can be little doubt that formative experiences during this period were an excellent grounding for each of the members of Classix Nouveaux.

Following a string of singles on Liberty, including 'Is It A Dream' and 'Because You're Young'; albums 'Night People' and 'La Verite'; and seminal appearances on *Cheggers Plays Pop*, absolutely nothing happened. PW

# The World

## Part 2

Half way through the Real World Recording week and already there have been some memorable performances – and some unlikely collaborations...

**Text by  
Neville Farmer**

### THURSDAY 20TH AUGUST

Billy Cobham leaves this morning. He sits eating breakfast looking very tired. "I'm glad it's finished because the pressure was intense. When you've got ten African musicians who all play different instruments with different sound levels and they all want to play together and all want the same amount of volume and the same amount of their soul coming through – it's pretty difficult." Of course, Cobham managed it and was rewarded by being asked to do the same with fifteen.

But his feelings about the event are passionate. "I'm ecstatic. I have learned so much. There are instruments here that I have seen before and thought I'd like to try, but I knew I wouldn't use them much and the roadies wouldn't like it. But here I have seen them played properly and realise what they can do." He leaves for Switzerland to prepare for a tour and to wait for the new instruments he has ordered.

Hossam Ramzy has hardly slept a wink. "I can't sleep. I am too excited." The guys in the Groove Factory have slowed down on recording because they want to start mixing and taking stock of the vast array of samples they have

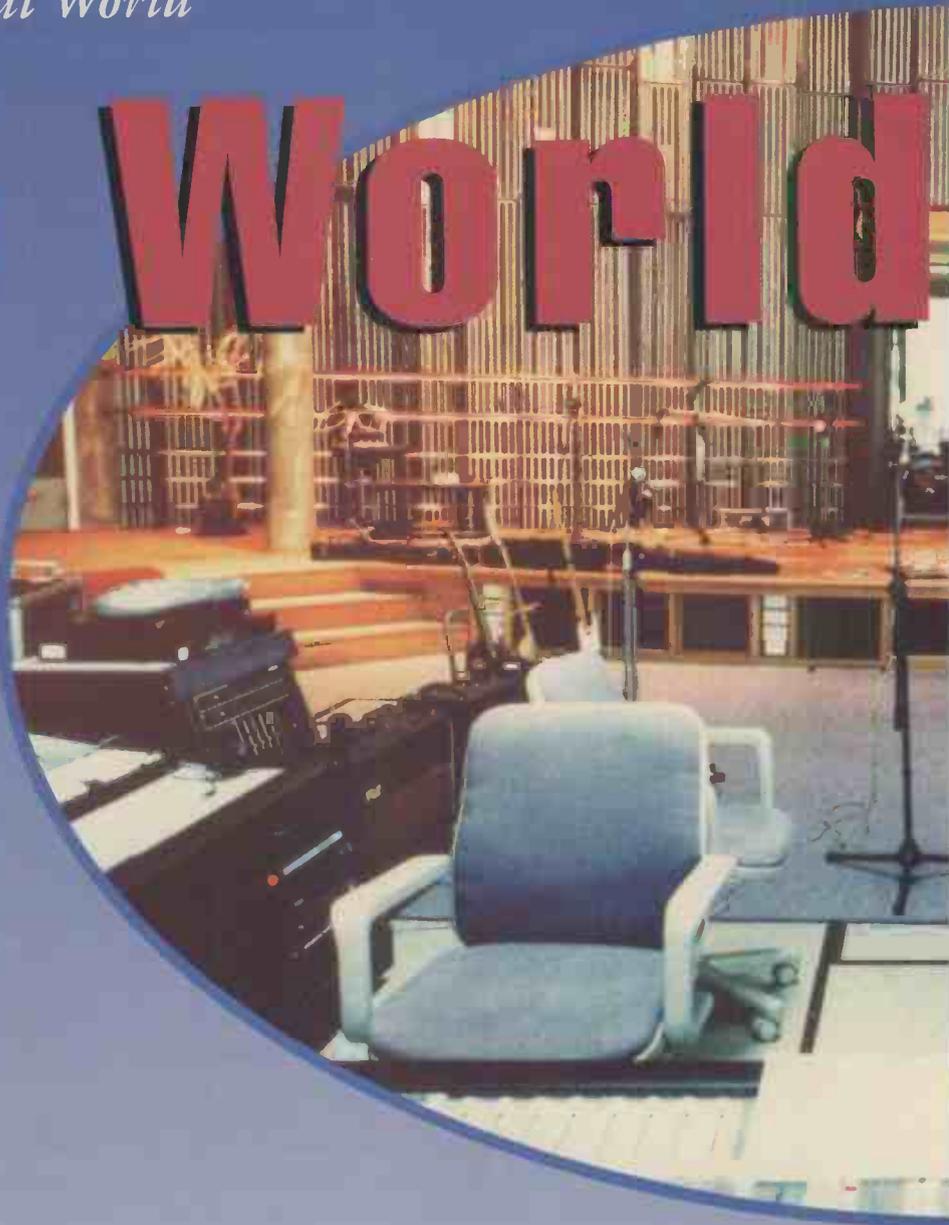
taken. They reckon they have eight tracks to work on. Ashkhabad are forced to rehearse over at a small production suite by Lulu's cafe as someone has run off with the keys to their rehearsal room. Lucky Dube and his band have turned up after playing the free concert and making amends with the Virgin Islands police. They are getting stuck into recording in the Groove Factory before moving into the Big Room with Daniel Lanois tomorrow morning.

Toni Childs lays down vocal lines to a number of tracks with Peter Gabriel in the Work Room. She is really enjoying herself now and is becoming the centre of a number of collaborations. By mid afternoon Lucky Dube and Farafina (and every other available drummer) are out on the lawn laying down a deafening rhythm which Hassan Hakmoun is trying to control. "It's like a war," he says, "No one knows what they are doing." Daniel Lanois continues his marathon run in the Big Room, recording Kudsi's flute with his own Dobro and footstomp. His deft handling of effects units

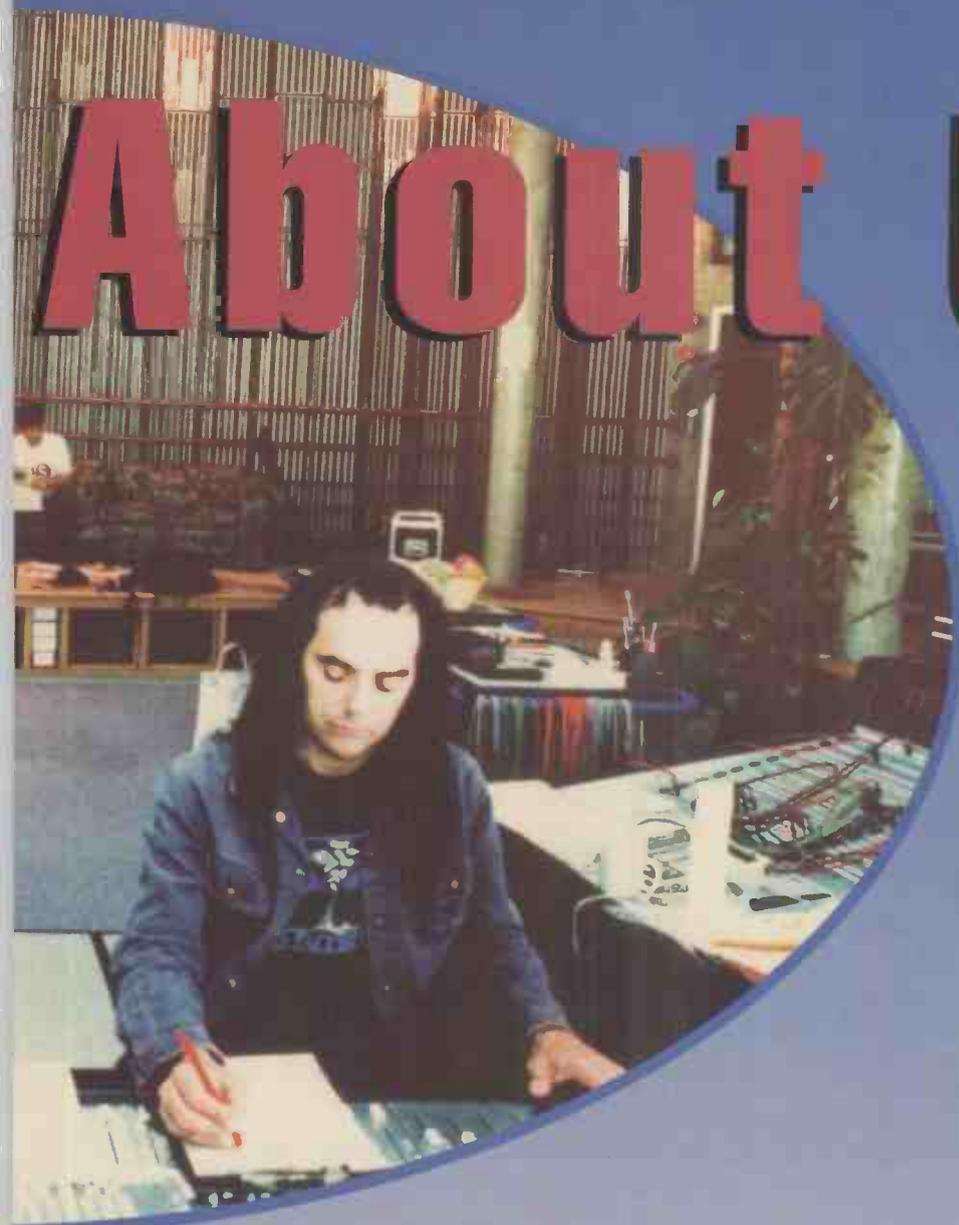
and EQ give the recording a very haunting quality.

Mike Edwards (of Jesus Jones) and Symon Bye of (This Picture) are working in the Writing Room with John Leckie trying to put a vocal line over the bagpipe and funk guitar theme of the previous night. After a while Edwards takes over the room to work on his own projects with Geoffrey Oryema and other members of Jesus Jones. A few people try to relax a bit. David Defries reads a score by the river.

Michael Brook's small pre-production cell has been taken over by Simon Booth and Ron Aslan who have come up with a great funk groove. Within a couple of hours poet Neil Stiles, American singer Carole Rowley and myself have added a lyric and the search starts for a studio. William Orbit has come back to see how things are going in the Groove Factory but things are going so well there is little he can do but join in. Simon Jeffes, on the other hand, is leaving and is very happy with the four tracks he has recorded though



# About Us



denies having finished them. "Finished? You're never finished here." he says.

The big action this evening centres on the Work Room. The technology-jammed attic somehow accommodates about twenty musicians and hangers on. Toni Childs, Peter Gabriel and Nigel Kennedy start things off but the collaboration expands to include Carole Rowley, Karl Wallinger, several drummers (who are exiled to the adjoining drum room), Sagat and many others. The groove they are laying down becomes so infectious that everyone gets carried away, dancing round the room, clapping and whooping. Engineer Dave Bottrill records everything but gets caught up in the excitement and doesn't even notice when the tape runs out. Everyone is convinced it will be a massive track.

When this finishes around half past one in the morning everyone heads down to the Big Room where Simon Booth has managed to oust Daniel Lanois for one night and has started getting the funk track together. The

drunken chorus sing backing vocals 'til 5.30pm and Simon and Ron carry on with Carole Rowley singing lead until well into Friday. The result is a great, if somewhat out of context, funk track called 'Take Good Care Of Your Soul'.

## FRIDAY 21ST AUGUST

Lucky Dube and band move into the Big Room this morning and get down to some serious recording in the hope of making up for lost time. In the couple of days they have they completed two tracks of driving South African reggae. Their energy is not matched by Simon Booth, however, who cancels sessions for the day and staggers off to bed at ten in the morning. Alex Gifford has taken over the Power Of Three Room again and is turning out some beautiful music with Ayub Ogada, Zi Lan Liao, Jane Siberry, Andy Sheppard and others. His music leans towards the jazz side but he has been amazed by what he has learned from

working with the likes of Ogada. "We were working on this track 'Mother'; Ayub, Jane and I, trying to fit in a chorus somewhere but Ayub kept saying there were already enough changes in what he was playing. I just couldn't hear it until this afternoon when I suddenly realised the way in which his music works. It made me feel really clumsy."

Jane Siberry is particularly moved by the piece which she started writing with Ayub Ogada a couple of days earlier. She also collaborates with U Srinivas and Michael Brook later that day, but Srinivas' band of elderly Indian musicians find their western harmonies very amusing. "Every time someone played something they thought was wrong they sniggered." says Jane. Nigel Kennedy shatters the peace of the afternoon and wrecks the lawn recording session by rehearsing his electric fiddle version of Purple Haze with his cottage windows open.

John Leckie takes over the production room during the afternoon to prepare for the evening's Ashkhabad performance. Like Srinivas, they are going to perform for an audience but this time it includes the press corps who arrive by helicopters, cars and buses during the afternoon for a press conference which generally shatters the peace of the event. There is definitely a feeling of something drawing to a close today despite the fact that recording will continue at least until Monday.

Jah Wobble and His Invaders Of The Heart turn up just before the conference and Jah entertains the visitors by telling them that the music industry is a bunch of bollocks and that although the Real World set up is a little hippyish for him it was likely to result in something a little closer to God than the record industry could achieve. Ashkhabad's evening concert is a great success and Leckie is very happy with the results on tape. Tomorrow he wants to add various overdubs to take it beyond being just a live album. Ashkhabad are famous for Islamic wedding music but they are closet heavy metal fans so heaven knows what might happen.

The Work Room is much quieter than the previous night as the Electra Strings have returned and are working on a particularly awkward arrangement for Karl Wallinger and

► Peter Gabriel. This is one of a number of pieces left from last year's sessions which Peter wanted to tie up. As a result it is also one of the few sessions being run on Mitsubishi digital. Late in the night violinist Sonia Slany and viola player Jocelyn Pook are sweating over an unbearably high harmonic note which has to be held for eight bars without vibrato. At five o'clock in the morning, the wild side of Daniel Lanois begins to rear its head. He is to be found playing barman in Lulu's Cafe, pouring a mean tequila for the late night drinkers.

## SATURDAY 22ND AUGUST

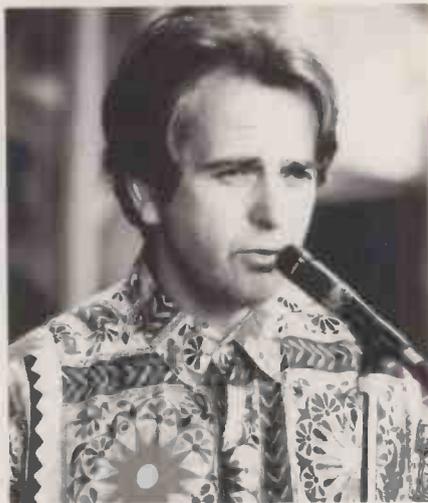
Peter Gabriel leaves the Work Room to Karl Wallinger today and goes to Sting's wedding party. His departure and that of several other musicians makes things seem much quieter. He will be back later this evening, however.

String players, Caroline Lavelle and Jocelyn Pook have found their time here particularly rewarding. They have been allowed to do much more than the usual dry session work... "We've been collaborating properly, which is very unusual for us." says Pook, "We were given a lot of space to do our own thing. We are normally expected to do a little embroidery on other people's stuff and it is unusual to be involved in the structuring from the beginning." Lavelle adds... "We usually come in right at the end but this time there are some production ideas coming from us. String players don't get a chance to have ideas like most musicians."

They also claim to be learning things from the other musicians. "I've learned that it's okay to make mistakes and to learn about other types of music." says Lavelle, "I've been working with Srinivas on some Indian music and I'm using the cello more like a synthesiser – using all the harmonics and scrapey bits that you're never allowed to use in rock music because they would scream in horror and sack you."

William Orbit takes over in the Rehearsal Room to work with Galliano, who have returned after their performance at the concert last Sunday. Unlike most of the producers, Alex Gifford was here last year, but feels this week has produced a much more complete and structured music. The pressure, however, has been incredible... "It's been like being on tour and doing four gigs every day with a different band.". He has formed such a rapport with Nigel Kennedy that he has been booked to play bass at the concert tomorrow.

Caroline Lavelle has also been asked to play on one number – evidence, if it were needed,



## Recording Week Participants

### Musicians:

Nigel Kennedy (UK)  
Zhou Yu (China)  
Lucky Dube (S.Africa)  
Electra Strings (UK)  
Cheng Yu (China)  
Ayub Ogada (Kenya)  
Sheila Chandra (India/UK)  
Billy Cobham (USA)  
Zi Lan Liao (China)  
Kudsi Erguner (Turkey)  
Papa Wemba (Zaire)  
Andy Sheppard (UK)  
Nana Vasconcelos (Brazil)  
Geoffrey Oryema (Uganda)  
Jane Siberry (Canada)  
Hossam Ramzy (Egypt)  
Juan Martin (Spain)  
Michael Brook (Canada)  
Jah Wobble (UK)  
Toni Childs (USA)  
Farafina (Burkina Faso)

### Hassan Hakmoun &

Zahar (Morocco)  
U Srinivas (India)  
Ashkhabad (Turkmenistan)  
Galliano (UK)  
Robyn Hitchcock  
Karl Wallinger & David Catlin-Birch (UK)

### Producers:

Peter Gabriel  
Karl Wallinger  
Bob Ezrin  
William Orbit  
George Acogny  
Michael Brook  
David Rhodes  
Mike Edwards  
Alex Gifford  
Daniel Lanois  
John Leckie  
Simon Jeffes  
Mark Rutherford  
Sugar J

of the friendships that have been formed over the past few days. Lavelle remembers Kennedy from her schooldays and wouldn't play with him earlier in the week. Now they are like sparring partners. Kennedy will also have his guitarist Sagat and the Brazilian percussionist Nana Vasconcelos on stage with him so they all decamp early in the morning for a soundcheck in Victoria Park before he goes to the Villa match in Southampton. Unfortunately, the check overruns and he misses the match.

It is a fairly quiet day with so many musicians up at the park, but it proves to be a good opportunity for producers to get on with some housework. John Leckie has completed eight tracks with Ashkhabad though he is getting bogged down in some fiddly overdubs. Apparently, some of the drum work doesn't

seem to gel if the drummer isn't playing with the whole band. Jah Wobble has been working through the night with Daniel Lanois producing wild mixtures of sounds.

Everyone who has heard the work Mark Rutherford and Sugar J have turned out in the Groove Factory reckons there are at least three singles among the eight tracks recorded – most unusual for Real World Records. All the material recorded on the lawn is now being tweaked and mixed by AD, as he calls himself. Although his is the least technological set up – eight track cassette or DAT – he has managed to capture some of the week's finest performances. Apparently, he hid a couple of pieces from Gabriel and Ezrin earlier in the week for fear of hijack, – as with 'Between Two Trains' – and he intends presenting them in a more complete form later. He is, however, going to have a hard time removing the Intercity 125 which runs through the middle of 'Green Lawns'.

Simon Booth, Ron Aslan and Juan Martin have left for London. Martin loved almost every second of the week though he suggests it would be useful to have cassettes of the day's work available for the artists to speed things up the following day. Michael Brook is back in his pre-production cell and is working on some ideas for his session with Kennedy, Vasconcelos and Srinivas later this evening. And Mike Edwards continues in the Writing Room though no one knows what on.

After finishing with Jah Wobble, Daniel Lanois packs up his things and prepares to leave for New Orleans. He has recorded and mixed 19 tracks in about four days and reckons 13 are worth releasing. Admiration for him is quite apparent amongst the other musicians. Dave Bottrill has found to his dismay that the party recording two nights earlier isn't that wonderful after all. He might not be able to save it.

Late in the evening Michael Brook has created an amazingly calm atmosphere in the Big Room as U Srinivas, Nigel Kennedy and Nana Vasconcelos record one of the week's most beautiful pieces of music.

## SUNDAY 23RD AUGUST

John Leckie is adding the Electra strings to Ashkhabad in the Wooden Room while Michael Brook's continues his work from the previous night in the Big Room. He hopes to add some vocals by Jane Siberry later in the day. Work is also in progress in The Groove Factory but everyone else has decamped to Royal Victoria Park for a very wet but crowded concert. Additional acts include Boy George, The Pogues

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PHOTOGRAPHY: Stephen Lovell-Davis

John Wordle gets funky

► and Kirsty McColl. A marvellous time is had by all.

During the day Peter Gabriel gets as involved as possible, introducing acts, checking on ticket sales and even working in the guest pass office. He takes a short stroll round the arena and talks very positively about the week. "I think we've done a lot more this time than last year," he says, "There have been some great people here."

Backstage Nigel Kennedy spins the wheels of his awful BMW and manages to coat about ten people with mud. He doesn't find out 'til later in the evening when his mud-splattered victims turn up at Lulu's Cafe for the after-gig party. "Monster, eh?" he quips. At the end of the evening, he toasts Peter Gabriel for the week, "I think we've all had a monster time." he says. Peter responds by making a brief

speech but is too choked up to finish and leaves hurriedly. On his return, Kennedy passes a ghostly shape in the car park – his BMW has been repainted in white Dulux emulsion.

## MONDAY 24TH AUGUST

Although most of the musicians are leaving today there are a few hanging on to finish what they can. John Leckie will need at least one more day to mix Ashkhabad. The bagpipe track probably won't be finished. Michael Brook has about six tracks on top of the U Srinivas album to complete but he is quite well into it. Peter Gabriel leaves for New York while Dave Bottrill tries to sort out the ten tracks they have more or less completed. Jane Siberry records a vocal onto a song she has written with Gabriel, Lanois and Hossam Ramzy.

Mark Rutherford decides to take the eight tracks he has recorded back to his own studio to finish. "We had a sort of plan when we started and I think we've more or less stuck to it – though lack of sleep makes it difficult to judge. I get a bit of a headache about people who bring ethnic musicians in just to play something over a piece of music. You end up with several minutes of beautiful playing but no start or finish. I wanted complete songs and I think we got that." Rutherford reckons the material he has recorded during the week will stand up to Radio 1 playlisting. We shall see...

In the evening, the fifty staff who have held the whole thing together gather for a party. A few of the remaining musicians and producers join them later. They have completed around 95 different tracks, more or less and about nine albums by Mike Large's reckoning. The concerts turned a profit and the week costed about £85,000 to organise. With nine albums they should clear the costs. Next year, Mike Large hopes to run a two week event.

My ambitions extend no further than a swift return to London and a long night's sleep... ■

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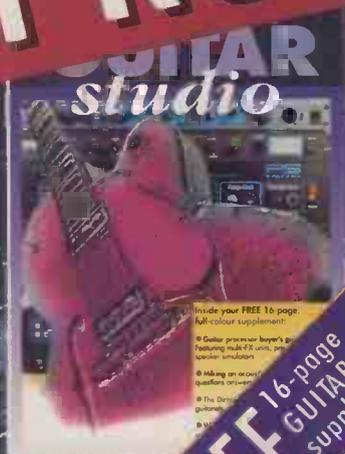
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# Ensoniq SQ-1 Plus

## Personal Music Studio



PHOTOGRAPHY: James Cumpsty

### Text By Ian Masterson

**How do you improve on a winning formula? Well, giving people more is usually a good place to start...**

In the film world, they often say that a sequel is never as good as the original movie. Since I first discovered the Ensoniq SQ1 Plus, I have started to wonder whether this is true in music technology circles as well. My conclusion? You'll have to wait until later for that. First, a little background info...

MT looked at the original SQ1 in October 1990, when we were confronted with a 21-note polyphonic, 180 sound synth section, 20 banks of drums, a 16-track, 9000 note sequencer and digital effects unit in one box. Sounds could be comprehensively edited and laden with on-board effects, jammed into sequences, or played over MIDI. Ensoniq seemed to have made a quite decent stab at that most elusive of instruments – the 'complete' music workstation – and our verdict was generally pretty favourable.

But that was many moons ago. What have Ensoniq

done to rejuvenate the SQ? Well, it still resides in the same box, with the same small 2x16 character LCD display and the same chunky buttons. The only external difference would appear to be the addition of the words 'Plus' and '32 Voice' to the logo – and indeed, this is perhaps the best clue to the changed beast that dwells within.

In a nutshell, the SQ has gone 32 voice polyphonic. Now, even the most note-greedy of synthesists can layer sounds left, right and centre with ne'er a shadow of concern about voices cutting out or sticking. Well, perhaps just a little. But the difference between having 21 voices and 32 voices to play with cannot be overstated. Suddenly, I found myself piling on thick pad sounds with gleeful abandon, and marvelling in the way they remained 'intact' – even when faced with a barrage of MIDI data from my sequencer. Sheer bliss.

The other major change concerns the insertion of an additional 43 sampled waveforms. These are known as 'expansion' waves, and have been incorporated with the rest of 167 waves to create a whole new range of internal sounds. Factory sounds can be incredibly important when choosing a synth. They really do need to

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elicit that strange, tingling, 'Wow!' factor when you first hear them – the factor that causes your hand to mysteriously reach for a credit card. So did I swoon in amazement?

Well, sort of. I hope that's not anticlimactic, but having played this synth for I while now, I find myself faced with a conundrum. Many of the sounds are simply fantastic – they fill you with an inspirational enthusiasm for life that is hard to beat. But there are also sounds that are quite the opposite: thin, unchallenging and really rather a waste of space. Naturally, there are subjectively poor sounds on any synth – you know, the ones you hardly ever use, perhaps because they seem to crop up everywhere, or because they always sound out of place. The SQ1 has its share of these; unfortunately, it also has some which can only be described as pointless. There – I've said it.

Thankfully, such sounds are very much in the minority (...and your opinion of them may differ anyway). The bulk of the voices are stunning – the Ensoniq 'character' is rather like a combination of the M1, D50 and several analogue synths rolled into one. It is capable of producing rich, luxuriant pad sounds – '01-Airchoir', '05-Analog Orch' and '26-Monks Sing', for example, along with some excellent breathy choirs. The string sounds are equally impressive and include some attractive orchestral voicings like '07-Concert Strings'. By contrast, I detested '53-Gypsy Violin' which, to me, sounded horribly thin and 'cheap'.

The bass sounds are highly convincing and I spent many hours with '16-MiniBass' and '17-Fretless 2'. In fact, the SQ1 Plus is particularly impressive at the lower end of the frequency spectrum where its detailed, solid feel was reflected in some superb recreations of analogue synths such as '57-Lead Kiss'. Full marks must also go to the guitar samples – '02-Classic Guitar' – and anything to do with woodwind: check out the clarinet in '45-Violin & Reed'. Organ aficionados are not left out either, and I guarantee



they'll be impressed by the throbbing tones of '32-Jazzy's Organ'.

Finally, the drum kits deserve a special mention. Without exception, each of the banks offers a selection of highly usable, dynamic sounds all of which are worthy of praise.

So where does the SQ1 Plus fall down? If you listen to patches such as '70-Soprano 2' and '65-Koto', you'll see where my reservations lie. Simply put, I feel that around a quarter of the sounds let the side down. But of course, making up for them are the other seventy-five percent which are quite excellent. And this is the basis of my conundrum: I really do feel the SQ1 Plus has outstanding talents, and oodles of potential. It simply isn't always utilised to the full. As for the sequel argument – well, you could say that it has much the same plot, many of the same characters, but there's a cleverly devised twist at the end. It shouldn't disappoint. ■

### Voices, Polyphony, Sounds & Notes

The sounds in the SQ1 can be separated into two categories: Drum Sounds, made up of 17 voices, and Standard Sounds, which can be assembled from up to three voices (pressing one key can thus play up three voices simultaneously). The SQ has a total of 32 voices, which may be assigned as the user wishes. If each sound uses only one voice, then 32 notes can be played at once before voices start to 'cut out'. Drum Sounds naturally only use one voice per key. To protect 'important' sounds from being cut out, the SQ1 also allows the user to put sounds in priority order – the lowest priority sounds have their voices 'stolen' first.

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## 3D Sound Effect CD

Text By Vic Lennard

Most sample CDs currently on the market concentrate on break beats and drum loops which can be used individually or as an underlying rhythm. Not so with this CD. Created at Studio JBF in Paris, *3D Sound Effect* is aimed at people who want atmospheric and sound effects with the touch of magic that Roland's RSS psycho-acoustic effect adds. The 98 tracks are divided into seven sections - Natural and Electronic Atmospheres, Horror, Voyages, Synthesised and Natural Sound Effects, and Musical Phrases.

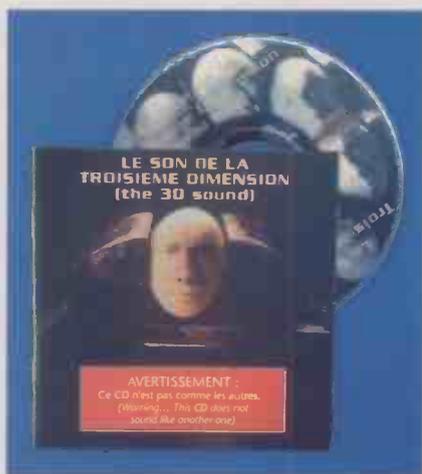
Some sections do not really lend themselves to RSS treatment. For instance, on Natural Atmospheres and Voyages it whirls the various sounds around between the speakers in a way quite unlike anything that would occur naturally. That said, 'Little Rain Drops' is an excellent 3D collage of puddles and ambient street life.

Most of the Electronic Atmospheres and Horror tracks are very useable, especially the three Brain Damage tracks. Similarly, some of the Synthesised Sound Effects could be used in stereo situations such as Nicam digital TV and FM radio - Lunar Insects and Intrigue being particularly good.

As I've said, natural sound effects suffer a little by the continuous movement of the sound (rather than using the RSS system to enhance the spatial positioning beyond the confines of stereo speakers) - though there are saving graces in tracks like Broken Glass and Shots. Most of the 'musical' phrases are marvellous examples of what RSS can achieve but are, perhaps, too distinctive to be used as specific themes - the exceptions being the modern orchestra hits, the (few) scratches and the 'falls', which are eminently useable.

The overall sound quality suffers a little from the graininess and harsh mid-range (which is associated with extensive use of RSS), especially on sounds which have come from sampled sources. The general level of sub-bass is also too high and subjects speaker cones to unnecessary movement even at low volume; frequencies below 50 Hz could have done with a higher degree of roll-off.

Who will this CD interest? Certainly those producing TV and film music/soundtracks - particularly where this will be replayed in stereo environments (RSS loses its spatial quality in mono). Those involved in A-V work should also benefit; the sound effects will, I'm sure, prove invaluable. The 3D Sound Effect CD is unlikely to be a massive seller due to its rather specialist nature, but it's one of an increasing number of collections helping to win over those who refuse to contemplate the use of sample CDs as a source of ideas.



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**PETER GABRIEL**  
*Us*  
(Real World)

The most telling aspect of this very beautiful album is its similarity to *So*. Not so much in the formula of the songs, one or two of which can be equated directly with the 1986 release's highlights, but more in the very small gap in



production values and engineering tools between them. Having come to rely on Gabriel for a pretty much state-of-the-art acquittal with each release, it's a shock to remember that six years separate 'So' and 'Us'. Clearly, those years have yielded far fewer developments at the top of the technological range than, for example, the years between 1980's *Peter Gabriel* and *So*.

But then machine precision would be a

misplaced priority on an album like this. Its themes are more confessional, more human, than even the most personal of Gabriel's songs up to now. Thus the psychotherapeutic lyrics are best served by the wilfully ragged double tracking on the voice. Much of the dirt in which the great man digs is given brilliant sonic dimension by David Rhodes' distorted, squealing guitars. And the takes are, on occasion, flawed, quite literally allowing the cracks to show.

Of course, the overall recording is as rich and lush and expert as you would expect. For this much vulnerability to shine through against the backdrop of one of the most flawless studios in the world is a measure of the work's achievement. **PW**

**THE HAPPY MONDAYS**  
*Yes Please*  
(Factory)

A fine example of how an inspired choice of producer(s) can jack up a cold turkey career. Mr & Mrs Tom Tom Club (Chris Frantz and Tina Weymouth), the rhythm section behind Talking Heads, have been drafted in to make sense of a pretty dishevelled set from the Mondays.

Frantz's characteristically crisp percussion preferences combine with a parallel influence from Weymouth – taut and minimal bass figures – to achieve just that. Indeed, those tracks with least vocals evoke a true flavour of their own

band, and are the most rewarding. But all the songs are rescued from complete torpidity, a miracle given Shaun Ryder's frankly unexceptional voice. As for the band, they probably wouldn't want to join a club that would accept them as members, but at least The Tom Tom is preferable to The Playboy. **PW**

**JOHN MARTYN**  
*Live at The Town & Country Club, London*

For the last two decades John Martyn has been to the guitar what Jacques Cousteau has been to undersea filming. Last year's *Cooltide* album, however, marked a dramatic change in direction. Keyboardist and co-producer Spencer Cozens arrived on the scene, Mr Martyn was introduced to Mr Sequence, and hey presto! – a clutch of finely crafted songs were dragged screaming into the '90s.

This happy ending was subsequently soured by a shambolic, substance-ridden performance to a packed Dominion Theatre earlier this year, so this sell-out charity show for the Prison Reform Trust was something of a grudge match: would John



PHOTO: Mark McEvoy

forego his legendary afternoon drinking session? With a band like tonight's he'd have been mad not to. Thankfully, he only stayed for a few, and later took the stage with Cozens, sax men Andy Sheppard and Gerry Underwood, bassist Alan Thomson and a duo of drummers for a dazzling (and upright) display of skill and dynamics.

Classics such as 'May You Never' and 'Solid Air' gained a new lease of life from Cozens' high-tech doodlings, while longer groove-based numbers like the jazz-tinged 'Looking On' soared to new heights. Dodging a barrage of whisky miniatures (full), Martyn clearly rose to the occasion. He even seemed to be enjoying himself, as did 1800 punters. Full marks to all involved – quite how they managed to pack the place after that Dominion gig I'll never know... **TC**

*Plastic Max...* Essential, interesting or hmmm... but MT-recommended.

**SWALLOW**

*Blowback* (4AD)  
Spaclar reworkings of debut 'Blow'.

**ROBERT WYATT**

*A Short Break* (Voiceprint)  
Five x 4-track home doodlings from the wistful Softie.

**INNOCENCE**

*Build* (Cooltempo)  
Continuing the mellow formula of 1990's 'Belief'.

**SUZANNE VEGA**

*99.9°F* (A&M)  
Mitchell Froom's percussively robust treatment of fresh Vega songs.

**MEAT BEAT MANIFESTO**

*Satyricon* (Play It Again Sam)  
Linear sonic montages with added protein.

**EMF**

*Stigma* (Parlophone)  
Whither guitar pop with dance grooves?

**STEREO MCs**

*Connected* (4th & Broadway)  
Hip. Tough loops with ragga bent, under surprisingly tuneful rants. Hop.

**INSPIRAL CARPETS**

*Revenge Of The Goldfish* (Mute)  
See above.

**TASMIN ARCHER**

*Great Expectations* (EMI)  
A Dickens of a good debut from powerful soul diva.

**A CERTAIN RATIO**

*Up In Downsville* (Robsrecords)  
They funk. They groove. They never sell any records.

**MOODSWINGS**

*Moodfood* (Arista)  
Excellent spacey debut from Colourbox/Fall/Smiths producer Grant Showblz and partner JFT Hood. Guts, grooves and guest guitar celebs. And guest vocal celebs. Watch closely.

# Out Takes

## TOM WAITS *Bone Machine* (Island)

Tom's been gone too long, and things have been quiet without him. The good news is that he's back, he's still on the bottle, and he's wilder than ever. The bad news... well, the bad news is that *Bone Machine* sees him in his meanest frame of mind since *Raindogs*. Still, this latest outpouring is the work of a mean, lean drinking machine who shows up any pretenders to his crown as a bunch of shandy-drinking charlatans.

'Earth Dies Screaming' sets the tone; the sound of rattling bones framing Waits' brooding bellow in a scene straight from *The Book Of Revelations*. He claims to have recorded the whole affair in his shed, and the sheer clattering intensity of it would convince us that this was true if it wasn't for the fact that (a) he's a compulsive liar and (b) the production is stunning. Put simply, 'Bone Machine' manages to be raw and direct without ever invoking thoughts of self-conscious amateurism.

Classic ballads in 'A Little Rain' and 'Whistle Down The Wind' offer some respite from the album's crushing claustrophobia. Elsewhere, decades of obvious gravel swallowing give the man's voice that special threat, and an air of real menace hangs dangerously over drummer Brain's (sic) big bad biscuit tins.

*Bone Machine* is by turns poignant and disturbing, parodic and strikingly original, and above all devastatingly human. **TC**

## ULTRAMARINE *Every Man And Woman Is A Star* (Rough Trade)

More drinking... this time, however, it's cocktails rather than absinthe. Ultramarine's amalgam of all things ambient takes its title from a moment of moonshine-induced revelation on the part of a drinking companion on their Stateside travels. The album charts the duo's progress through various

backwaters, each song telling its own story.

The result is a splendid array of post-rave soundscapes, with techno rhythms forming the backbone for a wealth of acoustic instruments and offbeat samples. Violins, harmonicas and Chinese flutes commune with Kevin Ayers and a host of crazy Californians in the chill-out room. That may sound strange, but somehow it all goes smoothly.

The album works best taken as a whole, although a number of minor niggles emerge. Some cheesy drum sounds occasionally push 'Star' towards 'Stars On 45' territory, and rubber-band bass lines abound, but thankfully good taste prevails in the hands of Jolly James' easy production, allowing the sounds to speak for themselves. The nearest landmark is possibly Blue Nile proteges Botany 5, but even that's forcing the issue.

All in all, Ultramarine's seamless arrangements ensure that the trip is a pleasant one, with no instrument bullying another in the back seats. Consequently they've created a fleeting classic for goldfish the world over. **TC**

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**STEINBERG CUBASE V2**, manual and dongle, £170. Tel: 091 263 5135.

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**YAMAHA CX5M**, includes all software, the rare DMS cartridge, and voices; will sell for £55 or swap for quality digital delay. Jason. 0525 717557, 5.30-7pm.

## DRUMS

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**BOSS DR550** MIDI rhythm machine, 48 16-bit voices, as new with psu, £90. Sean. Tel: 0734 811827.

**CASIO RZ1** drum machine, very good condition, £100. Tel: 081 855 0092 after 9pm.

**CLASSIC DRUM** machines: Yamaha RX5 £199. four extra cartridges £20 each. Alesis HR16 £130. Roland 808 with MIDI £350. Linn MkII many extra sound chips £399. Alan. Tel: 081 446 3098.

**KORG S3** Rhythm Workstation with onboard eight-track sequencer plus two cards worth £90 each, very versatile, boxed, as new, £495. Andrew Flinton. Tel: 0379 853982.

**ROLAND R8**, drum machine with 808 card, boxed, mint condition, £300 ono. Tel: 0752 607126, mornings.

**ROLAND R8**, immac. 2 RAMS, 3 ROMS including ethnic mallet and jazz brush, flightcase and manual, £350. Alex. Tel: 0708 453167.

**ROLAND TR727**, percussion machine, fully MIDI'd, excellent condition, offers. Tel: 071 727 2199.

**ROLAND TR909**, £500. Roland TR808 with MIDI retrofit £400. Sequential circuits Pro 1 £165. Chase Bit1 keyboard with MIDI, £350. SH101 analogue classic, £150. All in vgc with manuals. Willy. Tel: 0224 323007.

**ROLAND TR909** drum machine with manuals and box, £350. Roland CR78 Compu-rhythms with all programming switches, £150. Linn LM1 drum machine with manuals and full flightcase, £150. Alesis SR16 drums with box and manuals, £180. Roland U220 module with card and manuals £350. Alesis 1622 mixer with manuals, £350. Ultimate Support Apex stand, £80. Andy. Tel: 0273 822556, 24 hours.

**ROLAND TR626** with manual, excellent condition, home use only, £175. Tel: 0276 32249 evenings.

**SIMMONS SDX1000**, five pads, stands, immaculate, with Cheeta

pads-to-MIDI converter, £400, will split; Akai XR10 drum machine, mint, £200. Steven Bate. Tel: 0690 710231.

**YAMAHA RX8** drum machine, 16-bit samples, still under eighteen months guarantee, £150 ono. Tel: 0429 869633.

**YAMAHA RX17** drum machine, excellent condition, hardly used, £120. Steve. Tel: 0226 248159.

**YAMAHA RY10** with psu and manual, boxed, vgc, £350. Ben. Tel: 0564 773357 around 6pm.

**YAMAHA RX5**, vgc with manual. Reasonable offers, contact Paul. Tel: 081 524 0835.

**YAMAHA RX7** great sounds. Easy to program, power supply, manual, £100. Yamaha EMQ1 disk recorder stores bulk dumps, records tracks real-time, power supply, disks, manual and boxed, £100. 13U studio rack, excellent condition, a bargain at £60. Neil. Tel: 0254 775675, evenings.

## RECORDING

**24-TRACK PACKAGE**, 2" recorder, mixer, 16 channel automation, Atari plus Notator, Uinit, Korg M1 plus extras, £5000 for quick sale. Tel: 0784 246753.

**ALESIS 16:2:2** mixer with six aux sends and eight aux returns, inserts everywhere (!), very quiet, home use only, mint condition, £420 ono. John. Tel: 021 449 6603.

**CASIO DAT** recorder with case, digital in/out, £250. Tel: 0480 476067.

**FOSTEX 4030** and 4035 machine transport synchronisation units are remote controller with all cables etc. £750. Colin Smedley. Tel: 081 878 0512.

**FOSTEX 280** multitracker, exc cond, as new, recently serviced, brand new heads, manual, boxed, £425 ovno. Tel: 051 426 5353.

**FOSTEX 820** 20 channel, 6 subs, parametric EQ, 4 Aux, MIDI mute desk. Only 4 months old. Home use only. Immaculate. Upgrading, £1100 ono. Steven. Tel: 0424 33205.

**KORG A3**, multi-effects, 6 effects at once. Absolutely brand new (surplus to requirements) includes free new car phone £395 ono. Boss flanger pedal as new £30. Tel: 0532 680331.

**KUDOS 16:2** mixing desk, includes manual, excellent condition, £200. Don. Tel: 031 441 3948 after 6pm.

**MTR 12:8:2** mixer, £500; 8U demo rack unit, £30; AKG C1000S mic, £95. Tel: 061 477 6246.

**SOUNDCRAFT SPIRIT** studio, 16:8:2 mixing desk. New and unused. Sensible offers or swop for Tascam 688 sampler or good keyboard (eg. D70, SD1, O1/W FD). All interesting deals considered. Phone Gid on 0794 68328, Hampshire.

**SECK 12:8:2** mixer, £350 for quick sale. Mr Birtley. Tel: 0756 752043.

**TASCAM 424** portastudio, dbx noise reduction, six inputs, sync in/out, three speeds, in immaculate condition, £290. Panos OIassi. Tel: 081 8881129 before 9pm.

**TASCAM 488** eight-track portastudio, dbx noise reduction, £800 ono. Andy. Tel: 071 388 5392.

**TASCAM PORTA 2**, mint condition, £300; Shure SM57s, new, £57 each; Alesis graphic EQ, dual 15-band, £100. Steven Bate. Tel: 0690 710231.

**TASCAM 1516** mixer, 16:4:2, new, only home use, mint condition, £999 or swop with cash for JD800 or Wavestation. Tel: 0843 290019.

**TEAC DAP 20** portable Pro DAT machine. Mint condition XOR balanced mic inputs, £450. Please phone Andy on Oxford 0865 200443.

**YAMAHA MT44D** four-track with six inputs, RM602 mixer plus patchbay, leads and full manuals, as new, 50 hours use. £280. Clive. Tel: 0582 833638 (north London)

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**QUAD 303** power amp, 220w, £70. Chris. Tel: 0256 812125.

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**V-AMP VA30K** 60w keyboard amplifier, as new, lovely-sounding poky combo complete with parametric sweep mid, shelving hi and lo EQ, reverb, DI out, reluctant sale, £85 ono. John. Tel: 021 449 6603.

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**19 YEAR OLD** Oxford-based talented keyboard player seeks talented guitarist, bass player, vocalist rock band. Bon Jovi influenced. Must be serious about future prospects. No dossiers. Wayne. Tel: 0865 68807.

**FEMALE SINGER** wanted by House/Garage producer. Initially for cover version but also original material. An interest in dance music etc is important. Simon. Tel: 0763 72991, Herts.

**MANCHESTER COMPOSER** requires kbd player with studio for original material (not dance), experience, gear list and tape. Ian.

**RAPPER**, male or female, required for recording project. Chris. Tel: 0256 812125.

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**AKG D320B** vocal mic + boom stand and lead. Perfect, £60. Alan. Tel: 081 568 9698 London area.

**ALESIS MIDIVERB II**, boxed, manual, studio use only, £100. Vic. Tel: 081 368 3667.

**ALESIS MIDIVERB III** digital multi FX processor, as new, £100. Tel: 0480 66346.

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**CHEETAH SX16** sampler, £375; Alesis HR16B, £130; Commodore Amiga with Music X sequencing software, £225. All as new. Al. Tel: 0423 330057.

**ENSONIQ VFX/SD1** voices, huge library available in Atari or Ensoniq formats. Four disks with 1000 voices each, only £10 per disk or £35 for all four. Richard. Tel: 0736 67531.

**FOR SALE:** Roland D5, Kawai K4 and other synth sounds for sale in Atari disk format. Ben White. Tel: 061 434 6290 after 5pm.

**GIBSON LG1** acoustic, vgc, case, £549 ovno. Graham. Tel: (0993) 87391.

**GIBSON MELODY MAKER** 1969, 2 pickups, vgc, extras, £349 ovno. Graham. Tel: (0993) 87391.

**JL COOPER** FaderMaster MIDI control unit, boxed, manual, £150. Vic. Tel: 081 368 3667.

**KAWAI K4** 16-bit digital synth, £400; Roland MT100 sequencer/sound module, plus disks and editor, £325. Casio FZ1 2Mb sampler, £750; Yamaha PSS680 mini-synth, £65. Paul. 0536 761014.

**KEYFAX BOOK 1** wanted. Contact Duncan Q21 444 2681.

**MAPLIN EC44** analogue echo, £30, Kenmulti MSL7 flanger pedal, £20. Tel: 081 689 8372.

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**PEAVEY SERIES 260C** reverb, Marshall amplifier, £300, vgc. Mr Beswick. Tel: 0449 737101.

**ROLAND RS-PCM** sound card SN-U110-12 (Sax and trombone). David. 0483 476524, evenings.

**ROLAND M64C** memory cartridge (for Super JX etc), £30. David. Tel: 0372 275293.

**ROLAND GP16** + FC100 MkII foot switch, immac. Home use only,

£500 or swop for Korg M1R. Gary. Tel: 0873 890669, after 6pm.

**ROLAND GS6** digital guitar pre-amp, boxed, studio use only, £175. Vic. Tel: 081 368 3667.

**ROLAND DEP5** multi-effects stereo mic/line, MIDI etc, exc cond, manual, £295 ovno. Graham. Tel: 0993 87391.

**ROLAND GR50** plus GK2 with SE100 foot controller with RAM card, manuals, all in very good cond, £600. Ian. Tel: 0705 640898.

**SECK 12:2** mixer, £200. Exotech analogue delay, £70. Akai XE8 drum module, £100. Tel: 0245 24564.

**STAR LC24** printer, boxed, manual, spare ribbon, £110. Vic. Tel: 081 368 3667.

**TASCAM 38** with two dbx units and remote, £880. Allen & Heath Sabre 24:16:2, £5500. Akai VX90 synth module, £170. Roland SVC350 vocoder, £350. Boss DE200 digital delay, £120. Dr T's D110 editing s/w, £40. Word Perfect 4.1 for the Atari ST, £50. Microvitec RGB colour monitor, £75. Tel: 0923 231866.

**TECHNICS SL1210** turntable, excellent condition, home use only, £185 ono. Alex. Tel: 0234 854707.

**WERSI**, 13-note pedal board, excellent, MIDI + presets. Just plug in keyboard/MIDI socket. Carry bag, psu, £175. Tel: 0703 636885, Southampton.

**AKAI S1000** sampler, preferably expanded, must be in excellent cond, cash waiting. Craig. Tel: 0472 79264.

**DESPERATELY WANTED**, Sequential Pro 1. Roland SH09. Korg Mono/Poly and Roland MC4 or MC4B sequencer preferably with DTR100 tape storage or MIDI interface. Please contact A. Prentice. 031 440 1774, 9am-5pm.

**KAWAI K4R** or K5R. Art Multiverb EXT. Peavey 1210 Special Expander. Tel: 061 799 6154.

**KORG M3R** and Kawai K5 patches. Cheap Roland R8 cards. Eventide Fader/flanger. Tel: 081 692 8129. **KORG POLY 800** synth, £120. Steve. Tel: 091 234 3283 after 4pm.

**MANUAL FOR** an Evolution EVS1 module and a copy of the data cassette for the Korg Poly 800. Graham. Tel: 051 493 1309.

**MOOG PRODIGY**, £110. Newcastle Area. Steve. Tel: 091 234 3283, after 4pm.

**ORIGINAL CUBASE** program. Not a copy. Oberheim Matrix 1000. Cash waiting. Paul. Tel: 0302 538304.

**ROLAND D70** with any cards. Cash waiting. Please phone Sean on Andover 0264 75257.

**ROLAND S330** sampler and VDU.

Needed urgently. Pete. Tel: 021 779 6398.

**ROLAND S750** sampler. Paul. Tel: 0302 538304.

**ROLAND U220** synth module. Mr D. Dawson Tel: 0942 35638.

**FOSTEX E16**. Also Korg M1 keyboard. Tel: 061 483 8551, anytime.

**YAMAHA MDS2**. Tel: 0494 713168. **YAMAHA TG77** either new, ex-demo or secondhand at a reasonable price. Must have manuals. Tel: Dave 091 273 4443.

## EXPANDERS

**CASIO VZ10M** expander, boxed, manual, 25 banks of sounds on Atari disk, £170. Vic. Tel: 081 368 3667.

**KURZWEIL PX1000**, extra sound blocks, £1600. HX1000, £600. Object Mover Atari for both. Home use, fantastic sounds, boxed, manuals. Tel: Boston 0205 722546.

**YAMAHA FB01** multitimbral expander, mint condition, boxed with manual, £100. Also wanted MIDI-to-CV converter. Osrick. Tel: 0223 357798.

**QUICK FEEL**, MA6 tutor multitimbral synth module, £150. MD16 drum module, truly excellent machine £175. PR100 infinite sequencer drive. All boxed, very good condition £125. Tel: 0222 792302.

## WANTED

**AKAI S950**, cash waiting. Will travel. Andrew Wardby. Tel: 0482 46053

**BOSS DR550** second-hand, Tascam Porta 05. Will pay reasonable price. William. Tel: 021 4548463.

**CASH WAITING FOR ALESIS 3630** dual compressor/gate, TR909 drum machine, Yamaha DMP7 mixing desk. Peter. Tel: 081 969 5188 day or night. K Casio CZ3000 synthesiser, full-size keys, as new, only £125. Tel: 0507 606709

**ENSONIQ EPS16** Plus sampler. Matthew Cartwright. Tel: 0902 671930/679030.

**FARFISA OR VOX** 1960s organ. John. Tel: 0302 745447.

**OVERHEIM OBX**, £350 ono. Paul. Tel: 0902 736893 after 5pm.

**ROLAND PK5** MIDI Bass Pedals. Tel: 0273 870560.

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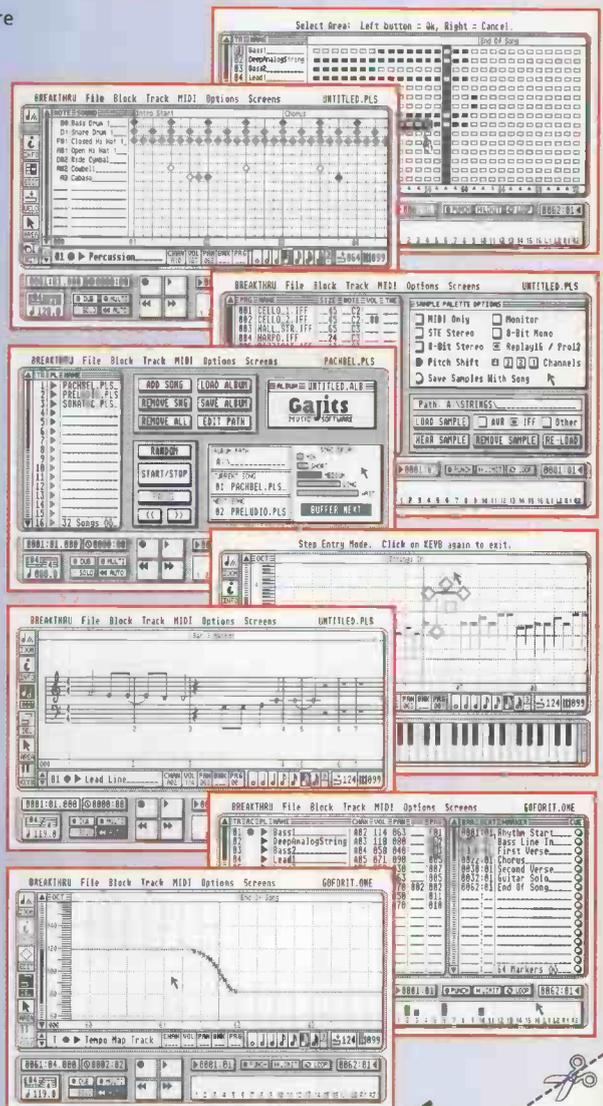
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