

# Music Technology

September 1989

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## Simon Harris

*the sample is the law*

**BMF REPORT**

*latest trade show news*

**ARTHUR BAKER**

*dance disciple*

**KORG M3R**

*the affordable M1?*



### ON TEST

*Steinberg*

*Cubase*

*Sequencing*

*Software*

*C-Lab*

*Explorer*

*Matrix 1000*

*Editor*

*Cheetah*

*MIDI*

*Controller*

*Keyboard*

*Yamaha*

*FX500*

*Multi-fx*

*Processor*

*Steinberg*

*MusiCal*

*Educational*

*Software*

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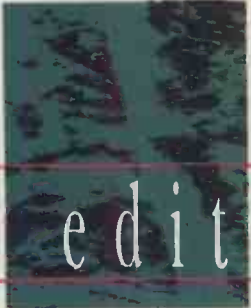
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# editorial

## REMAKE, REMODEL

Talking to a guitarist friend of mine recently (yes, a few guitarists still speak to me), I was treated to a run-down of his current guitar collection. It included a number of guitars that had been heavily modified – fitted with different pickups, bridges, machine heads and so on. He even kept one guitar, a Strat, to use as a “test bed” for new pickups and bridges.

It was then I realised that what guitarists have been doing to guitars for decades, and what keyboard players used to do to their instruments during the ‘70s, has fallen by the wayside and is only just being rediscovered – I’m talking about “hot-rodding” instruments.

I suppose it was as a result of the MIDI communications standard and the growing use of custom VLSI chips that the average synth player/enthusiast was effectively prevented from customising his rig beyond the choice of instruments and effects units that constituted it. A couple of years ago, the home-built synth modules and production-line instruments that had “grown” non-standard pieces of circuit board seemed to have all but disappeared. The only people really able to perform surgery on their equipment were the electronics buffs and, more recently, the computer addicts who were knocking out their own patch librarians and editors.

Then electronic dance music, with its leanings towards old synths, heralded the resurgence of analogue sounds and technology. That technology came complete with its accessible circuitry and its inability to speak MIDI. The first step, then, was to find – or build – a MIDI-to-CV converter. Roland’s discontinued MPU101 four-channel MIDI-to-CV converter has become a much sought-after item, and a number of smaller companies like Philip Rees, Groove Electronics and Cision have taken advantage of the

situation and begun producing their own. The different pre-MIDI triggering standards saw many old instruments acquire an extra socket or two (my Minimoog trigger inverter was stolen from a BT circuit diagram). Groove’s services modifying a growing selection of old ‘70s analogue equipment to suit the ‘80s musicians’ requirements, bears out the growing interest in old sounds. And in the interview elsewhere in this issue, Simon Harris makes some pretty damning comments about the way the musical instrument manufacturers are responding to the requirements of many of today’s musicians. So just what is going on?

It seems to me that people respond to adversity – and I’m including musicians in this category. If you tell someone they can’t have it, or that they can’t do it, they’re sure to want it that little bit more. Some of the most interesting records have been cut in spite of the technology rather than because of it. You can only give people what you want (or what you think they want) for so long before they start looking for it somewhere else. Well, they’re looking and they’re starting to find. And, right now, there are more people with hot-rodded gear around than there have been for quite a while. How many DX7s carry E! boards? How many S900s are fitted with Marion Systems 16-bit enhancement boards? The boys at Cision are even offering circuit diagrams to help you modify your SH101 to talk MIDI more fluently.

In one sense what’s going on is a bad reflection on the industry we all depend upon to bring us new instruments and ideas. In another it’s good to see musicians doing it for themselves and each other, and to see the shape of the industry changing because there’s a demand for services that the older companies don’t offer. *Tj*

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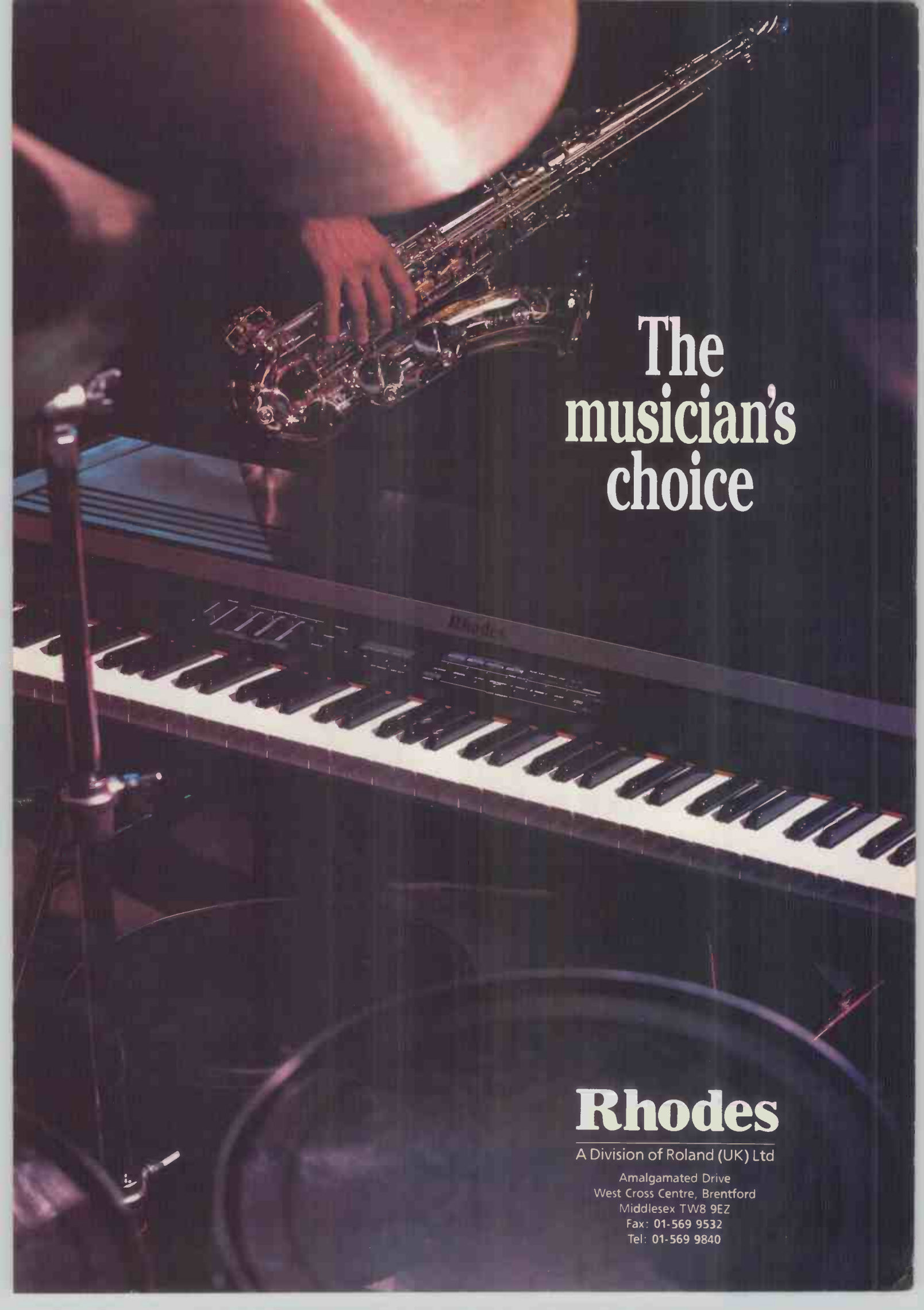
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In a completely different vein to Cubase, MusiCal is a music learning program aimed primarily at the educational market. Ian Waugh goes back to school.

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This year's British Music Fair attracted hordes of equipment-hungry punters eager to see what the future of music might hold. Simon Trask was there asking the same question.

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Having abandoned the independence of Factory Records in favour of the relative safety of a major record deal, ACR are back in the limelight with a new LP. Nigel Lord asks questions of commerciality.

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September's music reviews cover LPs from 808 State and Mark Shreeve, a new line in videos called "videola", a live outing from Tackhead drummer Keith Leblanc and demos from you, the gentle reader.

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78

Readers' patches for Casio's CZ5000 and Ensoniq ESQ1, and a review of Leister Productions' Professional patches for D110 & TX81Z make up this month's Patchwork.



## EVEN MORE MIDIHELP

MIDIHelp, the service set up by Vic Lennard to sort out MIDI and recording problems of all descriptions, is announcing several additions to its service.

Disk data recovery is now officially being offered (after having been unofficially available for about three months). The services of Eric Northwood, a computer hardware consultant, have been acquired, which means that data recovery can now be offered for PCs as well as Atari STs. The charge for data recovery is 50p for each 1K of file recovered, but this is only payable if the data can be saved. No recovery, no charge.

MIDIHelp is also now offering Home Recording Workshops, following the success of the weekend MIDI workshops. The Home Recording class will cover all

aspects of getting signal onto tape, and will cost £85 per person for a 12-hour weekend at Eastside Studio in North London. Maximum size of a class is 5 persons.

Another new class offered is the Advanced MIDI Workshop. This class is intended for those who are interested in running a MIDI studio real-time with an absolute minimum of recording onto tape. The topics covered include MIDI control of synthesisers, audio and FX units and working with SMPTE, sequencers and System Exclusive information for data dumping. The cost is £85, as for the Home Recording Workshop.

More from Vic Lennard at MIDIHelp, 26 Brunswick Park Gardens, New Southgate, London N11 1EJ. Tel: 01-368 3667, Fax 01-368 7918. Dp

## THE WIZARD OF OZ

How do you fancy a day's free recording in top London studio Power Plant, under the able guidance of Australian producer Jim Taig? (Has Christmas come early? Is it your birthday?)

Producer Taig, recently moved to the UK, has a day at the Power Plant, courtesy of the British Record Producer's Guild, at his disposal, and is keen to find a high-calibre unsigned band or artist to take into the studio with him - with a view to establishing a long-term working relationship. The act in question must be "highly original and non-derivative", with quality material (strong, identifiable melodies and lyrics) which Taig can enhance with his own production style and techniques. He's already got a list

of top-line credits to his name, including work on material by INXS and Icehouse, and notably with Wa Wa Nee, an Australian band with a string of top ten chart successes, including Australian No. 1 single and gold debut album.

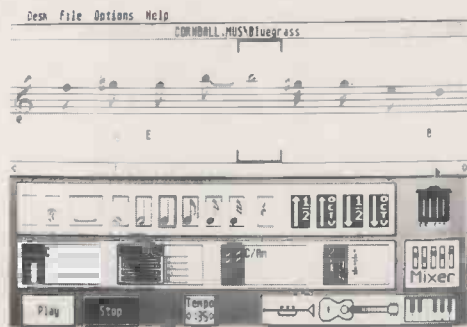
Taig plans to record and mix two tracks at Power Plant, after pre-production at his home and rehearsal studio with the chosen act.

Interested parties should send tapes, photos and biographies to Jim Taig, c/o Ulterior Productions Ltd, 171 Blythe Road, West Kensington, London W14 0HL. Taig assured Newsdesk that the musical style of bands or artists is immaterial - originality and personality are what counts. Dp

## PCS SHOWIN' OUT

The 12th annual PC Show is taking place this year at Earls Court from 27th September to 1st October. As well as the usual complement of games software, visitors will also be able to see music and MIDI software in action. There will also be a good range of hardware on display, including Atari's new STACY

laptop (which attracted attention at the Chicago NAMM), and possibly the upgraded ST, code named the STE. Amstrad, Commodore and Acorn will be present at the show too. Trade days are the 27-29th September, with the public being admitted over the weekend of 30th September and 1st October. Dp



## MUSIC FOR THE MASSES

Hybrid Arts are launching a new synthesis program for the Atari ST. Entitled FM Melody Maker (copyright problem there lads?), it's a veritable one-man band in a program, complete with 78 pre-programmed sounds, 16 different accompaniment styles and 14 chord types.

FM Melody Maker is configurable into either nine FM channels or six FM and five drum channels, it slots into the STs cartridge port and has pseudo-stereo line level RCA phono outputs for use with a hi-fi/stereo system. It works with all Atari STs in both colour and monochrome.

The program could be used by people without any previous musical

knowledge; music entry is easy, and the program features a real-time one-track MIDI recorder, a drum machine with pattern and song editors, which can output to MIDI drum machines and modules, plus the FM expander feature turns FM Melody Maker into a nine-voice multitimbral touch-sensitive synth module, which can be controlled by an external MIDI keyboard or sequencer.

FM Melody Maker costs £69.95 and will be available from computer and music retailers throughout the UK.

More info from Hybrid Arts (UK) Ltd, 24/26 Avenue Mews, London N10 3NP. Tel: 01-444 9126/7. Dp

## HORSES FOR COURSES

The Gateway School of Recording and Music Technology have announced an interesting addition to their range of highly-respected courses; the new course in music technology, recording and music business studies will be a one-year, full-time course.

Gateway supremo Dave Ward commented "We have wanted to put on a year-long course for some time now, but could never justify such a course in recording technology alone, bearing in mind the lack of employment possibilities in the recording industry and the desire of many studios to train their staff in-house". The new course, however,

provides comprehensive training for work in almost any facet of the music industry; the need to have a working knowledge of all areas of the industry, both technological and administrative, is becoming increasingly clear, and the course is appropriate for anyone wishing to work in the creative administrative service or sales side of the industry.

The course will offer training in all aspects of modern music technology, business structures in the music industry, and basic business knowledge.

More info on this and other Gateway courses from Gateway, The School of Music, Kingston Hill Centre, Surrey KT2 7LB. Tel: 01-549 0014. Dp



## SDX-PLAINED

Owners of Simmons SDXs might well be wondering about what they can do if problems arise with their SDX software since the untimely demise of Simmons. Baz Watts (ex-SDX product specialist) and Ampsounds of St Albans have provided an answer.

Baz is now working for Ampsounds, and they've kindly put one of their phone lines at his disposal so he can temporarily continue software support for SDX owners.

If you have an SDX, and need advice or troubleshooting, you can call Baz on (0727) 50075.

Ampsounds also inform us that they're now distributing the Tascam Pro Range of tape recorders, and have also announced sole UK distributorship of CSR Clear Sound Reflex digital audio tape, highly acclaimed at the recent International Radio Exhibition, and now available in DR46, 60, 90 and 120 lengths, only from Ampsounds and selected retailers.

More information on any of the above from Mike Paige on (0727) 50075 or Ampsounds, 153a Victoria Street, St Albans, Herts AL1 3TA. Dp

## SAMPLES TO SPEC

A new service has recently been set up by freelance programmers Jason Creasey and Hamish Hutchison, aimed at providing a personal sampling service. The service goes under the name of The Engine Factory, and specific samples which a musician or studio may require can be offered for any sampler (except the Synclavier!).

Even though the service has been operating for only six months, the client list is quite impressive, including Hans Zimmer, Matt Bianco, Level 42 and Paul McCartney, amongst others.

Fixed prices for the service are difficult to set in advance, as the amount of time and work required could vary drastically with a client's needs, so Jason suggests that anyone interested in tailor-made samples calls him or Hamish for a quote. Demo disks are also available for the S1000 at £19.95 each; these include Drum kits, Strings, Synths, Trumpets, FX and more on the way.

Further information can be obtained from either Jason Creasey or Hamish Hutchison, on 01-650 1033. Dp

## SONIC BEAM BOYS

Edward Williams, Richard Monkhouse (any relation?), and Robin Wood, of British company EMS, more usually known for their Synthi AKS and vocoders, have recently won one of the 1989 Social Invention awards for their innovative Soundbeam. The awards are presented in recognition of the best ideas for improving society every year.

EMS's Soundbeam, outwardly a fairly innocuous little box, allows handicapped people with minimal movement to control electronic instruments. Up to four linked ultrasonic echo-sounders, con-

nected to a synth, detect the presence and range of any part of the body entering the beams, so that minute movements up to six metres away can be used to create dramatic musical effects.

The Soundbeam also has potential applications for dancers and other performing artists, and could be used in schools to introduce children to the great potential of technology in music making. Prices start at around £580.

More from Robin Wood at EMS, Trendale Vein Barn, Ladock, Truro, Cornwall TR2 4NW. Tel: (0726) 883265. Dp

## ALESIS' DATING SERVICE



An interesting new gismo from Alesis is the Datadisk, a 1U-high 19" rackmounting unit which will allow convenient storage and access to any MIDI data from any MIDI device. Sequences, patches, SysEx and so on, can all be easily stored and retrieved. The datadisk has a large memory and a high-

quality disk drive, and will retail for £399. A solution to that infuriating quick-disk problem with your trusty Akai S612?

More information is available from Sound Technology plc, 6 Letchworth Business Centre, Avenue One, Letchworth, Herts SG6 2HR. Tel: (0462) 480000. Dp

Scotland's first ever music show is due to be held this Autumn in Glasgow. The Scottish Music Show will run over the weekend of September 30 to October 1st and is being organised by Music Maker Exhibitions Ltd.

The Scottish Music Show will be the first chance Scottish musicians have had to see the latest in musical instruments and associated equipment without having to travel hundreds of miles south. And since the show is being held at Glasgow's Scottish Exhibition and Conference Centre (Scotland's premier exhibition venue), those who attend the show will be able to try out new musical equipment in comfortable and modern surroundings.

A key element in the show will be a series of demonstrations and

seminars, held in the Exhibition and Conference centre's custom-designed concert area. Each of these seminars will concentrate on a particular musical instrument or technique, and each one will be sponsored by the appropriate magazine from the Music Maker Publications stable: Music Technology, Guitarist, Rhythm and Home Keyboard Review. It's also expected that various star names from the music business will be in attendance at each seminar.

Waving the sampling flag on MT's behalf will be The Irresistible Force, whose live sampling show has to be seen to be believed. If you think sampling music is passé, catch this show.

## SHOWTIME

The bulk of the UK Industry has already given its backing to the Scottish Music Show, and you can be sure that the big names will all be there.

For more information about the Scottish Music Show, contact Elaine West on (0353) 665577.

Shortly after the Scottish Music Show comes the second annual Hands On Show, hosted by our sister magazine, Home and Studio Recording, on the weekend of the 14th and 15th of October. If you weren't at last year's show, the idea is that it combines a recording equipment trade show with a selection of seminars on various aspects of recording music. The emphasis is very much on the

"hands-on" aspect, and manufacturers and retailers will have gear up and working so that you can see it in action and press a few buttons if you feel the urge (please, this is a family show).

Of particular interest to the MT reader are the seminars covering MIDI sequencing and the use of MIDI guitars, while the more recording-related seminars will be of great use to any musician who spends time in a home or professional studio. Every day, there will be a one-hour open question session where a panel of experts will help you out with any recording-related problems you might have come across.

More info from Music Maker Exhibitions, Alexander House, Forehill, Ely, Cambs CB7 4AF. Tel: (0353) 665577. Dp

## pirates ahoy

Software piracy has become an inevitable fact of life. Software companies such as ourselves have gone to great lengths to copy protect software. Not because we're greedy capitalists out to make as much money as possible out of the poor musician, but because without adequate income from a piece of software, there will be no money available to invest in Research and Design for future products. No R&D – no new products.

All this has been discussed in the letters and editorial pages of magazines many times before. But how does software piracy affect the user of music software?

For those unaware, we distribute Steinberg software. Most is for the Atari computer, virtually all of it copy protected. In most cases the copy protection takes the form of a dongle, or key. Over the years, key-protected programs have become "fair game" to the hacker brigade. There are now non-protected versions of many key protected programs in circulation. Some work fairly well, others don't. Classified adverts are starting to appear selling "non-protected" versions of music programs for up to a fifth of the normal retail price.

When buying computer software you are not just buying the product as is, you are buying a system that will grow and evolve with future upgrades. For example, Steinberg Pro24 has grown from a basic MIDI sequencer to a comprehensive MIDI recording/processing program with four major upgrades. Purchasers of the original program would have received four major upgrades for a nominal handling charge and would now have a program that bore little resemblance to the original. An unsuspecting musician will see a classified ad for, say, Steinberg Pro24 at £75. This will almost certainly be an unprotected copy. If he buys it he will (1) have no guarantee that it works properly, (2)

not receive any product support from Steinberg's customer helpline, (3) not receive any future upgrades with new features/enhancements, (4) in certain circumstances be breaking the law.

Also, non-protected versions of a program such as Pro24 aren't Pro24s. The file procedure can be different. This means that, when you try to load the song or pattern into an authorised version, it may not work – you could be creating problems for the future.

Steinberg's new sequencing/MIDI processing program is Cubase. It sells for £500. It is undoubtedly being hacked at the moment, and maybe in six months time someone will have managed to evolve a non-protected version. This may then appear in the small ads with a photocopied manual for, say, £100. It may work, though it probably will crash a lot. If you were to buy it you would be flushing your money down the toilet. We are currently planning a whole host of really impressive upgrades which will be coming out over the next 18 months. Buying a non-authorised version will mean you won't get these upgrades. When a new upgrade comes out we send disks to all subscribers – these disks will only work with a key, so those with a non-protected version won't have access to them.

We aren't whingeing manufacturers or distributors, but constantly crashing unauthorised software reflects rather badly on our authorised product. We are inundated with calls on our helpline from people with defective unauthorised product. Our only suggestion is that the user take it back to the person they got it from and get their money back. "You would say that", I hear you say, but what other solution, apart from involving the police, is there?

Software protection isn't the "big nasty" it might appear. It works for the user, not against him. If you have an authorised version of a product, the chances of it working properly are infinitely greater. The message is clear: if you buy bargain

priced non-authorised software you'll be getting a lot more than you bargained for!

**David Cromble**  
**Evenlode Soundworks**

## clone ranger

Thanks for publishing my letter in your February issue. How about that free subscription I was supposed to get? Just wondering...

I wonder why you guys, and so many other music mags out, down IBM PC compatibles so much. Granted, they're not as cute as the Mac or Atari ST, but they can get the job done wonderfully. Maybe in England they're not as cheap as the Atari, but elsewhere you can usually find a well-equipped clone for about the same price. The amount and quality of software available is unbeatable for most applications, even in the music domain: less quantity but undeniable quality – anyone familiar with Sequencer Plus can attest to this. I guess people presume musicians are morons and need a "user-friendly" interface to work with.

This assumption really doesn't make much sense because (1) not all graphic user interfaces are user friendly, and (2) musicians, no matter how moronic they may be, have to deal with far more difficult operating systems than MS-DOS to get their synths, samplers and drum machines to work.

Even so, if you can't live without a mouse and a graphic user interface you can always get an AT compatible or a 386SX machine and run Windows (most music software already comes in a version suitable for running under it). That way you can point and click to your heart's content and still benefit from the speed and graphic capabilities of the machine.

I believe people give PCs a hard time basically because of their image – musicians aren't supposed to like big corporations – but I wonder if they ever stop to think how big the Roland and Yamaha

Corporations are these days.

Sorry, I just couldn't mail this letter without mentioning that subscription again. As you might have guessed, I quite enjoy a pointless argument...

Kudos  
**Gustavo Fonseca**  
**Sao Paulo**  
**Brasil**

A hard time? Does he mean us? He surely does. And a pointless argument? He could have a point there.

Never having skipped over to Sao Paulo to pick up an ST or a clone, I'll take your word for their cost and availability, Gus, but you obviously don't need mine to tell you that there's considerably more software around for the ST than there is for the PC. You said yourself "...less quantity but undeniable quality". What do you want us to do? Keep re-reviewing a good piece of software to keep up the coverage and the superlatives?

We're not unfairly favouring the ST with the coverage we give its software, we're simply reflecting the trends in computer popularity. There are more STs around in musicians' circles and, consequently, a lot more attention is paid to generating software for them. And the situation isn't even that simple as there's the Macintosh, Amiga and now the Archimedes to take into account. All these machines deserve space in Music Technology, and we attempt to give it to them. We gave Voyetra's Sequencer Plus (for the PC) a pretty good write-up back in May last year, and since then we've also taken a look at programs like Turtle Beach's SampleVision and the Songwright IV scorewriter. Is this what you mean by putting down the PC? It's certainly not what I'd have called it.

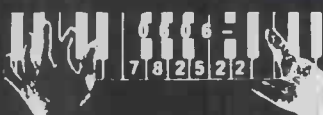
And before I forget, this "free sub" business – your letter is supposed to make Letter of the Month before you become eligible. You give a guy a few column-inches in a magazine and he starts trying to take liberties. Tg



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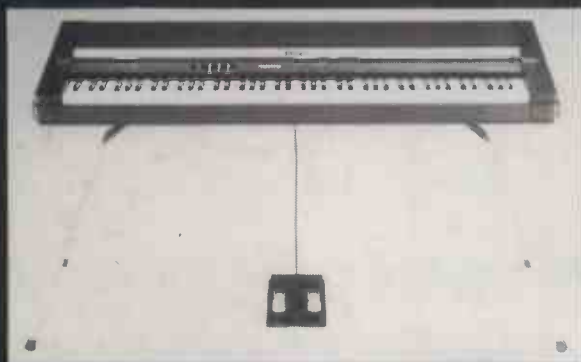
Dynamic Component Synthesis best describes Ensoniq's powerful integration of carefully selected waves, comprehensive sound shaping tools and programmable sound processing possibilities. Simply stated, the Ensoniq VFX's great new sound will inspire you to make great music.

## The Roland U20



The U-20 is an entirely new type of keyboard which enables musicians to play realistic PCM sampled sounds with the same convenience as playing regular synthesizer sounds. Using the DI (Differential Interpolation) method also used by S-Series samplers, the U-20 reproduces high-quality sounds which have been sampled and stored in its built-in ROM. This allows the player to instantly access a vast array of professional-quality sampled sounds without the time required to load samples from a disk. The U-20 features a 61-key velocity- and aftertouch-sensitive keyboard, built-in digital effects, output panning and performance functions including Chord Play and Arpeggio. With extensive MIDI implementation and multi-timbral capability (six Parts with a separate Rhythm Part), the U-20 is perfect for applications ranging from live performance to studio recording.

## THE RHODES MK80



THE RHODES PIANO is back, and that's official! After speculation that it may have disappeared for ever, excited keyboard players have reported sightings of the new Rhodes MK-80 and MK-60.

The designed team included Harold Rhodes, who was responsible for the development of the Rhodes marque, and ensured that these new models (using Digital Technology) still reproduce faithfully the original, much-loved Rhodes sound. But the new Rhodes offers much more than its predecessors ever did. The eight preset voices include: \* **Classic** - The authentic rich and warm Rhodes; \* **Special** - the sound of a customized Rhodes with clear highs and full-bodied midrange; \* **Blend** - naturally distorting lows with sharp attack in the mid/high frequencer; \* **Contemporary** - the modern Rhodes, crisp and brilliant tones with metallic highs. All these pianos employ a revolutionary new 'Stretched Scale' system, which reflects the imperfections that give traditional instruments their harmonic interest and tonal variations. Both the 88-key MK-80 and the 64-key MK-60 have EQ and Effects built-in

# M3R & RE1



PHOTOGRAPHY: JAMES CUMPSTY

Since it appeared, Korg's M1 has set the standard against which other workstations have been judged; now the company's M3R makes AI sounds available in non-workstation form. Review by Simon Trask.



**E**VER SINCE THEY brought out the M1, Korg have been in no hurry to move into the sub-£1000 price bracket. While other companies concentrate on repackaging their innovations in ever-cheaper versions for the masses, Korg are, if anything, moving upmarket with their new T1, T2 and T3 synths. Until now the M1R (a rack-mount version of the M1) has been the cheapest option for anyone wanting the M1's particular angle on sound synthesis, but even that will be gradually replaced by the ExM1R, an M1R with twice the amount of onboard sample ROM, which will sell for around £1800 (existing M1R owners will be able to get their unit upgraded for a fee).

But now with the M3R, Korg have come up with a unit which looks set to please all those musicians who've been longing for a budget expander version of the M1. While forgoing the M1/M1R's onboard sequencing, the M3R retains most of its more expensive relatives' features. However, it has only one oscillator (and therefore one sound) per Program, compared to the M1/M1R's two, and 75% of the latter's onboard ROM sample memory. Furthermore, its sample memory can't be upgraded like that of the M1R and (provisionally) the M1. But the polyphony remains the same (16 voices), as does the number of parts (eight), and the M3R has the same digital effects capability as the M1/M1R (and consequently the same audio output arrangement). It's also compatible with the series of M1 PCM ROM Sample cards, so you're not confined to its onboard samples.

Coming in a 1U-high 19" rack-mounting casing, the M3R is operated from a set of eight buttons on the front panel, with a modest 2x16-character backlit LCD window taking care of the display facilities. Realising that this might not be to

everyone's liking, Korg have also come up with a more user-friendly alternative in the form of the RE1 Remote Editor, a dedicated M3R hardware editor which connects to the M3R by means of a special ten-foot cable. The RE1 is an optional extra, with the combined price of an M3R and an RE1 coming to £1174.

As well as the aforementioned LCD window and eight editing buttons, the front panel contains a volume knob, stereo phones output jack, power on/off switch, and two card slots for PCM ROM data cards and Program/Combination data cards respectively. It's worth noting that the M3R cannot load M1 Program/Combination data cards, so Korg have been busy reprogramming their existing library specifically for the M3R.

Each of the eight edit buttons also has a red pinpoint LED which lights whenever a note is received on the corresponding Timbre's MIDI channel, resulting in quite a lightshow when you're running the M3R multitimbrally off a sequencer. On

the rear panel, meanwhile, are MIDI In, Out and Thru sockets, the Remote socket for connection of the RE1, and four audio output jacks (a stereo pair and two mono outs).

## SOUNDS

THE M3R'S INTERNAL sample ROM contains 89 Multisounds and 45 Drum sounds – all 16-bit. The Multisounds are a mixture of multisampled instruments, attack transients and DWGS-synthesised waveforms. Korg have included a healthy variety of familiar instrumental sounds such as electric pianos, clavinet, harpsichord, acoustic and electric guitars, a variety of basses (acoustic, fretless, picked and synth), flute, clarinet, vibes, choir, ensemble and solo strings, tenor sax and trombone, and – familiar at least in terms of African and Asian music – marimba, kalimba, koto and gamelan. Personally I'd like to see Korg provide a much more comprehensive selection of African and Asian instruments on future plug-in PCM ROM sample cards – there are a wealth of such instruments just waiting to be sampled. How about, for instance, a complete gamelan orchestra on a card?

However, along with the instrumental sounds onboard the M3R, go a range of more unusual metallic, percussive sounds and noises, many of

them digitally synthesised, with names like 'Lore', 'Pole', 'Metal Hit', 'Pop', 'Spectrum', 'Wire' and 'Digital'. These play an important part in defining the distinctive character of the M3R's sounds. Korg have also included DWGS-synthesised sine, square, pulse (10% and 20%) and sawtooth waves for more traditional synthesis.

In part the Drum sounds occupy familiar territory, including bass and snare drums, open and closed hi-

hats, congas, timbales and cowbell. But they've also included a number of sounds which appear to have been taken from the metallic, noisy end of the Multisounds spectrum – perhaps because, unlike Roland's L/A synths, the M3R's Drumkits can't incorporate sounds from outside the Drums list. Whatever, the inclusion of off-the-wall percussive sounds in the Drumkits can greatly enhance the sonic vocabulary of your M3R rhythm parts, and that's no bad thing nowadays.

Multisounds put through the M3R's synth section are known as Programs; there are 100 of these onboard the expander, while a further 100 can be stored on RAM card. Multitimbral combinations of Programs are, logically enough, known as Combinations, and again there are 100 onboard and 100 on RAM card. A Drumkit can be selected for a Program in place of a Multisound. You can program four Drumkits into the M3R's onboard memory, each kit consisting of up to 30 drum samples assigned across the keyboard, each with ▶

**“The RE1 offers essentially the same panel editing facilities to be found on the M1, but with the significant addition of the eight data sliders.”**



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Whereas oscillators traditionally presented a limited number of harmonically rich waveforms, on the M3R you can use any of its samples (including a Drumkit) as the starting point for synthesis. The M3R's Program structure follows the familiar pattern of oscillator-filter-amplifier (all digital, of course), with separate five-stage pitch, filter and amplifier envelopes (which can be modified by keyboard tracking and by velocity) and pitch and filter Modulation Generators (LFOs by any other name, with a choice of triangle, saw up, saw down and square waves, and frequency, delay, intensity and key sync on/off parameters). In addition to attack velocity, the M3R will respond to channel aftertouch, which can be routed to pitch, pitch modulation, VDF (Variable Digital Filter) cutoff, VDF modulation and VDA amplitude. Additionally you can determine how MIDI pitchbend will affect pitchbend (logically enough) and VDF cutoff, how MIDI controller 1 will affect pitch modulation, and how MIDI controller 2 will affect filter cutoff modulation. All in all, then, a flexible but not over-complicated set of synthesis parameters. If there's one thing I would like to see making its way onto today's all-digital instruments it's filter resonance; to date only Roland seem to have sussed this, on their W30 sampler workstation and S330 rack-mount sampler.

For the most part the M3R's factory Programs don't change the Multisounds all that much, even adopting many of the Multisound names as Program names. Remember, as I said earlier, unlike the M1/M1R the M3R's Programs only have one oscillator, so to pair up samples you need to use the Combination memories.

Tuning enthusiasts will be pleased to know that the M3R allows you to select alternative scale types. Equal Temperament 2 is equal temperament with a randomised fine-tuning for each note, while Pure Major and Pure Minor provide just intonation (complete with programmable tonic, or root, note) and a user-definable scale allows you to specify pitch deviations (+/-50 cents in cent intervals) for each semitone in the octave. Not as flexible as Ensoniq's EPS sampler and VFX synth, perhaps, but welcome nonetheless.

You can select and play Programs in Program Edit mode, but digital effect settings can't be stored as part of a Program. At most, if you select Effect Interlock in Global mode then the Programs will be routed through the effect parameters of the last-selected Combination. The preferable way of playing individual Programs on the M3R is as part of a Combination, with Single texture selected; in this way you'll also be able to set a playback level and effect/output routing. Because the M3R only has one oscillator per Program, you're much more likely to work in Combination mode anyway, as it's the only way of combining two sounds.

Combination mode allows you to select one of five textures which govern the number of Timbres used: Single (1), Layer (2), Split (2), Velocity-switched (2) and Multi (8). For all five textures you can define Program, volume level, pan position and sustain-pedal on/off per Timbre, while additionally for Layer you can define interval (+/-24 in semitone steps)

and detune (+/-50 in cent steps), for Split you can set the splitpoint (C#1-G9), and for Velocity-switched you can set the switch point (2-127).

The Multi texture allows you to use from 1-8 Timbres at once. Necessarily you have to define a MIDI channel for each Timbre, but you can also set a note window and a velocity window (as low/high values in each case, with each Timbre independent of the others). In this way you can create a wide variety of textures, with combinations of layered, split and velocity-switched Timbres, or up to eight independent Timbres. You can define semitone and cent transpositions for each Timbre as per Layer, and set MIDI patch change, sustain pedal, aftertouch and control change on/off selectively for each Timbre, while patch changes received on the Global channel select new Combinations.

Only two of the M3R's factory Combinations use a Single texture: 'GrandPiano' (01) and 'Fretless' (77). The others vary from two to eight, and provide excellent examples of the ways in which Programs can be combined. One of my favourites is 'TouchRoads' (11), which velocity-switches between soft and hard electric pianos to produce the best recreation of the Rhodes sound I've heard this side of Roland's new digital Rhodes pianos. On the other hand, 'Jhanda' (60) is an example of an eight-way keyboard texture which makes use of velocity-windowing and semitonal tunings with such Programs as 'Voices', 'DigiBell2', 'Marimba', 'Music Box' and 'Spectrum2' to create the sort of atmospheric, pseudo-oriental sound collage that the M1 is so well known for. 'Rock Organ' (81) is in fact a gloriously cheesy Sale of the Century organ sound, courtesy of a fast rotary-speaker effect (see below), while breathy sounds are present courtesy of such sounds as 'VoiceChoir' (17) and 'BellVoices' (75). String pads are well catered for, with the likes of the imaginatively-named 'String Pad' (03), the suitably Baroque 'Vivaldi' (07) and 'Sonata #1' (37), and 'Concerto' (43). There are plenty of eerie atmospheric sounds, such as 'Aurora' (10), a combination of 'MagicOrgan', 'Spectrum2', 'Choir', 'PanDrops' and 'WindBells'; 'Nocturnal' (20), which mixes 'Lore', 'Spectrum3', 'Voices', 'Harmonics', 'Vibe' and 'Sine' 'Timp'; and 'Inner Space' (50), which mixes 'Spectrum1', 'PanFlute', 'Spectrum3' and 'SoftBell'. Meanwhile, 'Kit1+MIDI', 'Kit2+MIDI' and 'Kit3+MIDI' all provide eight-part multitimbral combinations of drumkits with sounds like bass, piano, guitar, and sax.

The M3R's voices are assigned dynamically to the active Timbres, but there are no voice-reserve or Timbre-priority facilities. Remember that you've got a relatively modest 16 voices to play with; in contrast, Roland's U110 and E-mu's Proteus (both possible alternatives to the M3R) have 31 and 32 voices respectively. The M3R does implement an Overflow facility which allows the polyphony to be effectively doubled if you connect another M3R to its MIDI Out, as it passes on incoming MIDI notes whenever its onboard 16-voice capacity is reached. Still, it's an expensive way of getting 32-note polyphony compared to the U110 and Proteus.

However, the M3R scores with its sophisticated onboard digital effects (in comparison, the U110 has digital chorus and tremolo, while Proteus ►

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► has no effects at all). Like the M1/M1R, the M3R offers you a choice of 33 programmable effects, eight of which are paired. Here you'll find six reverbs (hall, ensemble hall, concert hall, room, large room and live stage), early reflections, stereo and cross delays, stereo chorus, stereo and cross flanging, phasing, tremolo, EQ, overdrive, distortion, exciter, rotary speaker, and pairings of delay with most of the above. These are all perfectly usable effects, on a par with much that is available today in the way of the cheaper multi-effectors, and so score highly in the value-for-money category.

Each Timbre can be routed to A, B, C and D inputs to the digital effects, with the following options: A, 9:1-1:9 (stereo placement within A/B stereo outs), B, C, C+D, or D. The M3R has two effects generators which can be organised in one of two configurations: serial or parallel. Inputs A and B are "hardwired" to effect one, and C and D to effect two; similarly, effect one goes to outputs 1 and 2 (the stereo pair) and effect two to outputs 3 and 4. However, inputs C and D can alternatively be routed to outputs 1 and 2 – to A, B, or a stereo placement (99:1-1:99) – if you only want to use the stereo outs.

In this way you can route each of your Timbres through one of two independent effects (serial configuration), or through both effects or effect two only (parallel configuration). What's more, by using two of the eight combination effects Korg have provided, you can route your Timbres through up to four effects. Additionally you can program a dry:effect balance for each of the two effects within a Combination, or switch out one or both of the effects altogether.

The Drumkits are a special case, in that each of the 30 drum sounds per Drumkit can be given its own effect routing. In this way you can not only spread your drum sounds across the stereo image, but selectively route a couple of sounds via Outs C and D for separate (even external) processing.

As well as being able to save the M3R's entire memory to RAM card, you can transfer it via MIDI SysEx, either as a single bulk memory dump or else by category – Programs, Combinations, Drumkits or Global. Incidentally, the factory Programs and Combinations are stored permanently in onboard ROM and can be recalled at any time – always a handy facility, especially when, as here, the factory sounds are worth keeping.

## RE1 REMOTE EDITOR

THE RE1 IS a compact, fairly lightweight optional stand-alone unit, which provides an alternative front panel for the M3R. It has no power socket of its own, instead deriving power from the M3R via the Remote cable which connects the two units. The RE1 "takes over" the M3R as soon as you plug it in – the message "Remote Control" appears in the expander's LED window and the edit buttons are locked out (except for indicating active notes).

The RE1's purpose in life is to make operation of the M3R a great deal easier, a task which it succeeds in admirably. For a start, it provides a 2x40-character LCD window with a soft blue

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backlighting which is much easier on the eye than the M3R's garish yellow. Underneath the LCD are eight buttons, labelled A-H, which select various parameters depending on which screen you're on. The RE1 uses the same type of buttons and sliders as the M1, but goes one better with eight data sliders for editing the parameters. You can use the data sliders without first having to select the relevant parameter – pressing the A-H buttons allows you to use the +/- edit buttons to the right of the LCD window, tells you what each parameter is, or, in some cases, instigates actions (for example, Program Write yes/no).

The operational principles of the RE1 mirror those of the M3R, with function buttons to the left of the sliders selecting operating modes, and a pair of buttons to the right of the display stepping in either direction through the pages of the currently-selected mode. Below these are numeric buttons for directly moving to pages within the current mode, and a pair of buttons for selecting Internal and Card memories.

Thus the RE1 offers essentially the same panel editing facilities as are found on the M1, but with the significant addition of the eight data sliders. These are particularly useful when you're editing parameters (eg. volume) for the eight Timbres of a Multi Combination.

## VERDICT

IT'S TEMPTING TO say that the M3R is what the M1R should have been all along – a sequencer-less version of the M1 with a few compromises which are adequately justified by the budget price. The lack of onboard sequencing isn't any great loss on an expander, while I for one can live with the reduced sample memory and the single oscillator per Program. The M3R's 1U-high 19" casing does mean that editing from the front panel is a drag (man), and although you can get by without the RE1 Remote Editor it soon becomes a very tempting proposition. Full marks to Korg for providing the option, but I can't help feeling that at £275 the RE1 is overpriced. Just think, that amount could go towards another piece of sound-generating gear.

But what really matters is that unique vibrant sound quality of Korg's AI synthesis, and the fact that the M3R retains the most significant features of the M1/M1R, such as 16-voice polyphony, eight-part multitimbrality, sophisticated onboard digital effects processing (a gift at this price), four audio outputs, and the ability to access Korg's growing library of PCM ROM sample cards and Program/Combination data cards. How can you resist? ■

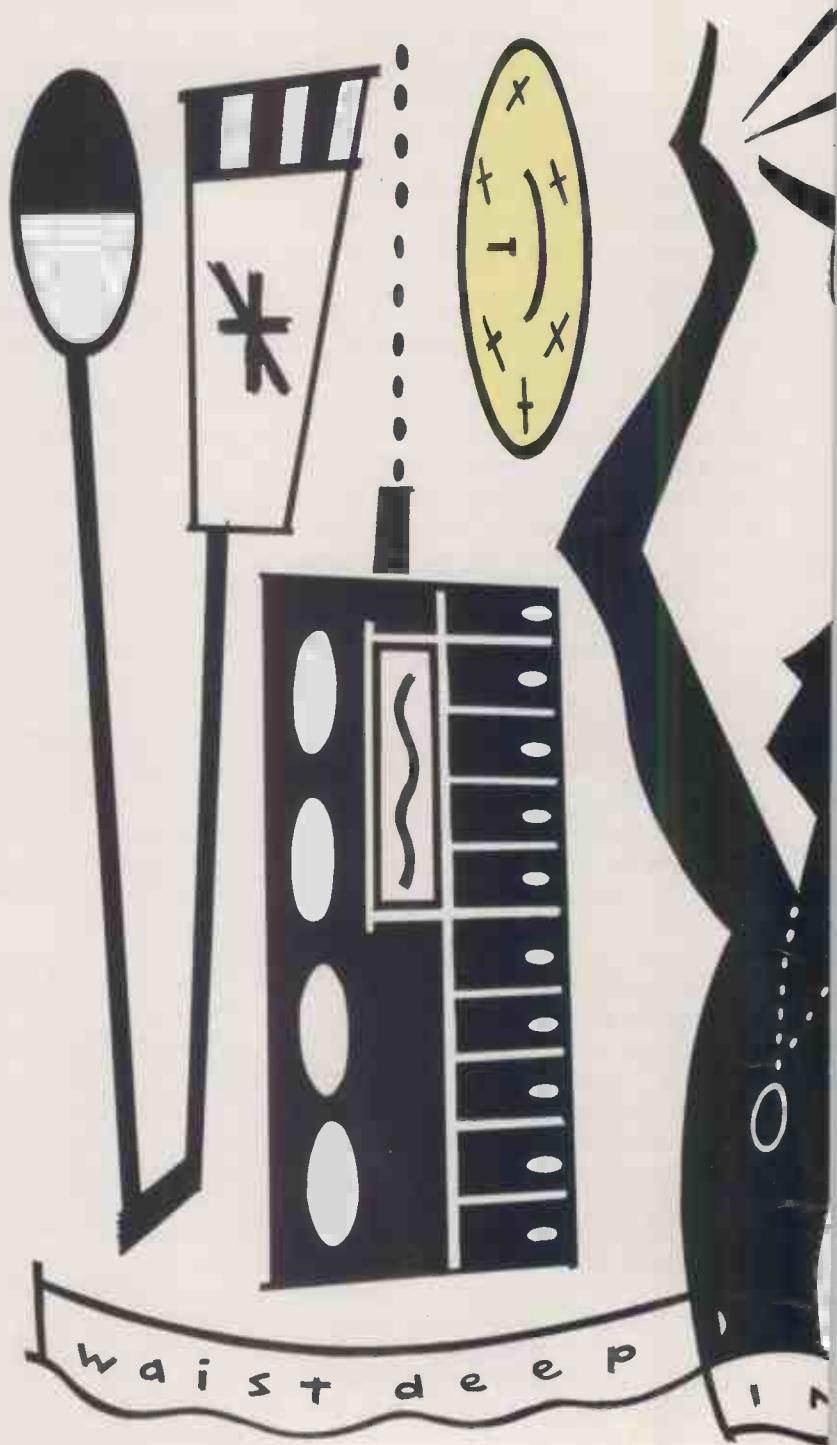
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**IN THE SECOND PART  
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EXAMINE THE  
IMPORTANCE OF THE  
HI-HAT. TEXT BY  
NIGEL LORD.**

SORRY TO BE apologising for mistakes so early in the series, but in my introductory article last month, the snare and bass drum notes managed to find their way onto the wrong beats of bar two in pattern nine (the penultimate pattern). The placing of the snare drum should have been the same as in pattern eight and ten, but for some reason it ended up a beat early – and this brought the bass drum forward as well. If you followed the text, you would probably have spotted the error, as no mention was made of the snare beat being moved. To avoid any further confusion,

however, the pattern is repeated as Pattern 1.

Actually, reprinting this pattern has proved quite fortuitous, as it represents an excellent starting point for the examples in this month's article. Here we shall attempt to extend the role of the hi-hat.

Having programmed many different styles on a wide variety of machines over the years, it is my belief that the battle to produce natural, fluid-sounding rhythms is often won or lost on the hi-hat line of the pattern grid. Actually, I must expand on

MUSIC TECHNOLOGY SEPTEMBER 1989





ILLUSTRATION: CLIVE GOODYER

a little colour to the hi-hat track is by removing a few of the beats altogether. Taking out the beats which coincide with the snare drum, for example, doesn't detract from the overall feel of a pattern (it's often scarcely detectable, given the overlapping sound frequencies often involved), yet it can go some way to alleviating the monotony of a constant eight- or 16-to-the-bar tick.

Beyond this, unless you're specifically trying to achieve a machine-like feel to your rhythm, listening to a pattern and dispensing with all those hi-hat beats which aren't absolutely necessary has a lot to recommend it. Somehow the absence of any tonal variation in a hi-hat voice (whether electronically generated or sampled), is not nearly as noticeable if a little space is introduced between certain notes. In other words, if it is syncopated.

But of course, that's only part of the story. Inserting notes – particularly those which occur on what could be termed off-beats – can be equally productive, particularly where space has been created by the deletion of more "predictable" events. And dynamics, too, play a significant role in the syncopation of the hi-hat – more sophisticated drum machines allowing the programming of quite compelling rhythmic figures. But we're getting ahead of ourselves. Let's start with last month's rogue pattern and introduce a little spice to the hi-hat line. (See Pattern 2)

As you will notice, the increased hi-hat activity has necessitated the change to eight beats to the bar for the grid. (The pattern can be programmed as four bars of 4/4 and the tempo increased if this makes life easier for you, but remember that this will mean that the rest of your song will run at double time if you're using a sequencer sync'd to your drum machine via MIDI.) Loading the new pattern into your machine, you'll notice that the whole feel of the rhythm has been transformed – despite the fact that the snare and bass drum beats are in exactly the same place.

Moving the hi-hat beats around at the beginning of bar one brings about a subtle, yet quite definite, change and a jazzier feel. (See Pattern 3)

To achieve this, it has been necessary to introduce a degree of dynamic programming to the proceedings, but in line with our intention to keep the series relevant to those with more modest drum machines, this amounts to no more than accenting certain beats.

From here it's simply a matter of further rearranging the hi-hat part to produce variations on the basic rhythmic feel – again using accented notes. (See Patterns 4 and 5)

Maintaining the position of the bass and ►

this to include any instrument which acts as a metronome within the bar; it just happens that, in conventional programming, this task usually falls to the closed hi-hat. For some reason most people – even quite experienced programmers – are quite happy to let the hi-hat tick away without ever thinking of putting a little extra programming time into accenting or displacing any of the beats.

I suspect that this is connected with the hi-hat's traditional role as a time-keeper: using it as the pulse against which everything else is positioned in the bar.

It's all too easy to simply forget that it is an instrument in its own right and deserves to be treated as such – in most forms of music, at least. As I've already pointed out, if you're hoping to produce natural-sounding rhythm tracks (I've purposely avoided using the expression "real-sounding"), how you put together the hi-hat part will prove critical to its ultimate success or failure.

Besides doubling up the number of closed hi-hat beats in the bar – from four to eight, or eight to 16 (or, of course, halving them) – the simplest way of adding

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► snare drums whilst changing the feel of the hi-hat in this way provides an effective approach to programming an entire song. A degree of consistency is preserved throughout the patterns, yet there is sufficient variation to reflect the differing feel of individual song sections. The number of possible combinations is vast – even limiting yourself to the 16 beats and two dynamic levels these patterns are based on. But this will be tempered by the need to tie in with other rhythmic elements in the song – this is particularly true if some of those elements have already been written.

In the following pattern, one of the most common (some would say predictable) snare/bass drum grooves is given a new lease of life by programming a few accents on the hi-hat. . . (See Pattern 6)

As you will hear, even with the same number of beats per bar as the standard rhythm, the accents lend the pattern a sense of urgency which lifts it above the mundane.

For something rather more striking, you could try programming in a couple of extra beats between beats 1 & 2 and 2 & 3. This will mean doubling the resolution to accommodate 32nd notes (and reprogramming the snare and bass if each instrument cannot be individually quantised), but even the most humble drum machine should be able to resolve to this level. Incidentally, the accent on the first note is included to improve the definition of the opening figure. (See Pattern 7)

Using patterns 6 and 7 in combination should also prove worthwhile, particularly if the 32nd notes of the second pattern are programmed to occur at strategic points in a song.

For something a little less upfront, try replacing the hi-hat part with that in Pattern 8.

Even though programming is still restricted to accented and non-accented beats, the hi-hat is syncopated in a subtle and pleasantly insistent way which compliments the bass/snare combination. The light and shade created by the accents produces an echo-like effect on certain beats – and increases the foot-tapping quotient considerably (I don't know the correct technical term for this, I'm afraid). Obviously those with drum machines capable of greater dynamic sophistication will see opportunities here for further experimentation, but even in its basic form, the pattern has considerable potential across a wide range of styles.

Putting aside my personal dislike of the open hi-hat on practically every drum machine I've come across, it is, perhaps, time we looked at the rhythmic possibilities of the two hi-hat sounds in combination. In many situations an open hi-hat may be freely exchanged for an accented closed hi-hat. And it may well prove interesting making the necessary program changes to accommodate this in some of the patterns here. It should be remembered, though, that an open hi-hat left hanging (so to speak) is not a very attractive sound. As a general rule it is better to close an open hat down as soon as is rhythmically possible.

The following two dance patterns make use of the open hi-hat to add rhythmic interest and, again, having broadly similar feels, they could be adapted for use in the same song. (See Patterns 9 and 10)

Unlike drum voices, some quite elaborate hi-hat figures can be programmed without the danger of them becoming intrusive. This next example makes use of both open and closed voices to produce the kind of fill normally associated with real drummers (and good ones at that). But although it sounds quite complex, we're still only using the hi-hat, snare and bass drum voices, and two levels of dynamics. (See Pattern 11)

Finally this month, an example of a simple rhythm given added interest by shifting the hi-hat onto the off-beat. This pattern, too, makes a good starting point for experimentation. (See Pattern 12)

Writing a rhythm pattern is clearly an interactive process – both in terms of its relationship with the rest of the song, and the relationship of the individual instruments within the pattern. Thus, after we've re-written the hi-hat part and changed the feel of the rhythm, there's nothing to stop us taking a further look at the other instruments and deciding whether these could now be improved upon. Like so many things, producing the right groove for a piece of music takes time and patience, and should always be seen as more than an exercise in time-keeping. ■

Pattern 1

HI-HAT	•	•	•	•	•	•	•	•	•
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 2

HI-HAT CLSD	•	•	•	•	•	•	•	•	•
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 3

HI-HAT ACCENTS		>		>					>
HI-HAT CLSD	•	•	•	•	•	•	•	•	•
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 4

HI-HAT ACCENTS		>		>					>
HI-HAT CLSD	•	•	•	•	•	•	•	•	•
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 5

HI-HAT ACCENTS		>		>		>		>	
HI-HAT CLSD	•	•	•	•	•	•	•	•	•
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 6

HI-HAT ACCENTS		>		>		>		>	
HI-HAT CLSD	•	•	•	•	•	•	•	•	•
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 7

HI-HAT ACCENTS		>		>		>		>	
HI-HAT CLSD	•	•	•	•	•	•	•	•	•
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 8

HI-HAT ACCENTS		>		>		>		>	
HI-HAT CLSD	•	•	•	•	•	•	•	•	•
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 9

HI-HAT ACCENTS		>		>		>		>	
HI-HAT CLSD	•	•	•	•	•	•	•	•	•
HI-HAT OPEN									
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 10

HI-HAT ACCENTS		>		>		>		>	
HI-HAT CLSD	•	•	•	•	•	•	•	•	•
HI-HAT OPEN									
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 11

HI-HAT ACCENTS		>		>		>		>	
HI-HAT CLSD	•	•	•	•	•	•	•	•	•
HI-HAT OPEN									
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

Pattern 12

HI-HAT CLSD	•	•	•	•	•	•	•	•	•
SNARE									
BASS DRUM	•								•
TIME SIG: 4/4	BAR 1				BAR 2				

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# A Sense of Proportion

***A Certain Ratio first made their name in the early '80s as part of the Factory Records Northern dance movement. Their recent signing to a major label has signalled a drastic change in direction - or has it? Interview by Nigel Lord.***

AS THE EMBODIMENT OF ALL THOSE principles which have gone to fashion the independent music business in this country, A Certain Ratio have few equals. With an uninterrupted stream of albums and singles, the band's first decade has seen them turning out the kind of material which has become the very life blood of the indie charts. Of course, the relationship with Factory Records hasn't exactly hindered them in this respect, and though they are the first to admit that it was a right place/right time situation, ACR's uniquely hard-edged dance grooves seemed the perfect complement to Factory's well-tempered industrial chic during the early '80s.

Enjoying the shade created by New Order's consistently higher media profile, ACR took full advantage of Factory's rather compliant regime. When they wanted to make a record, they made one; if they wanted more colour on an album sleeve, they got it. As they themselves are only too aware, the relaxed and sympathetic approach of the Factory bosses - from Tony Wilson down - provided them with an environment in which they could experiment and develop at their own pace. Not exactly every band's experience of the music business. But then, not many bands would be astute enough to use such an opportunity wisely - or

indeed, maintain so assiduous an approach to their music as ACR have over the years.

Speaking to them at their Soundstation studio/rehearsal facility in Manchester, I discovered five people totally dedicated to the concept of the *band*. Ask them, for example, if there isn't a temptation for one member to develop an idea "more fully" before offering it to the others, and you're met with a look of genuine incomprehension. Clearly, that's not what being in a band is about for them. Asked if working together in the studio week in, week out doesn't get a little tedious, they point out that, like most people, their creative moments are unpredictable, so they need to be together in a working environment *every day* in order to take full advantage of them when they do occur.

It's probably fair to suggest that much of their long-term success can be put down to this inherent level-headedness. But of course, there are those who would no doubt dismiss it as the kind of feet-on-the-ground, whippet-keeping directness peculiar to "men of the north". Having lived most of my life in that part of the world, however, I have to say this hasn't exactly been my experience of bands in the area. Despite (or perhaps, because of) the image put about by the music press, of the North West as some kind of oasis of creative energy, ego appears to



be every bit the force to be reckoned with, as it is elsewhere in contemporary music circles. That ACR have managed to hang on to the principles they started out with some 12 years ago, whilst maintaining the more vital elements in their music, is an achievement not to be underrated.

But ACR are no strangers to change. From the industrial funk of the late '70s/early '80s, through the jazz tinged *sextet* period and into the more technology-orientated elements of *Force*, they have endured a variety of personnel and direction changes. Towards the end of 1986 however, (the year of *Force*), following major tours of the US and Japan, they decided it was time for a more fundamental reassessment. And so followed a period which to the outside world appeared to be something of a hiatus. Needless to say, from their perspective it was nothing of the sort. Major decisions were being made, perhaps the most fundamental of which was the decision to part company with Factory. Guitarist and trumpet player, Martin Moscrop explains the thinking behind the move.

"I suppose it was just a question of us having been with them for ten years and feeling like we weren't really getting anywhere. As you may know, Factory is run from a little office and everybody there is really efficient. But Tony Wilson has another full-time job (on Granada TV), so everything is left to Tina and Allan. And if New Order have a new record coming out... well, let's just say there's no way two people can work on more than one band at a time.

"It's like a one-band label really. Even though bands like Happy Mondays are getting a real push – that's only been since we left. We'd been moaning at Factory for five years about the way we wanted to attack things like advertising, but it seemed to be against their principles. Then a few weeks after we left, they started putting money into advertising and getting things moving properly.

"We fought like hell to get a producer for our last album on Factory – *Force*. Not a name producer, just someone who could teach us a few things. Up to that point we'd produced all our own albums (apart from the first, which Martin Hannet produced), and we wanted to try something new. But they just weren't prepared to put up the money, so..."

Like me, you probably weren't aware that Factory was such a shoe-string operation. Moscrop elaborates: "It's not shoe-string compared to most indies. Factory do like to do things properly. Like artwork: we had full control over the artwork for our records – we had our own designers – and nobody ever moaned about the expense, they wanted it to look right. The product was always the main thing for them – not the promotion."

Clearly, there's a certain amount of mixed feelings involved as the band looks back on its relationship with Factory. But what of the "one big happy family" image we associate with independent labels. Is it so much different in reality? Drummer Donald Johnson clears the air...

"I really don't think there would have been another label on the planet that would have allowed us to do what Factory did – to experiment with changes from Latin to jazz to funk to pop and African – all in the space of a few years. But they really liked the idea of us being diverse and trying to move things along."

"We'd come back off tour", Moscrop continues, "Have a few weeks off and decide to get a new album together. So we'd phone up the studios we liked in the area, get quotes off them and book the time. Then we'd say to Factory, 'Look, we're starting an album on such a date' and they'd say, 'OK, fine'. Once we'd finished recording, we'd take the master down to the Townhouse, hire a car to get us there, cut the record and then get the sleeve sorted out – and just come back and give Factory the finished product". ➤

***"We use anything we need to get the right result. We're happy to play along with the computer, but we can also play without it."***



**"When we're  
working on a  
new tune, I  
don't sleep for  
a couple of  
days - there's  
something  
about the idea  
of a song just  
happening..."**

► Johnson recalls an incident following the recording of the band's first album in New Jersey.

"We were at Manchester airport with the masters, having an argument with the guy on the Customs desk about whether we should be allowed to bring our own tapes into the country without paying duty on them. Apparently they can charge you according to how much they think the album is worth. Anyway, Tony (Wilson) had to come and talk them into charging us only for the value of eight reels of two inch tape, worth about 80 quid each! It gives you some idea of how casual the relationship was that Factory were happy to let three 19-year-olds come through customs on their own with the masters under their arms... they didn't even know we wouldn't go through the magnetic detector channels and wipe them!"

**BUT ALL GOOD THINGS MUST COME TO** an end, so where did the band turn *post* Factory? Moscrop takes up the story...

"The first thing we did was to sign a publishing deal with Virgin. We demo'd two tunes for them in Manchester studios, but it was a real ball-ache for us getting all our gear into a 16-track studio. You know what it's like: the engineer's a young kid and it's his second day at work, a lot of the gear doesn't work and the patchbay isn't labelled properly... It can take you two days just to get everything set up and working.

"And we wanted to demo a whole album because it gives more bargaining power with a record company if you can show them the finished product. So with part of the money from Virgin we set up a basic eight-track system here. We spent about eight grand on a Fostex machine, Allen & Heath desk, some outboard gear, cassette player, Atari computer and Notator software, patchbay and so on. But eight grand doesn't buy much and it's easy to leave out things like cable and connectors - until you go and find out how much they cost..."

"Anyway, the rest of the money from Virgin kept us in wages for six months while we were writing and demoing tunes, and the week the money ran out, we signed a record deal with A&M. I suppose you could say the eight grand we invested in gear got us the record deal. Anyway, after we'd signed with A&M we spent another five grand and got an E16, a DAT player and a few other bits of gear"

Fortune was obviously favouring the bold. So, a new record company, a new publishing contract, a new album... and a new sound? It has to be said, the decidedly commercial feel of their A&M debut album *Good Together* doesn't sound too much like ACR 1981 - or even ACR 1986. Is that the way the boys planned it? Bassist and vocalist Jeremy Kerr: "I'd hope it wouldn't sound the same. When we started off in the band, we couldn't *really* play, so you end up doing it the way you feel, and as you feel differently over the years, so the music changes".

"The reason we probably sound more mainstream", Moscrop interjects, "is because the

vocals are now given a major role. Three years ago when Jeremy first sang on a record, he couldn't really sing that well - he'd always been the bass player. Now he's a brilliant vocalist and we've got Donald on drums and Flo (McSweeney) who are also brilliant vocalists. So from only having one fairly weak vocal, we've now got three really strong voices."

But surely this switch to the more melodic side of things must have changed the whole emphasis of the band?

Kerr: "Oh, definitely. Melody was never really a consideration up to a couple of years ago. Basically, we'd always been a groove band, the lyric was the last thing we put on. But as I said, as you get older you change, and we got into melody and harmony. But if you listen to the album, you'll hear all the elements from the other kinds of music we've done over the years - they're still there. It just that now there's a much stronger vocal line over the top."

But how about the criticism that too many of the rough edges seem to have been rubbed off. Do the band see this as a valid observation? Was it deliberate - perhaps the work of an over-zealous producer?

"It's certainly a valid point", replies Moscrop, "but it wasn't deliberate. Most of it happened in the pre-production stages. In fact, Julian Mendelsohn, who produced four of the tracks, and Bob Kraushaar who co-produced four tracks with us, actually tried to put a few of the rough edges back in. Because they have a lot of experience working with bands, they immediately picked up on the character of ACR and were constantly trying to bring it out and exaggerate it. They really wanted it to sound like a *band*. When Julian came down to meet us, we set the gear up and played half a dozen tunes live and then we asked him how he wanted to record us. And he said, 'Like that. Like you just did it then'."

"So we went down to Sarm and set up all the gear as it is here - facing each other - and we played the tracks live. But the people at Sarm, who were more used to dealing with bands like the Pet Shop Boys, where there's just two guys and a producer, didn't know how to handle it. All of a sudden they had four guys in there playing like a proper band, relating to the same thing at the same time. Not only that, but we actually knew what a studio was all about; we knew how all the equipment worked and what was needed of us. In a way, I think they learned something from us."

**PERHAPS AS A LEGACY FROM THEIR** roots in Manchester's thriving punk scene back in the late '70s, A Certain Ratio set great store on maintaining their status as a live band - both on stage and in the studio. Though fully *au fait* with the complexities of sequenced and sampled sound, and quite happy to express their belief in such systems as tools of their trade, they nevertheless stress the importance of playing live whenever the situation allows - as Moscrop explains:

"We tried to make sure this album had a live feel; ►

MUSIC TECHNOLOGY SEPTEMBER 1989



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**"You could say the eight grand we invested in gear got us the record deal – after we'd signed with A&M we spent another five grand and got an E16, a DAT player..."**

► there are sequenced drums on three or four of the tracks – but with live percussion over the top. And even the sequenced parts are recorded in real time. Mikey (the band's programmer and 'fifth' member) always tries to get us to play the parts tight enough so that he doesn't have to quantise them, because obviously that's when you start to lose some of the

feel. But we're certainly not against quantising; if Tony has a complicated keyboard part to play we'll use quantise because he's a sax player and only started playing keyboards after Andy, our other keyboard player, left."

"Basically", Johnson continues, "we use anything we need to get the right result. We're happy to play along with the computer, but we can also play without it. In fact, we have a little

experiment where Mikey turns it off in the middle of a song and we have to carry on playing."

But surely they don't rely on the Atari at live gigs?

"At the moment we do. It's a question of money really..."

But what would happen if it went down during a gig?

"It has", recalls Kerr, "but we just carry on. We can all play the parts anyway; and before we go out on tour we often come in here and practise playing the set without any of the computer stuff. And if the songs still stand up, we know they're really happening. But you can't worry about things like the computer going down."

You can't? Well, no, I suppose you can't. Even so, I think I'd find myself polishing up the pins on the mains plug before the gig and using an extra strip of gaffa (or six) to stick down the cables.

Obviously, there's a strong element of pragmatism involved in ACR's approach to their work. Looking around the Soundstation, you get a sense of the respect afforded the various pieces of equipment with which they have plied their trade over the years. Thus, Moscrop's battered old VCF guitar processor appears to be awarded similar status to the pair of Akai S900 samplers languishing in one of the equipment racks. And though a special place is reserved for the basic instruments with which they identify themselves as musicians, the band seem reluctant to be drawn by my attempts to discover which of the gear they would least care to be without.

"Gear's gear", explains Moscrop incisively, "We use whatever's there. We like all the old stuff – we've got an 808 and a 303, the Rhodes and the Clavinet. In fact, when we heard the Clavinet on Prince's 'Electric Chair', we said right, the Clav's back in! It's not MIDI'd, but it doesn't matter, we just have to play it!"

Kerr continues: "We know what new gear we

need, it's really just a case of waiting till we've got the money to go out and buy it".

Will there be no help from A&M?

"Oh yeah, they want us to go out on tour to promote the album. So it's a case of saying right, if we're going to tour, we have to do it properly, and there are some bits of gear we need. But we're not going to be greedy."

Johnson agrees: "The people at A&M know we're not a nickel and dime band – we're not into egos and wasting money. We try to make sure the promotional budgets are spent sensibly... not just, *have this* because somebody says we should have it, or because it's big and it looks good. If there's something smaller that we can use in its place we'll go with that."

Moscrop again: "The main thing is we need more sampling memory. Live, we need an S1000 to hold the samples for the whole set without having to have 40-second gaps in between for loading."

"At the moment we have to use tapes to cover the gaps", explains Kerr, "and I've learnt to be a great stand-up comedian! In fact our set order's dictated by the gaps – not what order we want to do the songs!"

This "anything might happen" approach to their work has, in many ways, been responsible for ACR's innumerable changes in style. Not for them the constraints of working within a single genre. With situations, personalities and technologies constantly combining and re-combining, their musical output has been maintained in a continuous state of flux – evolving quite unpredictably throughout their 12 years together. Whilst *Good Together* and its accompanying single 'The Big E' has signalled the band's new-found interest (and ability) in putting together melodically structured songs, it represents simply another shift in the band's creative development – as different from the old style ACR as it is from the tracks they're currently working on.

At the basis of it all is the fascination of watching a new idea take root and develop into a piece of music – and of course, being involved in that process.

"Writing is still the most exciting part of it", reflects Kerr. "When we're working on a new tune, I don't sleep for a couple of days. There's something about the idea of a song just happening..."

Johnson: "The vibe at the moment with ACR is great. We've finished the album, everything's been sorted out and we're already into the next year's work – and the buzz underneath that is incredible. Like, last week we all went home and nobody could get in touch with us because we were all writing. And next week we'll all be in here and there'll be about six different ideas all happening. It's what being in a band is all about for us".

Clearly, the years have not dampened their enthusiasm for their work in any way. Whether their records bear the label of an indie or a major record company, A Certain Ratio will always maintain that independence of spirit which has served them so well. ■



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THE NEW YAMAHA V50 WORKSTATION.

# FX500

## MULTI-EFFECTS



PHOTOGRAPHY: JAMES CUMPSTY

The multi-effect processor war is truly underway. The latest addition to Yamaha's arsenal is the FX500: flexible, tasteful and cost-effective.

Review by Vic Lennard.



**Y**AMAHA HAVE ALWAYS been at the forefront of the development of effects processors. From fully professional reverb units like the REV 1, down to the popular multi-effects unit, the SPX90, their presence has always been felt – or heard. The only possible hole in their operation is at the budget end of the market. True, the REX50 added overdrive characteristics to their range but it was a budget sound at a budget price. The current vogue is for units which offer four or five effects at the same time, complete with some degree of sound quality. Well, we need wait no longer for Yamaha to respond because the FX500 is now ready to take its place in the music shops.

## DESCRIPTION

AND A SMALL place that will be, as Yamaha have decided to go for a 1U-high half-width rack unit, plastic encased with an external power supply.

The basis of the FX500 is that it has five “modules” available, namely; Compressor, Distortion, Equaliser, Modulation and Reverb. The last of these encompasses both reverb and delay and so has various options for these effects including the order in which they occur. More of this later. Quality? 20Hz-20kHz quoted bandwidth with 16-bit resolution and a sampling rate of 44.1kHz is now becoming the norm, but let’s not get blasé about it. At this price such characteristics are impressive. Memory-wise, there are 60 presets and 30 for you to program.

The front panel is pretty self-explanatory. The rear has a single input (the front panel input takes precedence) and two outputs with a flick switch for level, -10 or -20dB. A rather odd choice this, because it makes the unit a little difficult to match up with any equipment intended for use with the professional level of +4dB. Headphones socket and level control (nice touch), MIDI In and two footswitch sockets for bypass and memory change/trigger complete the line-up.

## INDIVIDUAL EFFECTS

EACH EFFECT HAS various programmable parameters pertaining to its nature, and an output level to set the overall gain for each stage. As there is only a single input, the first three effects are mono.

The Compressor has parameters for Threshold (-60dB-0dB), Compression Ratio (1:2, 4, 8 and limit) and Attack Time (1 to 20 milliseconds).

The Distortion has variable Amount which also increases the volume, Trigger – an expander noise gate – (threshold between -80 and -30dB), and Low-Pass Filter (thru or 400Hz to 16kHz).

The Equaliser operates in three bands. The High and Low are of the shelving type with variable cut/boost of -15/+15dB while the Mid band sweeps between 400 and 6300Hz with gain of -40/+15dB.

The Modulation comes in four types; Flange, Symphonic, Tremolo and Chorus. Each has variable oscillator Speed (0.1-20Hz), Depth and Mix between incoming signal and effect. Parameters specifically associated with each effect are also included. For instance, the Flanger has Feedback, while the Chorus has both Pitch and Amplitude Modulation. Everything

you would expect from a complete multi-effect unit. The Reverb section is most impressive. There are seven choices, the first of which is Reverb(!). Four types of basic reverb (Hall, Room, Vocal and Plate) with reverb time up to 40 seconds, High Frequency roll off and a pre-delay of up to 335 milliseconds. Other manufacturers should pay attention to this because pre-delays are imperative for the accurate setting up of that first reflection and the times existing in many units are nothing short of useless. Next follows Early Reflection with Hall, Random, Reverse and Plate being the options, again with up to 400 milliseconds for the pre-delay. Delay (up to 740 milliseconds per side) and Echo (up to 370 milliseconds) each have Feedback and Left/Right balance while Reverb + Delay combines the best of both worlds. Finally, the option of whether the Reverb feeds into the Delay or vice versa. Comprehensive, or what?

A quick glance at the front panel shows that there are LED’s above each of the effects and that the Modulation and Reverb modules can be changed around in order. This is particularly helpful as they are dealing with stereo effect.

## EDITING PARAMETERS

WITH ANY MULTI-EFFECTS unit, ease of programming is important. Starting from a preset close to the required effect, how easy is it to achieve the necessary result? Judge for yourself. After selecting one of the current memories, the LED’s above each effect will either light up to show that effect is in use or not. The buttons below each effect’s name are toggle switches and by holding down the Parameter button at the same time as pressing one of these, edit mode is entered for this effect. Further pressing of this effect button at this stage effectively causes the effect to be played “solo” or in line as part of the overall setting. Once in edit mode, the Memory and Parameter buttons double as cursor keys to allow for movement across each page with the effect button moving through the various pages of parameters for each effect (three maximum) and the up/down arrow keys change the value of the selected parameter. Then press another effect, either leaving the previous one in line or “muting” it, and continue on your way. The result can be stored at any point. A piece of cake.

## MIDI FUNCTIONS

OVER THE LAST couple of years, MIDI in the context of effects units has evolved through simple patch changing to the situation where MIDI controllers can alter the values of parameters. The FX500 has a program change table which allows you to set up which memory location is called from a MIDI patch change command and also has the capability of allowing any two of 28 listed parameters to have their ►

**“The FX500 boasts four types of basic reverb with reverb times of up to 40 seconds, High Frequency roll off and a pre-delay of up to 335 milliseconds.”**

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## KEYBOARDS

### KORG M1 & M1R

The Arnold Schwarzenegger of synths. Read the reviews! 'Worth joining the Foreign Legion for' Wombat Breeder's Monthly. 'A terrifyingly nice synth'. Pravda.

### ROLAND D5/D110/D10/D20

Roland's new baby has arrived and guess what they've called it. That's right Roland. To avoid confusion please refer to it by its poll tax number, D5. Mighty Meaty Multi-timbral fun plus drums. SRP £595

### KAWAI K1/K1M/K1R (Kawai Main Dealer)

'Well I know we've got one, cos I saw the boss nail it to the counter five minutes ago. If you want a new, boxed one at that price you'll have to put down a 98% deposit and be prepared to wait until Paddy Ashdown is elected prime minister.' Sound familiar? We've actually got them 'at that price' plus we've got a library for purchasers plus free hamster if you buy ten.

### YAMAHA DS55/YS100/YS200/TQ5

Who'd have ever thought that you'd be able to buy a touch sensitive multi timbral midi synth for less than £450. That's right Norman's cousin Enid at that party in Stockwell in 1979. And we all mocked her. Sorry Enid.

### YAMAHA V50

Yamaha's first true workstation. No more plugs and spaghetti. Everything you wanted all in one superbly designed machine. Sequencer, PCM Drum Machine, Multi timbral, Digital FX, Thermo Nuclear Rockets plus Disk drive. If you thought eternal happiness was just an illusion listen to a V50. It will change your mind. Probably.

### ENSONIQ VFX

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## SAMPLERS

### ROLAND W30

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### CASIO FZ1/FZ10M

Don't worry, 16 bit samplers don't bite. Just feed it a few of these funny looking biscuits every now and then and it'll give you years of trouble free, CD quality recording.

### AKAI S950/S1000

'As every studio engineer knows these are the standards to which others must aspire. Many attempt, few succeed.' Come and browse through our huge library of reviewers cliches and see what they say about these two.

## EFFECTS AND DRUM MACHINES

### KAWAI R50E

We've had a small shipment of these much sought after little chaps. Although they sound a bit aggressive, they're very friendly to handle. They can do all sorts of clever tricks. More fun than a rottweiler and a lot cheaper.

### ROLAND R8/ALESIS HR16/YAMAHA RX8

Using tiny amounts of power these remarkable machines can transform wimpy keyboardists and guitarists into wild drug crazed drummers. Advanced drinking and swearing lessons are planned for those wishing to become real drummers.

### ALESIS QUADRAVERB

Some people are never satisfied. First of all you want 2 effects at once then 3 now 4. What can you possibly want with 4 programmably simultaneous effects. In my day we had to go and buy our effects separately and weld them to the floor with gaffa tape And what do you want with 20k bandwidth only bats and dogs can hear up there. Nah! give me a good old spring reverb anyway. You can't beat the old gear, I remember when I started out in this business...

## COMPUTERS AND SOFTWARE

### CUBASE

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### C-LAB NOTATOR AND CREATOR

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► values changed by MIDI information. MIDI controllers 0 to 31 (continuous), 64 to 95 (switches) and 102 to 120 (undefined) can all be used, as can the note on/off velocity and channel pressure (aftertouch). For instance, the distortion amount could be controlled via a foot pedal sending out portamento time (MIDI controller No. 5) and to this end the Anatek Pocket Pedal (reviewed last month) would be invaluable as it can inject two extra MIDI controllers into the MIDI system. The range of the pedal can also be set so that full movement will only result in the chosen value changing within specified limits.

MIDI aside, one of the footswitch sockets on the rear panel has a dual identity. It can either act as an increment/decrement switch for memory numbers or can set up the delay time by tapping in via a footswitch. I couldn't test this but would assume that a non-latching pedal would do the job.

So it would appear that the FX500 has a lot going for it both in the way of effects and facilities. Now, how does it perform?

## IN USE

THE ACID TEST for a multi-effect unit has to be the quality of its reverb. Most of the other effects are quite easy to implement, but a good quality reverb usually equates to doosh – loads of it. In this respect the FX500 scores well. There's a slight flutter when long reverb times are selected, but otherwise it's pretty well grain free. Another useful test is to check how long delay repeats remain faithful to the original. Again, the FX500 presents no problem. Even when the feedback is increased to the point where the repeats are of the same volume as the original there is still little difference.

How about a guitar on the input? After all, many of you are going to be using this as a replacement for guitar FX pedals. For clean sounds, the FX500 is excellent. That typical sparkle which we have come to

noise gate keeps things quiet when you stop playing, but overall I felt that this was a letdown.

Distortion apart, I have to admit to being impressed with the FX500. The sound practically glistens as though it's being passed through an aural exciter, which is most pleasant and cuts through on mixes. The parameters have been well selected and care has been taken with most of the little things – like incorporating the type of reverb with the name of each memory location. The stereo image created by the modulation effects is also worthy of special mention.

There are some gripes, though. Firstly, the front panel buttons are made from a rather "squidgy" compound, reminiscent of those on the Kawai K1 and lack a positive feel. I'm certain that it wouldn't have been any more expensive to have used plastic like on the old TX7. Secondly, the delay times are very slow to step through. This is a nuisance, especially if you're starting from a low number. Perhaps there's a quicker method, but if there is, I couldn't find it. My final complaint will only interest those of you who intend to get involved in using the real-time MIDI controllers. The FX500 is a little slow to react to MIDI data, and felt sluggish when compared to the Alesis Quadverb. Still, this will only affect a very small proportion of you.

## VERDICT

WHEN I BEGAN to look at the FX500, I was unaware of the price tag and guesstimated it to be around £450. The RRP is, in fact, £389 – this is destined to be a best seller, make no mistake. Excellent audio



expect of Yamaha since the SPX1000 was introduced is certainly evident here and the various modulation effects really made my faithful Strat sing. The compressor tightens up funk chords nicely and is reasonably quiet. Unfortunately the fly in the ointment has to be the distortion which shows characteristics typical of digital fuzz – harsh even when only slightly in evidence, although no glitches as used to occur with the REX50. The low-pass filter is useful for removing the "buzz" and the expander

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sound, easy to use, low noise... The list is practically endless. Apart from the distortion module and the quality of the front panel buttons, it is difficult to find faults. Pity it's only half width – I've got to find another unit of a similar size to help fill the one space that I have left in my effects rack! ■

**Price** £389 including VAT

**More From** Yamaha Kemble, Mount Avenue, Bletchley, Milton Keynes, Bucks. Tel: (0908) 71771.

**"The FX500 is destined to be a best seller, make no mistake – excellent audio sound, easy to use, low noise... the list is practically endless."**

# Music By Design

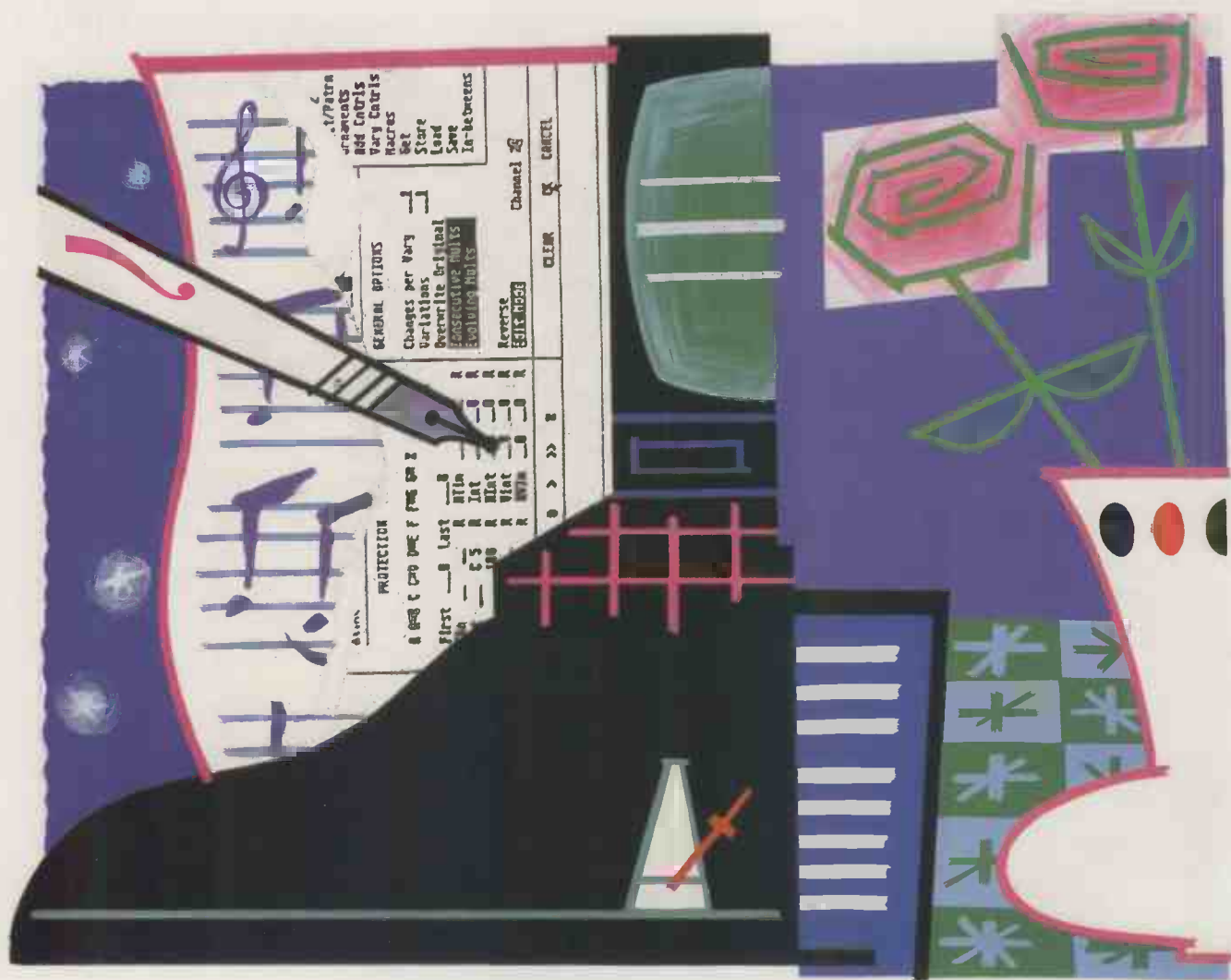


ILLUSTRATION: CLIVE GOODYER

## Part 2

**LAST MONTH'S VENTURE INTO COMPUTER-ASSISTED COMPOSITION SAW US USING INTELLIGENT MUSIC'S M TO CREATE A BASIC RHYTHM TRACK. THIS MONTH WE'LL MOVE IN ON THE ACCOMPANIMENT WITH THE HELP OF DR T'S KCS. TEXT BY GREG TRUCKELL.**



**I**N THE SECOND and concluding part of this series on applying algorithmic composition techniques, we will explore some of the remoter regions of artificial intelligence compositional software. Last month, we created some bass riffs and drum and percussion parts, using Intelligent Music's Interactive Composing and Performing System, M. The plan, however, was to write a piece of music in one of the most stylized and highly structured forms known in the history of music – a pop song. Let's get on with it.

Having created a bassline or two and a drum pattern, we might want to start thinking about the structure of the song. While it seems unlikely that we'll be straying too far from the intro, verse, chorus, middle eight structure, it is worth remembering that there's room at the end of each of these sections for something interesting. Introducing a polyrhythm, by altering the length of one of the cycles of the bassline for instance, would let the listener know that something different was on its way, and make you look pretty damn smart. Remember though, in a pop song, the basic groove has to be kept going, so polyrhythmic tricks should be reserved for the occasional fancy bits.

M allows you to experiment with tricks such as these, by allowing you to copy Patterns to multiple locations and then try variations on them. There are six groups of Patterns – there are six groups of everything, really. You can flip between these by clicking on the Pattern Group Bar. You could also click on the Pattern Group Arrow Button, and conduct your way through your themes and variations on the Conducting Grid. Alternatively, you can take Snapshots. These enable you to recall any configuration of whatever's going on in any combination of Patterns, Cyclic Editor grids, Note Manipulation and MIDI Variable Windows – while the sequencer is running. The combinations and permutations, and the range of techniques available, theoretically allow you to rehearse and create the structure of a song completely "live" – in real time. The result can be captured as a Movie, which is a MIDI file (MSF). I say theoretically, because in operation it's just about impossible to execute any of these techniques without a serious glitch – a hiccup or two in the switch from one Pattern to another. This is a real shame; what might have been a fascinating chance to put the freshness and enthusiasm of that inspired "first take" into a song, turns out to be a frustrating stumble from one section to another. You might get away with it in a piece of "ambient" music, but not in a dance song. Still, you can try things out, even make a

few Movies, and these can be used as points of reference when ported over to your main sequencer.

Which brings us nicely on to Dr T's Keyboard Controlled Sequencer, Level II (with Programmable Variations Generator), or KCSII. While M has the sort of instantly tweakable user interface that enables non-keyboard players (and even non-musicians) to experiment, the Programmable Variations Generator is a real maze. There have been grumbles that algorithmic sequencers, by not allowing user-creation of algorithms, ultimately restrict the styles available through that software. The PVG allows you to create algorithms – in fact, it insists. It even allows you to create algorithms of algorithms (called Macros). Logical testing for motifs, reference sequences, and the creation of musical ornaments are the sorts of tools you will find here. The potential is awesome; so is the learning time. Fortunately, you can take things slowly – the highly informative handbook, liberally dosed with examples and suggestions (and still less fun to read than *The Egyptian Book Of The Dead*), advises just this approach.

A significant difference between KCSII and everything else (except perhaps Intelligent Music's Realtime), is that it combines compositional software (the PVG) with a powerful and conventional multitrack sequencer (Track Mode). There are two more modes; Song Mode allows the creation of song structures from sections, while Open Mode could be the subject of another article in itself. The benefits of a system like this exceed even the potential of MSF Files; variations generated in the PVG are put straight in with the rest of the song; you can try the results of a Vary in context without any fuss, and either keep it and move on, vary it some more, or Undo it and get back to where you were.

On with the show; we'll assume we have a few chunks comprising bass, kick, snare, and percussion. Now some chords. We could have added these in M – remember that the Durations Cycle can have some pretty high values, and that Patterns can have independent time signatures, running at a quarter or even an eighth or less of the tempo of the bassline. Your Movies can be converted to KCS Sequences (a bit of a drag), and then loaded into Open Mode. As we work on each section in Track Mode, we can use the Sequence to All Tracks feature, which puts each MIDI channel on a separate track, thus saving the hassle of having to strip each channel out separately. Find the riffs for verse one, and let's go.

If we know where we want our chord changes, fine. If not, why not let the

software help? There are plenty of ways of generating notes derived from the bassline. First, copy the bass track to another track and change its MIDI Channel to that of your pad sound. Now Delete 80% or more of the new track, using the Global Changes in Edit Mode, with 20% Protection. This is used to randomly generate the points at which the chords will play. If we don't like the results, we can Undo them and do them again until we do. We might try coarsely Auto-Correcting (quantising) the results if they're too syncopated. There are many tests which a note may undergo in order to determine whether or not it's a candidate for variation; since in this case the variation is simply deleting the note, we can effectively determine the rhythmic and dynamic character of the variation with reference to the original. Remember also that this sequence is only being used as a source for variations; it will make no appearance in the completed song itself – so if we want variations generated from something almost, but not exactly, the same as a bass riff, then edit the source a little before varying it.

Next we'll transpose the variation until it's playing in the appropriate register for the pad sound, then set up the Defaults screen not to allow New Scale Positions. What this means, in the context of varying source data which contains no key changes, is that the variations will contain no bum notes. New notes, at pitches higher or lower than those in the source material, may be generated – we can put limits on this. We may also amend the software's analysis of the source, by allowing pitches which were not included in the source, but which would not be out of key. This is reasonable; few bass riffs include every note in the scale.

## P A D D I N G U P

WE'RE READY TO let the computer offer possibilities for chords. Depending on how we got this far, we'll either have a sequence as long as the section we're working on, or as long as one or two lines from that section. If we're working with something the same length as the section, then variations should be generated in Edit Mode; otherwise we'll need consecutive, and possibly evolving multiple varies (as many as one less than the total number of lines we'll need, as the varies are tacked onto one copy of the source). Enter some weights for pitch changes of 3, 4 and 7 semitones Constant on the Changes screen; remember to set values for Pitch Limits, probably from 8 or 9 semitones below the lowest pitch in the source sequence, to the same interval above the highest pitch. If we're working on the ►

► whole section in one vary, then we'll want every note in the sequence to be varied – the source will be kept for root notes at least for now. Enter a higher value under Changes Per Vary than there are events in the sequence, and go into Edit Mode. Play the original and the variation together, and we'll get some idea of the measure of success so far. Add another variation on the variation just generated, and we'll end up with three note chords, in key, which we'd probably never have dreamed of (we might have chords containing the same pitch on more than one track; these can be cleared later by Sorting the merged tracks in Chords in Master Edit, and erasing notes in Global with a pitch in unison with the preceding note, by logically inverting a test for protecting note intervals of 0 – simple!). Now edit the note lengths until the pad plays smoothly.

While those of you unfamiliar with the PVG may have been a little bemused by some of this, some of you, particularly those of you who have used PVG, will realise it barely scratches the surface. The potential is there for really high-level processes; you'll have to understand composition to understand what you're doing – but you only need a pair of lugholes to tell you if it's appealing or appalling.

One way or another, we have our chord sequence. Whether we put one in while still working with M, or stuck in a chord sequence in Track Mode or tangled with

## **“THE COMBINATIONS AND PERMUTATIONS, AND THE RANGE OF TECHNIQUES AVAILABLE, THEORETICALLY ALLOW YOU TO REHEARSE AND CREATE THE STRUCTURE OF A SONG COMPLETELY ‘LIVE’.”**

the PVG, we're at the same place now. We're not finished with the pads yet though. If we used the PVG to create our chords, we'll still have them on separate tracks – this means that we can put them on separate MIDI channels. If we got the chords elsewhere, then we can use the PVG's Set Values Screen to change the MIDI channels of some of the notes. We could apply a logical test of some sort – we could put the highest note from each

chord onto a MIDI channel which plays a brighter instrument, such as a trumpet instead of a brass pad, or a violin instead of a string pad. This would actually go some way towards suggesting not so much a melody, but a harmony part to a melody. Using a multitimbral instrument like a Roland D110, we could pan the parts on the various MIDI channels around the stereo image a little. This sort of technique gets closer to traditional (orchestral) polyphony than synth music has been for a sod of a long time. Face it, string sections may play chords, but no one bowed instrument from the orchestra plays chords. Instead, chords are built up from individual monophonic (as opposed to homophonic) lines.

If you don't have a multitimbral instrument, all is not entirely lost. To obtain a similar effect to the above, the highest note from each chord (or whatever other logical test you want to apply) can be selected for variation, the form of the variation being such that the velocity of any varied note is increased by some amount. Assuming that the sound gets brighter as it gets louder, we have multiple parts from within a monotimbral instrument (such as the venerable DX7). It's worth mentioning that generating chords from a monophonic line in the PVG will probably not generate one sequence which contains the highest notes from each chord; it's more likely to generate sequences which interweave. This is fine – particularly if you start to experiment with transposing tracks to different registers: instant string quartets, real answering phrases, duelling banjos...

Having generated as many variations as we need to create our chords, we could mute the original and listen. Remember that the original was derived from the bassline, so when the chords are played with the bassline, the root notes are already there. Keeping the root note out of the chords can give both parts more room in the mix, as well as saving you synth voices.

## **P E R C U S S I V E S**

ENOUGH OF PADS. There is a family of percussive sounds which, used within a certain sort of sequence, create what I call the “digger-digger” sound. You know the sort of thing: the bassline's thumping, the drums are thrashing, there's a high melody, and somewhere in the middle there's something going digger-digger-digger. Marimbas, synthesised harps, that sort of thing. In the good old, bad old days this was probably just provided by an arpeggiator or two. Well, we can do better than that.

We'll use the bassline as a source again.

This time, we want to copy only the first few notes – say seven – onto a new track. We also want to copy something longer – 12 notes perhaps – onto another new track. These will be used to generate consecutive variations. We're trying to create pattern phasing, so that the patterns are coming back into their original phase by the closing lines of the section. Again we're operating with short sections from within a structure. There's no need to generate vast amounts of material. We want three minutes, not 30. To calculate the number of notes to take as the source for each new track, pick two numbers which when multiplied together come to the number of notes you need in order to play through the section, then subtract one from one of the original numbers – we want the patterns to be back in phase by the last couple of lines of the section.

Now, since our sequences have been taken from the bassline, they already contain motifs which the listener will be able to recognise – always a good thing. Since the lengths have been changed, the motifs, be they particular accents, articulations, or sequences of notes, will start to appear in places other than where they appear in the bassline. If we can get away with it – and we nearly always can – it can be an effective trick to generate the digger-digger sequences for the verse from variations on the bassline from the chorus, and for the chorus from the verse (and for the middle eight from both). This technique is similar to hocketing (where a part is played on slightly different sounding instruments at different sections of the piece), only I would venture to suggest that it operates at a higher level of musical sophistication.

How should these variations sound? I'd suggest that only the pitches be varied; changing the lengths of the phrases themselves should generate enough variation in the rhythm. Since the phrases, and the notes within them, are of different lengths, when they play together they will be in unison at least as far as duration and articulation are concerned. But as soon as the shorter sequence starts its first vary, the sequences will go out of phase and hopefully into an interesting polyrhythm. Using consecutive and evolving multiple varies, each variation will be generated from the preceding one; if this takes you too far from the original, but you don't want to cut down on the number of changes per vary, and you don't want just consecutive multiple varies, then you could protect some steps – the first two or three from one sequence, the last two or three from the other. That way there will be something for the listener to cling to even at the most varied vary. Better yet,



set one of the variations to Reverse; this causes consecutive evolving variations to be generated, then replayed in reverse order, starting with the most varied, then finally playing the original. When this is played alongside another evolving variation, the results are something like this. At the start, there is something instantly recognisable accompanied by something vaguely familiar. As the section progresses, the instantly recognisable phrase starts to vary, and this should be heard as such; meanwhile, the vaguely recognisable phrase is becoming more familiar. As we get near to the end of the section, the listener has clued in to what is going on, we have returned to the instantly recognisable phrase, and the patterns are returning to phase. If you don't think that's clever (within the context of dance music), then you're a sick man, Letitia.

Having generated almost an entire song from a humble bassline, it only seems fair that the bassline itself should get some attention from the PVG. We may already have the articulation and dynamics of a slap 'n' pull bassist – but what about the sounds? Maybe we've got a great slapped bass patch, but it doesn't sound right for the whole song, whereas the patch that sounds fine throughout the song doesn't cut it as a slapped bass. Have a listen to the bassline, and figure out where the slaps should be and shouldn't be; then it's a simple matter to program a PVG Preset or Macro (Programmable Algorithms, remember?) which applies the logical tests we will need, and which will change the MIDI channel of notes which pass the test. Typical tests might be for notes with high velocities, which fall close in time to the preceding note but not close to the following note. Of course, we can invent logical tests that might not seem so intuitive at first; perhaps we only want a slap to be followed by a note that is higher in pitch. We don't have to stick with what sounds reasonable at first.

## THE RANDOM PATCH

HAVING TOUCHED ON the sounds themselves, let's digress for a moment and talk about using artificial intelligence processes intelligently rather than artificially. I'd like to touch on the randomisation features in your synthesiser's Visual Editing System (VES). Editing programmable synthesisers with a computer has become a way of life for professional programmers. Many programmers dismiss the random voice generator section of a VES as a gimmick not for the serious programmer. This is not so; with the use of the randomisation mask found in all good VESs, artificial intelligence-assisted synthesiser programming makes perfect sense. For those of you who haven't bothered with VESs, a randomisation mask, when set up, "masks out" certain parameters, so they're exempt from randomisation. Let's suppose we want to synthesise an acoustic guitar patch or two. We select one of our existing guitar patches for editing, then open a mask with the parameters we consider essential masked out. We're ready to randomise.

You might be surprised how useful curious variations on your favourite patches can turn out to be. Suppose you have used any of the techniques described above to split a synth pad onto several tracks. Try putting slightly randomised versions of the original sound on some of these tracks. The effect of all tracks playing together will be of one instrument playing, but it will be a more complicated instrument, with more life and "human" variety.

Back to the issue of using artificial intelligence/algorithmic software, even to aid in compositional processes. Why use a computer when you can write a tune yourself? Let's suppose that your keyboard technique is fab, that you can imitate bass guitar, stick, horn sections, sax solos and acoustic guitar strumming

with precision and ease. Can you go beyond all that? I've written basslines in M (I wrote them, M was just there) which sound like a modern bassist, but which a modern bassist couldn't play. I've created 12-string guitar parts in the PVG which

**"YOU'LL HAVE TO UNDERSTAND COMPOSITION THEORY TO UNDERSTAND WHAT YOU'RE DOING - BUT YOU ONLY NEED A PAIR OF LUGHOLES TO TELL YOU IF IT'S APPEALING OR APPALLING."**

couldn't have been written even with a MIDI 12-string guitar controller. The notes are in the right places; they sound just like the instrument that they are replacing. But bassists don't have hands that big, and you can't mic up every string of a 12-string guitar. These are new ideas; they haven't been explored before, because they couldn't have been done before.

More significantly than this, I keep surprising myself with this software. I don't really believe that it's fair to say of an experienced user that they're throwing dice with their music. As the above examples should demonstrate, it's possible to work with specific objectives in mind, and to attain these objectives. It's not always easy – learning to use the PVG is just like learning a completely new type of synthesis. But it's worth the effort; you'll find yourself able to attempt things which you wouldn't even have thought of before you took the plunge, far less would you have been able to achieve them from within your conventional sequencer. And yes, now and again, you really will surprise yourself. Where the hell did that come from, you will wonder; and it was never the computer's idea. It was yours. ■

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If your creative prowess isn't stimulated yet, we could go on to describe additional benefits like its combination mode and how it adds a new dimension to multi-timbral texturing.

We could examine the "definable wheels" concept. (Which gives you complete control over modulation effects as tremelo and vibrato.)

We could even discuss how its MIDI compatibility takes it into the future; with multi-channel modes.

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However, like its talents, a full description would take forever. Instead we think trying is believing.



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# MASTER SERIES 7P



PHOTOGRAPHY: JAMES CUMPSTY

Live and in the MIDI studio, a capable MIDI controller keyboard is becoming increasingly important – appropriately, Cheetah's latest is also their best offering to date. Review by Simon Trask.

**T**HERE'S NO DOUBT that Cheetah have done their bit to push the concept of the MIDI controller keyboard. While other companies have (mostly) concentrated on the professional end of the scale, Cheetah have consistently produced affordable controllers, realising that not everyone wants 88-note weighted

keyboards and extensive MIDI control facilities – for a lot of budding musicians, a nice cheap MIDI keyboard to plug into that nice cheap MIDI expander will do nicely, thank you.

But with the Master Series 7P, Cheetah have finally moved upmarket – and the price tag has moved upwards of £500 in the process. If you haven't been over-enamoured of Cheetah's



controller keyboards in the past, maybe now is the time to think again. For instance, there's the 7P's 88-note weighted keyboard. Manufacturers typically plump for what can loosely be described as either a synth feel or a piano feel on their controller keyboards, even producing synth and piano versions of the same controller. To my mind, for many of the sounds available to hi-tech keyboard players these days, a synth-style keyboard action is more appropriate. Yet I also find myself longing for a more substantial keyboard feel than many synths provide. For the 7P Cheetah have come up with a keyboard which represents an ideal balance of synth and piano feels. In fact, having played a wide selection of acoustic pianos at the BMF recently, I can only conclude that the so-called piano-action keyboards employed by companies like Roland and Akai are, by today's standards, greatly over-exaggerated versions of "the real thing". In truth, the 7P's keyboard is closer to a real piano action, though necessarily without the particular response generated by a mechanical action.

So what's the keyboard like? Well, the keys have a shallow-ish travel, while the weighted action means that your fingers have to work harder than on a typical synth keyboard, but not excessively so. To any keyboard players reared on an acoustic piano and worried about losing their touch through playing a synth keyboard, the 7P should be an attractive proposition. On the other hand, there's perhaps a danger that synth players reared on light-action keyboards will find the resistance of the 7P's keys a little too much for their liking.

The 7P's keyboard can generate both attack and release velocity, with programmable response curves, but not aftertouch. However, Cheetah have thoughtfully allowed aftertouch to be transmitted from wheel three and/or a footpedal, the latter proving to be a particularly effective alternative.

There are three wheel controllers to the left of the keyboard, the furthest left of which is centre-sprung for pitchbend control. In fact, these are the same type of wheels as are to be found on Ensoniq's new VFX synth, though on the review-model 7P the pitchbend wheel was sprung a little more stiffly (a bit too much more for my liking) while the other two wheels offered slightly less resistance than their VFX counterparts. The default assignments of the wheels on power-up are pitchbend, modulation and volume respectively, but you can assign them to any controller value or to other functions.

The 7P's control panel is similar in appearance to those of previous Cheetah controller keyboards. However, while the 7P is undeniably the company's most sophisticated controller to date, it's also the easiest to use. How can this be? Well, it's all down to good design. The 7P brings its functions to the surface as much as possible, which means a maximum of two functions per button (shifted and unshifted). Once you've sussed out the principles on which the 7P operates, you can move around its parameters with the minimum of fuss. The four-character LED display is a necessary compromise to keep the price down, but, aside from the annoyance of not being able to name patches, it

does a good job of displaying the necessary information at any given moment.

In addition to one MIDI In, one MIDI Thru and four individually-addressable MIDI Out sockets, the 7P's rear panel provides two footswitch jacks and one footpedal jack (both programmable), and a 9vDC power connection. Like previous Cheetah controller keyboards, the 7P comes with an external power supply unit, and lacks an on/off switch. External power supplies often mean easy-to-accidentally-disconnect power supplies, but on the 7P Cheetah have opted for a firm three-pin DIN connection. However, if you find that the keyboard doesn't power up when you plug in the lead, try again: there are two ways the connection can be made.

Incidentally, the 7P I reviewed was running version 1.1 software, but by the time you read this the 7Ps in the shops should be running version 1.3, or even version 1.4. And Cheetah promise that the only two bugs I came across during the review (involving MIDI patch number and note reception) will have been fixed by then.

**"While the 7P is undeniably Cheetah's most sophisticated controller, it's also the easiest to use - it's all down to good design."**

## THE CONTROL ZONE

THE 7P HAS up to 90 RAM Performance Memories and a further ten (90-99) permanently stored in ROM. Each Memory can store parameters governing up to eight keyboard zones, with each zone in turn consisting of up to four layers (or Notes, to use Cheetah's terminology).

The ROM Memories have been pre-programmed by Cheetah to demonstrate the 7P's capabilities, with full listings of the parameter settings for each Memory printed at the back of the 54-page manual for further convenience. The ROM memories have been designed to run on one expander plugged into any one of the 7P's four MIDI Outs and receiving on MIDI channel 1. While this means they won't give you the full picture of how you can organise sounds on the keyboard, you can always copy them into the RAM Performance Memories and play around with the MIDI channel and Output Port settings. In fact, individual RAM Memories can't be used until you have either programmed them yourself or copied in an existing Memory. Unusually but quite sensibly, the 7P only saves data for the zones which are assigned to the keyboard, so the fewer zones you use the less memory you use. If for some reason you wanted every Performance Memory to consist of eight zones, you'd be able to store around 56 Memories, but with an average spread of zones you can save the full number. And once you've filled the memory, or if you just want to make a backup, you can transfer the entire memory between the 7P and external storage via MIDI SysEx.

The method of assigning zones to the keyboard is straightforward enough. Each zone's range is ►





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► defined as the distance between its own top key and the top key of the preceding zone. Therefore, to assign only one zone to the keyboard, select the top-key parameter of zone one and set it to 88 (the top key of the 7P's 88-note range), while to assign two zones to the keyboard, with a split at middle C, set the top key of zone one to 39 and the top key of zone two to 88.

This approach has the virtue of simplicity (though it would be even simpler if you could enter top-key values by playing the actual keys as opposed to entering numbers from the keypad), but it does mean that you can't layer zones. Fortunately you don't need to, as the four Notes per zone that I mentioned earlier allow you to layer up to four different sounds on four different MIDI channels. This approach is ideal for using multitimbral expanders in conjunction with the 7P, as it provides an easy means of layering sounds on a single instrument. Notes can be turned on or off individually, so it's an easy matter to program one Performance Memory with four Notes and another with only one Note.

Of course, with four independently-addressable MIDI Outs you can also layer up to four sounds across four different instruments without using the Notes – or, heaven forbid, 16 different sounds with the Notes. In fact, with up to four multitimbral expanders, each hanging off different Outs but assigned to the same range

of MIDI channels, you can create a wide range of keyboard textures just by changing the zone top-key assignments and the Note MIDI channel and MIDI Output assignments.

The 7P also allows you to play chords of up to four notes (or Notes) on each key. Individual Notes can be given their own transposition value of between +63/-64 semitones in semitone steps, so you've got quite a choice of chord voicings. If you assign all four Notes in a zone to the same MIDI channel, the complete chord will be played by one sound, but, as you'll have gathered by now, you can also play each note of the chord with a different sound. Transposition also allows you to thicken up sounds by octave-doubling and by detuning (playing two or more detuned versions of a sound on different MIDI channels).

Now, what else would you like to be able to do with up to four sounds and/or pitches per key? How about controlling which sound and/or pitch you play on the basis of velocity? The 7P allows you to assign separate attack and release velocity response curves to each Note per zone, plus sensitivity values which further modify the response (on a scale of 0-127, with 64 as the unmodified curve response). The 7P provides you with a choice of 16 curves. Curves 8-14 are the inverse of curves

1-7, allowing you to create velocity crossfades, while curve zero generates fixed velocity. Finally, if you assign dynamic velocity control to wheel controller three and select curve 15 for a Note, you can control the velocity not from the keyboard but from the position of wheel three. Strange but true.

However, while this degree of control is welcome, I'd still have liked to see velocity windowing implemented as a straightforward means of switching between several Notes on the basis of velocity. Incidentally, if you want to assign the same curve and sensitivity values (and other Note parameters) to all Notes, you can do this quickly by selecting zone zero, which is effectively global edit mode: any edits you make in zone zero will be applied to all zones.

Crucially, each Note can also be assigned a MIDI patch number which will be transmitted whenever the Performance Memory is selected. In this way you can predefine the configuration of sounds you want for each Performance Memory. However, there's no ready means of controlling the volume level of each sound, so balancing one sound against another will need to be done on the instruments themselves.

You can also assign a MIDI Song number to each Performance Memory; this will be transmitted on all four Outs when the Memory is selected. If your sequencer and drum machine can store multiple songs and respond to the

MIDI Song Select message, you can tie a song in with a particular 7P Performance Memory. After you've selected the Memory and the song, you can start the song playing by pressing the 7P's Start/Stop button. No prizes for guessing that this sends a MIDI Start command; pressing the button again Stops the song, while pressing the Shift and Start/Stop buttons Continues the song. You can also globally define the tempo of your song from the 7P (in the range 40-240bpm), as it transmits MIDI clocks. Alternatively you can set the 7P to RECeive rather than GENErate MIDI clocks, in which case it will wait for MIDI clocks before doing anything. But what possible use could a controller keyboard have for incoming MIDI clocks? Stay tuned.

Once you've programmed a series of Performance Memories you can either step through them sequentially by setting one of the footswitches to increment the Memory number on each press, or create a Performance Memory Chain of up to 32 steps and program the footswitch to increment through the steps. The Chain method has the obvious advantage that you don't need to bother what order the Memories are in when you program them. However, it's a pity there isn't a footswitch input dedicated to incrementing the Memories and the Chain steps. As it is, you have to ensure that ►

**“You can sync the 7P's arpeggio and echo effects to a sequencer or drum machine, which makes it practical to record the results into a sequencer.”**

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► every relevant Memory has one of the footswitches assigned to one or other increment functions as required, otherwise you could reach a Memory and find that your footswitch is incrementing no more, which could be very embarrassing in company.

The 7P has six physical controllers: three wheels, two footswitches and a footpedal. You can set the polarity of each controller (including the wheels), allowing you to use any manufacturers' footswitches and footpedals. Each controller can be assigned to transmit values for any one of MIDI controllers 0-127, programmable per Performance Memory. Alternative functions vary from controller to controller: controller one, for instance, can transmit pitchbend, while controllers three and four (wheel and footpedal) can each transmit velocity or aftertouch or control the MIDI clock rate, while controllers seven and eight (the footswitches) can

to each Destination the assigned controller code (if any) and a value based on the actual value referenced to the sensitivity. In this way you can, for instance, send four different MIDI volume values from a single controller (wheel three is normally volume), which gives you a limited means of balancing sounds.

## THE EFFECT ZONE

THE 7P'S FACILITIES include two MIDI-generated effects: arpeggio and echo (a third, delay, is merely echo without the initial notes sounding). These are programmable per zone within a Performance Memory, with one effect active at a time per zone. Arpeggio direction can be up, down, up/down, down/up or random, and can move through the initial Note or all Notes of each key within a zone.

Additionally, you can program effect rate (1-254), arpeggio note length (1-254), the number of echo repeats (1-32) and a constant velocity fade on successive echo repeats (+63/-64).

This is where the 7P's ability to send and receive MIDI clocks really comes into its own, because you can sync the 7P's arpeggio and echo effects to a sequencer or a drum machine, which in turn makes it practical to record the results into a sequencer. Of course, if you want the 7P's output to be in time with the sequencer then you must play the initial notes in time, but there again you can also create interesting syncopations by deliberately playing off the beat – the 7P merely makes sure that its notes are aligned to the nearest MIDI clock. However, things get even more interesting when you realise that the arpeggio and echo rates for each



each select pitchbend up or down or aftertouch enable/disable, or increment Memory, Chain or MIDI patch.

Each controller can transmit on up to four MIDI channels and to a separate Output Port configuration for each channel – or Destination, as it's known. Each Destination of each controller can be given its own sensitivity on a scale of 0-127: 64 equals full 0-127 range, 32 equals 0-64, and 127 equals 0-127 in half the travel. The 7P reads the value of each controller when you power up or select a new Performance Memory, and transmits

zone are set as multiples of MIDI clocks (1-254). Multiples of six thus give you regular note values (24 MIDI clocks equal a quarter note), but by, for instance, choosing a rate of 24 in one zone and 25 in another, you can create a phasing effect as arpeggiated and echoed notes progressively move out of time with one another.

This can get very interesting with Dual mode selected. This mode internally feeds the notes of each odd-numbered zone into the adjacent even-numbered zone, where they become source notes for that zone's effect. In this way you can route the



notes of an odd-numbered zone through two effects, so that arpeggiated notes can be echoed, echoed notes can be arpeggiated, arpeggiated notes can be arpeggiated, or echoed notes can be echoed. The results can be surprising, and it's best not to be too analytical about what's going on – just experiment. It's also worth experimenting with how long you hold down the initial notes, as this controls how many notes are arpeggiated – an interesting new keyboard technique.

You can also set up an accompaniment for yourself by turning on Hold for, say, zones one and two, which will cause the Dual mode effected output to loop indefinitely. If you've turned off effects for zone three you can solo in that zone over an accompaniment pattern that you've set to loop in zones one and two. Great stuff. Of course, the ingenuity of the result depends not only on the notes and the effect parameter values you choose, but also on what those notes are playing. For instance, they could be triggering all manner of samples, even sampled rhythms. By enabling multiple effected zones (Dual or otherwise) on the keyboard and assigning different repeat rates for each zone, then experimenting with Hold on various combinations of zones, the possibilities are literally endless.

If you set the 7P to Expand mode, any notes received via the controller's MIDI In port (whether from another instrument or a sequencer) will be treated as if they were being played on the keyboard in zone one or, if Dual mode is selected, zones one and two. You can even set the top key of zone one to zero, effectively removing it from the keyboard, and incoming notes will still be routed through all its parameters. In this way you could be playing zones three and four as a split on the keyboard, while the output of another instrument is routed through zone one, merged with your playing, and then sent out to expanders and recorded into a sequencer hanging off the 7P.

## SEQUENCER CONTROL

I CAN'T FINISH this review without discussing the practicality of using a controller keyboard with four MIDI Outs in a sequencing setup. Basically, there's no question that multiple individually-addressable MIDI Outs are a distinct advantage where sequencing isn't involved, especially with today's multitimbral expanders. But if you want to use a sequencer and still slave your expanders off the controller rather than the sequencer, then you need to route the output of the sequencer back to the input of the controller. If you do that, then you need to make sure that the input isn't routed back to the sequencer when you're recording. On the 7P you can define an Output Port configuration specially for the MIDI Input data, so you can switch out the sequencer Output; Roland's A50 and A80 don't even allow you to get this far.

But can the sequenced output replay the same combination of sounds that you originally played on the keyboard? If you're using two or three instruments, each on a different Out and each set

to receive on different MIDI channel(s), then yes. But if you're using two or three multitimbral MIDI instruments, each on a different Out and all receiving on the same MIDI channels, no – unless you can define Output assignments for each of MIDI channels 1-16, which you can't do on the 7P or any other controller. And what if you originally routed different Notes to the same MIDI channel(s) on different 7P Outs? Enough, enough! Without getting any further into detailed discussion on the subject, let's just say that there are limits to the keyboard textures that you can recreate when using a sequencer playing back via the controller, while if you're slaving your expanders directly off multiple outputs on the sequencer, you can at least (re)create any texture you want by fine-tuning track assignments. Ultimately the success of multiple outs on controller keyboards depends on the sophistication of the textures you want to create.

## CONTROLLED VERDICT

THE 7P IS easily Cheetah's best controller keyboard to date. And in many respects it's more sophisticated than anything else on the market – which makes its price all the more remarkable. £700 may be expensive when measured against other Cheetah products, but measured against the competition the 7P still qualifies for the budget category. Its very sophistication means that you need to take time to familiarise yourself with it, but once you've done that it's straightforward enough to use.

Along with its degree of control sophistication, the 7P's weighted keyboard takes it into a different league to previous Cheetah controllers. It's their first professional-quality keyboard, and, as I've said, it exhibits a very successful balance of synth- and piano-style feel, where other controllers plump for one or the other and usually over-exaggerate on the piano feel. I would certainly be very comfortable with it as my main controller, from both the keyboard and the control perspectives. Also, the 7P proved to be very reliable during the couple or so weeks I had it.

If £700 is still too much for you to find, but you're attracted to the 7P's control facilities and don't mind compromising on the keyboard, the Master Series 5V represents amazing value at £300 (or £299.95, as Cheetah will insist on having it). For this money you get a 61-note plastic unweighted keyboard but the same facilities as the 7P.

Any company that concentrates on the budget end of the market to the exclusion of all else, as Cheetah have done in the past, run the risk of not being taken seriously if they subsequently try to move upmarket too. Cheetah are taking that important step forward and running that risk. If you're on the lookout for a controller keyboard, you'll be the one missing out if you overlook the 7P. ■

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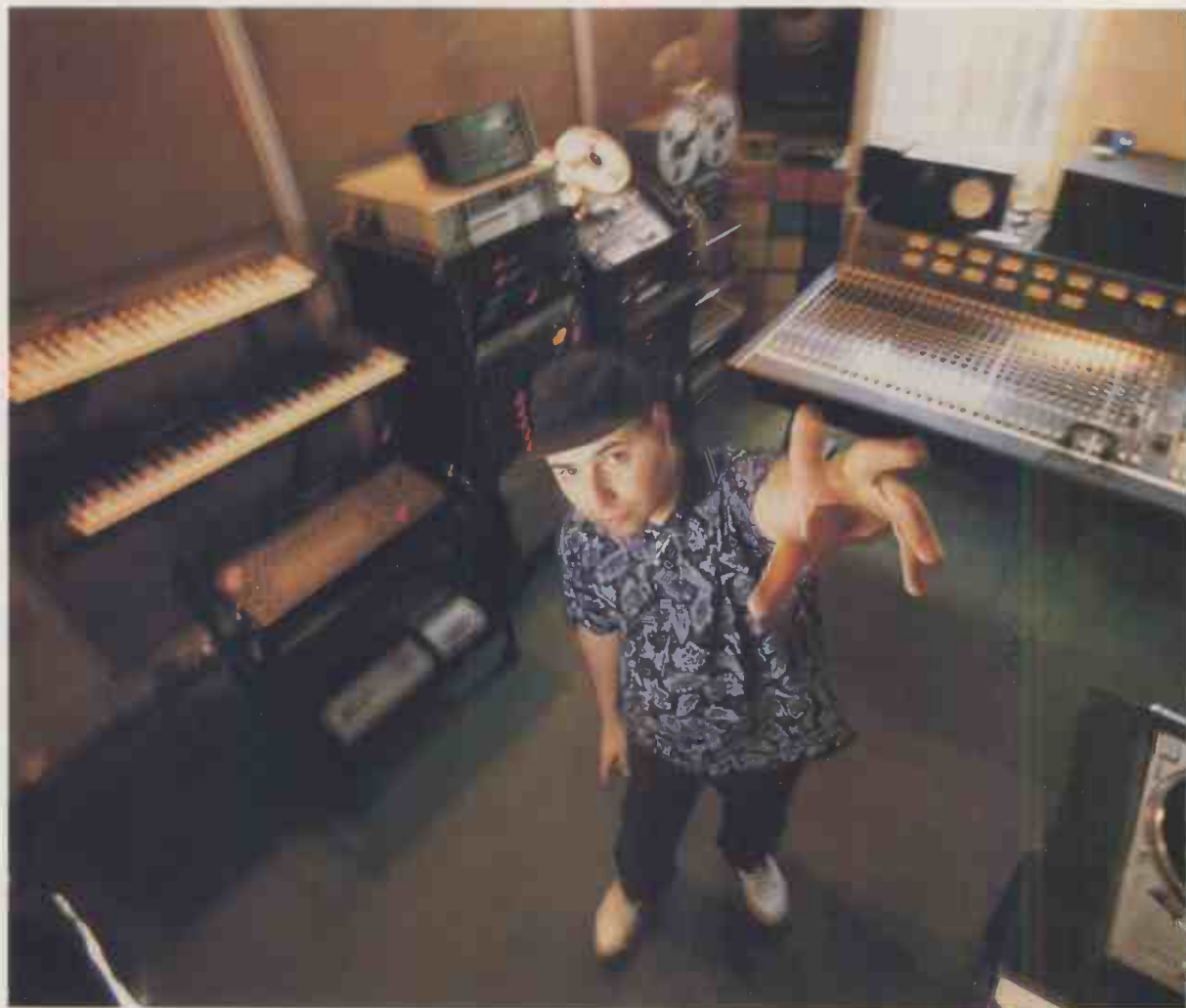
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# *the* **BASSMETS**

***His single, 'Bass (How Low Can You Go)' played its part in the sampling madness***



***of last summer, but there's a lot more to Simon Harris than a sampler and one hit single. Interview by Tim Goodyer.***

QUICK, BEFORE HE COMES BACK. WHAT have we got here? AC/DC, The Carpenters, Tracy Chapman, Eric Burdon, Al Jarreau, the Blues Brothers, ELO, George Michael. . . I'm inside Simon Harris' studio, furtively checking through his collection of compact discs while he's fetching a couple of cans of Coca Cola from around the corner. And all is not quite what I'd anticipated. . .

This is more the sort of thing I'd expected - LL Cool J, Yello, Art of Noise, Bomb the Bass, Led Zeppelin, Public Enemy, even a couple of copies of

Harris' brand new album *Bass*. My survey is barely completed before a beaming Harris returns bearing welcome refreshment. Now, where to start?

Perhaps a little history is in order. If Simon Harris' name is familiar to you, it's either through his work with his own record label, Music of Life, who are working to further the careers of British rappers like MC Duke and Einstein, or through his single, 'Bass (How Low Can You Go)', which climbed to No. 12 in the charts during the sampling frenzy of last year.

The story actually began when a 13-year old Harris



received a stereo system as a birthday present. Not content to simply play records, he began pause-button mixing with it. Eventually he bought a cheap disco setup with which he began DJ'ing professionally, playing the jazz funk of the time: Light of the World, Central Line and Ronnie Laws.

Cheap turntables were replaced with Technics SL1200s, while a Citronic mixer gave way to a Formula Sound PM80; the addition of a Tascam 32-2B tape deck enabled Harris to produce special edits for local radio stations and the Disco Mix Club that was just getting started at the time.

On the instrument side, he also began to collect the drum machines, samplers and synths that are the trademark of the late-'80s remixer, instruments like Roland's TR909 drum machine – a house music classic.

Nineteen-eighty-seven saw Harris invest in a multitrack setup with a Fostex E16, Seck 18-8-2 desk and a modest selection of outboard gear. The instruments also continued to proliferate. A Sequential Studio 440 satisfied both Harris' sampling and sequencing requirements. A D50 was called in to provide what he calls "quality" sounds, while an Alpha Juno 1 looked after the analogue duties.

"Already having the turntables, I had everything I needed", he comments. And it was with this equipment in the living room of his

basement flat that he set about recording the Music of Life artists and 'Bass (How Low Can You Go)'.

The same living room currently accommodates a huge Soundtracs desk and 2" 24-track tape machine – along with the Tascam 32-2B, E16, Technics turntables, Formula Sound mixer, and the tuner from the original hi-fi. Harris describes the arrangement as "a mutated version of that first stereo system".

'Bass (How Low Can You Go)' conforms to all the rules of a sample record – a powerful house beat and synth bassline, a couple of upfront vocal samples serving as conventional "hooks" and a wealth of vocal and instrumental samples taken from a variety of familiar and not-so-familiar sources. In fact, 'Bass (How Low Can You Go)' helped define the rules in the first place.

Harris' main sample, the line "Bass, how low can you go" was lifted from Public Enemy's 'Bring the

Noise'. But why make anything as simple as lifting it straight off vinyl?

"It was the a cappella version that Tim Westwood was debuting on his Capital Radio show", Harris recalls, "and, because I happened to be taping it, within an hour of its world radio debut, there it was on my record. It was recorded at 7 1/2 ips, grotty quality, I've never been able to get that sound since.

"'Bass (How Low Can You Go)' was only intended to be a rhythm track but I found that sample and never looked back. What I was actually looking for was a sample as good as 'Pump up the volume' because M/A/R/R/S' 'Pump Up The Volume' was big then. After I did 'Bass (How Low Can You Go)' but before it had been accepted by London Records, Bomb the Bass appeared with 'Beat Dis' on the Mister Ron label, and at the same time up popped S' Xpress as well. Around the same time 'Bass...'

was being promo'd, Coldcut came out with 'Doctorin' the House' and suddenly there was a whole crowd of us out there trying to do the same thing. We'd all heard 'Pump Up The Volume' and wanted to do it again."

Harris followed 'Bass (How Low Can You Go)' with a similar sample-based single, 'Here Comes That Sound'. But the heavy use of samples that had spelled success for 'Bass...' were to prevent 'Here Comes That Sound' climbing above No. 38 in the British charts.

"It wasn't as successful because I went too heavy, too late on the samples", comments Harris. "Because everybody was doing it by then, it started to go out – it wasn't such an unusual thing to do a sample record any more. With 'Here Comes That Sound' all based around samples, and London Records putting it out six months after I gave it to them, it was too late."

The comparative failure of 'Here Comes That Sound' did not, however, discourage London from asking Harris for an album.

"They said to me 'go away and do an album', so I thought 'what they're going to want me to do is sit in an expensive recording studio. There'll be a boy to make the sandwiches and it'll be air-conditioned, but it'll be my money that's paying for it'. So I said 'I've got a 16-track, I want to upgrade it to 24-track, give me the money to buy the equipment and I'll give you the master at the end of the day. It'll cost you the same amount of money and it's better for you, because if you want something changed or a remix it won't cost a penny'. But at the same time, I keep the gear! So they gave me 30 grand, well, they gave it to Don Larking – a clever move on their behalf – and that bought me my desk, the ►

***"Suddenly there was a whole crowd of us out there trying to do the same thing – we'd all heard 'Pump Up The Volume' and wanted to do it again."***



► Soundtracs CMX 3200, Soundcraft 762 Mk II 2" tape machine and all the other bits I needed."

Along the way Harris has collected odd instruments such as Roland's TB303 Bassline, an MC202 Microcomposer and an Octave Kitten. Most recently he has added an Akai S1000 sampler and Roland's flagship R8 drum machine to his collection.

"When I went for the 16-track I decided it was just as important to have one central piece of equipment that I could do everything from. At the time the only machines available were the Studio 440 and the Emulator SP12. I didn't have a drum machine apart from my 909 and I didn't have a sampler, so what attracted me to the 440 was that it was a sampler and a sequencer in one box. It's also very useful that it has SMPTE. Basically, the Studio 440 is a recording studio in a box.

"I needed the 16-track to do what the 440 wouldn't - that is run things at different levels and run them at once. I also felt I needed a quality synth and an analogue synth, and I didn't know what to get because I didn't know anything about sine waves and programs, so I went down to Rose Morris and found the sounds I like best. I knew I was looking for dance/house sounds from the analogue so I picked out the Juno 1, and I use that for all my bass sounds. I think programming sounds yourself is the big secret - otherwise you won't have an individual sound. I also figured I needed a quality keyboard so I bought a D50, but I only really use it as a keyboard controller now. I think a lot of the D50's sounds are totally unusable in a track. They sound fantastic when you're listening to them on headphones but because they tend to fill out a track so much they're almost unusable. I don't know what it is, maybe a pop track's different and

they work well in a pop track, but I don't do pop tracks. The Juno 1 is much more usable. I don't know if that's a lesson to be learned for dance music, but it's the old analogue machines that seem to do the job the best. I go to the Casio CZ1000 occasionally, but I'm not really a synth merchant in a big way. I always use synths for basslines and for pads, but not much else really."

The single-oscillator Kitten was little sister to the company's Cat synth.

Originally intended to rival the Minimoog and ARP Odyssey for sounds but undercut them in price, the Cat only really succeeded in getting Octave sued by ARP. The Kitten's presence in the studio is a source of considerable amusement to Harris.

"That was when I was having my acid craze", he grins. "I spotted it and thought 'that's got to be acid, look at it!'. It cost me 40 quid in the Notting Hill Exchange Centre and I've used it once. But

everyone that looks at it thinks it must make brilliant acid sounds. I use it for the odd sound effect, but that's about all. I collect odd little things like that."

The R8, on the other hand, is one of Harris' current favourites.

"The sounds are absolutely fabulous", he enthuses. "It's interesting what Roland have done, because, for the first time, you can truly shape your own sounds from a neutral sound. That's what I've done with it. I don't know what they're talking about with this 'human' thing though. Why can't they just have a button that makes it *go human*? You have to alter so many parameters on it, surely it would be easier just to play the part yourself. But it is a brilliant machine. I've got just one criticism, are they cheapskates not giving you a backlit display? Another thing they've done is make you wait for the sound cards. I bought the machine with the intent of using it on my album, but the cards didn't arrive until after I'd finished recording it!"

Get Simon Harris talking about Roland drum machines and you'll find out that he has some definite opinions on the company's importance in the development of dance music - and responsibilities they're not necessarily living up to.

"The whole of dance music for the last seven years has been guided by one drum machine", he begins, "the TR808. And it's taken eight or nine years for Roland to re-release those same sounds on a card for their new digital drum machine. If the 808 hadn't been invented we'd all be doing something different now. It literally changed the course of dance music. Nick Martinelli made his name on the 808 cowbell, Jimmy Jam and Terry Lewis made their name on the 808, and without the 808 what would the whole Miami bass scene be doing?"

"I rang Roland and they told me they didn't want to look backwards, they want to look to the future, which is something I totally agree with. But we're not looking to the future of the same market; they're looking at Sting and Dire Straits and ignoring the people who were brought up on the 808 and 909.

"It's what people want, why is it taking so long? The 808 was never MIDI, thankfully the 909 is MIDI and that's why it's getting so much use at the moment. Don't these people buy Inner City albums and hear Kevin Saunderson using 909s and 727s until he's blue in the face?"

"I'll tell you something that is a real crazy rule - there seems to be a battle between the equipment manufacturers, who want to make things better, and the kids on the street who buy the records. The kids want dirty sounds, the manufacturers want clean sounds. The kids grow up and want to be musicians, so they go out and buy the equipment and all it will do is ultra high-quality digital sounds. It stretches right back to kids in the Bronx who started off the whole thing with grotty equipment.

"We want dirty sounds and that's one of the reasons we sample. We can't even buy a snare drum and recreate the old sounds because everything's too clean - they'll end up sounding like the R8. I ►

**"There seems to be a battle between the equipment manufacturers, who want to make things better, and the kids on the street who want dirty sounds."**



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► love the sounds on the R8 but I play them to some of my rappers and they think they're terrible – they want to hear a snare from 400 years ago played through a cassette. What the hell is all this technology for? The whole point of having samples is for the people who want to hear those old sounds.

“But I've gotta say that, with the current swingbeat sounds – very high quality sounds like Cameo – the R8 is very good because it's got some fantastic snare sounds in it. If you play around with the internal sounds you can get the most fantastic dance drum sounds. But, again, it does take programming.

“Also, why the hell don't Roland release for their wonderful D50, a card of sounds that sound like the TB303 and MC202, so that people can take those old sounds and play them on new synths? I'm sure they can do that in their labs. It's a constant battle with the manufacturers to get the right things at the right prices.”

#### RETURNING TO BASS, WE FIND HARRIS'

LP debut to be a collection of songs that vary wildly in style – from the soul of 'Feel' and the garage feel of 'Sexy Lady' through the hip house of 'Another

on vinyl up to 16), and beneath their surface is an intriguing patchwork of instrumentation and samples.

“I wanted to make the album playable”, Harris explains. “I didn't want to make it a trendy album. A lot of people are saying about their records ‘it's going to be all music, no samples’ or ‘it's going to be all samples’. Everyone knows what I do – I do a bit of sampling and I like a lot of different types of music. So I tried to do a bit of everything. I also tried to think about DJs who are going to be playing it. I wanted to make it easy for DJs to play and programme in, otherwise it's not going to stand a chance.”

That's the vinyl version of the album, but the collection of CDs that attracted my attention when I arrived has a greater significance.

“I've gone real CD crazy”, Harris announces. “I never buy albums any more. Most DJs dismiss CDs, but I was thinking from a CD buyer's point of view. You can get 75 minutes of music on a CD and I felt cheated when I bought the Inner City album on CD only to discover 7" versions of the songs using about a quarter of the time. So I've filled my CD up with 74 minutes of music – dub versions, a

cappellas, instrumentals and stuff. I even stuck 'Bad On The Mic' on there, which is my rap version of Michael Jackson's 'Bad' with the lyrics changed subtly. That's one of my favourites, actually.”

Probably the most important single aspect of *Bass* is its samples. Listening through *Bass* it's easy to catch shreds of James Brown, Public Enemy, The Tom Tom Club, Lyn Collins, James T Kirk... I even thought I'd spotted a section of Walton's *Belshazzar's Feast* under the introduction but it seems someone had ripped Walton off before Harris got his hands on the sample. Its actual source? Well I'm now sworn to secrecy, so you'll have to spot it for yourselves, but regular cinema-goers may have an advantage. Exactly what has Harris set out to achieve with his sampling?

“I've tried to make the album simple so the DJs can play it, but at the same time I want people to think ‘where *did* he get that sample from?’”

“In a way it's going back to the rule of the street and the rule of the rap scene, because there's a battle that goes on between people with samplers:

Monster Jam' to the hip hop of 'Run 4 Cover' and the reggae of 'London's Finest'. It's already been criticised as being simply a showcase for the producer's talents, but it also makes engaging listening. Between the nine tracks are short bridges built of samples (bringing the total number of tracks



PHOTOGRAPHY: NORMSKI



'you're using my sample... ', 'don't use that, he used it... '. You've got to come up with the most original sample.

"There are a lot of people listening to me who know about sampling. I'm not trying to keep one step ahead of them, but I'm trying not to use a lot of known samples. I'm trying to use more unusual things for the people who look to me to be original. If I use 'Funky Drummer' I'm not using it from the point of view of 'it sounds great, let's use it', I'm using it from the point of view of everyone else is using it and I want to make my mark with a 'Funky Drummer' track."

But just how does Harris decide what makes a usable sample?

"I never think of things as samples. I always think of a track as different sounds: drum sounds, synth sounds, sampled sounds, whatever. I never think 'let's build this up with samples'. It's good to work things out beforehand, but what normally happens is that you start putting it together and then decide that it doesn't sound that good, so you have to change it until it's right.

"For a drum sample I'll just look for something that's clean – something without hi-hats over it. If you're absolutely desperate, you can edit a hi-hat out, like I did with the 'Funky Drummer' snare. Ages ago I put it onto tape at 15ips and edited it out – and that's the 'Funky Drummer' snare I use to this day. For kick drums I just look for something which sounds dirty.

"With musical samples I think it's just a case of finding the right thing for the right time. You have to keep ahead with samples. If you don't, something that sounds good now sounds naff when it's released in a month's time. De La Soul just sampled Daryl Hall and John Oates – they got permission for that. Everybody is sampling everybody else.

"What I've been doing lately is getting a lot of my samples and putting them together on the *Beats, Breaks and Scratches* albums that I've been doing. In a way it makes them naff, but it also makes them handy for everyone to use. The albums have been selling really well. After I use a sample I'll put it on one of those albums. That way the younger DJs can get samples without having to spend a fortune on 300 different albums. Loads of kids were ringing up the office asking where to get the samples and I was thinking 'do I tell them about *TeeVee Toons...* which has only got a few samples on and costs £15 on import? The kids are going to go out and buy this thing and be disappointed, so I thought I'd stick them on an album with a couple of looped drum patterns – I've just started looping them in stereo on the \$1000 actually."

Of course the presence of samples on an album like *Breaks, Beats and Scratches* means that nobody else can use them with credibility...

"Exactly. What I'm saying is 'I used it first, now you use it!'"

The copyright on recorded material has hindered the cause of sampling from the outset. Harris has already had his share of trouble with music he's sampled, and it doesn't look as if he's safe yet.

"Last week I was at the New Music Seminar in New York and a guy came up to me and said 'Simon Harris? This is for you.' And subpoenaed me. He gave me a US court subpoena for sampling at a panel on sampling! It was a sampling panel with Daddy O from Stetsasonic, my partner Chris France, Hank Shocklee and a bunch of lawyers. There were people there saying the most crazy things..."

"The subpoena was for Tough City Records who have The 45 King's 'The 900 Number', and they are suing me for using a section of that. As anybody who's a regular sampler knows, that sample originally comes from a Marva Whitney record entitled 'Unwind Yourself'. Basically all DJ Mark did was take that sample, slow it down and loop it and put his own sampled drums over the top. It raises the question 'When does a sample become your own property?'. I think it's utter rubbish what's going on, and I'm going to fight it. Everybody's behind me – Profile and Tommy Boy are right behind me, but it raises some interesting questions."

It seems sad that, with all the opposition facing musicians sampling other musicians' work, there should be fighting between the samplers.

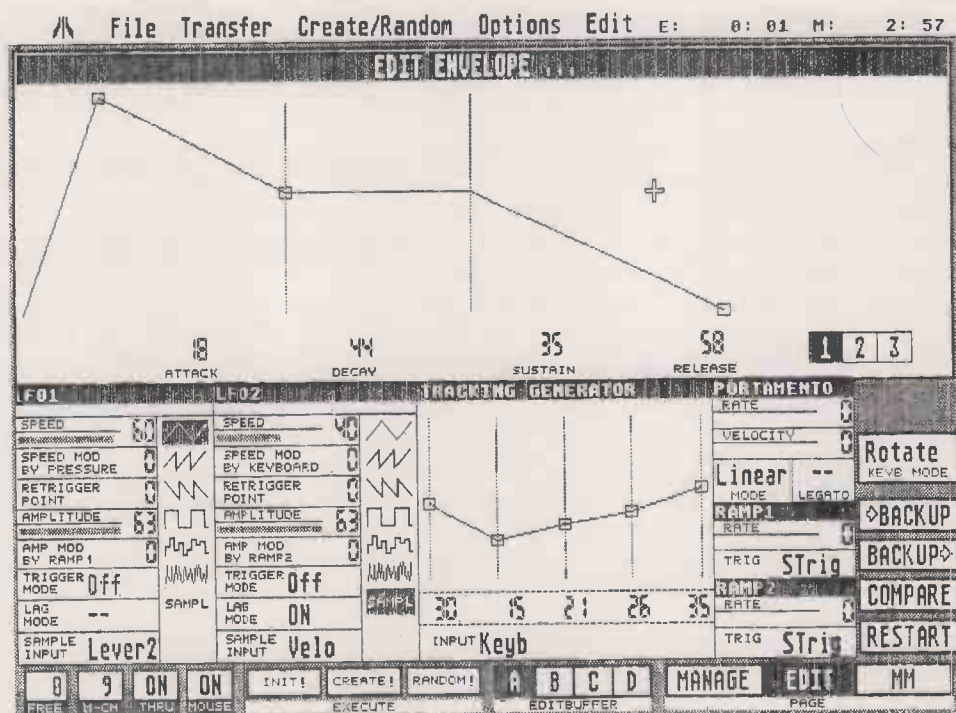
"DJ Mark's a good guy, it's not him" Harris elaborates. "The guy whose fault it is is Aaron Fuchs. He owns Tough City Records and he's one of those guys who sees a quick buck and wants to dig his feet in. What's unfortunate for everybody else is that if people like him don't calm themselves down, then nobody's going to be able to do any sampling because everybody will be suing everybody.

"If you listen to the remix of Sonia's 'You'll Never Stop Me Loving You' you can hear Lil Louis sampled all the way through it – or plagiarised, as Pete Waterman would have it. Sampling, plagiarising, what's the difference? You're still ripping someone off. I rip off but, hopefully, I don't create damage. If I rip someone off, I'm also hoping someone will want to buy the original of the record. It's not my fault if the record companies haven't got the record issued any more. Why don't they pull their fingers out and get the originals issued? Why didn't they reissue 'The Jump' by the JBs when everybody was going crazy about Public Enemy's 'Rebel Without A Pause'? They could have had a hit with that but they didn't, whose fault is that?"

No doubt the record companies have excuses to offer, but the fact remains that most of them are failing to understand the sampling phenomenon, let alone becoming properly involved in it. Between these attitudes and those of the media who are still conducting the "acid witch-hunt", it's reassuring to know there are people like Simon Harris around. ■

***"You have to keep ahead with samples. If you don't, something that sounds good now sounds naff when it's released in a month's time."***

# EXPLORER 1000



Envelope editing

The digital synthesis romance is over, and the warmth of analogue is back, but some of the old beasts can still use a hand from digital technology – patch editors, say. Review by Vic Lennard.

**D**IGITAL SYNTHS, SAMPLERS, hybrids (D50, M1 and so on) – fads will come and go but the likes of the Minimoog live on. That fat, warm analogue sound will always be in demand no matter what the style of music. Or so it seems.

Oberheim were in on that era too. Their Matrix 12 and Expander were followed by the cheaper, cut-down Matrix 6 and rack-mounted 6R. A unique manner of modulation gave the Matrix family a sound all of their own and the Matrix 1000 continues in the same vein.

The only problem here is that the Matrix 1000 cannot be programmed from its front panel, and so it demands a visual editor if you're to explore it any further than the presets. The Matrix 1000 is basically the same as the Matrix 6, but the differences make it difficult to use a Matrix 6 editor and, to date, the offerings from the software houses have been few and far between.

Unless you've been taking a three-year sabbatical on Mars, you'll probably know that the C-Lab programmers have added a range of visual editors called the Explorer series. Conveniently enough, one of these is for the Matrix 1000.

## OVERVIEW

FOR THOSE OF you unfamiliar with the Matrix 1000, it has ten banks of 100 sounds onboard, of which the

first two are in RAM so that they can be edited, while the other eight are in ROM and are effectively presets. It does not possess an edit buffer as such, which means that any edits are usually of a permanent nature. Explorer gets around this by designating the last slots in each of the editable banks as "pseudo edit buffers" – a technique used successfully in editors for the Kawai K1, which suffers a similar problem.

Another inconvenience with the Matrix 1000 is the lack of complete compatibility with the Matrix 6. True, it shares the same voice structure but cannot display the names for each sound due to the limited display facilities, and doesn't save the names internally. Consequently it cannot transfer the sound names to a visual editor. And keeping track of the 200 which you can program gets rather awkward. The other difference is that the Matrix 6 can also save 64 "splits" for layering voices, and as Explorer has no facility for the editing of these, I would question the validity of entitling it a "Matrix 6/6R/1000" editor.

Explorer is fully GEM-based (which means that the screens are similar to those found on other C-Lab programs) and can handle up to four banks in memory simultaneously, along with four single sound edit buffers (A,B,C,D). In keeping with other editors, particularly Dr T's, the right-hand mouse button is used to play a virtual keyboard with pitch varying from left to right and velocity from top to bottom. As this



right button is also used for decrementing values, the Alternate key on the Atari has to be held down to play the keyboard.

To keep the editor relatively simple, there are only two main pages; Management and Editor.

## MANAGEMENT PAGE

ON BOOTING UP, the Management page is the default page and is divided horizontally into four areas. At the top is the standard GEM menu bar and the first two headings of File and Transfer

Options has a selector for two different fonts for the numbers on screen, and a choice of whether a warning box is displayed each time something is about to be over-written. It also has a Tune request for making the Matrix 1000 tune itself (I wish my car had one of those) and Delete Doubles which checks the current bank and removes duplicates. Edit displays the names of the patches held in each of the four edit buffers and Create/Random will be examined in due course.

The next window is for the four banks, or Sets as they are referred to here, and includes the numbers of the patches as transferred from the Matrix 1000. A vertical scroll bar moves through ten patches at a time.

The third window is intended to save us from having to access the GEM menus too often, as it duplicates many of the options. Placing patches into buffers, writing patches to different positions, transferring between Matrix 1000, editor and disk are all possible from here, as is the dumping of sounds into our old friend Dusty Bin. This bin has one advantage over the usual GEM version in that a single click on it regurgitates the last two entries. Are you paying attention Atari? There is also a clipboard for temporary storage of a patch when reorganising banks.

The final strip at the bottom of the page displays the information which is relevant to both this and the Editor page. This strip remains in this position when the latter is accessed and allows access to MIDI channel and on/off for the note output from the right mouse button; Thru on/off so that notes from a real keyboard connected to the MIDI In of the Atari can be merged with any screen edits; current edit buffer in use, immediate access to altering it by randomisation and the page changer.

To be able to edit a sound, click on the correct position in the bank, select an edit buffer and use the "Edit" icon in the third window.

## EDIT PAGE

C-LAB HAVE DONE an excellent job in fitting all of the necessary parameters onto one screen and, while I do not intend to go on a guided tour, here is the basic manner of working.

Values assigned to sliders can be "grabbed" by either of the mouse buttons and scrolled. Alternatively, continuous clicking on these buttons will increment (left) or decrement (right) values, although the right button appears to be very slow to react. This is probably because the program is checking to see whether the Alternate key is being held down as well and has to decide if a note is to be played. Maximum

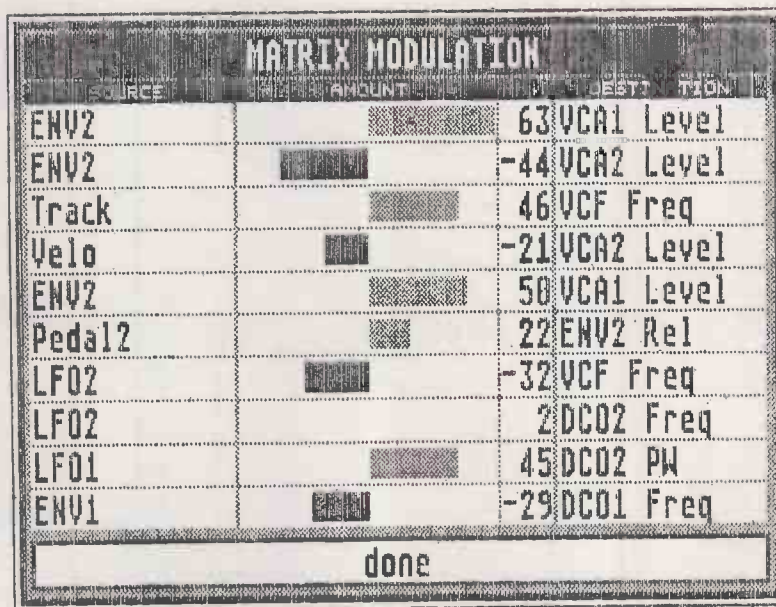
and Minimum values can be selected by using the Shift key and the speed increases when holding down the other mouse button as well. To help in editing at a glance, sliders are black for negative values and grey for positive ones.

A click on one of the three envelopes magnifies it to half of the screen. Grabbing and dragging the joints allows you to quickly alter these, and moving the cursor outside of the window closes it back down. Whenever you are editing, there's always a point where you have achieved a sound which you would have problems reproducing, and yet it still isn't quite right. Backup is designed with this in mind, as it's a buffer for storing a single sound which can be recalled if needed. Compare redraws the screen to show the original values as well as making the initial sound available for playing, while Restart bins any edits and restores this initial sound.

At the foot of the screen is the selector for the Matrix Modulation page (MM). The structure behind the Matrix series of synths allows for a variety of modulation paths which are all visible on this page. 'Nuff said.

## CREATING PATCHES

STARTING FROM ANY current patch, any combination of the 96 parameters available can be selected from the Edit Mask option in the menu along with an intensity value between one and five. This mask can be saved to disk and re-used as required. The patch then created takes the place of the current patch and the option of creating a complete bank of 100 patches is also available. The only problem with this is that the workings of the Matrix 1000 are quite complex and you need to have a good idea of which



Matrix Modulation

parameters to alter in order to get acceptable (read musical) results.

The particular way in which Explorer implements randomisation is interesting. You can select any number of the patches in memory, starting from number one, via the Randomise Limit and Explorer will examine their parameters and create hybrids of them. For instance, if you have an entire bank of brass sounds in bank one, set the limit from 0 to 99 ►

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► to encompass that bank and Explorer will randomly create either a single sound in the current edit buffer or 100 patches in the currently selected bank. In practice, this works rather well but I would have been happier to have seen some guidelines offered in the manual as to how to obtain the best results.

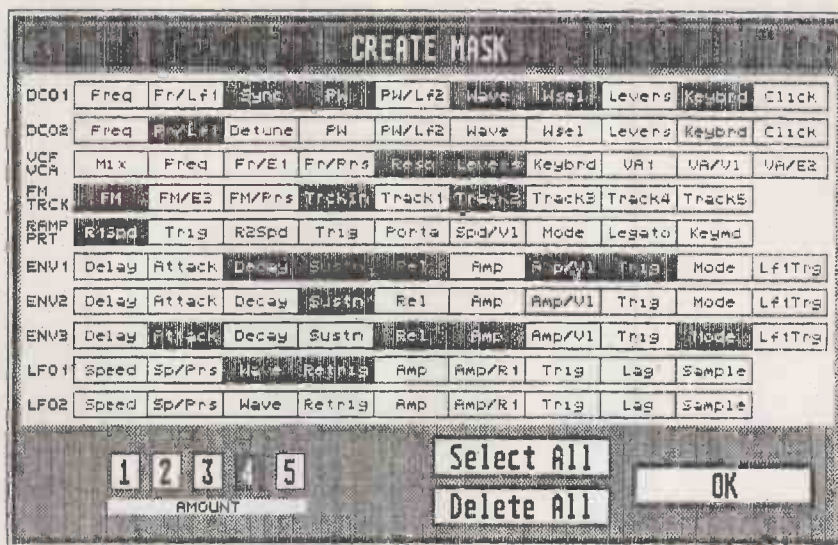
## IN USE

EXPLORER IS A sound editor pure and simple, and so does not allow you access to the functions which you can change from the front panel of the Matrix 1000 like transpose, pitchbend range and the like. I understand that this is down to the system exclusive setup of the synth and not the lack of programming.

I ran into no problems in the time that I worked with this editor, but one thing started to grate a little. As the right-hand mouse button serves the dual purpose of playing the invisible keyboard and decrementing values, it can't do both at the same time – so editing and playing simultaneously is often impossible. I ended up working with a merge box which meant notes could be played from a master keyboard with one hand while the other dealt with the mouse. In fact, a merge box always makes visual editors easier to work with.

## VERDICT

VISUAL EDITORS HAVE become a way of life for anyone working with a computer and a synth without a hardware editor. Some offer you the luxury of being



Randomisation mask

able to co-reside in your computer's memory with other pieces of software (a sequencer in particular) while others will do practically anything bar making the morning cup of coffee.

Explorer is a member of the No Frills club in that it is a well laid-out editor which performs its job without flying flags. All I can say is that if you have a Matrix 1000 and want to edit the sounds, get this editor. ■

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### **PROGRESS – IF YOU CAN'T ESCAPE IT, EMBRACE IT. AND WHERE BETTER THAN AT THE BRITISH MUSIC FAIR? REPORT BY SIMON TRASK.**

IN THE FOLLOWING pages you'll find information on new instruments, new software, new black boxes intended to make your life easier... In short, you'll find examples of what is generally called "progress". But what is progress? One definition provided by my dictionary is "increasing complexity". Today's hi-tech musical instruments and MIDI software

are becoming increasingly complex – but is that progress?

We tend to think of progress as growth, as improvement – in other words, as something beneficial. The term carries with it connotations of moving forward (never backward), and thus of change. Unfortunately, these underlying assumptions often become confused, so that change in itself is construed as a good thing, and what is to come is felt to be automatically better than what has gone before. It's a trap which is easy to fall into where hi-tech musical equipment is concerned. Someone once phoned the MT office asking us where Korg's S1 sampling drum machine had got to, because he couldn't possibly make any music until he'd got hold of one. Well, sorry to say, that poor fellow will never be

able to make any music, because Korg have decided not to release the S1 (see below).

So as you sift through the mass of information presented below, by all means plan out your next purchases – but think about what really constitutes progress in your musical life.

Sometimes we need to look back in order to move forward. **Roland** certainly seem to understand this. They're about to endear themselves to thousands of musicians by bringing out two new all-digital versions of the classic Fender Rhodes electric piano, the 64-note MK60 and 88-note MK80. Developed in conjunction with Harold Rhodes himself, they use Roland's latest technology, Adjustable Structured Adaptive Synthesis (a development of the system used on the company's RD series



electronic pianos) to produce wonderfully realistic digital recreations of the original Rhodes sound(s). Stunning. If you've ever loved the Fender Rhodes then believe me, you'll love the new digital Rhodes.

Of the two pianos the MK80 is the more sophisticated. Both instruments come with eight sounds: Rhodes 1 (Classic), Rhodes 2 (Special), Rhodes 3 (Blend) and Rhodes 4 (Contemporary) together with concert and electric grands, clavi and vibes, but the MK80 (£1799) allows you to program seven variations on each sound using onboard tremolo, chorus, phaser and EQ together with such parameters as punch, tightness, bender depth and modulation rate. These features allow you to program a broad range of electric piano sounds, from rich, warm phased to bright and hard-edged. In contrast, the MK60 (£1299) isn't programmable, loses the phaser and has simpler EQ (just bass and treble).

Both instruments are MIDI'd, of course, so the Rhodes can take its proper place among today's hi-tech MIDI setups. Oh, and on a practical note, both MKs are a good deal lighter than the original Fender Rhodes.

Interesting fact No. 1: the new Rhodes' stretch tuning feature was asked for by none other than Miles Davis (and if you're wondering how Davis came to be involved, he was one of the first musicians to incorporate the Rhodes into jazz, back in the '60s, when its sound became an integral part of the electronic jazz-rock style he was forging).

Meanwhile, over on The Synthesiser Company's stand a MIDI'd Oberheim Four-Voice monosynth was busy proving that digital technology will have to work hard if it wants to beat the old analogue gear at its own game. For one thing, if it's truly wonderful fat, warm and funky synthbass sounds you're after, look no further. The Obierack, as it's known, has been MIDI retrofitted by US company **Studio Electronics**, the same company responsible for the MIDI Moog (reviewed MT, May '89). As with the MIDI Moog, MIDI velocity and aftertouch can be routed to control volume and filter cutoff.

The Obierack will be available on a strictly limited basis, and although at just over £2000 it's not particularly cheap, if you're rich, you're working in the studio and you need that special Oberheim sound, what's £2000? The MIDI Moog can boast such users as the Pet Shop Boys, Stock Aitken & Waterman, Propaganda, Steve Lipson, Soul II Soul and Arthur Baker, and no doubt the Obierack will soon be keeping similarly distinguished company. Studio Electronics are apparently also working on a rack-mounted Prophet 5. Is there no stopping them?

**Cheetah** are a company who appreciate

the value of analogue synthesis. Their under-rated MS6 analogue expander is, with the exception of Oberheim's Matrix 1000 expander, the only current analogue synth. Trouble is, part of the attraction of analogue gear is its nostalgia quotient; compared to an "original" analogue synth the MS6 just doesn't have that magical authenticity value.

Cheetah are forging ahead with what could be called their "second generation" of instruments: the MQ8 sequencer/performance system (£249.95), SX16 sampler (£799.95), MD16 drum machine (£299.95), new pad-to-MIDI converter (£149.95) and the Master Series 7P and 5V MIDI controller keyboards (see elsewhere in this issue for a review of the 7P). The MQ8 is an eight-track hardware sequencer with 256 sequences and 16 songs, 20,000-MIDI-event memory, real-time step-time recording, footswitch-activated punch in/out, and both tape and MIDI SysEx data transfer. The MQ8 also has two MIDI Ins in addition to MIDI Out and Thru.

But the MQ8 is also more than a straight sequencer, with real-time triggering of sequences from the keyboard and eight modes of sequence playback including echo, arpeggio, embellish and vector chord - shades of Zyklus.

The company are also set to bring a whole new meaning to the phrase "affordable sampling" with their under-a-grand stereo 16-bit-linear sampler, the SX16. Coming in 1U-high 19" rack-mounting format, the SX16 (which was in an unfinished state at the Fair) can sample at up to 48kHz, comes with 512Kbytes of RAM as standard, is eight-voice polyphonic with 16-part multitimbrality, and has eight individual outs. The SX16's memory can be expanded to a maximum 2Mb, with a 0.5Mb card retailing at £249.95, extra 0.5Mb RAM chips at £199.95, and a full 1.5Mb card at £599.95. Samples are responsive to velocity and aftertouch, and dynamically-controlled sample crossfading has been implemented.

With an optional CRT modulator card (£129.95), a Cheetah Powerplay joystick (£24.95) and a TV you can indulge in on-screen editing of samples. Any new sampler needs a library of samples to get it off the proverbial ground; Cheetah seem to have solved this problem by allowing the SX16 to load S900 samples, thus giving it access to possibly the largest sample library of all. Very smart.

But it was their new 16-bit drum machine, the MD16, which most impressed me. Although it only arrived in incomplete form on the last day of the show, the MD16 came with a set of bright, clean, punchy sounds which instantly

marked it out as an instrument with a promising future ahead of it.

Coming with over 40 sounds onboard, expandable to 256 simultaneously-available sounds via chainable ROM cartridges, the MD16 has 16 velocity-sensitive pads, tunable samples (+/- one octave) eight individual audio outs (actually, four stereo jacks with two separately-output sounds per jack), ten preset patterns, 60 programmable patterns and 20 programmable songs (expandable to 200 and 50 respectively), 96ppqn timing resolution and a humanise function. With both real- and step-time programming, the MD16 also features dynamic stereo panning, dynamic tuning and dynamic envelope, together with tape sync using embedded MIDI song position pointers, and tape and MIDI SysEx data transfer. Roland R5 and Alesis HR16/16B watch out, there's a Cheetah about.

**Akai** are another company about to launch a new drum machine, the XR10 (£TBA, under £400), which has 16-bit sound quality, eight voices, 61 internal sounds, 15 drum pads with five preset and five programmable "drumkits", stereo output and separate effect send output pair, 50 preset and 50 user-programmable patterns and 20 songs. The company have also reduced the price of their XE8 16-bit drum module to £299, of the AR900 digital reverb to £499 and the ME30P II MIDI patchbay to £149. At the other end of the market, the company have come up with a keyboard version of their studio-standard S1000 stereo 16-bit sampler, to be known logically enough as the S1000KB. This has a 61-note keyboard with aftertouch, and a basic 2Mb of memory. An optional hard disk retrofit consisting of 40Mb hard disk and IB103 interface can be had for a further £1150.

**Roland** are busy readying their own stereo 16-bit sampler, the rack-mount S770 (see Frankfurt show report in MT, March 89). However, although it took part in the Roland demos it wasn't in a finalised state. Definitely finalised was the PAD5 Handy Pad, a fairly cheap 'n' cheerful five-pad MIDI Percussion Controller which retails for £159 and includes 14 preset five-voice rhythm patterns which play over MIDI (there are no onboard sounds) with whatever notes (25-94) you've assigned to the pads; tempo can be adjusted (40-250) and pads/voices can be selectively de-assigned. Pad sensitivity can be adjusted, allowing you to play them with sticks or with your fingers. The PAD5 is powered from six batteries, and weighs a fairly modest 3lb 3oz.

Roland also debuted a trio of compact (1U-high half-rack) light-grey boxes which answer to the names CM32L, CM32P and ►

► CM64, look rather uninteresting but are actually well worth investigating. The CM32L is basically an MT32 in a different casing, but with double the PCM sample memory, allowing it to incorporate 33 sound effects. The CM32P is a U110 in a different guise, minus the individual audio outs but plus reverb and an audio input (so that the CM32L, for instance, can be routed through it). Extra samples can be accessed from U110 sample cards courtesy of a front-panel card slot.

But the most impressive module is the CM64, which combines the facilities of the CM32L and CM32P to give you a total of 63-voice polyphony, 15 Parts and 255 different sounds in the same size casing, complete with onboard reverb and, as on the CM32P, the ability to read samples off U110 cards. However, all this multitimbral power still has to be output through a single stereo pair. And none of the modules have any onboard programming facilities, though Roland aim to support all three with ST-based editing software later in the year. Existing MT32 editors should work with the CM32L, and with the CM32L portion of the CM64, though obviously not for the sound effects.

In case you're wondering who these modules are aimed at, I'll give you a clue: CM stands for Computer Music. Yes, Roland are pitching them at the computer hobbyists, hence the styling and the lack of programmability. But just look at the prices: £369 for the CM32L, £445 for the CM32P and £789 for the CM64. Compare these to list prices of £450 for the MT32 and £599 for the U110 and you should get the picture: if you're prepared to make a few sacrifices (notably where audio outputs are concerned) then these modules start to look very attractive.

Roland also have the LAPC1 L/A Sound Card (an MT32 on a plug-in card) for the IBM PC, and have been working with US games company Sierra on a series of computer games for the IBM PC which include a soundtrack which plays on the LAPC1 (there are also ST versions which play via the ST's MIDI Out port). I'm not particularly a games fan, but having seen Space Quest III: The Pirates of Pestulon (no, really) running in colour on an IBM PC fitted with the LAPC1, I have to say that the specially-composed soundtrack really does add a whole new dimension to games playing.

Other items in Roland's computer music series are the CF10 Digital Fader (a 10-MIDI-channel "mixing desk" allowing real-time generation of MIDI volume and pan information), CN20 Music Entry Pad (a button-pushers' dream device for transmitting individual notes, chords and MIDI controllers via MIDI) and CA30 Intelligent Arranger (feed it a melody and

chord accompaniment via MIDI and it'll come up with a harmonisation, in any one of 32 styles, which is transmitted via MIDI). In a similar vein, the RA50 Real-Time Arranger is a CA30 with onboard L/A sound source and digital reverb, while the Pro-E Intelligent Arranger further adds a three-octave velocity-sensitive keyboard, six-track sequencer and 32 sound effects (12 of which can be readily triggered from dedicated front-panel buttons). Whenever a keyboard instrument with auto-accompaniment arrives at the MT offices (which is not very often) it always pulls a big crowd and generates a lot of laughter, basically because it's fun. With instruments like the Pro-E it seems that auto-accompaniment is getting quite sophisticated.

ENOUGH OF THIS play-along nonsense, I hear you cry. What about the real instruments? Well, you can't get much more real than **Korg's** new T series synths, the T1 (£3700), T2 (£2999) and T3 (£2399), which are upmarket versions of the revered M1. Both the T1 and the T3 made it to the show; the T3 is expected in late September, while the T1 and T2 should be arriving in late October (the T1 in small quantities, as its price will prohibit it from being a big seller). The T1 had to be shipped back to Japan straight after the show, and the T3 wasn't in a finished state suitable for review, but if production-line models arrive in time there'll be a review in the next issue of MT.

The T series synths use the same AI (Advanced Integrated) synthesis method as the M1 but have double the amount of sample ROM (eight megabytes to the M1's four). They have the same Multisounds and Drum sounds as the M1, so anyone upgrading won't lose the sounds they know and love, but add a good deal more. Onboard sequencing has been retained, but with a considerably enhanced memory capacity of 56,000 notes (still only eight tracks, though), and the number of MIDI Outs has been increased to four (organised as two pairs, making 32 MIDI output channels). The new synths have the same polyphony as the M1 (16 voices), and the same onboard digital effects capability. An onboard 3.5" disk drive makes saving and loading of Programs, Combinations, sequences and SysEx data easy, and all three models have a sizeable LCD screen which Korg have taken full advantage of to provide many user-friendly features (such as listing the Programs in each Bank whenever you select a new Bank).

As all three T series synths are essentially the same instrument, what

distinguishes them is the keyboard (and consequently the size of the casing): the T1 sports an 88-note weighted, the T2 a 74-note non-weighted and the T3 a 61-note non-weighted keyboard.

For technology-watchers, probably the most interesting development on Korg's new synths is the internal 512K RAM board (fitted as standard on the T1, optional on the T2 and T3) which allows any samples, not just the ones in the synth's sample ROM or on Korg's plug-in PCM sample cards, to be used as oscillator sound sources for synthesis. Samples from Korg's DSS1/DSM1 sample library can be loaded directly off disk, while any samples that can be transferred via MIDI using MIDI Sample Dump Standard format can be loaded from other samplers or from generic sample editing software. The possibilities are interesting, to say the least.

For the more budget-conscious musician, Korg have produced the M3R 1U-high 19" synth expander (£899) and optional RE1 Remote Editor (£275), about which I'll say no more as you can find reviews elsewhere in the magazine. The company will also be gradually replacing the M1R (rack-mount version of the M1) with the ExM1R, which doubles the amount of onboard ROM sample memory to 8Mb (bringing it in line with the T-series synths). Existing M1R owners (and possibly M1 owners, though don't hold your breath) will be able to get their instruments upgraded for a suitable fee (not decided on yet).

Unfortunately the S3 Rhythm Workstation (£TBA) didn't make it to the show as expected, apparently because the designer fell ill (a likely story). But the Q1 sequencer (£TBA) was being used to run Korg's M1 demo, and shipments of both the S3 and the Q1 should be arriving in late October. Finally, the company are also introducing a £350 MIDI data filer, known as the DF1, which looks to be along the same lines as Yamaha's MDF1.

One instrument which won't be shipping at all is Korg's fabled S1 sampling drum machine, which has been so long in development that the company have decided not to release it, due to the way the market has changed in the meantime. Instead the technology they developed while working on the S1 will be used in a different instrument which the company intend will lead the way rather than lag behind (or something to that effect).

**Kawai**, meanwhile, are furthering their K1 product line with the K1 II (£695), the K4 (£895) and the K4R (£695). The 61-note K1 II is an enhanced version of the popular K1, in the sense that it adds a separate drum section and onboard digital effects – somewhat belatedly, perhaps, bringing the K1 range into line with most ►



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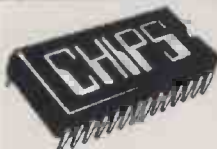
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► other multitimbral synths on the market at present. The drum section features 32 PCM drum sounds and can be played along with the eight synth Parts in a multitimbral setting, while the onboard effects consist of 16 types of reverb and delay effects, with effect on/off selection for individual instruments and the drum part in Multi mode, and remote effect patch selection via MIDI patch changes (allowing you to sequence them as you would other MIDI-compatible signal processors).

The 61-note K4 and rack-mount K4R represent a step up again, with a cleaner sound courtesy of 16-bit PCM samples, and a more sophisticated voice architecture with two Digitally Controlled Filters (complete with resonance) per patch, and increased modulation possibilities. The only differences between the K4 and K4R (OK, apart from the obvious physical ones) appear to be that the R forgoes onboard digital reverb but adds six individual audio outs.

Kawai have also come up with the 16-voice-polyphonic PHm Pop Synth Module (£276), which contains 200 preset K1 sounds, 16 PCM drum sounds and 30 preset rhythm patterns (synchronisable to an external sequencer) within its small but perfectly-formed casing. In addition you can create split/layer combinations of up to four sounds (the PHm provides 50 preset and 30 programmable combinations), or play up to four K1 sounds independently on four different MIDI channels, with the drum sounds on a fifth channel.

Taking a quick look at the **Tascam** stand the company's MSR24, 1/2" 24-track machine arrived safely from its NAMM show debut to make its UK debut. More upheavals on the pro recording scene are sure to follow. Also making UK debuts were the 644 and 688 Midistudios – four- and eight-track personal multitrackers respectively. The 644 boasts 16 inputs and a built-in MTS30 tape synchroniser, while the 688 has no less than 20 inputs. Looking to plug a huge gap in the current range of mixing desks is Tascam's MM1, a 20-input, 19" rack mixer with four aux sends, four stereo returns and programmable MIDI muting. At a shade under £700 it's going to be an important development in the home studio and as a keyboard sub-mixer.

**Yamaha** have added to their already impressive Personal Recording Series 100 range of budget studio gear with the DR100 Digital Reverb (£159), BSP100 Bass Sound Processor (£145) and DP100 Dynamic Processor (£145). The DR100 has four reverb modes and three-band EQ, while the BSP100 allows direct input to the 100 Series system for bass guitarists

and includes three-band parametric EQ and an effect send/return loop, and the DR100 is a stereo limiter.

Also impressive from Yamaha on the signal-processing front is the new FX500 budget multi-effects processor (£349), which comes in 1U-high half-19" format (making it compatible with the 100 Series) and provides five chained effects: compressor, distortion, equaliser, modulation (chorus, flanger, symphonic, tremolo) and reverb (hall, room, vocal and plate reverbs; hall, random, reverse and plate early reflections; delay, echo, reverb+delay, reverb into delay and delay into reverb). The FX500 boasts 16-bit, 44.1kHz quality and 60 preset and 30 user-programmable effect programs, with real-time MIDI control of up to two effect parameters simultaneously. Full review elsewhere in this issue.

Yamaha have also decided to market the WX11/WT11 MIDI Wind Controller System. The WX11 (£TBA) is a kind of scaled-down version of the WX7, while the WT11 (£329) is an eight-voice, multitimbral sound module which, although designed especially for the WX7 and WX11, can also be used as a stand-alone MIDI expander.

In contrast, the company were offering nothing new on the synth front. However, while synth players (im)patiently await the next technological advance from Yamaha, maybe they should cast a glance at the company's new PSR3500 (£649.99) and PSR4500 (£849.99) portable keyboards. These utilise a sound-generating method known as Dual Architectural Synthesis System, which merges Yamaha's AWM technology (sample-based sound modelling as used on their digital pianos) with an advanced form of FM known as Customised Wave Modulation. These are combined in an L/A-ish way, with AWM used mainly for the attack portion of a sound and CWM mainly for the sustain and release portions. DASS will be incorporated into all Yamaha's new portable keyboards as they are released, but will it become the new standard on Yamaha's synths, too? Reports suggest that Yamaha are lining up something even more advanced for their next generation of synths, which we might see later in the year. The other buzz on Yamaha is that they are readying an "affordable" digital multitrack machine for release.

The Synthesiser Company had an **E-mu** Proteus tucked away in a rack full of gear; although it wasn't hooked up to a keyboard for playing, it did let forth some impressive sounds courtesy of an onboard demo sequence. Proteus is already available in the States, but we'll have to wait till Autumn for UK shipments as E-mu gear up for mass production. **Peavey** had a DPM3 synth on their stand but it wasn't

doing anything (nonetheless, from advance reports this is one synth to watch out for when it becomes available later in the year). **Ensoniq's** new VFX synth was present in a low-key sort of way on the Bose stand. Why Bose? Well, Ensoniq have developed a new digital piano in conjunction with Bose, who are responsible for the instrument's Acoustic Wave speaker technology. Known as the AWP4000 (£1756.97), it's based around a modified Ensoniq DoClI chip like the VFX, and has an 88-note weighted, velocity-sensitive keyboard, a four-track sequencer and ten sounds: grand piano 1 & 2, ragtime piano, electric piano 1 & 2, harpsichord, vibes, marimba, acoustic bass and electric bass. The two bass sounds operate as the lower end of a split keyboard with any of the other sounds, with each side of the split able to transmit on separate MIDI channels. Fixed chorus and "enhance" (reverb) digital effects can be switched in or out at any time, and L/R audio inputs allow another sound source to be routed through the piano.

The ever-active **Philip Rees** was debuting yet more of his extremely useful little black boxes (black and red, actually), with the 8M eight-way MIDI merge unit (yes, that's eight inputs), which should be available October-ish and retail at under £200, and several MIDI selector boxes: the 2S (£12.95), 3B (£25.95) and 9S (£35.95). He's also working on a MIDI Line Driver which will allow the officially-specified maximum transmission distance of 15 metres to be greatly exceeded (just the thing for your bedroom studio), and is taking his first step into the world of sound-generating little black boxes with the PSP Percussion Sample Player (at an estimated price of £169.95, and around £20-25 per sample cartridge; available October-ish). This is a MIDI digital drum module with five internal sounds and a further 12 accessible from a ROM cartridge. Sound quality is eight-bit compounded with 31.25kHz sample rate, the sounds are velocity-responsive, polyphony is four voices, and the rear panel has stereo outs and four mono outs. Eight cartridges are expected to be available by the launch date, and one cartridge will be included free with the PSP.

A new British company, **Audio Architecture**, were debuting two very sophisticated MIDI matrix boxes which go by the names of Function Junction (£395) and Function Junction Plus (£695), which offer 8x8 and 16x16 MIDI connections respectively. The 8x8 model has front-panel programming while the Plus has a blank front panel but adds a remote editing "strip" which could sit neatly on any synth, sampler or mixing desk. Audio ►



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► Architecture also plan to release editing software for the ST which, to judge by initial screens, will be well worth investing in.

The units allow routing of any input to any output(s), with merging of any number of the ins to any number of the outs, while individual inputs and outputs can be solo'd for easy monitoring. Zoning and overlapping of inputs is possible, as is filtering of various types of MIDI data from the inputs, transposition of incoming data, delays of up to 2.5 seconds programmable in 10mS increments or bpm values, velocity scaling, velocity crossfading across the outs, remapping of controllers. . . Phew! No doubt you get the message that Function Junction is more than just a straightforward routing box.

Distributors Sound Technology are keeping busy, having recently added Digidesign and JL Cooper to their books. Latest arrivals from **Alesis** via Sound Technology are the HR16B drum machine (£449), companion to the HR16 and possessed of some impressive new bass and snare sounds well suited to hip hop and techno; the MIDlverb III (£399), a 16-bit stereo simultaneous effects processor capable of generating delay, reverb, chorus and EQ all at the same time; and the Data Disk (£399), a stand-alone 1U-high 19" universal SysEx data storage device. The Data Disk stores and retrieves SysEx data directly to and from 3.5" floppy disk. Consequently, file size is limited only by the disk's 800Kbte storage capacity, whereas typically on other data storage systems file size is limited by a rather more modest input buffer size. This means that you could feasibly transfer samples to the Data Disk, and in fact it will recognise MIDI Sample Dump Standard, though I can't think why anyone would want to transfer samples to it.

Files are automatically identified in the unit's 32-character LCD window by manufacturer (read off the SysEx ID code), device and an eight-character user-definable name, making it easy to identify the files you want to pull off disk. But will it really be able to substantiate its "universal" tag by handling SysEx data dumps from all MIDI instruments, even the ones that can't initiate their own dumps? No doubt we'll find out in due course; in the meantime, I'm inclined to agree with Alesis' claim that the Data Disk allows you to store, retrieve and copy your music without having to become a rocket scientist.

Alesis MMT8 owners should be breathing sighs of relief by now, however, as the Data Disk will allow them to forget tedious tape storage and dump the entire contents of their sequencer's memory to floppy disk instead.

TALKING OF SEQUENCERS, you may be wondering if there was anything new in MIDI software at the show (doncha just love these smooth links?). Well, Sound Technology were on the case once again with **C-Lab's** increasingly impressive ST-based Creator/Notator system. C-Lab have just introduced Human Touch (£149), the Combiner Key expansion interface (£199) and Softlink (which will be available as an update for existing C-Lab users for a nominal fee). Softlink is a program management system which allows software from different manufacturers to be co-resident in the ST, with some degree of multitasking. Potentially a very valuable addition to the Creator/Notator setup.

In case you think £149 is a bit much to pay for a spot of human contact, let me explain that Human Touch is an audio trigger attachment for C-Lab's Unitor SMPTE synchroniser which allows an audio pulse to control the tempo of the sequencer in real-time, with tempo changes being recorded along with or separately from a performance for subsequent playback – for demonstration purposes at the show, the audio input was provided by anyone who cared to snap their fingers in the vicinity of the Human Touch. The aforementioned Combiner Key expansion interface allows four dongles from any manufacturer to be combined.

The software for translating the incoming signal into tempo information for the sequencer is handled by the latest version Creator/Notator software. In fact you don't have to use Human Touch to control the tempo from your playing – the software can also extrapolate tempo from incoming MIDI notes. Both the keyboard and the audio input methods work extremely well, suggesting that at last the musician can become master of the sequencer, rather than vice versa.

British company **The Digital Muse** were demonstrating their 99-track Virtuoso sequencing software for the ST (£299). Dispensing with the ST's GEM operating system, they've written the program entirely in machine code, which does rather tend to put them out on a limb, in that they'll have to come up with all the other bits and pieces of software which make up a computer-based MIDI system these days. Featuring extremely fast and smooth graphics (such as the smoothly-scrolling grid edit display), 480ppqn resolution, a tempo resolution of 0.01bpm, disk load/save as a background task while sequences are playing, on-line help pages and a wealth of well-thought-out features, it's a very impressive program – watch out for a review soon in MT.

Sometimes it seems there are no limits

to what ingenious software writers can achieve with the Atari, but there will come a point beyond which the ST can't go but other computers can. This will no doubt be in the area of multitasking and the combination of audio, video and MIDI. Apple's Mac II will always be too expensive to break the mass market in the UK, but **Commodore's** Amiga and **Acorn's** new BBC A3000 are shaping up to be the music computers of the future.

With its custom RISC (Reduced Instruction Set Computer) processing and 4MIPS (million instructions per second) processing speed the A3000 is the most powerful machine, but that doesn't really matter if the price isn't right and the software isn't there. Well, the price is good: £744 for a 1Mb A3000, £229 for a 1Mb upgrade and £56 for a MIDI upgrade makes it a cheaper option than the ST. Acorn are keen to show that they're interested in the music software market. Not only are they the first computer manufacturer to join the Music Industries Association, they had their own stand at the BMF as a showcase for the companies working on music software for them. EMR were the first company to write music software for the computer, concentrating mainly on educational applications (Acorn having had a strong schools angle ever since the BBC micro). **Pandora Technology** have decided to champion the A3000 (in addition to supporting their range of ST-based patch editors), which means that Acorn could soon have a serious piece of sequencing software on their hands in the shape of **!Intuition** (yes, you did read that right). We'll keep you posted.

The cutely-named **Armadillo Systems** have been concentrating on the digital sampling side of things with their impressive 16-bit sampling package which is set to blossom into a stereo digital audio hard-disk recording system before the year is out. Now, if the sequencer and the digital audio recording could be made to run together...

Another computer company who have just taken out membership of the Music Industries Association are computer distributors **SDL**, who have set up a music division to release US company **MicroIllusion's** Music-X sequencing software for the Commodore Amiga (£199 plus VAT). This is a 250-track sequencer which features a colour-coded editing system with real-time graphic input, an inbuilt generic editor/librarian, keyboard mapping, MIDI filtering and, as the saying goes, much much more. The Amiga's multitasking ability allows Music-X to be used in conjunction with other programs such as video-editing software. The future is fast approaching. ■



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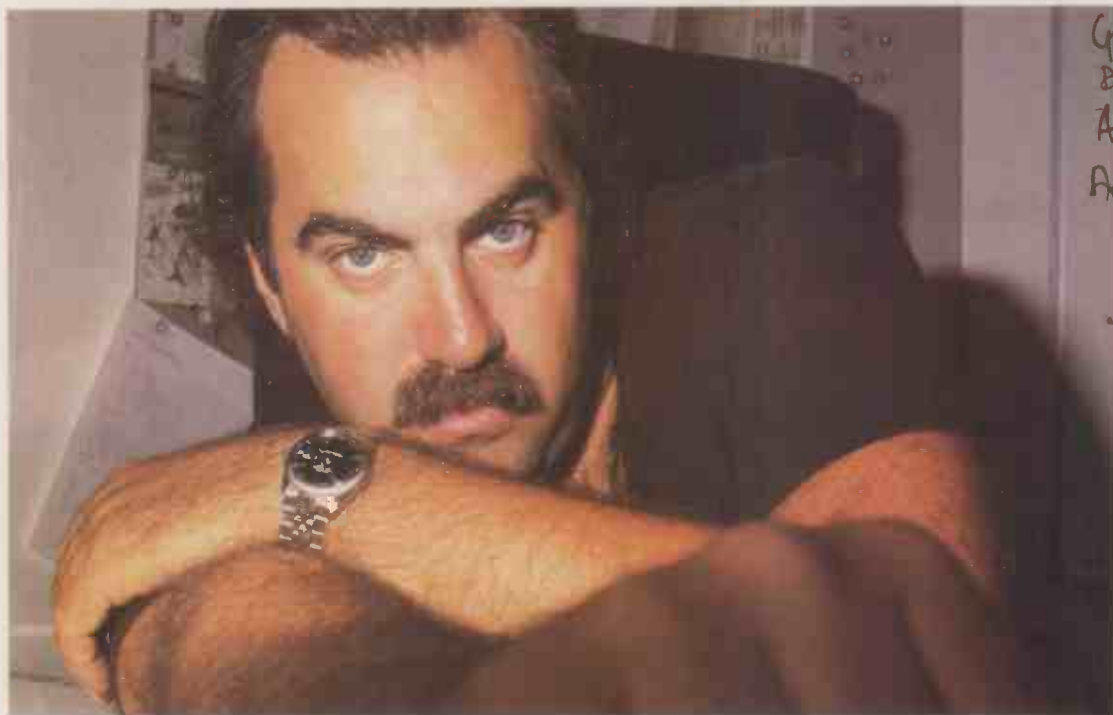
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# DISCIPLE OF THE BEAT



***Arthur Baker has long been a respected and versatile  
remixer and producer. Now, with the release of  
his own album, he's stepping into the limelight as an artist.***

***Interview by Simon Trask.***

TO ANYONE WHO KNOWS THEIR DANCE music, Arthur Baker hardly needs an introduction. During the past decade he has established solid credentials both as a remixer and a producer. He first made his mark in the early '80s with a string of influential New York electro records, the most famous of which was Afrika Bambaataa and the Soulsonic Force's classic 'Planet Rock'. Following this success, a steady stream of hits like Rockers' Revenge's 'Walking on Sunshine', Freez's 'IOU' and New Edition's 'Candy' established his

credentials. In the period 1982-84 he worked with New Order, co-writing 'Confusion' and 'Thieves like Us', but also developed his remixing talents beyond the dance realm into the pop mainstream, working on tracks like Cyndi Lauper's 'Girls Just Want to Have Fun' and Bruce Springsteen's 'Born in the USA', 'Cover Me' and 'Dancing in the Dark', as well as with artists as diverse as Hall & Oates, Jennifer Warnes and Bob Dylan. And in the mid-'80s he produced the music for the film *Beat Street* and co-ordinated the *Sun City* anti-apartheid album.



More recently, on the club dance front he masterminded the Criminal Element Orchestra's 'Put the Needle to the Record' (the track which influenced M/A/R/R/S - Baker also claims that he gave them the idea for using samples after they played him an acetate of the original mix of 'Pump up the Volume') and has produced, played on, and co-written tracks for Wally Jump Junior and the Criminal Elements' '88 album *Don't Push Your Luck*. And the latest Baker-produced Criminal Element 12", 'When the Funk Hits the Fan', a slice of Minneapolis-influenced funk, has just been released at the time of writing.

Now he's launching himself, under the banner of Arthur Baker and the Backbeat Disciples, as an artist in his own right with an album which he describes as "the culmination of everything I've done in the last ten years". It's an eclectic album which showcases his songwriting and production talents to good effect. Baker has gathered around him a talented group of musicians, singers and composers who act as collaborators rather than mere sidemen. The album also includes guest vocals from the likes of Jimmy Somerville, Martin Fry, Al Green and Andy McCluskey, all vocalists and songwriters who Baker has admired over the years.

While the 13 tracks that make up the album are all in a commercial vein, they cover a variety of dance music styles, but, broadly speaking, marry Baker's twin loves of early-'80s English synthpop (which he refers to as "my heritage") and black dance music of the '70s and '80s. For instance, '2x1' combines a swingbeat rhythm with Scritti Politti-style vocals and harmonies, 'Silly Games' has a Todd Terry-ish NY club feel, 'Mythical Girl' carries distinct echoes of ABC's 'Poison Arrow' (but then it is the track Martin Fry guests on), and 'Paris' sounds like a slowed-down Pet Shop Boys. Yet the album has an underlying unified feel which allows it to transcend any accusations of mere musical pastiche. Baker may be wearing his musical influences on his sleeve, but his obvious love of and respect for those influences shines through.

#### **A SELF-CONFESSED VINYL JUNKIE FROM**

an early age, Baker first got involved in music through working in record stores in his home town of Boston, Massachusetts when he was a teenager. But although he started DJ'ing when he went to college in the mid-'70s, as he readily admits, he didn't have the right attitude to be a DJ. He never had any patience with club audiences - if they didn't dance to a record he was playing, he'd smash it and throw it out onto the dancefloor.

Musically he had always been into rock 'n' roll, anything from Jefferson Airplane to the Allman Brothers, as well as the more folky music of people like James Taylor and Tom Rush. But when he returned from college in '77 and started working in a black music record store, he discovered artists like the Jackson Five, Al Green and the Temptations and became hooked on black music. Inspired by the productions of Gamble & Huff, Thom Bell and Norman Whitfield, Baker decided that what he

wanted most of all was to become a producer.

"I never had the patience to learn an instrument", he confesses as we sit in the press office at A&M Records in London. It's a sweltering July day and the office refrigerator has almost run out of cold drinks - hardly the ideal situation in which to subject Baker to the rigours of an MT interview. But he's an affable man with a down-to-earth, unpretentious manner which suggests he has known bad times as well as good times - as indeed he has.

"From the time I thought about making records I really wanted to put things together, to produce, to come up with ideas. By the time I started making records I felt it was too late to learn a musical instrument, which wasn't true."

In pursuance of his aim, Baker took an engineering course in '78 at Intermedia Studios, the first 24-track studio in Boston. His first taste of production work came with a group called The Hearts of Stone ("three pimps from Rhode Island"). The group put up the money for the musicians, Baker persuaded the owner of Intermedia to give them some free studio time, and they produced a disco record called 'Losing You' which eventually came out in Canada.

Having developed a taste for production he went on to record a dance album with money provided by relatives, and sold it to a label owner called Tom Moulton. He was about to learn how slippery the music business can be.

"That was my first experience of getting ripped off, but definitely not my last", he recalls ruefully. "I got no points. He told me he was just going to use the songs and re-record everything, but he ended up using my finished tracks and I just got an arranging credit."

Baker moved to New York in the late '70s. There followed a lull in his career when he couldn't get production or DJ'ing work and had to turn to working for a record wholesalers called Cardinal One Stop on Long Island. Here he swept the floor while his records were on the shelves (but no-one would believe they were his), and eventually worked his way up to become a breaker - someone who takes the records as they come in in bulk and breaks them down according to their list prices. This came to an end when a box of records fell on his head, knocking him unconscious. It was, he realised, time to move on.

For a while he worked as a record salesman, but it was as a result of writing record reviews for *Dance Music Report*, a monthly magazine published by Tommy Boy Records boss Tom Silverman, that his fortunes took a dramatic turn for the better. Through Silverman he became involved in the burgeoning New York rap scene, met up with Afrika Bambaataa, and together with John Robie formed a production partnership which was responsible for many of the classic electro tracks of the early '80s - including 'Planet Rock'.

As many people will be aware, 'Planet Rock' was influenced in particular by two Kraftwerk tracks, 'Numbers' and 'Trans-Europe Express'.

"I was listening to Kraftwerk ever since I'd worked in a record store, because 'Autobahn' was a big ►

**"Four people can use the same sample and one of the records is going to be a hit because of the way that the sample is used."**

► record back then", Baker recalls. "And I was going around record stores in New York and people were really into 'Numbers' and 'Trans-Europe Express', so we put the two together. When the track was finished, we knew we had something special. I went home to my wife and said 'We've got a hit'."

'Planet Rock' immortalised Roland's TR808 drum machine, which Baker used because "it was the only drum machine which really sounded like a drum machine". They got their 808 by answering an ad in *The Village Voice* which read "Roland 808 and programmer: \$25 a night". The record was also notable for its use of the Fairlight orchestral hit sample, which subsequently became a much over-used device in dance music, while the metallic vocal effect was produced using a Lexicon PCM41 delay unit set to a really short delay.

Yet, as Baker reveals, Kraftwerk weren't the only European influence on the New York electro scene – New York ears were just as attuned to British synthpop. The first such record to really influence Baker was the Human League's 'Don't You Want Me, Baby?', which came out in November '81.

"I was totally impressed that the music was all computerised, with a drum machine playing the rhythm parts", he recalls. "This was before 'Planet Rock'. I was also into 'Situation' and 'Don't Go' by Yazoo, and 'The Look of Love' and 'Poison Arrow' by ABC. The Roland drum machine, mournful minor-key melodies, depressing lyrics, threatening lyrics... Those were really the records that inspired all the guys in New York. Our version of that was all the electro stuff, like Planet Patrol's 'Play At Your Own Risk'."

And what, for Baker, was the most influential aspect of synthpop?

"I think it was the arrangements and the melodies, and the fact that it was synths and not guitar and bass. Vince Clarke is still making great records, basically doing the same thing, which is even more impressive because his songs still sound fresh. He doesn't have to go into trends, he just has this sound that was so ahead of its time it still works now."

**DESPITE HIS MANY SUCCESSES IN THE** early '80s, Baker's career took a nosedive later in the decade as he struggled with a cocaine addiction. Today he makes no secret of that period in his life; in fact, he is painfully honest about it.

"In Boston, a friend of mine from high school had an incredible connection, so we were dealing drugs out of the club. Then when I moved to New York I quit cold, and for two years I didn't do anything. Then I was editing a song on the Freez album, and I had to have it done but I was really tired. The engineer said 'Here, try some coke', so I tried it and I felt good. From then on, through the music for the movie *Beat Street* and the *Sun City* album, from '85-86, I did tons of coke. Well, it wasn't as much as a lot of people do, but it was enough; all I needed was one line to get fucked up and want to retreat into the woodwork.

"I really lost a lot of ground in my career. In fact, I

didn't make another record for about a year. Then at the end of '86 I was working with New Order and I decided I would quit drugs, and that was it. I just said 'Fuck it, I can't do this any more'."

Although he could blame pressures of work as his reason for succumbing to the lure of drugs, Baker is honest enough to admit that "it was just weakness on my part, a way to escape from reality". Nowadays he is emphatic in his condemnation both of drugs and of the people who deal in them.

"I think they're a waste of money, and people who deal drugs are total sleaze assholes who just make money off of people's misery. That alone should be enough to make anyone steer clear of drugs, because the people who live off of other people's blood, who make money off of drugs, are just pathetic fucking scumbags. Regardless of how bad it is for you, just the fact that these scum are making money off of people's misery should be enough."

Once Baker had come off drugs he set about writing songs, and, by his own admission, "started to make really good dance records again". His remixes of Living in a Box, Fine Young Cannibals and Fleetwood Mac were influential in that they were the first house remixes of non-house tracks. His more recent remix credits have included artists as diverse as the Tom Tom Club, the Gypsy Kings, Paul Rutherford, Roberta Flack and Debbie Harry.

These days, however, Baker has his sights set firmly on writing and producing his own material, following in the footsteps of the great producer/writers whose music so inspired him in the '70s.

"I have three different ways of writing a song", he elaborates. "The first way is I come up with a groove, maybe a bassline, and I put that down and then either try to come up with a vocal idea for it or give it to someone else to work on. Then sometimes I'll come up with a melody line but no chorus. The way I usually work, though, is with a chorus, a strong hook, and from there I'll go into the studio with someone who's a keyboard player and programmer, so they can operate all the stuff. I write with three different people who each have a different computer and different sequencing software, so I don't really get into using sequencers. I just play in the parts. I'm not a great keyboard player, but I can play enough to play on the record and get my ideas into the sequencer, which is what's important to me. We use sequencing for getting the song structure together, then we put that on tape and work on the melody and the lyrics. I can always come up with a good hook, but finishing the lyrics is the most difficult part of writing a song for me."

Baker's own 48-track SSL studio, Shakedown, situated in New York, has been running commercially for the past five years.

"I love the flexibility that the SSL desk gives you", he says of the centrepiece of his studio. "Sometimes you can rely on it too much, and you lose spontaneity, but I've been using it since they came out, so I feel that I can work with it in a spontaneous way." ►



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► Baker's favoured instrument setup is relatively modest, however:

"I have an Akai S900, which I use mostly for drum sounds and a lot of my bass sounds; I have tons of drum samples. Also I use a Yamaha DX7 and DX7II, a MIDI Moog, and a Roland D50 and Juno 60 - always the Juno. I haven't got into digital recording yet, simply 'cos I can't afford it at the moment. Also, most of my clients don't want it, and the ones who do rent it in. When you own a studio you have to think of your overheads. I know a lot of studios that have gone out of business just because they over-extended themselves."

Baker has seen a steady "democratisation" of both technology and techniques over the years since he first began using synths, samplers and drum machines. Nowhere is this more the case than with sampling. A technique that was once limited to professional studios and musicians has now become the preserve of anyone who fancies themselves as a musician. The repercussions for music have been profound.

"Sampling came into dance music when the Emulator I came out, which was '81/'82. John Robie had one and Unique Recording Studio had one. The first record I used it on was Freez's 'IOU', with sampled vocals. Also I used it on records like The Awesome Foursome's 'Funky Breakdown', which was the first record that really sampled speeches from other records, like there was Smokey Robinson saying 'Come on, is everybody ready?' from 'Going to the Go Go', and for 'Renegades of

Funk' we sampled Martin Luther King saying 'I have a dream'; that was seven years ago.

"Today everything sounds so much better, and the technology's so much cheaper that everyone can afford that stuff. It's incredible. Everyone can have a sampler, everyone can have the same technology. It means nothing."

So what does one of the original users of sampling think of the contemporary state of the sampling art, now that everyone can, theoretically at least, own a sampler?

"I'm bored with sampling, to be honest. I think nowadays it's often a gimmick for songs that need gimmicks, although I like the way that Teddy Riley uses samples in his songs. The three dance/street songs on my album are the only ones I use samples on, because that music suits samples, but I'm not going to throw in a sample just for the sake of it; a sample's got to make sense within the record."

Is sampling played out, in Baker's view?

"No, it's really about how you do it. Four people can use the same sample and one of the records is going to be a hit because of the way that the sample's used."

**NO TECHNOLOGY INTERVIEW WITH Arthur Baker would be complete without a discussion of remixing. As one of the most experienced and respected practitioners of the art, he must have plenty to say on the subject. As it turns out, not only does he have plenty to say about remixing, he also has plenty to say about the current** ►

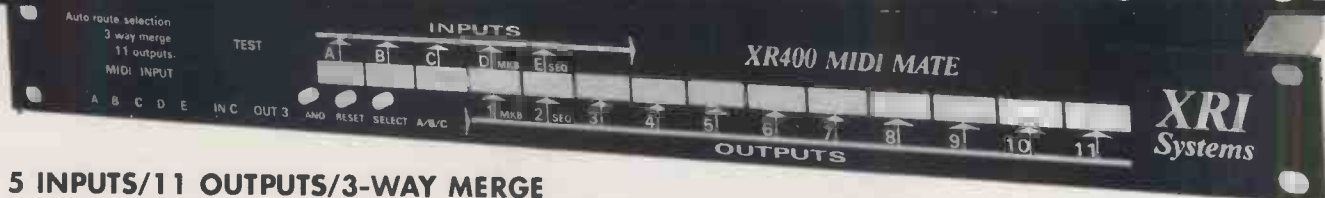
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## Books

Our book department is now quite comprehensive: we are carrying over 1000 titles covering everything from recording to song titles. Also we are carrying some which will give you an insight into the way contracts are laid out. Considering the speed at which record companies come and go nowadays, these types of books can prove invaluable. For instance, if you have in your contract a liquidation clause, and your record company or production house goes bust, you can claim back all your masters and the rights to your material. Ring for a list.

## Sequencers

As the guys at the shop have now got their multitracks, they now seem to be mad about sequencers. Three of the staff are using C-lab Notator and two are using the Cubase. Which one's better? That's open to opinion...however we can offer an unbiased demonstration. Also up and running is the IBM based Voyetra and the APPLE MAC based Vision, you are welcome to come and explore it with us.

It seems to us that there are two distinct types of software customers: Some people decide on the sequencer and buy the computer to suit. Others may already be locked into certain business or Desk Top Publishing software, or to quote the new American phraseology "Multi-Media Environments". So if you would like to find a sequencer that will fit into your existing system then give us a call. Although we don't sell Lotus 123 or Pagemaker, we do get excited about it.

## Mics for 4 Tracks

When we were trying out microphones to go with our 4 tracks we found that it really is a case of YGWYPF (you get what you pay for). It seemed pointless putting a good recorder with a lousy mic, because a person may have a really nice voice but will lose heart if after spending say three hundred pounds on the recorder they end up sounding like Mickey Mouse. However there are some makes around that are a good compromise. One is the Audio Technica Pro 22 which has a dual impedance switch for maximum matching to your 4 track and a good top end response comes complete with a lead and sells for around £35.00. The PZM (pressure Zone Microphone) is also worth checking out. We can show you how to modify this mike to increase its response and output. Fostex have been making good mics for some years now, and are definitely worth a listen. One trick that can be used to get a better sound is to record using two mics at once. A dynamic fairly close to the mouth to give a full bodied sound with plenty of bass and a condenser just behind it to give you all the top end frequencies. I have used this technique a lot and have found that it gives a good result

## Mics for 8 Track

Our number one mic for recording is still the AKG 535EB. It is a high output condenser

type which is equally at home on stage as well as in the studio (requires phantom powering) sells for under £200.00. Beyer and Sennheiser are two of the other makes we carry and have a very comprehensive range of top quality mics.

## Mics for 16/24 Track

If you can afford it, then one or two top of the range microphones for your studio are invaluable assets. The first thing the source instrument sees is that mike... QED! Poor mic = poor sound. GREAT MIC = GREAT SOUND!!!! Microphones like the Neumann U89 or AKG C414 or Beyer MC740 are also good investments and will hold their price over a long period. Old Neumanns that were £200.00 in the 1950's are now fetching over £1000.00, so if you are looking for a future classic give us a call. We carry all the right names, and are geared up to give good demos

## 4 Track recording

4 track recording is about to make a giant leap into the future with TASCAM'S new 644 MIDISTUDIO. It offers dual speed, sixteen inputs, two auxiliary sends and four auxiliary returns. A sophisticated monitoring system. Built in MTS30 (Midi to Tape synchroniser). Real-time mute automation. MIDIIZER compatible can be locked to an SMPTE master. The recommended retail is £999.00. Yamaha's MT-3X is selling well. Customers like the nice clean sound that this machine is capable of giving. The FOSTEX X-26 is still proving to be the number one 4 track under £300.00, very easy to use with plenty of top end sparkle.

## 8 Track Recording

TASCAM have a new 8 track, the 688 MIDISTUDIO. Speed runs at 9.5CM/S. Two inputs, two auxiliary send, and four auxiliary returns. A new type of screen display (Shows how you set up the routing and muting). Separate meter panel. Three band equaliser with sweep mid frequency on each main mix channel. Input overload on main inputs. Four assignable effects returns. Independent 8x2 Cue monitor section. Eight tape and eight group outputs. Recommended retails will be around £2000. Also from TASCAM is the New TSR8. Eight tracks on 1/2" runs at 15 IPS, built in DBX can be synched to Video (Via a Synchroniser). If you are thinking of trading in your TASCAM 38 then ring for a special price. FOSTEX have relaunched the E8 at the new price of £2499. A duty 8 track designed to last. The new FOSTEX R8 is going strong and is being sold in a package with either the Seck 12/8/2, 18/8/2 or any of the STUDIOMASTER range. Ring for details.

## 16/24 Track Recording

TASCAM'S new MSR24 bring a whole new meaning to the term low cost recording 24 tracks for under £9000. It offers, 2 speeds, 7.5/15IPS, DBX on all channels and many other

features definitely one to watch. Ideal package with the New Soundcraft 6000 mixer or Studiomaster series 2. Fostex's E16 is still going strong. We are doing a special price on two with a Fostex 4030 synchroniser which gives you the option of either running a 30 track system or locking to a Video player for Music to Film. Ring for details.

## Used but not abused

Don't forget we love second-hand goodies. From your old Revox A77 to a 24 track Studer, if we can get it in the shop then we will do a deal. Either Part Exchange, Sale Or Return (we sell it for you) or a straight cash purchase. All our second-hand items are sold on a 10 day no quibble money back warranty. With multitracks we first have them serviced and then offer them on a 3 month extended warranty. 1 x Quad 50c Mono amp £40. 1 x Fostex 260 £399. 1 x Revox A77 MK4 £399. 1 x Revox 150x150 watt amp £225. Second-hand Quad system (Pre amp/Power Amp/Tuner) £150. 1 x Tascam PortaOne £299. 1 x UMI sequencer with BBC B plus monitor £299. 1 x Boreus Berry 402 Sonic Enhancer £135. 1 x Casio 101 £125. 2 x Shure SM81 condenser microphones ideal for stereo recording £200. 1 x Seck 122 in flight case £399.99 Tascam 38 £1149.

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the integrity of  
artists - people  
who go to clubs  
just want to  
dance, but I  
think there's  
more to music  
than that."**

► state of dance music - most of it uncomplimentary. But to start with, what about the ethical considerations of remixing?

"Ninety percent of the remixes I do don't involve the artist. I don't have any ethical problems with that. The record company hires me to do a remix, and the record company should talk to the artist. Artists should have a clause in their contract which says they have to OK remixes. I know I do. If the record company likes a remix and I don't, it doesn't come out. Also, we have to agree on who can remix my records. It was something I was aware of, so I felt it was something I might as well try for in the contract."

In Baker's experience, the usual financial arrangement is a fee against royalties; payment of royalties alone is a rare situation, though he says that if it's for a friend and they're short of money, he'll do the remix for free and just pick up a royalty.

Baker doesn't always have a completely free hand in his remixes. Often there are guidelines to follow:

"They'll specifically say that they want a house mix or a Latin hip hop mix, and sometimes the producer or artist will say 'You can use anything on the tape except for this or that'."

Sometimes, though, you just can't please everyone. Baker recalls that when he was asked to remix the Gypsy Kings' 'Bamboleo' the record company told him not to make it too different, then when the group's producer heard the Latin and Club mixes that Baker did he said they were too conservative.

So how does Baker approach a remix?

"Sometimes I just keep the vocal, it really depends on the track. Most tracks I won't go that far, because if I have to replace the whole thing then there's something wrong. There has to be something there that I like, or I wouldn't have taken the job. In most cases I replace the drums and the bassline, and then add other keyboards, but usually keep some of the original keyboard parts.

"I would never do anything that's against the integrity of the artist. I draw the line there, and I think that's why artists with integrity come to me - because they know I'm not going to go for the cheap thrill. I have a pretty good background in music, and I can't think of one artist I've remixed whose music I didn't already know. Other remixers probably don't have that approach, but they should.

"With Springsteen's stuff I tried to add parts that he could have had on the record before but just didn't do. That's one of the major points he's made when he's talked about my remixes - that they sound like something he might have done. I wouldn't put Bruce's voice in the Emulator and play around with it. You don't want it to be out of character with the artist; that's really important. Even when I did the Fleetwood Mac house remix it wasn't totally out of character.

"You have to have an understanding of the artist, but some remixers simply don't care about that. They don't have a historical perspective on the artist, they just go ahead and do whatever they want. Which isn't to say that that approach doesn't work. For instance, Steve Hurley and I both did remixes of Roberta

Flack's 'Uh uh oh oh'. Even though I changed the song drastically, I kept the basic keyboard and melody and changed the bassline and the drums a little bit. But he totally recut the track, and it just sounds like a Steve Hurley record with Roberta Flack sampled on top; that isn't what I would have thought the record company wanted, but the fact is, that version is the one I hear a lot in clubs."

And what does Baker put this fact down to? His old impatience with club audiences comes to the surface as he explains his viewpoint.

"Clubgoers have no historical sense, and they don't care about the integrity of artists. People who go to clubs just want to dance, but I think there's more to music than that. Music *is* for dancing, but also when you write a song you're trying to communicate ideas, not just moaning, samples and ecstasy. I think with remixes and with dance music in general today, the only idea that's communicated is 'let's get fucked up and dance'. I was in a club last night and I didn't hear one damned vocal version of anything; it was all dub mixes. When I do a dub mix I still try to keep the essence of the song, and highlight vocal lines that I feel are important. That's why I do dropouts a lot in my mixes. I'll drop out all the music so that you just hear this one voice, 'cos that puts attention onto the lyric. With the guys now you can forget that; they make people dance but they don't make them think. People are in such a hurry to have a good time that they don't even want to hear the words.

"I think people who make dance records nowadays totally pander to the dancefloor. No-one's really doing anything innovative, it's all stale, all the same samples, all the same grooves, hip house music all sounds alike. The rappers are all boring and tired, but people still buy those records."

Harsh words indeed, but there's a lot of truth in what Baker has to say. As dance music crosses over to commercial success and the majors take an ever-increasing piece of the action, so it seems that a new agenda and new priorities are being set for dance music. But surely the music that Baker himself is making is commercially inspired.

"What I'm doing is writing songs that I hear in my head, and I hear some commercial songs. But if I was really trying to be commercial I wouldn't have made this record, I would have made a straight dance record, because that's what people know me for and that's what people expect. Instead I did what I wanted to do for myself, because I want to make a record that I can listen to at home, and I can't listen to that sample shit for any more than ten minutes without getting sick of it."

As for the future, Baker is clear where his priorities lie.

"I want to have a No. 1 record, I want to write great songs, and I want to have my songs covered by great singers. I'm going to keep writing songs till I drop. But with producing, who knows? There are lots of guys who have been producing for 20 or 30 years, so as long as there's something that excites me I'll keep on producing. But I'll definitely keep on writing, that much I know." ■



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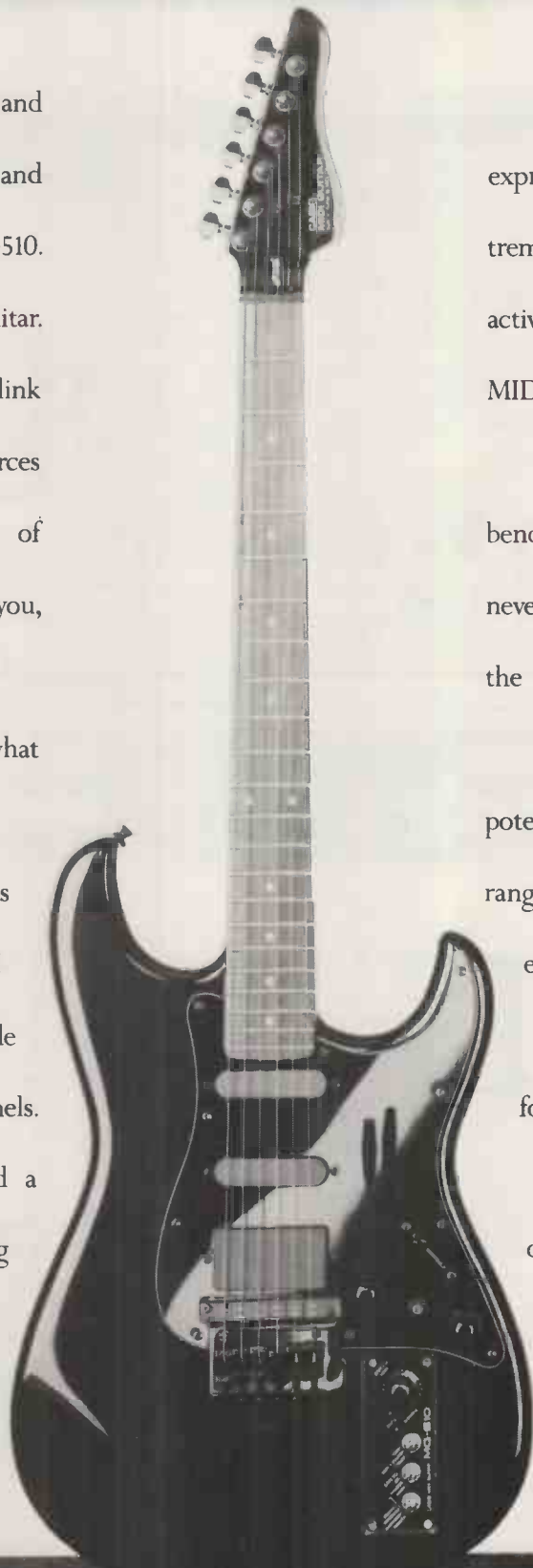
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# CUBASE

Desk File Edit Structure Functions Options Windows

KEEP CANCEL DRUM - NEED 18. 1. 0 - 26. 1. 0 FULL

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Drum Edit Window

After the pre-release attention it attracted, Steinberg's Cubase sequencer needs no further introduction. The second part of this review concentrates on the editing functions. Review by Nigel Lord.

**I** SUPPOSE IT could be argued that the two halves which comprise this review have appeared in the wrong order. In part one, in addition to a fairly broad overview of the program's structure, we concentrated on the system by which music can be arranged on screen. This month, it's the Edit windows (where all the basic note manipulation tasks are performed) which we'll be looking at. From the musician's point of view, this might seem to be putting the cart before the horse, but it does at least serve to emphasise where the true innovation of Cubase lies. The Edit windows, though imaginatively thought out and immensely useful, were (with the exception of Key Edit), all originally conceived as part of Pro24's architecture and as such don't represent any significant new ground for Steinberg.

Having said that, there has been a considerable amount of re-structuring of the screen layouts, and in its most tangible form this has led to a degree of standardisation being imposed across the entire Edit Window system. Users of Pro24 will be aware that the Grid, Score and Drum Edit screens, as originally conceived, all required quite different operating procedures - a result, no doubt, of the upgrading system Steinberg steadfastly maintained (unlike

some of its rivals). On Cubase, though each window preserves its own unique way of presenting note information, there is (where this has been possible), a common thread running through the editing process which makes the program far more accessible - particularly for the uninitiated.

## KEY EDIT

THE ADDITION OF Key Edit as a fourth Edit window, whilst certainly a very welcome addition, must, I believe, be seen as an effort on Steinberg's part to get in line with the other software companies who included this kind of facility in their programs some time ago. In essence, Key Edit represents a computer simulation of the piano roll system on the old pianola - except that the holes cut into the paper in the mechanical system are here represented by boxes of varying length.

A graphic display of a standard keyboard on its side is aligned with a grid on which appear the boxes, moving across the screen from left to right in real time (if Follow Song is selected). Some two-and-a-half octaves of the keyboard are visible at any one time, but this can be extended another half octave by losing some of the screen information - and scrolled



upwards or downwards to reveal a total of ten octaves from C-2 to C8. The grid itself is also scrollable manually (in much the same way as the Arrange window), and beneath it lies the Controller display in which you will find a graphic representation of velocity, MIDI control and pitchbend information and so on.

In common with all the Edit windows, a Function bar and Info line (above the main display area) contain all the track-specific data such as length, quantise and MIDI channel information, whilst the Transport bar (below the main display) functions in exactly the same way as it does throughout the program.

Manipulation of notes within the grid is extensive, to say the least, and the boxes (representing notes) may be dragged or kicked to a new position, extended, shortened, duplicated, created or deleted. Individual notes may be monitored by selecting the "ear" icon in the Functions bar and clicking on the relevant box on the grid, or by holding the magnifying glass over it.

Magnifying glass? I'm sorry, I should have mentioned last month that at any time, and in any window, a set of tools may be called up by clicking the right-hand mouse button. This gives you access to such useful little items as scissors and glue (for cutting and joining parts), pencil and rubber (for insertion and deletion of notes) – and of course the magnifying glass. I'd have thought a stethoscope might have been a tad more appropriate, but I digress...

The black and white keys of the keyboard reverse their colour in response to notes arriving via MIDI, and where this takes the form of a chord, a box in the Functions bar suddenly springs to life to tell you exactly what it is. I spent a happy half hour watching names being put to some of the more off-beat chords I've used over the years; and I can certainly see this feature coming in useful for settling arguments with truculent guitarists over the composition of diminished 7ths and the like.

The Controller display, as its name suggests, can be called upon to graphically present non-note events (in addition to note velocity) and thus reveal those Jan Hammer pitchbend excesses in all their visual glory. Editing of controller information is also possible here, although much more comprehensive facilities for this are included in the Grid Edit window we'll be looking at shortly.

One highly useful feature is the creation of even velocity increases – or decreases – across a series of notes. This is accomplished using a pair of compasses which reside in the Tool Box. Click with the mouse button at the point in the display where you want the change in velocity to begin and then drag a line to where you want it to end. The velocity level of successive notes then takes on the slope of the "ramp" you've created – and voila, instant crescendos or diminuendos. Drawing a ramp across an extended number of notes, of course, would allow you to program perfect fade-ins and fade-outs.

## GRID EDIT

THOUGH QUITE DISTINCT in the way they both present information, there are, nevertheless, considerable areas of overlap in the structure of the

Key and Grid Edit windows. Primarily, this is due to the reliance of both windows on a box and grid system of representing note and timing data. Where in Key Edit we find a ten-octave keyboard graphic down the left hand side of the screen, Grid Edit presents us with nothing more edifying than a numerical data list in this position. In this respect, Grid Edit probably represents the least musical of the four main Edit windows.

Because the data takes the form of a list, and because lists are, by their very nature, composed of serial information, the note boxes in Grid Edit (unlike those in Key Edit) always run diagonally across the screen from top left to bottom right. If you think about it for a moment it makes sense: if time is represented along the Y axis and if note events are listed consecutively from top to bottom, then the note boxes must be placed to the right of one another on the grid (or at least in line). Placing a box lower down the grid further to the left than one higher up would effectively be positioning it back in time – and even Cubase hasn't got that one cracked yet.

Unlike its counterpart in Pro24, the Grid Edit window in Cubase may contain other forms of information in addition to note data. In fact, no less than six different types of information can be listed – Note, Polyphonic Key Pressure, Control Change, Program Change, Aftertouch and Pitchbend – and depending on which is selected, three "Value" columns display the relevant information. So, for example, Val 2 column will reveal Note-on Velocity when note events are listed, or the degree of pressure if Polyphonic Key Pressure is displayed.

Two of the other columns – Start Position and MIDI Channel number – remain the same no matter what type of data is being displayed, whilst Length provides information applicable only to note events. Finally, the Status column, as you might imagine, details which of the six types of event is currently being listed. Full scrolling of the List and the Grid is possible (of course), but unlike Pro24, this can be done automatically if Follow Song is selected from the options menu.

The Function and Transport bars maintain their respective positions above and below the display area, but the "bar graph" velocity display appears down the right-hand side of the screen rather than along the bottom as it does in the Key and Drum Edit windows. Graphic editing of velocity may still be carried out here, however, though along with all the editing functions, it can also be performed within the columns of the data list.

All the note manipulation tasks – dragging, kicking, extending and so on – are carried out in exactly the same way as in Key Edit, and so too is the on-screen insertion and deletion of notes using the pencil and rubber from the tool box. Incidentally, I should mention the other method of getting notes onto the grid using the paint brush – again selected from the tool box. By "painting" with the brush icon you can input a series of notes across the grid, spaced ►

**"In essence, Key Edit represents a computer simulation of the piano roll system on the old pianola."**

► according to the selected snap value. They are of uniform length (determined by the current quantise value) and uniform pitch (C3), but of course, can be modified later to the desired settings.

## SCORE WRITING

MOVING QUICKLY ALONG (I don't think the Ed would stomach a third part to this review), we come to what I always regard as the cleverest item of software yet devised for music applications – the score-writer. Somehow, I never get tired of seeing my inconsequential doodlings at the keyboard transcribed into full musical notation. Of course, as far as Cubase is concerned, we're not looking at a full score-writing package (though this is promised as an upgrade in the near future), but the Score Edit window does offer some pretty comprehensive facilities nonetheless.

Recorded Tracks are presented in conventional note form on staves which appear beneath one another in the main display area. As every literate musician knows, the same piece of music can often be written in different ways, and in this respect Cubase offers you a number of options, primarily for making scores more legible. Thus, parts can be transcribed either on a single staff or split into treble and bass clefs (the split point being set by the user). Where a single staff is used, however, Cubase can be prevailed upon to decide automatically whether this should be in the bass or treble clef.

Notes held down in such a way as to appear as slurs in the score, can be cut off in order to "clean up" the bar and make it easier to follow. (On traditional instruments, keys have to be held down in order to stop notes being cut off, but with the advent of envelope generators in electronic instruments this

often isn't required.) Similarly, selecting the Syncopate function rewrites syncopated notes so that they are easier to interpret; a pair of slurred quavers, for example, will appear as a crotchet, and thus take up less room in the bar.

Notes and rests can be input straight onto a staff using the relevant icons in the tool box, and as with the other Edit

windows, step time entry is also possible. On-screen editing facilities are pretty comprehensive, but of course, you have to be mindful of the laws of music notation when attempting certain operations. That said, those unable to read conventional music should find Score Edit an immensely useful teaching aid – especially if used with the other Edit windows to study note information in various forms.

## DRUM EDIT

ON NOW TO the last of the four main Edit windows – Drum Edit. And here we find, not unreasonably, a display optimised for the creation and editing of drum and percussion parts. On Cubase, it is possible to work with a Drum Map or without it, but as the manual makes clear, the time spent setting up a properly defined Drum Map is time well spent –

particularly if you are using more than one machine as your sound source.

In common with the Key and Grid Edit windows, a grid is used for displaying notes – or beats as they are in this case – and anyone familiar with conventional drum machine programming should find themselves immediately at home here. Unlike Pro24, the Drum Map is on permanent display down the left-hand side of the screen, but once defined, it may be overwritten by extending the grid to the left in much the same way as the Arrange window. Presumably for reasons of accuracy, drum beats appear on the grid as diamonds (the manual calls them "rhombs"), and take on a different pattern shading according to their velocity. As in other Edit windows, dragging and kicking is possible and new beats can be inserted using the pencil/brush method or erased using the rubber (or any of four other methods listed in the manual).

The full column list when the Drum Map is in use comprises the Sound Name column (entered by the user), the Quantise column (individually set for each sound), the I-Note column (to determine the note on which the sound is input), the Length column (for use with sounds that may be altered in length), the O-Note column (to determine the note on which the sound is output), the Instrument Name column (entered by the user), the Chn column (the MIDI send channel) and the Output column (the MIDI Out port). Additionally, columns LV1 to LV4 allow you to preset the four velocity levels at which beats can be input on the grid using the pencil or brush tools.

Selection of the "foot" icon in the Functions bar allows you to enter beats in step time, and monitoring of individual beats is possible using the ear icon (again in the Function bar) or the magnifying glass from the tool box. Non-note events such as velocity and Program Change messages may be edited graphically in the Controller display, and this, like Key Edit, is situated beneath the main display area and above the transport bar.

Though I've tried to keep it to a minimum, it should be obvious by the repetition in this review the degree to which Steinberg have managed to standardise operating procedures in the Edit windows. And indeed, there are a number of features I haven't yet mentioned which take this standardisation even further. For example, selecting the pop-up Goto menu from the Functions bar in all four Edit windows allows you to move straight to a prescribed position in the display (such as the first or last event in an active Part or the beginning of the next Part). Changing note data by MIDI is also possible in all Edit windows – a selected note may be given new pitch, key-on or key-off values simply by playing the relevant key on a keyboard.

Another universal feature is the Loop which allows you to set up a kind of mini-cycle (inside the main Cycle, if necessary) to repeat a specified Part or series of Parts. It's particularly useful when you're working on a small section of music which needs to be repeated more frequently than the main Cycle is set up for.

Also useful is the pop-up Functions menu where you have access to such time-saving commands as Fixed Note – which gives all notes the same pitch as the selected one; Delete Note which deletes all notes ►

**"Anyone familiar with conventional drum machine programming should find themselves at home with Drum Edit."**



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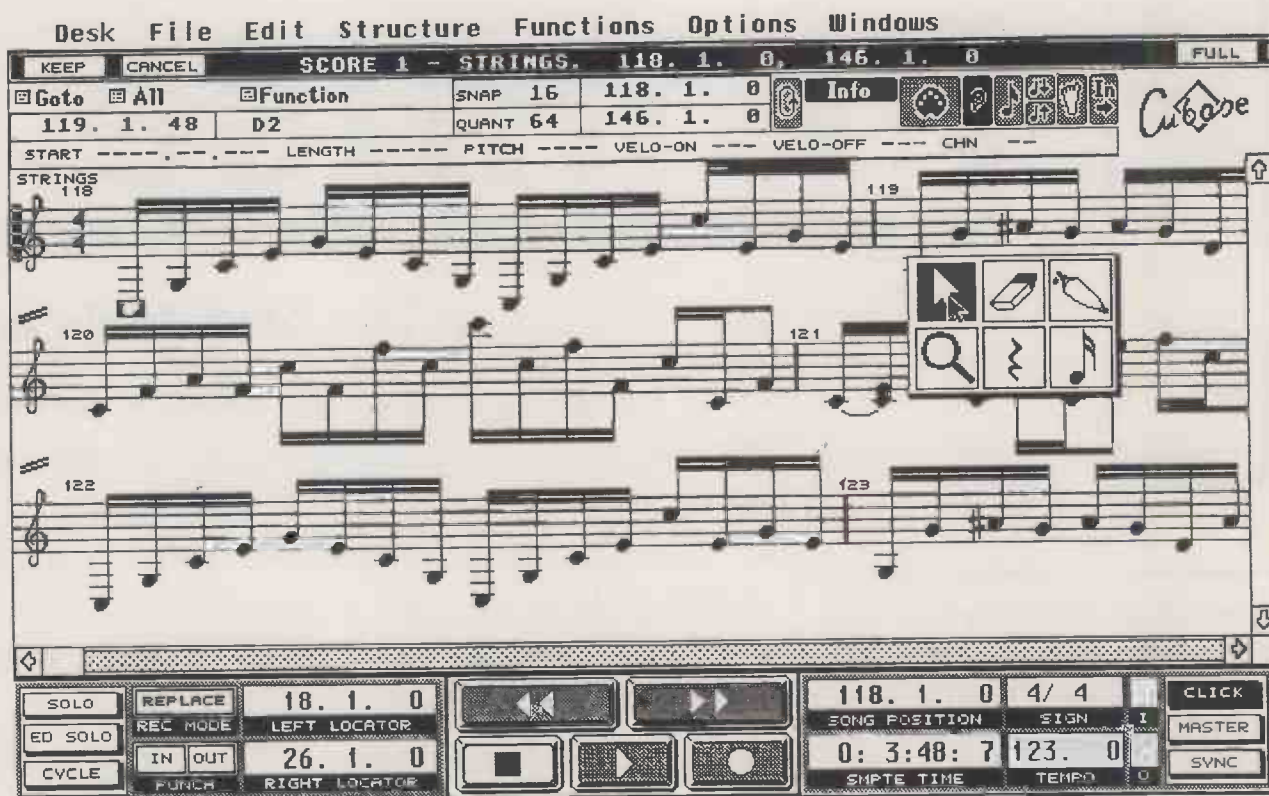


- ▶ with the same pitch as the selected one, and Keep Note which keeps all notes with the same pitch as the selected one and deletes all others.

This menu also contains commands for repeating a section of a Part (as many times as it takes to fill that Part), and for filling a whole part with C2 notes (spaced according to the Snap value and of length determined by the current quantise value). Instant reversal of selected events is possible here too, and there's also a delete command should anything need to be dumped. Finally, each Edit Window is given a further pop-up menu which allows you to select precisely which events you wish to be affected by the

system – and neither have I felt restricted in anything I've wanted to do because of it. Its importation from Pro24 would seem to indicate Steinberg's belief in it as a valid system for manipulating data, but I think they're going to have to brush up on the way it's presented, both on-screen and in the manual, if it's ever going to be seen as anything more than a hacker's system of editing. You don't believe me? OK, try this for size:

"The two '=' A' and '=' B' fields are the Variables. 'A' can be dragged to the Value 1 field and 'B' to the Value 2 field in the Result area. If you, for example, drag '=' A' to the Value 2 Result field, you are



Score Edit Window

editing functions. Thus you can opt for All, Looped, Cycled or Selected events to be included – or those which have been Looped and Selected or Cycled and Selected.

## LOGICAL EDIT

FOR THE SAKE of completeness, I should mention the fifth window in which editing can take place on Cubase – Logical Edit. Again, it's a feature which first saw the light of day on Pro24, and as such, will probably be known to users of that program – though I cannot believe it would ever have been used with the frequency of the other Edit windows. Indeed, Steinberg themselves seem to adopt a warning tone in their introductory spiel to the system. Primarily, it offers a method of editing based on logical – or mathematical – criteria. As a result there are no interesting graphics to keep you entertained and mouse activity is restricted to moving around columns of data where numbers are entered, and (if you know what you're doing), the desired result is produced.

I have to say that in two years of using Pro24, I've felt no compulsion to get to grips with the Logical Edit

'patching' the result from the operation in the Value 1 column to the Value 2 result. If we talked about notes, this would mean that the result from the note value (pitch) operations would be used for velocity."

S'funny, but the little gnomes in my first piano tutor never mentioned anything about dragging '=' A' to the Value 2 Result field.

On the subject of clarity (and excepting the more indecipherable aspects of the Logical Edit chapter), the Cubase handbook is a model of clearly-written English in comparison to Pro24's quite dismal attempt at an instruction manual. Which isn't to say it's exceptional in any way – simply that it does the job. That said, I do like the way Steinberg have been happy to repeat parts of the text as they apply to each window. There's no need to have to refer back to previous chapters to find an explanation of a particular function just because it has already been described in another context.

## SATELLITE

BEFORE SUMMING UP, there's one final carrot I'll dangle in front of you – just in case there's anyone out there who might still be unconvinced. The carrot ▶





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► in question is Satellite, a utility program included on the main Cubase disk which boots automatically on power up (though it can be loaded as a normal program). In Steinberg's words, it provides the missing link between sequencing software and synth editors in as much as it allows you to transfer (in either direction) banks of sounds and MIDI dumps for 50 of the most popular instruments. In conjunction with Cubase, however, it does a whole lot more. . .

For example, whilst most conventional software sequencers will allow you to store Program Change information with each track, Cubase, in conjunction with Satellite, will actually record the sound data for a particular voice and send it to the synth along with the track on playback. So, if a track uses a slightly modified synth voice, you don't need to use up synth memory saving it - all the sound data gets dumped to disk along with the song. And

speaking of editing voices, one of the things I've often been in need of is a quick way of tweaking the more common parameters (like attack, brightness, release level and so on) on synths like the DX7II. Messing around with a whole series of parameter controls on a DX never was my idea of fun, and even using Synthworks, things can prove very long-winded. With Satellite's Macro Editor to hand, it's possible to alter attack and release levels, the degree of brightness and "fatness", and the velocity sensitivity and vibrato levels for the whole sound - instantly. It really is an incredibly useful utility to have around, and like so many things on Cubase itself, it's great fun just to doodle around with.

Sounds may be transferred individually or in banks, and selecting the Configuration box allows you to assign separate MIDI data files and Program Change numbers for the different instruments. Join this to a Cubase song and on loading, it will send up to 50 data banks to your synths. Additionally, you can store drum maps for the Korg M1 or Roland D10/20/110/MT32, and there's a MIDI Controller facility for generating MIDI Control Change data of any type. Oh, and I mustn't forget the option of three different kinds of files which may be saved - standard MIDI files, SysEx files and Pro24 format files. . .

## VERDICT

I HAVE TO call a halt. I haven't run out of features to describe - either on Cubase or the Satellite utility - but I have run out of space. And after some eight thousand words I'm beginning to run out of steam too. In the course of reading this review, you will have perhaps noticed how little time I have spent passing opinions on those features I have described. Quite simply, there wasn't room. If I was ever to reflect the sheer scope of this program, all the available space had to be used in detailing the kind of features which give it the state-of-the-art status I referred to last month. Rest assured though, the superlatives were never far from my mind, and would have required a sizeable

proportion of the text had they been included.

Quite honestly, this is the most impressive piece of music software I have yet encountered for the ST. And I certainly cannot conceive of it being possible to develop a more sophisticated sequencing package for that machine. As with most genuinely worthwhile designs, the transition from well-crafted tool to creative instrument is quite seamless - the features which give it a claim to both these titles being universally well thought-out and meticulously presented. Not only that, but it's a delight to use and one of that increasingly rare breed of technologically advanced designs which positively encourage the user to experiment and get to grips with it. To use but one example: it is the work of a few minutes to produce a handful of songs of differing feel and structure from the same set of individual parts. With Cubase on stream, the days of feeling loath to remix or re-arrange a piece of music simply because the original version took so long to put together are at an end.

Without wishing to pour cold water over its more exotic multitasking facilities, I honestly believe that its potential as the centre of a complex multi-program system is going to be limited to professional studio use where the cost of a Mega-ST could more easily be justified. From my understanding of the situation, the Mega simply hasn't taken off as a mass market computer, and without its vast memory reserves, full multitasking on Cubase is simply not on. It is, of course, possible to increase the memory in a 1040ST, but given the sheer quantity of RAM required to run even two or three programs concurrently, I'm not sure this is a viable option.

So where does that leave us? Well, as I've endeavoured to point out, it still leaves us with a hell of a lot. The multitasking capabilities within Cubase itself really do make working with any other sequencing seem like dreadfully hard work. Not having to interrupt the music to select any other command or function doesn't sound like a big deal - until you return to a sequencer on which this would be impossible. Similarly, looking at a piece of music in two or three editing windows at the same time might sound rather OTT, but it has the effect of making any other sequencer seem as if it's hiding something from you - even one as "open" as Pro24. I suppose we're back to this concept of "transparency" I mentioned last month. Once loaded, it's incredibly easy to forget Cubase exists, and anyone who has spent time working with computer-based sequencing systems will know just how high a recommendation that is.

Of course, software companies will always have a problem asking hundreds of pounds for what amounts to no more than a couple of floppy disks and a dongle. And indeed, at some five hundred pounds, I don't think Steinberg are going to have a particularly easy time convincing people just what kind of value for money Cubase represents. But convince them they must, for this is something very special indeed. ■

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Clock resolution	480	384	192	96	96
Minimum hardware	520ST	1040ST	1040ST	1040ST	1040ST
True multitasking (1)	Yes	No	No	No	No
On-line help	Yes	No	No	No	No
Undo last edit	Yes	Yes	Yes	Yes	Yes
SMPTE option	Yes	Yes	Yes	Yes	No
Music Notation (2)	No	No	Yes	Yes	No
Drum style loop record	Yes	Yes	Yes	Yes	No
Song arrange mode	Yes	Yes	Yes	Yes	Yes
Record real time tempo changes	Yes	Yes	Yes	No	No
Max simultaneous patterns	8	4	N/A	1	N/A
Quick cut, copy, paste	Yes	No	Yes	No	No
Auto track stepping (3)	Yes	No	No	No	No
Smooth scrolling note grid	Yes	No	No	No	No
Quantise window control	Yes	Yes	Yes	No	Yes
Quantise strength control	Yes	Yes	Yes	Yes	Yes
Feel quantise	Yes	Yes	Yes	No	No
Real time track processes (4)	22	11	8	7	0
Separate mS and clock delay	Yes	No	No	No	No
MIDI file compatability	Yes	Yes	Yes	Yes	Yes
24 character file names	Yes	No	No	No	No
Price	£299.00	£299.00	£500.00	£300.00	£285.00

(1) eg Format disk whilst playing sequence, entering text and printing sequence information.

(2) Virtuoso notation module available next year. Currently compatible with Dr. T Copyist (£79.95) and others.

(3) eg Change from drum track to bass track whilst in record.

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MIDI SEQUENCING PACKAGE FOR THE ATARI ST SERIES



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# LEISTER PRODUCTIONS'

## D110 Professional Sounds

The presets on the D110 are quite impressive – at least I think so – but a couple of people have commented that, because of the unit's internal architecture, it's difficult to create sounds which are radically different. That's assuming you can find your way through the minefield of Timbres, Tones, Patches, Parts and Banks. It's interesting, therefore, to see what sort of sounds the professionals can produce.

Leister's D110 sounds are split into two banks of 64 sounds and are compatible with the D10 and D20 (and probably the new D5, although this is unconfirmed at the time of writing).

The first bank warms up with some synthy stuff, moves on to brass and lead sounds, followed by slow string-like sounds and sweeping pads (I'm a sucker for these). It ends with heavy synth/guitars and basses.

The second bank begins with some guitar/piano combinations, continues with bells and chimes, pads, brass, woodwind and organs. It concludes with some effects, such as '5th Climb' (guess what this does), 'ChildsPlay' (random pitches) and 'Alienz' which produces a long, slow downwards sweep with a choir over the top. I don't know how I could use it but I love it.

I have to confess to just a little disappointment, as certain of the

sounds were pretty similar to each other – although Leister have at least placed them in adjacent memory locations. Check out, for example, 'SweepTrack', 'FilmTrack' and 'Film Strng' or 'Fat Analog' and 'Chop Saw'. You can tell what the common elements are and you can hear where envelope or timbre substitutions have been made. Is this really a result of the D110's architecture or, dare I suggest, did Leister have an off day? Personally, I'd have preferred diversity to subtlety.

Then there are some real aces here, too. 'VocalPluck' sounds like it says, but it's a nice combination. 'Fantasy' does bear a resemblance to the 'Fantasy' in Preset b1 but it has more je ne sais quoi (how else can you describe a soft after-tinkle?) and is altogether rather more tasty (there is also an oriental version called 'Flantasy').

'Evolve' is a slowly unwinding pad with a touch of fizz and 'Rhythm Pno' is one of the best up-front piano sounds I've heard on the D110. Some nice organs here, too (can I say that in print?).

The sounds work out around 23p each which is par for the course for the D110. Perhaps they aren't all startlingly original but they are useable, subtleties and all.

# LEISTER PRODUCTIONS'

## TX81Z Professional Sounds

This package contains a mammoth 288 sounds (voices in Yamaha-speak) spread over nine banks of 32.

Frank Leister has put a lot of thought into the creation of these – he hasn't just tweaked a few parameters and stuck another name on. Many sounds "move" and change tone as they evolve. Many respond to velocity information, too, by becoming duller or brighter or by adding extra tones. Here's a brief run-down.

Bank A contains a goodly selection of movin' synthy/percussive sounds both soft and meaty. Bank B has lots of basses and some organ sounds including a tasty distorted Hammond with slow chorale.

Bank C contains a collection of pianos, the sort of sounds FM is very good at, including some very useable Rhodes sounds. (Who said "If I ever hear another FM piano on a record, I'll scream?"). I discovered a cute, soft Wurliitzer piano sound here, nice for laid-back reggae.

Bank D is brass. Full, rich, smooth, soft, angry – all sorts – plus fluty woodwindy sounds. In E you'll find chimes and tinkly sounds, something else FM excels at. Some have a soft pad underneath and there are pads on their own. There are also some solo sounds (which FM is good at) and ensembles (which it's not so good at).

If it's F it must be more pads. This is probably my favourite bank (ever since Nat West said "No" – and I hadn't even asked a question). It's full of slow, lush, big-wash sounds which take forever to complete. Wallow in them when you're zonked, be creative with them when you're not.

G is a mixture of lead/syn/guitar sounds and is probably my least-fave bank – but I did like 'Fat Lead'. I won't tell you what it reminded me of.

H houses sounds which could probably fit into all the other banks and bank I contains all those sounds you think are great but just can't find a use for. What about 'Jazz Solo' which plays a

random sequence of notes every time you hit a key? Or the Venusian Spacecraft sounds of 'Tricorder', 'Star Trek' and 'SpaceDrops'? Some drum sounds here, too.

OK, I can't pretend that I loved every sound, but in truth there were only perhaps a dozen which really grated – know what I mean? And one man's caterwaul is another man's choir.

There are also 24 Performance Setups and Effects for use with a file containing a collection of sounds from the nine banks. These produce some super combinations. 'Metal 5ths' is your original HM guitar power chord, 'dim7thBell' produces cascades of tinkerbells – loved this.

The sounds are fully compatible with the DX11 and can be loaded into the DX100, DX27 and DX21, although the TX's extra parameters are ignored.

At somewhere between 9p and 10p per sound, this is a far better investment than six pints of lager and a Chinese curry. Stay in next Friday and buy this instead. Your gut and ears will thank you for it.

Both sets of sounds are available in a variety of formats including self-load disks for the Atari ST, IBM PC and Amiga, data cassettes and RAM Cards (supply your own or buy them extra). The D110 ST disk contains a Shareware program called Mini-Dumpstor which operates as a desk accessory and will send a file – any file if you're not careful – out via MIDI.

All popular sequencer/editor/librarian formats can be accommodated; if you want a particular format, MIDI Music can probably supply it. Do get their catalogue, too – it's crammed with lists of sounds for just about everything! Ian Waugh

**Price** £29.99 per disk, irrespective of format.

**More from** MIDI Music, 25 Middleaze Drive, Middleaze, Swindon SN5 9GL. Tel: 0793 882108.



# out takes

## V I N Y L T A K E S

### 808 State

### Quadrastate

### Creed Records LP

Released towards the end of last year, Manchester-based 808 State's debut album of abstract acid-styled dance music, *Newbuild*, instantly marked them as a name to watch, by virtue of its superiority to just about all other acid music.

Now, following two obscure 12" releases, the six tracks on the group's second album *Quadrastate* confirm them as one of the most talented groups operating in dance music. Recorded over the period November '88-March '89, the album finds 808 State operating once again in an abstract, instrumental musical vein, but the music has broadened out a lot to take in influences from Derrick May (notably on 'Pacific State' and 'Disco State'), Yellow Magic Orchestra (on 'Firecracker' - which isn't the YMO track of the same name) and 'Headhunters'-period Herbie Hancock ('State Ritual'). However, the group convincingly synthesise these influences into a distinctive 808 State sound and style.

Fellow Mancunian A Guy Called Gerald, who was involved in the first album in some unspecified way, is credited as co-composer of the opening track, 'Pacific State', the most melodic track on the album. The rest of the record shows that 808 State minus Gerald are just as interesting, and if anything even more experimental and inspired. Only Baby Ford (another Mancunian) has produced music as impressive as this, with

tracks like 'Fordtrax' and 'Crashing' on his debut album from last year.

Quadrastate is rhythmically and texturally sophisticated abstract dance music with a strong melodic streak running through it, music for the head as much as for the feet, determinedly uncommercial, yet not obscure and certainly not introverted. 808 State are just about the only UK group who can hold their heads up proudly in the face of the Detroit Techno music they obviously love. As dance music becomes increasingly uninspired in direct proportion to its increasing commercialisation, we need truly inventive groups like 808 State. *Quadrastate* comes highly recommended by this reviewer. St

### Mark Shreeve

### Crash Head

### Jive LP

Great oaks from little acorns or what? Look at Mark Shreeve: Home Electro Musician of the month in February '83's issue of E&MM, to album release on Norwegian label Uniton in the period shortly after, then onto *Jive* and before you know it he's getting his stuff covered by Samantha Fox (you must remember 'Touch Me', from *la bosom*). He's being described as the creator of heavy-metal synth music, and his latest opus, *Crash Head*, is verging on the excellent. Call me a boring old fart but I like it.

The tone for the LP is set swiftly and stirringly

by the title track, which opens with atmospheric: computerese bleeps, manic motorbike engine revving - then explodes into massive brass and epic choirs of the female persuasion, while a killer drum track sets a compelling pace. Eerily mutated vocal samples sounding as though they came from somewhere beyond, create the impression, here as in the rest of the album, that each track was written for a specific - cinematic - context; almost the whole album has an atmosphere of filmic grandeur about it, though 'Darkness Comes' is approachable pop, 'Hellraiser' is superbly tough pop and both tracks nearly miss a vocal.

Put simply, this man is a real pro; he can obviously turn his hand to almost anything, and do it well. From the evidence of *Crash Head*, I'd



say he's now turning his hand to film music, and I find his style almost faultless; though it occasionally tips the balance towards the pompous/absurd, it's hard, it's heavy, and it might well make him a lot of money. Dp

## V I D E O T A K E S

### Mondo Video Godley & Creme

### The Fourth Dimension Zbig Rybczynski

### Eurotechno Stakker, Mark Maclean & Colin Scott

Let me introduce videola: a new approach to the use of images and sound. Well it's not completely new - although some of the techniques used in these videolas are - but it does not yet hold a place in the grand marketing scheme of music and video. However, this may all be about to change, courtesy of the Video Label.

Before taking a look at a selection of the first commercially promoted examples of the art form, let's set out a few guidelines for videola (there are no rules as yet). Simply, it's a marriage of

music and pictures - the marriage being an artistic one rather than a commercial one. Whereas a promotional video involves the use of images to sell singles, the videola is a complete format in itself.

Godley and Creme's *Mondo Video* predates the rest of the videolas in this collection by some three years. It's been gathering dust until now because, as I said, there just hasn't been a suitable slot in the market. Filmed entirely in monochrome, *Mondo Video* mainly uses shots of the recording studio - some involving its ▶





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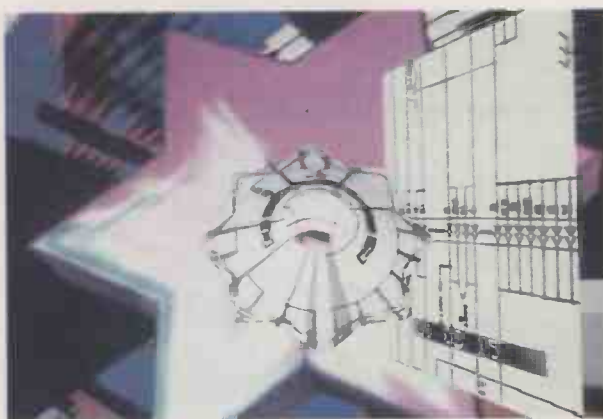
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► creators, others not. The images accompanying the sounds are frequently treated in a similar way to sound samples: though taken at separate times, they're spliced together to form a continuous image – take the sequence involving a man at a piano where each note or chord is presented with the player in a different playing position. Guitar chords are represented by a simple shot of Lol Creme playing the chord but, again, the images are treated in sympathy with the sound – audio reversals, loops and glitches all have a visual interpretation. There's also a sequence involving cars, in which the sounds of everyday motoring provide the sounds for the rhythm track. But it's not enough to describe the various images, they have to be taken in the context of the music to be properly appreciated.

Perhaps it's not as highly evolved as *The Fourth Dimension* or Eurotechno, but *Mondo Video* gives an insight into the genesis of the medium.

If videola does have a precedent, it lies with works such as Philip Glass' *Koyaanisqatsi*. Appropriately enough, Polish director Zbig Rybczynski's *The Fourth Dimension* opens (musically) with the sort of rhythm sequence that bears comparison to Glass' work. Rybczynski's work on the Art of Noise's 'Close to the Edit' and Herb Alpert's 'Keep Your Eye On Me' videos may already have made him a familiar (if unpronounceable) name. The music here does not bear the same close relationship to the images as in *Mondo Video*, assuming an accompanying role rather than an interactive one. Provided by Michael Urbaniak, the music is built from samples and at times resembles both ethnic and classical styles. The visuals allow no such straightforward explanation.

The action takes place in a series of artificially



generated settings in which familiar images (a book, a flute, a violin, a man and a woman) are treated in an unfamiliar way. Specifically, they undergo some sort of spiral transformation. My first reaction was to associate Zbig's spirals with DNA's double helix and conclude there was going to be some sort of sexual undertone to *The Fourth Dimension*. Then I decided I was reading too much into it. But when the man and woman (in various states of undress, no matter how tastefully presented) ended up spiralling around each other, I decided it was Zbig's imagination

playing up, not mine.

*The Fourth Dimension* does not represent a cheapening of the new art form, rather an intriguing example of image transformation. The sexual connotation could, after all, still be my own...

Stakker's Eurotechno comes as a stark visual and musical contrast to both *Mondo Video* and *The Fourth Dimension*. Where Rybczynski's graceful images evolve slowly, Stakker's glow luridly and change at 24 frames per second; where Godley and Creme's music sympathises perfectly with their images, Stakker's share only the brutality of the assault on your senses. The music is techno tainted with acid, the images are geometric shapes continuously transformed and intercut with each other. At the heart of the operation is the Fairlight Computer Video Instrument.

Don't get the idea that Eurotechno is just an acid house video – this is videola in another of its forms. To prevent the music becoming dance, and the images becoming wallpaper, the music is frequently interrupted, giving sections between around four and 40 seconds. Not the way to keep the punters on the dancefloor. The result, once again, is that music and image have to be considered together. It's bright, noisy, intimidating and as far from *Mondo Video* as from *The Fourth Dimension*.

These first examples of videola are between around 20 and 30 minutes long and are due for September release. If you want to see technology-dependent art escape from the chart single/promo video format, you could do worse than to invest a tenner in a videola – if not any of the above, perhaps Stacy Peralta and Tim Simenon's *Attack*, George Snow's *Plutonium Nightmare*, Holger Hiller and Carl Bonnie's *Ohi Ho Bang Bang* or the Boleks Brothers' *Vikings Go Pumping*. Tg

## L I V E T A K E S

### Keith LeBlanc Power-Haus London

A memorable evening indeed, the 10th August 1989. A bar with 60 customers, three bar staff, and the slowest lager pumps known to mankind; air conditioning with fans wired up negative to positive; 500 burly Tackhead fans between the bladder-filled beer aficionados at the bar and the gents toilet to the left of the stage; a PA system designed for the Power-Haus attempting an

impression of the in-house stacks of the Budokan, Tokyo.

And Keith LeBlanc playing the most breathtaking gig of 1989.

Tackhead's groove dancer is surely one of the most fluent and aggressive of drummers known to the hard core funk world. Standing by the stack on the left (near les pissoirs – important) his performance provokes sensations akin to shaving with a circular saw. That a band could cut an audience in half would be disturbing enough; that one man achieves it is nothing less than extraordinary. Widdlers go back to your bedrooms, roll on your back and stiffen up: LeBlanc categorically proves that a solo drummer

can make Gary Moore look like a corpse.

His approach is unique. This is not the Cozy Powell syndrome – a drumbore's wet dream – nor yet a depressing stage venture featuring three sequencers, 20 tone generators and a couple of drum sticks thrown in for good measure. It's live, vibrant use of sampling technology with the drum kit as controller. Nor is it à la Bill Bruford – his work is like a blunt scythe beside LeBlanc's combine harvester.

Each drum triggers a variety of sounds and phrases, from a Great Barrier Reef of bass drums to sections of sampled speech and short bass sequences. All triggered live. At the heart of the system is but one Akai S900 – that LeBlanc can



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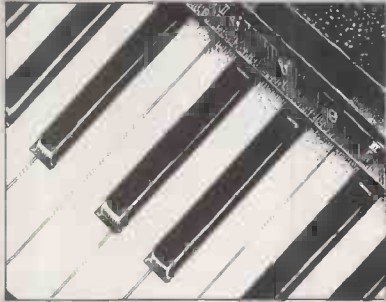
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► elicit this set from that machine is a tribute to both. All the while, the drummer maintains a monstrous funk/hip hop groove to inspire the feet – and deafen the ears. Adrian Sherwood, dub producer par excellence, actively operates the mixing desk to enhance the textures – if that's the right word. And Gary Clail, the ever-present Tackhead Sound System compère, sticks in his oar every once in a while.

Drawing material from his Major Malfunction days, his set is beefed up by the high

sophistication of his latest recorded work, *Stranger Than Fiction* (on Enigma Records). Tracks like 'Taxider' are freely reworked – live spontaneity the reward of triggering rather than sequencing the whole song. And besides his own material, there are a few Tackhead tracks grafted in, with barely any loss of impact, despite the three missing players.

For the drummers in the audience, there's plenty to gaze at in open-mouthed amazement. His facility at the kit is exceptional, particularly

bearing in mind that triggering samples with rhythmically bizarre start points is probably the most difficult task a drummer could ever attempt. His performance is stunning across the board.

For the tech-heads, perhaps the lack of state-of-the-art gear raises a few eyebrows. But as The Man said to me when I collared him at the end of the gig – "I just wonder what I could do with an S1000..." Brian Page.

## D E M O T A K E S

A little learning is a dangerous thing, or so somebody once said, and listening to **Patchwork Club**, I'm inclined to agree. Sure, Chris and Christine of the above-mentioned outfit can



program an industry-standard bass/snare groove with the best of them; they know where to stick the little jingly SAW noises and the Hazell Dean punchy brass fanfares – and the hi-nrg analogue octave bassline is beyond reproach. The brainless chord progression of the first track, 'Nobody's Toy', is ripped off from Depeche Mode's 'Just Can't Get Enough'. They've obviously listened to a lot of "chart" music and assimilated the necessary information. And the end result leaves me utterly lukewarm.

Recording quality is OK; the demo was recorded at a Hull 16-track using good-quality gear (ART ProVerb, SPX90, Korg MS20 and Poly 800, Akai X7000, Roland D110 and Yamaha TX81Z, plus Vestafire "Thingy". The backing tracks are cleanly recorded, but the competent vocal has that unmistakably boxy feel that results from inexperience in vocal recording – chucking on a bit more reverb doesn't necessarily do the trick.

More I can't say. This stuff is formula par excellence and I can just see Sharon and Tracey doing the handbag bop now. I hope Chris and Christine can do the Reynolds Girls dance. All together now, 'All we wanna do is have a good time...'

Next out of the bag, **The Officers Club** – and I thought that was it for the bland and boring disco dancefloor dross for this month. Sadly it was not to be. Let's plumb the depths together...

**Officers Club** consist of Mike Day, Tony Gaeta and Vince Riccardi. They've spent a lot of money on a very pretty promotional pack with all kinds

of fold-out gismos and doobries. This sets up some very unhealthy expectations about the probable quality of the music inside; it made me think it might be good or something. This meant that when I put the tape on I was even more amused than usual, because good it wasn't. The opening track, 'On the Street', kicks off with two prats saying (in fake American accents) "OK Boys, let's go down to the Club tonight". "What Club?" "The Officers Club!" Then a noise which roughly approximates to someone barfing leads smoothly into a sub-Village People dancefloor workout with a truly terrible vocal. Then the pseudo-salsa brass brings back early-80s third-rate disco with uncanny accuracy. Need I go on? To be fair, the standard of musicianship of The Officers Club (with the exception of the vocalist) is perfectly adequate. But if all these gorgeous chaps (judging by the photo) can do is replicate bad clubby dance music, what's the point?

I'll admit it; this month's selection of meisterwerkes was beginning to make me feel like throwing in the old Demotakes towel; then **Andy Silcox's** demo emerged from the pile of C90s and (partly) restored my faith. Stunningly original it isn't – let's not ask too much; but two of the tracks from 22-year old Andy's four-song demo, namely 'Just like America' and 'Lonely Without You', plus half of the second track, 'Give Me The Night', are actually listenable. Floating somewhere around the polite side of The Police, with a vocal not unadjacent to Neil Young, or perhaps Supertramp, Andy's material has a light, intimately poppish feel which could sit quite comfortably in a chart setting – I presume this is what he would like – with more polish and a better vocal. And on the vocal, Andy should certainly keep on singing, but his almost folkish voice (in the nicest sense, if there is one) needs a much harder edge in the recording. 'Just like America' carries distant echoes of early A-Ha, and demonstrates quite a sophisticated knowledge of instrumental and vocal arranging; the opening and verse of 'Give Me The Night' is genuinely catchy and inventively melodic, but Andy lets down the early promise of this track dismally with a painfully twee and predictable chord sequence for the chorus. My advice for this one is to take it apart and rebuild it: you have the technology.

Speaking of which, Andy's own technology consists of an effective but compact setup; D110, doing duty for percussion (which, incidentally, is almost uniformly well-programmed), guitar patches and pianos; Ensoniq SQ80, used for string and synth patches and sequencing; Roland DEP5 for all effects; the venerable Shure SM58 for vocals, and a Tascam Porta One for putting it all down on. This setup is used to excellent advantage and the quality of the sound is surprisingly spacy, especially given the number of bounces Andy must have had to do to create his multi-layered vocal effects – which in many places are the highlight of the tape. Andy informs me that he's been writing and recording for about 18 months. My hat is off to him – lots of people don't get as far as this demo in that many years.

Let's have a lecture about cover versions. People do 'em for lots of reasons – most people have a favourite song, a few people think they can do the song better than the original, most think they can do the song differently than the original. Not so **Pour Effecteur**. Their four-song demo (75 copies of which have been sent to record and production companies) opens with a carbon copy of The Eurhythmics' 'Sweet Dreams'. Nowt taken out, as they say. Needless for me to say, they've so far had no offers – would you be impressed at a band's ability to reproduce someone else's hit song verbatim at the drop of a hat? Only if you were auditioning an act for Bingo night at the local workie. What's immensely frustrating is that the rest of the tape isn't that bad; they've got a touch of the Hue and Cry, but the songs are far from hopeless. Track one on Side two, 'Hit Me', should certainly have been the first on the tape. Competently produced, punchy and eminently danceable, with an excellent performance from a stylish male vocalist, a creature that's hard to come by in my experience, it deserves more than the cursory listen this tape would definitely have received, on the strength of the first track. How many times do we have to say it? You have to prove your worth in the first 30 seconds of a tape – that's all you'll get from an A&R person who's got a pile of tapes big enough to qualify for an EEC subsidy.

Th..Th..That's all for this time folks. Skum  
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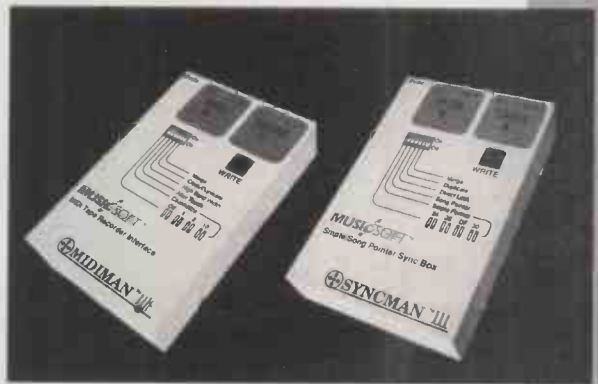
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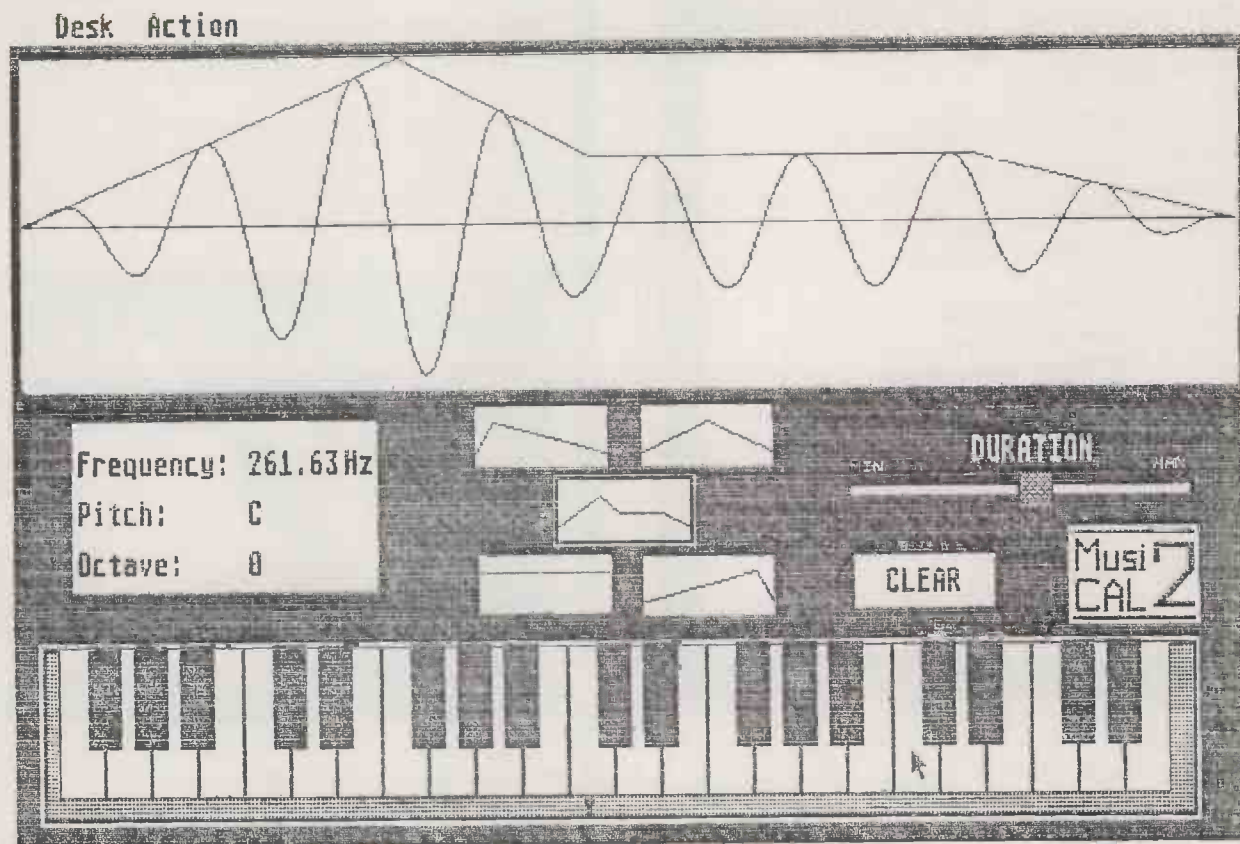
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# MUSICAL



Is music technology being treated fairly in the classroom? What role does educational software have to play? Does Steinberg's MusiCal fit the bill? Review by Ian Waugh.

**T**HE ATARI ST may be the musician's computer but it hasn't yet made much of a dent in the education market. There are many reasons why this is so – lack of money, politics and poorly informed IT advisers to name a few. (But this isn't the place to discuss why the youth of our country is not getting the musical education it deserves.) One other reason, however, could just be the severe shortage of educational music software for the ST. In this area, Acorn's veteran BBC micro still reigns supreme.

Realising the advantages in gaining a foothold in education, Evenlode have done their best to infiltrate the educational market, not least by preparing an educational version of Pro24 called Pro24e. This is basically the standard Pro24 program with a few "introduction to the ST" programs and more documentation – but cheaper! While sequencers are damn useful beasts to have around, they are not musically educational in themselves. That is, they don't teach you about sound or how to listen to sounds or music. Once you do have some musical experience and can put together a bar or two of music, then's the time to dig out the sequencer.

And so to MusiCal. As it is one of the very few

music education programs available it deserves a close look.

The manual states, "MusiCal is a major development in the trend towards a 'concept-based curriculum' for music education". It also describes MusiCal itself as a complete curriculum, which is rather an ambitious claim.

The package consists of a large A4 ring-binder, a program disk and the dreaded dongle. This is the first potential stumbling block for educational users. Basically, if something isn't nailed down it has a tendency to walk. If you don't use the dongle the programs just don't load. They really ought to give you a message telling you to insert the dongle – after switching off, of course.

## UNIT FOUR PLUS ONE

THERE ARE ACTUALLY five separate programs on the disk and although a MIDI instrument isn't essential for them all, it can be useful. You'll need a hi-res monitor, too.

Each of the five programs supports a work Unit which relates to the three criteria of the new GCSE in Music – listening, performing and composing.

Unit one explores how sounds are put together to

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make a composition. The accompanying program uses home-spun graphic notation. It invites you to draw a squiggle in boxes on the screen and record something "in the box" by clicking on an on-screen keyboard or playing an attached MIDI keyboard.

During drawing, the words "Drawing", "Erase" and "Finish" appear on screen. The latter two are buttons but there's nothing to distinguish them from the Drawing word which does nothing when you click on it.

As you are recording pitches rather than raw sound, the exercise is more one of relating pitch patterns to a graphic design – a rising line could indicate a rise in pitch and so on. You can record four different patterns and string eight together to create a score. The recorder offers no means of keeping time.

The screen is fairly empty but you have to access the record and play functions from a pull-down menu. Why not have these as buttons on the screen? If you move the mouse to the top of the screen during record you are subsequently unable to click on the Stop button and have to press a computer key.

Unit two is called Notes and introduces pupils to the delights of envelope shapes. The program draws sine waves of different frequencies on screen under a selection of five ADSR envelope outlines. You play the resulting note by clicking on the on-screen keyboard. The practical work covers rounds, canons, consonance and dissonance, pitched and unpitched sounds and the three elements of a note – frequency, loudness and timbre (what about duration?).

Although I accept that the envelopes and waveforms may be there for illustration rather than elucidation, the number of wave cycles under the envelopes do not match the frequency of the notes. For example, playing middle C (261.37Hz) with an envelope which lasts a second will only produce about seven wave cycles. In fact the display doesn't alter at all when you change the length of a note, although it does when you change the frequency.

So few waveforms are drawn that it's necessary to draw the envelope outline over the top. If the number of cycles was correct, the shape of the envelope would be clear and an outline would not be necessary. Also, you hear a square wave (as per the ST's sound chip) but the program draws a sine wave. OK, a minor point but if you're trying to relate what you see on screen to what you hear, surely it ought to be accurate?

Unit three is about tuning. The program uses the ST's sound chip to play two notes with different pitches and you have to tune the second to the first by moving an on-screen slider. When two notes of different pitches sound, beats are produced and it's not too demanding a task to tune up until the beating stops.

How does the slider work? Well, I expected to be able to click and drag it and hear the pitch change as it moved. Not so. You don't hear the pitch until you release the button. It's a bit like jumping towards the edge of a cliff and then looking down to see if you've overshot.

Alternatively, you can click on the top and bottom of the slider. This increments the pitch continuously – which means you're likely to overshoot the mark anyway and then have to backtrack. However, if you use the help function it virtually tunes the pitch for you.

Unit four introduces the pentatonic scale and traditional music notation. It allows you to compose music by clicking notes onto the staff. Music will play through the ST's speaker or a MIDI instrument and the score can be printed out.

The manual discusses song form – AABA and so on – tones, semitones, scales and time signatures. It also includes suggestions for a more advanced composition using a group of six or eight semitones.

From there it broaches the subject of sequencers and informs you that, using the Convert program on the disk, you can load a Pent file into Pro24 (plug).

Unit five is about rhythm and the final program lets you create drum patterns on three staves using three drum sounds. There are a number of small rhythmic motifs on screen which you click and drag to the staves. If you hold the right button you can repeat the pattern.

The ST's sound chip does a reasonable drum imitation – given its limitations – or you can connect a MIDI-compatible drum machine. To match the sounds to a drum machine you have to give each a MIDI channel and note number. For your average musician with drum machine manual at hand this will present no problem. In the classroom, however, manuals are not always available and the program expects the teacher to know what MIDI channels and note numbers are. Some will, many won't. An easier method perhaps, certainly for school use, would be to scroll through the values until you hear the drum sound you want.

## MANUAL ACTIVITIES

THE MANUAL IS generally well written and presented, easy to read and assimilate. It includes a suggested list of records to listen to and it has a superb bibliography.

Activities are divided into sections such as Did You Know?, Useful Tips, Try This, Listen, Discuss and Group Work. Some require the use of a tape recorder, a keyboard and a sampler, which not every school will have access to.

Music notation does not become necessary until you reach Unit four. The manual says, "The most important reason for writing music down is so that we can remember it! If the composer is not going to be the only performer then it must be written down in a form that others can easily understand".

Other Units explore some alternative forms of notation, and one suggests constructing a piece from patterns – circles, crosses and triangles – on a grid. Many modern – and not-so-modern – composers are well aware of the limitations of traditional music notation.

One example in the manual represents the opening of Beethoven's 5th Symphony on a grid. The first box contains three vertical lines, the next three contain one long horizontal line. "Beethoven didn't write the original like this", informs the manual, "but you will find that this version is very easy to follow". To which the cynic may be inclined to reply, "Yes, of course it is – but only if you know what the music is supposed to sound like in the first place".

There's nothing to suggest how MusiCal fits into age groups and classroom practice. Many of the activities seem to be aimed at seven and eight year ►

**"There are actually five separate programs on the MusiCal disk, and although a MIDI instrument isn't essential for them all, it can be useful."**

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► olds, although it purports to teach up to GCSE level (age 14 to 16). Some ideas are definitely for older children, although it is by no means a complete tutorial up to GCSE standard. Perhaps it is intended for use across a wide range of ages.

Although the manual is well presented, little of the text is original and it uses all the standard GCSE musical ideas and examples. Most music teachers will already be familiar with the material.

## VERDICT

YOU'VE PROBABLY REALISED by now that I'm not over-impressed with MusiCal. The programs are trivial and not particularly well-designed for classroom use. They have little relevance to the text, although in any event the majority of the work would be done away from the computer using other resources.

My final reservation concerns the price. It's on the cheap side of average for a piece of music software, but it's expensive if you're on an education budget. The software alone can in no way justify the price tag; any value the package has lies in the manual. If used by an intelligent teacher, the manual could be used very effectively – but the same ideas are available in books costing a tenth of the price.

There is also an optional Update Subscription Fee of £25 plus VAT, yet an Evenlode press release dated 19th September 1988 states that the only Steinberg products to attract an update fee are Pro24 and Masterscore. As the average total price of educational software is probably around £15-20 this

is likely to be as appealing to teachers as Kenneth Baker's education policy.

The dedication and effort which went into the creation of the package is enormous, and it's a genuine shame to find that the whole is rather less than the sum of the parts.


MusiCal is the first in a three-volume set. The other two volumes are due in Spring and Autumn 1989. Their content is rather more ambitious, but it will be interesting to see whether the packages contain any useful programs to support the manuals and justify their price.

MusiCal does nothing to refute many a music teachers' staunchly-held view that computers in general and the Atari ST in particular have no place in their lessons. It gives a bad name to the useful musical and educational things a computer can do and it can only hamper the acceptance of computers in the music curriculum. It could well shove the Atari ST further out in the educational cold than it already is. ■

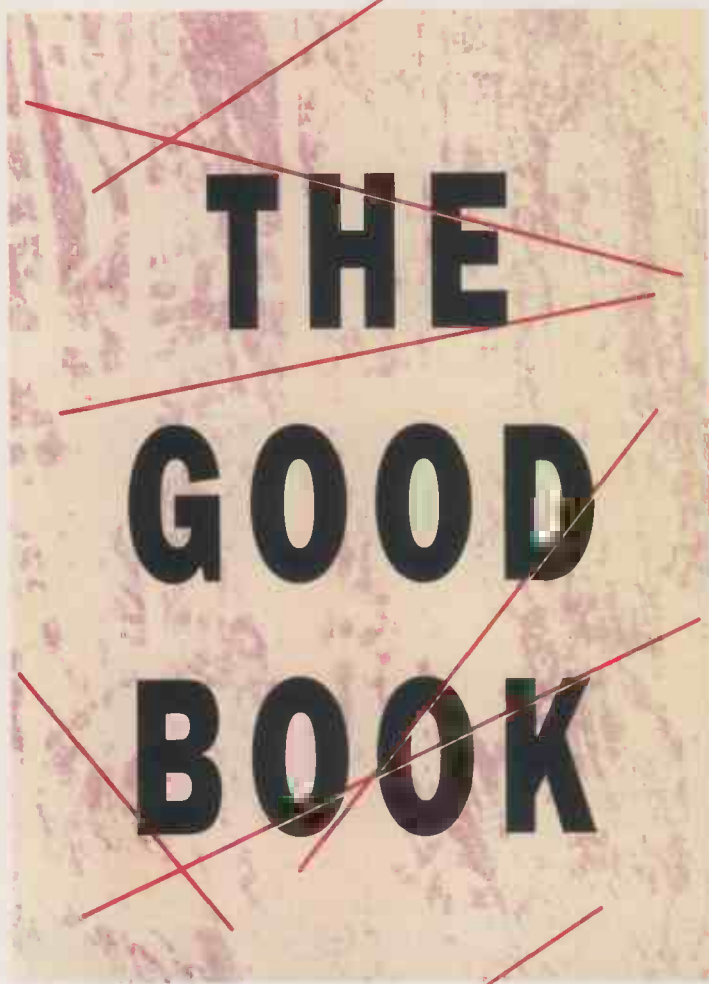
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**“While sequencers are useful beasts to have around, they're not educational in themselves – they don't teach you about sound or how to listen to music.”**

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<p><b>JUNO 6/60</b> MIDI IN. THRU. OUT Assign receive channel. Set a transmic split point &amp; channel either side. Patch change, arpeggiated notes etc. KIT £85.00 INSTALLED £100.00</p>	<p><b>MOOG, ARP, KORG, SH101, PRO-ONE, OBERHEIM</b> <i>Got one of these? You need one of these:</i></p> <p><b>MIDI-2CV</b> Control any IV/OCT synth from MIDI with pitch-bend. VCA/VCF output from velocity aftertouch and mod wheel. 3 trigger types (positive ground and negative)</p> <table border="0"> <tr><td>M2CV</td><td>£95.00</td></tr> <tr><td>2nd CV</td><td>£25.00</td></tr> <tr><td>S Trig (Moogs)</td><td>£15.00</td></tr> <tr><td>Wasp</td><td>£15.00</td></tr> <tr><td>Din Sync</td><td>£25.00</td></tr> <tr><td>Arpeggiator trig</td><td>£15.00</td></tr> <tr><td>Battery Ram</td><td>£20.00</td></tr> <tr><td>6 Simmons trigger</td><td>£45.00</td></tr> </table> <p>Pick what you need and we'll do the rest.</p>	M2CV	£95.00	2nd CV	£25.00	S Trig (Moogs)	£15.00	Wasp	£15.00	Din Sync	£25.00	Arpeggiator trig	£15.00	Battery Ram	£20.00	6 Simmons trigger	£45.00	<p><b>TB303 CV/GATE INPUTS</b> Let your Bassline talk to MIDI, MC202s etc. PRICE £35.00</p>
M2CV	£95.00																	
2nd CV	£25.00																	
S Trig (Moogs)	£15.00																	
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Din Sync	£25.00																	
Arpeggiator trig	£15.00																	
Battery Ram	£20.00																	
6 Simmons trigger	£45.00																	
<p><b>JUPITER 8/8A</b> MIDI IN. THRU. OUT Assign MIDI channels for upper and lower split. Received pitchbend aftertouch, mod wheel info to filter cross mod. LFO etc. Received velocity assigned to VCA or VCF. Receive transmit patch change. Loads more. KIT £100.00 INSTALLED £125.00</p>		<p><b>MIDI TRIGGER</b> Trigger Simmons, UP5 drum 'brains' with velocity from MIDI. Trigger Noise gates VCAs sampling DDLs etc. 6 or 12 trigger outputs in 1U rackmount or desktop modules. M2Trig 6 Desktop £125.00 M2Trig 6 Rackmount £145.00 M2Trig 12 Rackmount £185.00</p>																
<p><b>TR808 + DRUMULATOR</b> MIDI IN &amp; THRU Trigger + clock mode. Clock mode receives MIDI clock start and stop. Din sync output sync to MIDI clock. Trigger mode triggers voices with velocity from keyboard, drum machine, computer etc. KIT £75.00 INSTALLED £95.00</p>	<p><b>MIDI 4CV</b> 4 Channel 1U rackmount Midi to CV converter. 4 CV. Gate and Filter outputs on independent and assignable MIDI channels. Each receiving pitchbend, velocity, aftertouch and Mod wheel information. Each channel can respond to any or all in varying amounts. Options available as M2CV but fitted with DINSYNC and 12 trigger outputs as standard. PRICE £249.00</p>	<p><b>MIDI VOX The ORAtron</b> Allophone based speech synthesis system triggered by MIDI note numbers on an assignable MIDI channel. Build up sentences in your sequencer. Programmable Pitch, volume and metering (rhythm) under MIDI note or Clock control. PRICE £175.00</p>																
<p><b>PF10/15</b> MIDI OUT FOR PF PIANOS Splits MIDI out channels and patch changes &amp; velocity of course. MIDI in merges data with PF data but does not play PF voices. Also selected note numbers can be assigned to trigger MIDI output from drum machines etc. KIT £100.00 PF10 £110.00 PF15 £125.00</p>	<p><b>MIDI MERJ</b> MIDI DATA MERGER 2 in. 2 thru. 2outs. Route data between in &amp; outs. Merge date streams or switch them off. Filter date at the push of a button. Key on/off, pitchbend, controller, aftertouch, patch change, system realtime. system exclusive. PRICE £100.00 Software update - New features include split points and assignable receive MIDI channels for synths with early or limited receive MIDI capability. (ie Jupiter 6, Prophet 600) Trigger mode providing MIDI gate keying and ability to reassign MOD wheel info to different controller No.</p>	<p><b>MIDI LITE</b> Trigger lights under MIDI control from a spare sequencer channel or MIDI keyboard. 8/16 channels at 390Watts per channel. Variable light 'ON' time and sequenced patterns under MIDI Clock or Note Control. PRICE Control unit + 8 channel power £275.00 Additional Power units (8 chan) £150.00</p>																
<p><b>SYNC 24 Convertor</b> MIDI in &amp; thru to sync 24 (din sync) Output start &amp; stop clock. Price inc PSU £75.00</p>	<p><b>LINEAR</b> Converter for use with Yamaha and Korg gear not obeying 1V/octave standard. Dedicated channels on M2/4CV..... £15.00 each Separate units powered from M2/4CV..... £45.00 each</p>	<p><i>All prices exclude carriage.</i> Installations 3 hours on a good day. Sending it down? Please ensure good packing. Please don't take chances with your pride and joy Coming down? Find us on the A36 to Bristol Buying a kit or little black box? Please allow 28 days for delivery Sending a cheque/PO? Payable to 'Groove Electronics' please Got a Barclaycard? We can take orders. (Barclaycard only at the moment)</p>																
<p><b>24 Hour ANSWERPHONE</b> <b>0722 743712</b></p> <p><b>Groove Electronics</b></p> <p>Unit 30A, Barnack Industrial Centre, Kingsway Trading Estate, Wilton, Wiltshire, SP2 0AW</p>																		

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# Philip Rees

## MODERN MUSIC TECHNOLOGY

**2M** the smarter MIDI merge unit for just £79.95 inclusive

You may need to combine MIDI datastreams - for example, on the input to your sequencer or multi-timbral sound module. Sadly, you can't combine MIDI datastreams just by joining the wires together. Merging MIDI datastreams is a job for a micro-processor. The new **2M** from Philip Rees is a dedicated microcomputer, with built-in MIDI merge software.



The **2M** recognises all MIDI data, including MIDI Time Code and System Exclusive and has many automatic features to optimise performance and convenience. It has large data buffers to mitigate data loss, and it filters and prioritises the data to avoid delay problems. Clocks are handled through an intelligent interlock system. Pitchbend messages on the same MIDI channel are arithmetically merged.

The **2M** has two MIDI inputs, and provides thru outputs for both of these. The merged datastream is available simultaneously on two MIDI outputs.

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**V3** Handy 1 into 3 MIDI thru unit for just £12.95

You can use the **V3** to cope with devices without MIDI-thru sockets, or avoid MIDI timing errors caused by 'chain' connections.



The **V3** can be powered by a PP3 battery (not supplied), or via an external mains adaptor (available separately.)

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See your dealer, or order now, direct from the manufacturer. Fill in the coupon, and send it off with a cheque. Allow up to 28 days for delivery. Money back if not satisfied - just return the goods undamaged in the original packing within seven days for full refund.

The **2M** and **V3** are made in England by Philip Rees (Modern Music Technology), Unit B, Park End Works, Croughton, BRACKLEY, Northants NN13 5LX. Tel: (0869) 810948

**Philip Rees**  
MODERN MUSIC TECHNOLOGY

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Address .....

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..... **V3** MIDI thru unit(s) at £12.95 each £.....

..... **AAC3** mains adaptor(s) for **V3** at £6.95 each £.....

(prices include carriage and VAT)

I enclose my cheque for (total) £.....

Please send me more information on your MIDI products

Send to Philip Rees (Modern Music Technology)  
FREEPOST, BRACKLEY, Northants, NN13 5BR.

NO STAMP REQUIRED



It's a pity that more retailers don't copy our ideas (instead of just our ads), free courses with packages, faulty goods replaced and money refunded are all part of a service to which customers are entitled. It is a shame that more retailers do not realise this. By the way, have you noticed how some shops are incapable of giving you a price on the telephone? (Frustrating, huh?) Next time a shop respond with "How much have you been quoted already?" say "Why - are you too thick to think of a price yourself?" They'll soon learn.

### NEW STOCK

Whilst we do not pretend to carry EVERY item from EVERY manufacturer, (as some shops seem to - ever tried putting it to the test?), all new equipment is tested in our of our three working studios, and if we like it, our buying power can usually ensure that we have it in stock at all times (even when your local dealer might have run dry!). In addition, if we recommend an item, we will REFUND YOUR MONEY if you do not agree with us.

In fact we are the largest pro audio dealers in Britain for Alesis, Korg, Drawmer, Casio, Fostex, Seck, Yamaha, TOA, Tascam, Studiomas, Allen & Heath and a good many more! (Last year we sold nearly 600 new 8 + 16 track packages and around 200 s/h machines!) It's always worth ringing us for a quote on new equipment and if you're still unconvinced, ask yourself why we became the biggest in such a short time (or better still ask the rest!)

If you are bewildered by the vast amount of multitrack recording products currently on offer, Thatched Cottage fax packs should make the job of choosing the right equipment that much easier. There are 4 in the series; P.A. - Portastudios - 8 Track - Financial advice. To obtain any of our fax packs just phone or write.

### COMPUTER DEALS

1040 + monitor + Steinberg Pro 12 - £499 + VAT, 1040 + monitor + C Labs Creator - £675 + VAT, 1040 + monitor + C Labs Notator - £799 + VAT, 1040 + monitor + Steinberg Cubase - £325 + VAT, with computer £799 + VAT. All available with XRI 300 SMPTE unit for an extra £200 plus VAT.

### PORTASTUDIO OFFERS

Fostex X30 Portastudio plus Fostex MN15 4:2 mixer including compressors - the best value budget unit around (half price) £199 + VAT.  
Fostex 460 - Rolls Royce of Portastudios includes full 8 track mixing desk RRP £2125 Our Price £725 + VAT. We usually have large stocks of used + demonstration machines, call us for our comprehensive list.



When it comes to new equipment you may have noticed that we don't say 'phone for the best deal, POA, or 'lowest price guarantee' (Ha! Ha! if the prices are so great why don't they just print them and amaze us all). Our bulk buying policy can usually guarantee that a telephone call to us will not be wasted and in any case we can throw in those "hidden" extras - cables with multitracks, patchbays with desks. (By the way, next time a dealer "guarantees" the lowest price and then can't deliver, try reporting them to the local Office of Fair Trading - it will teach them not to waste your time!)

To be honest though, if you spend all afternoon on the telephone the chances are you might find someone somewhere who will undercut us by a pound or two. The difference at THATCHED COTTAGE is if your E16 breaks down on a Sunday morning or your Drum Machine 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!

### ALLEN & HEATH SABER 16 & 24 TRACK CONSOLES

This year's APRS A&H launched a revolutionary new professional mixing console - the SABER offering the quality of a Sound-craft and the durability of a TAC. It has comprehensive MIDI facilities and many features as standard offered only as options by other manufacturers. Full ladder automation and 24 track version now available.

Demand has been so great every month we sell the entire UK production run in advance! If you're considering spending around £5,000 on a high quality multi-track console then you owe it to yourself to check out what has become possibly the largest selling console of its kind in Britain. Give us a call and we will send full details and arrange a demonstration.

### THATCHED COTTAGE RECORDING SCHOOL

In response to popular demand we now run a one week recording course, designed specifically for those of you who feel they can make a go of running a professional 8, 16 or 24 Track Studio. The emphasis will be largely on the practical side and topics covered are finance, premises, running a recording session and hints and tips on every aspect of recording. Class sizes are limited to eight at a time and guest speakers will cover relevant areas. The price is just £200 for the week, including accommodation. Interested? Telephone or write and we'll tell you more. We also run "arranging courses", useful for samplers, call for details.

### FULL 8 TRACK SYSTEM FOR ONLY £999 INC VAT!!!!

At Thatched Cottage we are able to offer exclusively the revolutionary TOA 8 track cassette with built in monitor section PLUS the high quality full feature Nomad 8:8:2 mixer (Retail £175) Plus all the plugs and cables for the stunning Price of £999 inc. VAT!!!! (TOA + Full Spec Fostex 450 Desk only £1499 inc. VAT.)

There's no point in prattling on about it - a full 8 track system for under £1000 is an amazing breakthrough in budget recording - just send for full details! And to make it really easy, our credit card will give you instant credit of up to £1000 - just call in and take away a system. The phone lines are open!!!

THE SECOND ISSUE OF OUR FULL COLOUR QUARTERLY MAGAZINE FULL OF PRODUCT NEWS RECORDING ARTICLES AND DETAILS OF OUR BARGAINS IS NOW AVAILABLE. WRITE OR TELEPHONE FOR YOUR FREE COPY.



Dealers constantly complain about our secondhand and ex-demo list - it seems they are losing too many customers!

Being by far the largest supplier of 8 + 16 track equipment in Britain, we've decided we can afford to give away a few secrets! We simply tell customers that if any new equipment they purchase breaks down in the first two months we won't fix it, we will REPLACE it!

Result! Yet another customer who KNOWS they can rely on Thatched Cottage, and a secondhand list full of the latest gear, factory repaired, in mint condition with a full guarantee.

Simple? We didn't become the biggest without being the best! By the way, when it comes to s/h gear we care what we part-exchange. We only accept equipment which is in first class condition after all, when you buy from us its our guarantee you are relying on!

### SOME SECONDHAND AND EX-DEMO BARGAINS

Alesis HR16 digital drum machine.....	£250
Seck 12-8-2 Mixer, Mint.....	£750
Seck 18:8:2 Mixer (black).....	£899
Drawmer DS201/Dual Gates.....	£249
Alesis Midverb II.....	£199
Nomad Axeman.....	£199
32 Way Patchbays (new).....	£330
Fostex B16 (With Guarantee).....	£2,499
XRI 300 SMPTE Generator.....	£199
ART Multiverb.....	£299
Nomad Reclimix.....	£135
Aphex Type C Exciter.....	£199
Tascam MSR16 1/2" 16 Track.....	£3250
Dynamix 16:8 inc. flight case.....	£599
Vesta MR1 Super Rack Porta Studio.....	£399
Fostex 450 8 Track Desk.....	£399
Seck 10.4.....	£999
Akai S950.....	£1299
Lexicon PCM70 (mint).....	£2999
Tascam ATR 60 1/2" 2 track (inc. trolley).....	£250
Yamaha RX8 drum machine (loads of sound plus 4 outs).....	£499
Akai X7000 Sampler inc. library.....	£399
Akai S700 Rack Sampler Inc. library.....	£699
Tascam 24.4 Mixer.....	£199
Tascam DX4D noise reduction (2 available).....	£175
XRI 1 XR300 SMPTE box.....	£250
Korg Poly 800 MkII.....	£299
Casio PG510 MIDI Guitar.....	£199
Yamaha WX7 wind controller.....	£1499
Fostex EB large reel 8 track.....	£399
Tascam 3340 4 track reel to reel.....	£250
Kawai K3 rack synth expander.....	£999
Studiomas 16:16:2 - mint.....	£699
Casio FZ10M rack sampler (new).....	£499
Casio DA1 DAT mastering.....	£39
Fostex E16/model 80 remote control.....	£699
Bel BDE 2400 ES - 99 window, totally editable, 26 sec super sample. RRP £3000.....	£750
TOA MRBT - 8 track cassette demo, full guarantee.....	£1200
Yamaha TX1616.....	£5999
Aces high spec 24 track + 32 channel mixer.....	£199
Tascam MX80 8 channel mic/line amp.....	£199
Yamaha MT100 4 track.....	£199
Denon 1500 CD player (demo).....	£499
Sony PCM501 digital mastering + C9 Video.....	£75
Culec 2x10 band EQ.....	£149
Toa MR8A (routing box for 8 track).....	£750
Yamaha V50.....	£875
Korg MR.....	£999
Fostex 4030 synchroniser.....	£375
Fostex 4035 controller (for above).....	£375

We have a certain number of ex-demo Fostex E16s available all in mint condition with boxes - Give us a call (All prices exclude VAT)

### SUMMER SPECIAL OFFERS

Yamaha TX16W - 16 voice sampler inc. version II software + full library.....	£799 + VAT
Korg P3 sampled grand piano module.....	£199 inc VAT
(additional orchestra card available)	
Seck 18:2 desk (exclusive to us).....	£649 + VAT
Tannoy DC100 monitors (per pair).....	£150 + VAT
Yamaha TX16W 16 voice sampler with full library (new).....	£799 + VAT
Yamaha SPX 50D (great multi effect guitar processor).....	£199 + VAT
Allen & Heath Sigma - 20:24:24 (64 inputs).....	£8750 + VAT

### THATCHED COTTAGE SERVICE

At our fully equipped in-house service centre we can service all types of equipment (esp. 8-16 tracks) Every reputable audio dealer should have one on site (don't let anyone tell you any different). Believe it or not, some retailers actually sell complex electronic equipment from their front room or garage (nothing wrong with that of course - we all had to start somewhere - when you are successful though, you outgrow it pretty quickly!) It does though tend to suggest a lack of back up facilities. So if your multitrack needs a service or the heads looking at give us a call before its too late.

For those of you who are seriously considering starting a commercial studio we've come up with three packages, each containing everything you will need for your first paying session, from the Multi-track Machine right through to DI Boxes and Cables. The price of the 8 Track System is £4,300 + VAT, the 16 Track is £7,800 + VAT and the 24 Track is £15,750 + VAT. At Thatched Cottage we proved it could be done, and we have helped many new studios to open and start making money - our experience could help you. Give me a ring and have a chat - what have you got to lose? Plus: FREE Thatched Cottage Recording School Course to package buyers!!

### THATCHED COTTAGE PRIVILEGED CHARGE CARD

In our efforts to make life easier for our customers we have launched our own credit card! Like Access and Barclaycard, our Privileged Charge Card allows instant credit up to £1000 and some VERY special discounts, including an introductory discount of 2½% against ANY price we quote. (Even second hand gear)

For larger purchases we have arranged a unique loan/lease scheme for amounts up to £25,000

Full details of all our new financial services (including equipment insurance) are contained in our new Financial Fax Packs - Give us a call.

### NEW PRODUCTS

Casio DA2 - brand new updated DAT. Still only £649 + VAT inc. free rack kit, RSD Proline 16:8:16 plus MIDI mixing, Tascam 1" 24 Track - revolutionary at just over £7000 + VAT. Digidesign sound tools hard disk recording - call for demonstration, Korg M3

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**MUSIC TECHNOLOGY's free classified section** is the biggest of its kind in the business. Every month, we carry more ads for synthesisers, samplers, computers, signal processing gear and assorted other goodies than any other monthly magazine. So when musicians and studio engineers are on the lookout for some extra gear to update their line-up, they turn to these pages first.

If you're a private seller, advertising in the back of MUSIC TECHNOLOGY really couldn't be simpler. And if you're searching for a specific piece of equipment or looking for other musicians to fill a gap in your band, we can help out there, too.

Just fill in the form at the end of this section, indicate which sub-section you'd like your ad to appear in, and send it to us by the date specified. We'll do the rest – and it'll cost you no more than the price of a postage stamp.

If you buy and sell musical equipment as part of a business, you'll have to use the regular classified section on the last page. And we regret we can't answer any queries regarding free classifieds published in MUSIC TECHNOLOGY.

## KEYBOARDS

### AKAI AX73 master

keyboard/synthesiser, 6 octave velocity keyboard, sampler input, MIDI, split, immac, boxed, £399 ono. Tel: (0384) 410853.

**AKAI AX73** 6-octave keyboard, as new, boxed, £500 ono. Tel: (0909) 566695.

**ANOTHER SERIOUS** clear-out: Roland JX8P, £550; JX8P flightcase, £50; Roland S330, £900. Tel: (0223) 464117 days, (0638) 720090 eves.

**ARP ELECTRONIC PIANO**, great sounds, especially acoustic piano, wood keys, only £215. Tel: (0895) 677634.

**ARP OMNI2** string polysynth, string output needs attention, £80 ono; swap Boss RCL10 microrack? Mark, Tel: (0663) 43388.

**CASIO AZ1**, £230; Kawai K5M, £500; Yamaha RX21, £100, swaps considered. Tel: (0246) 200847.

**CASIO CPS01** piano, MIDI, £355; FB01, £145; Casio MT100 kbd, £80; 100W amp, 5-input, tone controls, £250; Akai stereo openreel 4-track PA controller, mic, £550/swap DX7. Tel: 01-445 4654, eves.

**CASIO CZ1**, £450; Yamaha DX7S, £675, both with cases and ono. Tel: Rugby (0788) 535811.

**CASIO CZ101**, vgc, £150. Tel: (0733) 268785, eves.

**CASIO CZ101** plus cartridge and everything, vgc, £140 or swap RX17 or DR220A plus MC202. Tel: (0924) 370832.

**CASIO CZ1000**, SZ1 and ROMs, vgc, boxed, all manuals and extras. Tel: Southampton (0703) 221876.

**CASIO CZ1000** synthesiser plus sound books, etc, bargain at £175 ono. Tel: Rugeley (0889) 579292 (near Birmingham).

**CASIO CZ1000**, vgc, manuals, psu, £180. Tel: (0761) 32473.

**CASIO CZ230S**, boxed, as new, £120; Boss TM3 line booster/headphone amp, £40. Tel: (0273) 493659.

**CASIO CZ3000**, vgc, box and manuals, great sounds, easy to use a program, £320 ono. Tel: 01-363 1965.

**CASIO CZ3000**, hardly used, with manuals, £275 ono. Terry, Tel: Runcorn 718655.

**CASIO CZ5000** multitimbral synth, 8-track sequencer, boxed, manuals, good cond, £350 ono. Tel: (03632) 2285.

**CASIO CZ5000**, £340; Yamaha PSS680 music station, £160 or swap for Casio SK2100. Paul, Tel: 01-889 5975.

**CASIO CZ5000**, home use only, £350, no offers. Martin, Tel: 01-622 5232, after 6pm.

**CASIO CZ5000** synth/sequencer, £350 or cheaper than anyone else's advertised price, must sell. Tel: (0384) 263070.

**CASIO CZ5000**, Akai S612 sampler, vgc, £650 ono, may split, may swap. Tel: (0827) 60243.

**CHEETAH MKV**, £160; Roland PG1000 for D50, £160; Alesis MMT8, £160, all immac. Tel: (0475) 30181.

**CHEETAH MKV** touch-sensitive mother keyboard, virtually unused, offers? Tel: 051-709 2871.

**CHEETAH MS6** module; Alesis MMT8 sequencer, 8-track, multitimbral, £400 ono. Chris, Tel: 01-739 5710, eves.

**ELKA EK44** multitimbral 8-oscillator, 18-voice FM synth, exc cond, £650. Tel: 01-764 4583, weekends.

**ELKA SOLOISTS** backing machine, drums, bassline, chord backing organ, strings, full sound, £475. Tel: (0734) 425369.

**ENSONIQ ESQ1**, seq expansion, voice cartridge, pedal and manuals, as new, £650. Tel: (04775) 324, eves.

**ENSONIQ ESQ1**, flightcase, software, £599; Tascam Porta One, £249; MM 12:2/multicore, £249; Atari software, all ono. Robert, Tel: (0248) 670 341.

**ENSONIQ ESQ1**, 120-voice cartridge, 100s of voices on disk, £495. Tel: 01-993 1224.

**ENSONIQ ESQ1**, exc cond, boxed, as new, RAM cartridge, Atari software, extra voices, £600. Tel: (0245) 257210.

**ENSONIQ ESQ1**, £699 ono; Gauss 15" bass speaker, mint cond, £99 ono; Dynamix 6:2 mixer, £150 ono. Dave, Tel: 061-705 2534.

**GRAND PIANO**, 6-foot in black, good working order, £650 ono. Tel: (0924) 864673.

**HOHNER VERDI 3** 120 bass accordion, 1930s, with case, excellent for age, £150. Tel: (0257) 791181 (Lancs).

**JEN SX1000** monosynth, good lead synth, bargain, £65 with case. Mark, Tel: (0782) 411589.

**KAWAI K1**, boxed, as new, £450 ono with card. Simon, Tel: (0706) 69355 (Manchester area).

**KAWAI K1** keyboard, boxed with manuals, immac, £475; Akai S612 sampler and drive, £250. Tel: (0734) 424553.

**KAWAI K1M**, £250; SDE, £100; MD8, £100; 2HD disks, £1.75; X15, QX21, £100 each. Tel: (0783) 5481.

**KAWAI K5**, as new, offers, also Casio

CZ3000, £320; Akai VX90, mint, £340 ono. Tel: 01-669 2692.

**KAWAI K5** synth, as new, brilliant, £950 ono. Tel: (0992) 27260.

**KAWAI K5** synth, 16-voice multitimbral, complex additive synthesis, excellent, £650 ono. Tel: (0482) 648846.

**KAWAI K5** mega multitimbral, velocity and aftertouch sensitive, cost £1499, sell £850. Mark, Tel: (0747) 54406.

**KAWAI K5M** synth module, £375; Roland DSP2000 presence processor, £175. Jonathan, Tel: 01-435 6896, days, 01-603 4907, eves.

**KORG C2500** digital piano, 76-note weighted keyboard, 2 pianos, 1 harpsi, MIDI, great sound, great feel, boxed, studio use only, £800. Tel: (03543) 5239, eves and weekends.

**KORG DW8000**, exc cond with MEX8000 expander, boxed, manuals, etc, £800 ono. Dal, Tel: (0904) 764963 after 6.30pm.

**KORG EX800**, £100; Pro One, MC202, TR606, the definitive acid machines, offers. Martin, Tel: 01-444 3775.

**KORG M1**, mint cond, £1195; DX11, £445; K1M, £325. Tel: (0525) 370514.

**KORG M1** workstation, boxed, as new, manuals, etc, home use only, £1150. Tel: (0332) 761649.

**KORG M1R** rack, 3hrs home use, boxed, mint, £999; Cheetah MkII 9-octave keyboard, new, £250. Tel: (0222) 792027.

**KORG MONO/POLY** synth, £150 ono, good cond. Graham, Tel: 091-489 3175.

**MOOG PRODIGY** with MIDI converter, swap anything (FB01/RX11, etc), old or new. Chris, Tel: 01-868 0070 (Middlesex).

**MOOG PRODIGY** 2-oscillator monosynth, £100. Tel: Thornton Heath 01-689 8372.

**OSCAR WITH MIDI**, vgc, £150; Casio synth guitar, boxed, immac, £100. John, Tel: (0443) 791159.

**ROLAND ALPHA JUNO 1**, £250; Kawai K1, £400. George Godley, Tel: 01-631 3223.

**ROLAND ALPHA JUNO 2**, £380; MC202, manual, £65; Korg Poly 61, classic analogue, £250. Kev, Tel: 051-263 1584.

**ROLAND ALPHA JUNO 2**, superb analogue sounds, immac cond, boxed with manual, £470. Tel: (0530) 37277.

**ROLAND ALPHA JUNO 2**, £395; Korg Poly 800 plus flight case, £160. Darren,

Tel: 01-648 8713.

**ROLAND D50**, boxed, as new, plus 2 ROM cards, bargain at £900. Paul, Tel: 01-699 7795.

**ROLAND D50**, £795; DPX1, £595; RX5, £350; A3340S, £295; 1976 Stratocaster, £195, genuine bargains. Tel: (0977) 557560.

**ROLAND D50**, with card, manuals, as new, £900 ono. Sean, Tel: (0582) 574714.

**ROLAND D10**, mint, £720 ono; Alesis MMT8, mint, £199 ono, both boxed. Tel: (0782) 661302.

**ROLAND D10**, home use only, exc cond, £650. Fernando, Tel: 01-449 6493, Mon-Fri daytime.

**ROLAND D110**, £420; Roland MKS70, offers; Yamaha TX81Z, £200; Alesis Midiverb II, £160. Peter, Tel: 01-669 2692.

**ROLAND D110**, £385; Yamaha TX81Z, £150; Atari mono monitor, £65, exc cond. Tel: (0702) 552182, eves.

**ROLAND D110**, absolutely mint, boxed, £450; Dr T's editor/librarian (Atari), £45, both £490. Tel: Chelmsford 257210.

**ROLAND D20**, immac cond, 10mths old, disks, sound card, £950 ono. Tony, Tel: (0622) 29321, daytime.

**ROLAND D20** workstation, 10 free disks, manuals, boxed, never used, £800. Craig, Tel: (0472) 79264.

**ROLAND D20**, 9mths old, 3 sets of sounds plus disks, £900 or swap D50 or DX7 plus piano module. Tel: (0226) 291253.

**ROLAND JUNO 106**, flightcased, immac cond, £350; Moog Prodigy, tatty but working, £75. Tel: Sheffield (0742) 847369.

**ROLAND JUNO 106**, £360; Yamaha RX15 drums, £150. Both mint cond, boxed. Tel: 01-435 7845.

**ROLAND JUPITER 6**, manual, flightcase, £600. Tel: Princes Risborough (084 44) 6032, eves.

**ROLAND JUPITER 6**, £550; Korg DW8000, £550; Roland Sh09, £50. Simon, Tel: Harrogate (0423) 887977, eves.

**ROLAND JUPITER 8**, full MIDI retrofit, flightcase, £750. Tel: 01-348 0414.

**ROLAND JUPITER 8**, mint, full flightcase, offers; Yamaha RX5, boxed, cartridge, as new. Steve, Tel: (0909) 771581, eves.

**ROLAND JUPITER 8** Immac cond, with case, best analogue ever, £650. Daniel, Tel: 01-991 9079.

**ROLAND JX3P**, MT32, Yamaha CP70B, Korg RK100 remote, best offer for



anything or everything. Tel: (0942) 37095.

**ROLAND JX3P**, home use only, immac, £350; Simmons SMP 8:2 MIDI mixer, £150. Tel: (025 125) 2749 (Surrey).

**ROLAND JX8P** polysynth, immac, original box, manuals, etc, £550 ono; Five Star flight case for JX8P, £50. Won't split. Tel: (0223) 464117 days, (0638) 720090 eves.

**ROLAND JX8P** plus flightcase, cartridge, etc, home use only, immac cond, £625 ono. Tel: (0924) 864673.

**ROLAND JX10**, £849; Jupiter 8 (MIDI), £749; MSQ700, £195; MT32, £269; Yamaha QX1, £449. Tel: 091-565 4334.

**ROLAND MKS20** digital piano module, brilliant, £425, as new, manuals, boxed. Andy, Tel: (0902) 723606.

**ROLAND MKS70** (JX10 module), immac, boxed, plus cartridge, 14mths old, ultimate analogue, £399. Tel: Yeovil (0935) 862573.

**ROLAND MT32** plus Cheetah MIDI keyboard, £300 or swap for Commodore Amiga. Larrie, Tel: (0293 83) 534.

**ROLAND MT32**, boxed, as new, £210; Casio CZ3000 multitimbral polysynth, £210. Tel: Peterborough (0733) 321726.

**ROLAND MT100** expander/sequencer, as new, including ST editor, £450. Tel: (0706) 50897.

**ROLAND SH101**, MC202, TB303, TR606, Boss handclap, Boss percussion synth, offers? Tel: (04955) 55067.

**ROLAND SH101**, MC202, Sequential Pro One, all perfect cond, £75 each. Dave, Tel: York (0904) 635453, eves.

**ROLAND SH101**, grip, strap, case, mint; MC202, boxed; Bassline, mint, all manuals, £100 each. Tel: 091-273 3351.

**ROLAND SH3A** mono analogue synth, good cond, service manual, £50 ono. Tel: Cheltenham (0242) 510434.

**ROLAND SUPER JX10**, excellent analogue/digital synth, has a basic polyphonic sequencer built in, mint, boxed, £870. Jaysen, Tel: (0323) 21274.

**SEQUENTIAL PROPHET 5**, REV 3, exc cond, fully serviced, £750; Also Moog Source, £240. Tel: (0382) 610352, after 6pm.

**SEQUENTIAL PROPHET 5**, exc cond, includes manual, pedal, stand and case, £700 ono. Tel: (0272) 353467.

**SEQUENTIAL SIXTRAK**, immac cond, £270 ono. Mike, Tel: 01-367 8235 or Antonella, Tel: 01-828 3952, eves.

**YAMAHA CP30** stereo piano, immac, 76 weighted keys, service manuals, £300. Tel: Cheltenham (0242) 510434.

**YAMAHA CS50**, good working cond with manuals, £170 ono. Rich, Tel: Hull (0482) 802590.

**YAMAHA CS80** 8-voice, stereo, monster analogue synth, not fully working, offers. Tel: Oxon (08675) 71909.

**YAMAHA DX5**, £900; Poly 800, £160; MC202, £130; Cheetah MK5, £30; Mirage disks, 10, £4 each. Wanted, DX ROMs. Tel: (0422) 57665.

**YAMAHA DX7IID**, mint, boxed, home use only, £890. Write D Trudgeon, 10 Chapel Street, Tavistock, Devon PL19 8DX.

**YAMAHA DX7IID** with extras, immac, home use only, bargain, £700. Rafael,

Tel: (0909) 487109.

**YAMAHA DX9**, good cond with factory sound tape and manual, £225. Tel: 061-432 5817.

**YAMAHA DX9**: buy mine and get sequencing/voicing software free. £295 ono. Tel: (0533) 557822.

**YAMAHA DX11** multitimbral synth plus extra RAMs, flightcase, as new, £450 ono. Tel: 01-734 5710, eves.

**YAMAHA DX11**, as new, £375; flightcased Ensoniq Mirage, £450; Roland Juno 6, £150. Tel: (0272) 561855.

**YAMAHA DX21**, good cond, £275. Patrick, Tel: Ipswich (0449) 673086.

**YAMAHA DX21**, absolutely mint cond, £300 ono or exchagne Juno 106. Tel: 01-485 6441.

**YAMAHA DX27**, exc cond, boxed, manual and keyboard stand, £300 ono. Bobby, Tel: 01-888 3207, eves.

**YAMAHA DX100**, exc cond, boxed, manuals, tape, psu, £155 inc Redstar delivery. Tel: St Austell (0726) 66715.

**YAMAHA DX100**, £100 inc flight case; Roland TR505, £150 inc psu. Tel: (0663) 46775.

**YAMAHA EMT10**, £135; Roland D110, £395; Synthworks editor, £50. Tel: Wakefield (0924) 825804.

**YAMAHA FB01**, immac plus Atari editor, extra sounds, boxed, £140; Roland MKS7, £225. Vince, Tel: 01-690 8430.

**YAMAHA FB01**, exchange for Roland TR505 or £100. Tel: 01-204 7981.

**YAMAHA ME50** multi-keyboard plus pedals, Yamaha RX21, both £900 ono. Phil, Tel: (0705) 258181, eves/weekends.

**YAMAHA PF80** piano, full weighted keyboard, MIDI, £450; Kawai K1R, as new, £300. Tel: (0737) 351794, eves.

**YAMAHA PSR31**, absolutely mint cond, 50,000 accomp, built-in drums, £275 ono. Tel: 061-775 6445.

**YAMAHA PSS 680**, new, private sale, £125 ono. Tel: 061-980 6140.

**YAMAHA SK30**, exc cond, £275. Steve, Tel: Watford (0923) 227394, eves.

**YAMAHA TX7** plus Dr T's editor, Mastertracks Pro and other ST software, £260 or p/x plus my cash for Kawai K1M. Tel: 051-933 6368.

**YAMAHA TX81Z**, £199; Atari 1040ST, mono monitor, Dr T's KCS Level II, £499, all mint. Tel: (0424) 218711 (East Sussex).

**YAMAHA TX81Z** (2), £225 each; Akai S612, disk drive, plus 50 disks, £250. Tel: (0708) 28426.

**YAMAHA YS200**, mint, boxed with manuals plus stand, £550 ono. Andy, Tel: 01-981 6374, eves after 6.30.

## SAMPLING

**AKAI S612** plus drive, £150-worth of blank disks, £295; Peavey Bandit 65, £160. Tel: 061-445 9894.

**AKAI S612/MD280** plus dozens of disk sounds, £235; Alesis Midiverb I, £160. Gareth, Tel: (0248) 750418.

**AKAI S950**, £1099; Akai S612, £199; Casio MB10, £159; Yamaha TX81Z, £199; Casio FZ10M, £699; Quadriverb, £359; Ibanez SDR1000+, £329. Tel: (0782) 723101.

**AKAI S950**, 2mths old, hardly used,

including good extensive sound library, £1100. Tel: (0606) 883689.

**AKAI S950**, £900 ono; Akai MX73 kbd, £250; MC500II sequencer plus flightcase, £850. Tel: 021-704 1944.

**CASIO FZ1** with expansion, £800; FZ10M, £700; Kawai K1M, £299; DAT-2, £725. Tel: (0860) 558400.

**CASIO FZ1**, 2Meg, massive library; Fostex 160, Atari 520STFM plus monitor plus loads of games, £1600 ono. Martin, Tel: (0253) 868874, will deliver, will split.

**CASIO SK1**, mint cond, £30. Tel: (0525) 370514.

**EMULATOR II**, S900, D50, Kurzweil K1000, Atari 1040, monitor, Pro24, more, full details, Tel: 061-928 5037.

**ENSONIQ EPS**, mint, full library, still under guarantee, move abroad forces sale, £1400 ono. Tel: 041-357 2623.

**ENSONIQ MIRAGE**, flightcased, library, £425 ono. Tel: Bath (0225) 337118/44285.

**ENSONIQ MIRAGE** DSK1 with massive library, £680; Pro One, £100; Pro16, C64, £250; PC100, £50. Tel: (0225) 444285.

**ENSONIQ MIRAGE**, MASOS, disks, mint, £599; Oberheim Matrix 6R synth, amazing, mint, £499. Tel: 061-764 5267, eves.

**KORG DSS1** sampler/synth, mint, cond, 55 disks, stand, £1000. Chris, Tel: Stoke Newington 01-249-3903.

**OBERHEIM PROMMER**-MIDI sampler, various PROMs, £175 ono. Tel: Bournemouth (0202) 535150.

**ROLAND S10** plus £400 worth of disks, mint, £560. Tel: Burton (0283) 33458.

**ROLAND S10**, £300; TR626, £150; MMT8, £95; JBL L80T, £300. Tel: (0942) 492300.

**ROLAND S10** sampler plus large library of sample disks, £450 ono. Steve, Tel: (0252) 521902.

**ROLAND S50**, mint cond, still boxed, sound disks, £995. Chris, Tel: 01-660 6300.

**ROLAND S330** sampler, the standard by which others are measured, immac, boxed, manuals, as many sounds as your disks will hold, £900 ono. Tel: (0223) 464117 days, (0638) 720090 eves.

**ROLAND U110**, £449; VP70 voice processor, amazing machine, £449; CD-quality audio/video recorder, £275. Tel: (02576) 2609.

**ROLAND U110**, £499, as new; Roland JX3P synth, £250. Martin, Tel: (072 92) 2415, daytime, N Yorks.

**ROLAND U110**, £449; VP70 - 4 harmonisers to create instant chords, etc, plus pitch-to-MIDI, £449. Tel: (025 76) 2609.

**SEQUENTIAL PROPHET 2002** rack sampler and ST universal sample editor, offers? Paul, Tel: (0706) 50897.

**SWAP MY KORG DSS1** sampler, flightcase, for Roland D20 or sell £850. Tel: Gosport (0705) 520093.

## SEQUENCERS

**ALESIS MMT8**, £180, 2mths old, boxed,

as new. Matthew, Tel: (05827) 69724.

**ALESIS MMT8**, £150; Kahler Human Clock, syncs sequencers to live

performance, £299; Kawai K3M, £99. Tel: (0707) 55594.

**ALESIS MMT8**, £165; Casio MT6000 keyboard, £345; AKG BX5 reverb, £165 plus more. Tel: (0784) 431549.

**CASIO SZ1** MIDI sequencer with manual and psu, home use only, £75 ono inc p&p. Tel: (0232) 328417.

**KAWAI Q80** sequencer, perfect cond, 80,000 note storage, exc editing facilities, £430. Tel: 01-654 7707.

**KORG SQD1**, MT32, SixTrak, Akai AX80, Carsbro Hornet keyboard combo, cheap, or trade M1. Tel: (0224) 589821.

**ROLAND MC300**, absolutely as new, £450; Seiko M1000, £30, both boxed. Tel: Haverhill (0440) 707610.

**ROLAND MC300**, loads of software, £450; Tascam 234 with remote, £400, both exc cond. Tel: (0256) 50259.

**ROLAND MC500** sequencer, boxed, home use, £395. Tel: 01-394 1540.

**ROLAND MC202** with free Korg drum machine and sync lead, £100. Steve, Tel: (0387) 720133.

**ROLAND MC4B**, exc cond, £150. Steve, Tel: Watford (0923) 227394, eves.

**ROLAND PR100**, unused, 2 weeks old, unwanted gift, £320. Tel: Preston (0772) 727211.

**YAMAHA QX7**, vgc, £70. Tel: (0761) 32473.

**YAMAHA QX7**, £70 ono; ETI 4600 big synth, needs some attention, offers. Mike, Tel: (0446) 751150.

**YAMAHA QX21**, literally 90 minutes use before made redundant in upgrade, amazing value, £160. Tel: (0248) 750418.

**YAMAHA QX21**, £140; Yamaha RX21, £100; Casio CZ1000, £225, all mint, boxed, quick sale. Jaysen, Tel: (0323) 21274.

## DRUMS

**CASIO RZ1** sampling drum machine with sample tapes and manual, £150. Derek, Tel: (0536) 743242 (Northants).

**CHEAPO BARGAINS!** Boss DR220A, £80; Boss Bass Chorus, £45; Casio SK1, £30. Paul, Tel: Wigan (0942) 212178.

**E-MU SP12** sampling drum machine with disk drive and large library, £550. Sean, Tel: 01-902 3841.

**KAWAI R50** plus CP2 sound chip, 48 tunable drums for £250. Tel: (0621) 892552, eves.

**KORG DDD5**, £275; Yamaha QX21, £125, both as new. Tel: Upminster (040 22) 21703.

**ROLAND PADS**, 3, and PM16, exc cond, £250. David, Tel: 01-841 3439.

**ROLAND R8**, immac, £575 ono; Roland U110 sample player, £500; Roland S50 inc monitor (colour TV), sequencer software, flightcase, £1325 ono. Steve, Tel: (0429) 222517.

**ROLAND R8**, box and manual, 2mths old, £500; 90W Carsbro keyboard amp, perfect, £200; Simmons MTX9, 3 pads, box, manual, 2 double stands, £250. Tel: (0865) 721643.

**ROLAND TR505**, you know the score, ring me for more, an unbeatable £120. Tel: (0353) 666149 (Cambridgeshire).

**ROLAND TR505**, it's mint, unused, boxed, bargain at £130 for quick sale.

Tel: (0732) 354311, eves.

**ROLAND TR606** Drumatix, £70 ono, exc cond, boxed, Tel: Wigan (0942) 863413, after 6pm.

**ROLAND TR707** drums, boxed, manual, psu, mint cond, MIDI/DIN (run your Bassline with it), Tape sync, excellent sampled sounds, £200 ono, cheapest this issue. Tel: (03543) 5239, eves/weekends).

**ROLAND TR707** drums, £235; Tascam Porta One, £240 ono, all immac. Paul, Tel: Leeds (0532) 865197.

**ROLAND TR707**, boxed, manual, psu, £225; Roland TR727, boxed, manual, psu, £175. Tel: (0705) 384467.

**ROLAND TR808** drum machine, £240 ono, vgc. Tel: Banbury (0295) 56878, after 5pm or weekends (Oxon).

**ROLAND TR909**, vgc, £270 ono. Tel: (0926) 881053, eves.

**ROLAND TR727** Latin, great sounds plus memory cartridge, vgc, boxed, £145. Neil, Tel: Southampton 268523, eves.

**SIMMONS SDS7** brain, 10 dual/single modules, offers? Or swap for MIDLverb or similar. Tel: 01-883 2564.

**SIMMONS SDS9**, black, 5 pads, Pearl twin tom stands, exc cond, offers. Mike, Tel: 01-370 0217.

**SIMMONS SDS1000** kit, four small pads, bass pad, rack plus hi-hat, £550 ono. Tel: (0765) 86678.

**SIMMONS TMI**, SDS1, 6 pads (3 stereo), Simmons rack, Yamaha 150W amp, £800, exc cond. Tel: (0425) 619357.

**SOUND CHIPS** for Drumulator, Linn, Oberheim, Drumtraks and Simmons, disks for Roland S10. Tel: (0342) 323094.

**YAMAHA RX5** plus WRC 02, 03 waveform cartridges, £600; Alesis MIDLverb, as new, boxed, £150. Tel: (0908) 320297.

**YAMAHA RX5**, £475; E-Mu SP1200, £1175; Oberheim Matrix 1000, £350; Roland MKS20, £575. Tel: 01-462 6261.

**YAMAHA RX5** plus cartridge, 12 outs, mint cond, £425. Tel: 01-363 2346.

**YAMAHA RX5** plus ROM and RAM4 cartridge, home use only, £475. Tel: Blackpool (0253) 827485.

**YAMAHA RX11**, home use only, £160; Q-Lock 3-tier keyboard stand, pristine, never gigged, £40. Tel: 01-993 0786.

**YAMAHA RX11**, good cond, £150; TR606 Drumatix, £50 ono. Tel: Leicester (0533) 555718.

**YAMAHA RX15**, good cond, boxed with manual, £120. Nic, Tel: (0442) 215320 (Hemel Hempstead).

**YAMAHA RX17**, good cond, 26 brilliant sounds, only £165. John, Tel: (0925) 68668.

**YAMAHA RX21** digital rhythm programmer, soft case inclusive, exc cond, £100. Tel: (0274) 597593.

**YAMAHA RX21** including psu and plug, £100. Tel: 021-430 8980.

**YAMAHA RX21** drum machine, £100; Yamaha EMT10 expander, as new, £200 ono. Tel: (0438) 724071, eves.

**YAMAHA RX21L** latin drum machine, superb sounds, boxed, manuals, immac, £80 inc p&p. Mark, Tel: (0663) 43388.

## COMPUTING

**AMSTRAD 6128**, colour, EMR 8-track sequencer, £500+ worth of software, ideal beginners setup, £300 ono. Em, Tel: 01-309 1397.

**ATARI**, SM125, 2nd drive, Pro24 V3, KCS Level II, other software, offers. Steve, Tel: 01-301 0777 (home).

**ATARI STF**, SM125, 2nd drive, KCS Level II, Pro24II, utils, etc, offers. Steve, Tel: 01-301 0777, eves.

**ATARI 520STFM**, SM124, EZ-track, EZ-score, CZ-Android and CZ5000, boxed with manuals, £700 ono. Tel: Sheffield (0742) 424499.

**ATARI 520STFM**, boxed with mouse and manuals, etc, as new, £230. Tel: Coventry (0203) 680677, eves only.

**ATARI 1040ST**, boxed with £720 worth of games, design/animation software and accessories, £430. Tel: (0245) 72323.

**ATARI 1040 STF**, monitor plus Pro24 VIII with updates, £625; Bill, Tel: 061-928 5946.

**ATARI 1040STF**, hi-res mono monitor, Hybrid Arts MIDI Track, latest version, £550. Jim, Tel: (0505) 31629.

**BBC B**, UMusic UMI 3S sequencer, disk drive, excellent MIDI system driver, £250; JX3P, £250. Andrew, Tel: (0242) 514737.

**BBC B**, drive, monitor. Choice of machines/DFS, disk drives/monitors (inc Zenith, Philips, Cub colour), various ROMs. Offers from £250. Bob Ames, City University, Tel: 01-253 4399 X3275/ (0487) 814227, eves/weekends.

**CHEETAH SPECTRUM** for ZX Spectrum plus Electro, Latin and Afro cassettes, £20. Tel: Leeds (0532) 866848.

**COMMODORE C64** computer, Oceanic slimline disk drive, 60 disks, games, backup cartridge, £200. Mark, Tel: (0663) 43388.

**DR T'S KCS** sequencer, £150 ono; Sound Quest MT32 editor, £60 ono, both for Amiga. Clyde, Tel: 01-870 0908.

**DX7 EDITING** using Yamaha's own system. Computer, module and cartridge, £75; 80 S10 quickdisks, £75. Tel: Exeter 213385.

**HYBRID ARTS** EZ-Track Plus, £30; EZ-Score, £65 for Atari ST. Tel: 01-991 1191, eves.

**MIDI STUDIO**: Spectrum+ with disk, sequencer, sampler, tapesync, etc, £165; Casio SK1 sampler, £45. Tel: (0761) 221632.

**SPECTRUM 48K** MIDI interface, real and step time sequencers, games, boxed, £100. Tel: (0253) 593791.

**SPECTRUM 128+3** (disk drive) with disks, £100. Derek, Tel: (0450) 75081.

**STEINBERG PRO16** with CBM64, disk drive, C2N and loads of games, £230. Tel: (0908) 664580.

**STEINBERG PRO16**, editor, CBM64, 1541 drive, Commodore colour monitor, various music software. Tel: 01-471 9501.

**STEINBERG TWELVE**, now Pro24 owner, £50. Tel: (0603) 860024 eves, (0603) 760426 9-5.

**UMI 2B** (Series 5 upgrade) 16-track sequencer for BBC micro, £195.

Richard, Tel: (0271) 65754.

**UMI 2B** 16-track sequencer plus BBC B computer, full micro-editing facilities, DX7 librarian, £300 ono. Tel: 01-223 4210.

**XRI INTERFACE**, step and real time sequencers, Yamaha DX, Casio CZ editors, £50 ono. Rich, Tel: (0482) 802590.

**YAMAHA CX5** 8-track MIDI sequencer, hardly used, £200. Gareth, Tel: (0702) 711888.

**YAMAHA CX5M**, large keyboard, voice editor and composer cartridges, manuals, perfect, £150. Tel: 051-644 0205 (Merseyside).

**YAMAHA CX5MII**, large keyboard, voicing, composer, MIDI recorder, graphics, £180; FB01, £110. Tel: (0273) 463328.

## RECORDING

**ACOUSTIC ENERGY** nearfields plus Rauch amp, £799; Roland S50 plus disks, £1200; M80, flightcased, £1100. Tel: 01-542 3335/(0267) 83600.

**AKAI 4000DSII** reel-to-reel tape recorders, several in good condition. Jonathan, Tel: (0905) 56250.

**AKG C410** headset microphone plus B18 phantom power, mint, £100; Korg micropreset synth, £35. Gareth, Tel: (0952) 79447.

**ALESIS MICROVERB II**, as new, £95. Tel: Faringdon (0367) 20732.

**ALESIS MICROVERB**, £85; Roland TR606, £65; GBS reverb, needs attention, £20. Steve, Tel: (0642) 590477 (Middlesbrough).

**ALTEC SPEAKERS**, 1kW, 3-way system, 2X bass bins, mids, horns, £450. Tel: (045 382) 2013.

**ART PROVERB**, exc cond, £175. Tel: 01-281 1918.

**BOSS KM60**, £125; Accessit stereo reverb, £20; Ibanez stereo chorus, £35. Steve, Tel: Watford 227394, eves.

**BOSS RCL10** compressor, RDD10 digital delay, SD1 distortion pedal, offers, will split. Dave, Tel: (0639) 843372.

**CLASSIC REVERB**: EMT plate type 140, amp type 162 to the highest bidder (guide price £400). Bob, Tel: 01-253 4399, X3275 or (0487) 814227, eves.

**DYNAMIX 16:2 MIXER**, vgc, silent faders, 2 auxiliaries, low and high inputs, quiet, £250. Steve, Tel: (0344) 428679.

**FOSTEX A8**, home use, calibrated, boxed, £775; Alesis MIDLVerb, immac, boxed, £165. Tel: (0203) 502030.

**FOSTEX B16**, 2<sup>1</sup>/<sub>2</sub> yrs old, serviced, new heads, £2000. Tel: (07462) 2971 (Shropshire).

**FOSTEX E16**, latest model, only 2mths old, including remote and stand, home use only, £3295. Paul White, Tel: Malvern (0684) 561397 (Midlands).

**FOSTEX M80**, boxed, new head fitted, £900. Chris, Tel: (0206) 572206.

**FOSTEX M80**, 6hrs use, mint cond, twin metal spools, £695 for quick sale. Tel: 021-459 4944.

**FOSTEX R8**, Seck 12:8:2, SMPTE unit, remote extension loom, 3mths old, £1795 ono. Tel: (0296) 85325.

**IBANEZ DM1000** digital delay/sampler, 1 sec, flanges, chorus, etc, vgc, only

£150. Steve, Tel: (0344) 428679.

**IBANEZ UE405** multi-effects unit, 4 effects at once! £150; Roland TR505, £130. Tel: (0533) 849368.

**KLARK-TEKNIK DN34**, £350 ono; Logic DM101 deck, £300 ono; Akai MB76 mix-bay, £250 ono; Moog amp, £300 ono. Tel: 021-420 3295, eves.

**MAGNUM 12:2 MIXER**, old and tatty but works, hence £65 or swaps. Paul, Tel: (0772) 39124.

**MCI 8-TRACK 1"**, 3-speed, console type (just serviced by Sony MCI), £2500, inc full remote control, variable speed spooling, etc. Bob, Tel: 01-253 4399, X3275 or (0487) 814227, eves.

**MTR 6:4:2** mixer, mint, £200 ono; Boss Playbus headphone amp, effects, mike, £80. Tel: Q91-273 3351.

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**YAMAHA MT100** 4-track, twin speed, dbx, etc, £250; Kawai K1/K5 memory cards, £40 each. Tel: (0934) 614303.

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**SPECTRUM MUSIC MACHINE** and any software wanted for same. John, Tel: (0970) 828178.

**STUDIOMASTER PROLINE** or Mixdown 16:8:16:2 or 16:4:8:2 (similar). Nick, Tel: (0548) 531334.

**SWAP YAMAHA PSS680** music station for Casio SK2100. Dave, Tel: (0322) 29822.

**WANTED: MD8 DCB-TO-MIDI** converter, well urgent. Chris, Tel: (0252) 512781, eves.

**YAMAHA DX7IIS** owners, want to swap new synth voices? Ed, Tel: Runcorn 65816.

**YAMAHA RX5** pattern book, original or photocopy. Gareth, Tel: (0702) 711888.

**YAMAHA SK50D** with bass pedals, condition immaterial. Tel: (03543) 5239, eves or weekends.

**YAMAHA TX7** in good cond. Dennis, Tel: (0923) 31866 (Watford).

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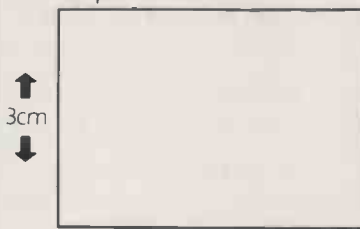
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