Ausic Technology THE WORLD'S PREMIER HI-TECH MUSIC MAGAZINE

December 1990 £1.60



ON TEST

Steinberg Midex + Cubase Expander

Miditemp MP44 Midi Data Recorder

Climax Collection Sample CD Passport Trax Software Celestion SR Monitors Track Ball Round-up

> WIN pc software

STEREO MCs sampling - naturally

ROLAND SPD8 the octapad speaks

Roland SPD-8

ORIENTIAL INTRIGUE tascam - past & future



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COMMENT

Once a recording studio was a large room lined with futuristic acoustic tiles and filled with impressive equipment; now it could be the corner of a bedroom - it's all a matter of size.

NEWSDESK

Forget the Gulf, forget the ERM, forget Polly Peck - possibly the only place in the world today where you're certain to hear only good news is MT's Newsdesk. Read and smile.

COMMUNIQUE

Samplers that dissect sound and the misrepresentation of acoustic instruments feature in this month's readers letters page - if you've got a problem or an opinion on music or hitechnology, this is your soap box.

COMPETITION



Long castigated in musicians' circles, the IBM PC is now making good. And in recognition of its new-found popularity, a selection of PC software and hardware is this month's competition prize.

READERS' ADS

It may not be Sotheby's, it may not be Birmingham's Rag Market, but if you're buying or selling hi-tech musical gear or services, MT's Reader's Ads are the only serious choice.

Appraisal

CELESTION SR1/SR3

Looking for a high-quality, lightweight live monitor system for your keyboard rig? Ian Sherwood discovers Celestion's SR series knocks out the watts.

PASSPORT TRAX

This cost-effective sequencing package from Passport comes ready to run on all the popular music computers. Ian Waugh checks out the newest relative in the MasterTracks family.

ROLAND SPD8

On the trail of Roland's successful Octapads comes the SPD8 - a MIDI percussion controller with a neat line in onboard sounds. Simon Trask says beat it.

TRACK BALL ROUND-UP

When you entrust your music to the sophistication of a computer and software, you may find yourself needing something more reliable than a mouse to control it. Vic Lennard has the balls - track balls.





VOLUME 5 NUMBER 1 DECEMBER 1990

MIDITEMP MP44

Latest in the emerging trend of MIDI data recorders is MIDItemp's MIDI Player - a composite 64-track sequencer, MIDI processor and patching matrix. Vic Lennard takes on a temp.

STEINBERG MIDEX+

Integration is the name of the game with Steinberg's Midex - a single unit combining a software key expander and a SMPTE synchroniser for the Atari ST. Nigel Lord even likes the colour.

BOAR

JASON REBELLO

Music

STEREO MCs

Trask elevates his mind.



The release of Jason Rebello's first LP shows him to be more than the tasteful performer the jazz circuit already recognises. Simon Trask talks to one of Britain's leading jazz keyboardsmen.

ingenuity and talent used to wring the most

out of a minimum of equipment. Simon

ROLAND KERRIDGE In keeping with the ideals of the hip hop Once he prayed to the beat behind Re-flex. movement, the Stereo MCs new LP sees

Studio

he's since become versed in high technology and worked with artists as diverse as Kate Bush and Mory Kante, Ollie Crooke talks to a rhythm programmer extraordinaire.

PATCHWORK

An unusual selection of vocals from the Masterbits Climax Collection sample CD and a bargain collection for TX81Z/DX100 from Emis are the sounds featured in this month's Patchwork.

Technology

ON THE BEAT

Slow, slow, quick, quick, slow - getting away from the 120bpm machine gun, Nigel Lord concentrates on those downtempo numbers in MT's regular drum programming series.

ORIENTAL INTRIGUE

Already assured their place in history for inventing the Portastudio, Tascam have also given us a one-inch 24-track machine and now the "Midistudio". Tim Goodyer visits Japan to find out more about this revolutionary company.

DAVE SMITH



In the second part of this exclusive MT interview, the man behind the Prophet 5 and MIDI discusses MIDI, user interfaces and programming. Simon Trask listens in on the thoughts of Korg's R&D.

ONE SIZE FITS ALL

SIZE ISN'T EVERYTHING, I'm sure you'll agree. In fact, there are many occasions when a substantial lack of size is a substantial asset.

orial

Turning our attention to the inexorable march of technological progress, it's generally agreed that its greatest single benefit to us impoverished musicians has been that of "more for less" - that is, more facilities for less cash. While this is undoubtedly an important factor when it comes to the ways in which technological advances have affected the working environment of the musician, there is another, less well-recognised spin-off whose effect has been almost as important. You've guessed it - space.

So why is space such a big deal? We all know microchip technology allows designers to get a lot of electronics into a small box these days, but does this offer us anything more than convenience? I think it does.

Before we consider the implications of space saving, let's take a look at what we can do with some of today's gear. Let's see how close we can get to setting up a small MIDI studio in a 19" rack. Better still, we'll try to keep every unit down to a single rack unit high.

First of all we'll need some sound-generating modules. What about a Kawai K1r and an E-mu Proteus for "modern" sounds, a Cheetah MS6 for a few old analogue tones, a Roland S330 (or Cheetah SX16 if we're strapped for cash as well as space) for samples and a Roland R8M for the drums. A 1U-high mixer would present us with a bit of a problem if it wasn't for Simmons old SPM8:2. Signal processing is easy - an Alesis Quadraverb or ART Multiverb III, say, while MIDI patching and merging could be entrusted to Audio Architecture's Function Junction. Now there's the small matter of sequencing to arrange. Tricky this one, as most sequencers take the form of software for a computer (computers can be racked up, but not in one "U" of rack space) or stand-alone units like Roland's MC500 or Alesis' MMT8. But if, in the interests of this exercise, we accept limited sequencing facilities, we could entrust the task to a MIDI data recorder such as the Alesis Datadisk or Elka CR99.

We could argue about the choice of specific units, but that just about covers what we set out to achieve in around eight units of rack space. The greatest failings of this "solution" are the lack of a keyboard (don't even think about it) and the inconvenience of working with the SPM8:2. Neither can we master a piece of music to any unit currently in the rack or monitor on anything other than headphones. Relaxing our 1U height rule, however, would allow us to bring in a DAT machine for mastering and even a multitrack cassette unit for the addition of acoustic sounds and tape multitracking. But even with the addition of a keyboard, tape recorders and a flat-bed desk, we're looking at a powerful music-making system that would fit into the majority of bedrooms.

So what have we achieved? Well, just that reallyfitted a facility that will allow you or I to use quite sophisticated methods of making music into a space that would previously have prevented us from doing so. Another practical hurdle has been removed from the path of making music. And the effects of that on the music being made shouldn't be under-estimated. The next time you hear a pro musician talking about "pre-production done in a home studio" he or she may be talking about a soundproofed room filled with racks of gear and a 40-input desk. On the other hand... Tg

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THE BLACKOUT

Readers attempting to take advantage of the reply form on last month's Metra Sound advertisement will have found themselves in need of that rarest of stationery items, the white ballpoint pen. Whilst the pioneering amongst you may have tried to fill in the form using Tippex, we'd like to point out that Metra Sound are more than happy to receive your enquiries on ordinary notepaper, fag-packets, beermats and so on.

Metra Sound have also sent us news of the addition of several new

Seeing is believing

It never rains, but it pours - after a distinct paucity of news from the venerable Digisound, we've had tidings of new products from them for two months on the trot. Last month's offering was their new MIDI/CV converter; this month, we've news of the Datastream MIDI Viewport, a hand-held unit which accepts MIDI input and gives a readout of whatever data is received in plain English. The LCD display shows any information in the last 64 bytes received in both hex and decimal formats. Everything is clearly shown and you can scroll back and forth through the received information simply using two buttons. Both In and Thru ports are provided, with all MIDI data passed through unaffected. The Thru port functions only as an Out port when the unit is being used as a cable tester, in which case the LCD will read "Cable Tests OK" with a functioning MIDI lead attached at both ends. The unit will also transmit middle C (C3) on all channels when required, as an aid to checking equipment. It's battery-powered for portability and has an auto-off function when not in use.

and sampler software. New ranges

include sampling CDs (Drums and

Percussion, Orchestral Strings and

Sound Effects being the first three, with more to follow), ROMs and

RAMs for the Yamaha SY77 and

SY22, Korg M3R, Waldorf

Microwave, Ensonig VFX and many

more keyboards and samplers.

Atari-based software is available for

the Lexicon LXP1 digital reverb as

well as a number of useful utilities.

More info on any of the above from

Metrasound on 081-888 4272. Tg

More information on the MIDI Viewport and any other Digisound equipment from Tim Higham, Digisound, 16 Lauriston Road, Wimbledon, London SW19 4TQ. Tel: 081-946 0467. **Dp**

BEATS UNIVERSAL

How about having, at your immediate disposal, the sounds and character of almost every notable drum machine of the past decade? The ability to pick and choose from scores of drum sounds until you come across the one you really need to fit that track? How about paying £29.95 for just that?

Patchworks' new Mega Beats sampling CD offers digitally mastered sounds from over 30 drum machines, including Roland's TR808, 909, 606, 505, 707, 626, 727, R8, Yamaha's RX5, RX11 and RX21L, Korg's DD1, KPR77, DDM110 and DDM220, Boss' DR550, DR110, DR55, Alesis' HR16 and 16B, the Simmons kit, Kawai's R100 and R50e, Akai's XR10 and XE8, Casio's RZ1, the Linn 9000 and Linn 2, Sequential Tom, Oberheim DMX, E-mu Drumulator and Dr Bohm Digital drums. All recording is done to a high standard for your own sampling use.

For details and sales, contact Patchworks on (0424) 436674. Dp

TCMID

Yet more proof that MIDI gets everywhere, this month from Danish company TC Electronic, who have just implemented a software enhancement to their TC1128 graphic equaliser/spectrum analyser which allows real-time control over MIDI using MIDI controller commands. Several maior sequencer programs allow full SMPTE synchronisation of graphic equaliser adjustments, including programs from Steinberg, Mark of the Unicorn and Opcode.

Programming continuously variable EQ changes into a mix can allow you to add interesting textures to your music - for example, bass frequencies could be boosted on a vocal during quiet parts, mid frequencies of instruments could be reduced during vocal passages for improved intelligibility, and so on.

The TC1128 is also now capable of full volume control over MIDI. Sequencer automation of the audio volume level from the front panel gain setting (±12dB) to full mute is now possible.

The unit offers 10Hz-100kHz bandwidth, 100dB dynamic range, balanced XLR audio in/out, low cut/high cut filters, bypass relay and 100 presets. Option include PC control software, footswitch control, pink noise room alignment, SMPTE time code, video monitor output and motor fader remote control.

Contact TC Electronic UK, 24 Church Street, Oswestry SY11 2SP, Tel: (0691) 658550, for further information. **Dp**

WINNER CHEETS



In spite of numerous offers from MT's staff and contributors to be the lucky "winner" of the Cheetah MS6 expander, the editor did the decent thing and picked out a solitary postcard from the many correct entries received.

The MS6 was the featured prize in one of MT's regular exclusive competitions, and proved to be one of the most popular to date. Sadly, Cheetah's Bob Pearson was unable to make the presentation personally, so the honour fell to MT's debonair supremo, Tim Goodyer, instead. On the receiving end of the deal was Sheffield's Craig Booker. Craig performed his part of the ceremony admirably, persuading the reluctant editorial staff to participate in sampling some of the local ale after the usual celebratory lunch. (He even paid for one of the rounds.)

Upon his return to his native Sheffield, Craig promises to put the MS6 to use in the rather unconventional setting of his traditional music ensemble. The expander can expect to find itself keeping the company of traditional English folk instruments as well as Craig's Ensoniq Mirage.

All that remains is to thank Bob Pearson at Cheetah for his generosity, Craig for his enthusiasm and The Minster tavern for liquid refreshment. **Dp**

WHAT WAUGHO WROTE NEXT

Star of stage, MT and the occasional bookshelf, MT contributor lan Waugh, has recently expanded his literary horizons. The intrepid Waugh, as he likes to be known, has recently moved into the trivia game with a book called *Film & TV Puzzles*. Having little or no relevance to the hi-tech music scene, *Film & TV Puzzles* doesn't really warrant inclusion in MT's

over-subscribed news pages, but we thought we'd mention it anyway. I make that three pints of best, Waugho.

Film & TV Puzzles is published by Mensa Publications Ltd, Mensa House, St John's Square, Wolverhampton WV2 4AH, price £3.95. It is available post-free direct from the publisher or from bookshops. Tg

Inspired thinking

If the thriving PC Music software market needed any further encouragement, then this is it: Digital Music, one of the UK's leading PC MIDI distributors, are celebrating the UK launch of the Inspire sequencing package by offering it for the very special price of £10, when you buy their Music Ouest PC MIDI Card.

The cost of the Music Quest Interface alone is £139, but for a limited period, you can purchase it with the Inspire 64-track sequencer for £149 including VAT. After the launch period, Inspire will revert to its usual price of £79.95.

Inspire is an entry-level patternbased or linear PC MIDI sequencer offering 64 tracks, variable resolution from 48-192ppqn, graphic editing and a Song List Juke Box facility ideal for live performance. Inspire also offers on-line Help, FSK tape sync, SMF and MIDI song pointer support. When purchased together, the Inspire/ Music Quest package, known as The Bundle, will also carry a money-back guarantee and a free subscription to the Music Network. At normal RRP, the package would cost £244.

Digital Music are also pleased to announce that they have been appointed the exclusive UK and Eire distributors for the Musicator PC MIDI program.

Musicator is an integrated sequencer and score printing package with a difference - music is always shown in standard notation format and not as numbers and/or graphics as often used in other packages.

Features include Step recording from a MIDI keyboard straight into Musical Notation, part extraction and editing, editing of all MIDI controller data with level adjust, compression and expansion and full support of tape sync, song position pointer and standard MIDI files. All commands are in drop-down menus with userdefinable parameters and setups, assisted by pop-up windows and dialogue boxes.

Musicator runs on all IBM PC/XT/ATs and compatibles with a minimum of 640K RAM and an MPU401 or compatible MIDI interface. Graphics modes supported include Hercules, 256K EGA or VGA (recommended). Printed output is via Epson/IBM 9- and 24pin printers and compatibles, plus PostScript with Adobe Sonata music font.

The program is available now from Digital Music at £450 including VAT.

Also new from Digital Music is Genesis, a new 64-track sequencer that makes full use of the Microsoft Windows operating environment. The program offers colour graphics, dropdown menus, dialogue boxes and specialised windows, as well as many other features. Almost all of the sequencer's controls can be used in real time, and it is possible to play back a looped section, edit notes and events and hear the result immediately without having to stop and restart. Step editing features a mouse-controlled 'piano-roll' which also provides direct access to all MIDI events at selected MIDI times. Event list editing is made easier, according to Digital Music, because MIDI messages are displayed in English wherever possible. Genesis offers numerous other features, is British designed and is available from Digital Music at £175 including VAT. UK and overseas dealer enquiries are welcome.

More information on the above from Digital Music at 27 Leven Close, Chandlers Ford, Hants S05 3SH. Tel: (0703) 252131. Fax: (0703) 270405. **Dp**

U GOT THE COURSE

It seems that in these times of rapidly-multiplying courses to tell you how to do just about everything, there's no excuse for not knowing how to program, sequence, play, record, sing, make the tea. . . The latest new course to come to our attention is Desire Productions' series of one-day workshops on modern studio techniques aimed mainly at the Dance/Remix side of pop music. Anyone can attend, and through the course of the day, a modern dance track will be put together and participants will be taken clearly and simply through sequencing, sampling, mixing and recording using the Akai DD1000 and Digidesign Sound Tools running on a Mac Ilfx. The price for the course is £49 plus VAT and includes an information pack on the day's event and lunch.

There will be no more than four people on any one workshop, and three workshops are available to choose from:

First is the original one-day course, in which a track is put together simply and clearly, covering seven main areas: what is and what can we do with MIDI; sequencers - why do we use them; the use and abuse of sampling; synthesisers - choosing sounds; mixing - including the use of effects; analogue and digital recording; hard disk recording.

The second course covers the above areas in more detail. Anyone who is familiar with the basics of the modern studio and would like to know more than the basic course can teach could use this course.

The third workshop covers just three areas: sampling, hard disk recording, and editing and remixing using a hard disk recorder.

The courses will take place at Desire Productions' studio in Muswell Hill, London, and equipment available in the studio includes Akai DD1000, Mac Ilfx running Sound Tools with 1hr stereo hard disk recording time, Tascam half-inch 8-track, Tascam and Sony DAT recorders, Vision and Cubase sequencing software, Soundcraft Delta 40-input mixing console, Akai S950 and S1100 samplers, Yamaha SY77 and TG77 synths, Roland D550 and JX8P synths, Korg M1R and Wavestation synths. . . need I go on?

Contact Desire Productions on 081-883 2722, Fax: 081-883 5665 for more information. *Dp*

CHRISTMAS IS COMING. .

News from Sound Technology includes the launch of the Ensonig EPS-16 Plus sampling workstation with effects. The EPS-16 scores over its predecessor with true 16-bit sampling, 24-bit effects processing and an upgraded sequencer. Ensonig also include an optional user-programmable memory expan-sion called Flashbank. This allows sounds to be ready to play without loading them from disk. The upgraded sequencer comes with complete edit and MIDI-automated mixdown capabilities, and effects available onboard the EPS-16 include reverb, chorusing, flanging, phase shifting, delay and distortion. The keyboard version of the EPS-16 is available now at the retail price of £1795, with the rackmounting EPS-16R Plus (additional memory and more outputs) expected to arrive soon at a cost of £1825.

Neither have Alesis been idle, with

E R R A Readers should note that the correct address for Stiletto Sound Systems is 15 Galloway Street, Dumfries DG2

the new SR16 drum machine now available. This compact machine offers 150 stereo samples with 200 preset and user patterns with fill variations. The SR16 also features dynamic voice allocation to avoid the machine-gun effect, and Dynamic Articulation, which incorporates timbral changes into drum sounds as they are played at different values. The SR16 will retail at £299 including VAT.

Other items on offer from Alesis include the new MEQ230 Dual 30band graphic equaliser, available now at £199, the RA-100 100W per channel power amplifier at £299, and the 3630 compressor at £249, both coming soon.

More info from Sound Technology at 15 Letchworth Point, Letchworth, Herts SG6 1ND. Tel: (0462) 480000. *Dp*

7TL. (Tel: (0387) 50748), and that the correct telephone number for Digisound is 081-946 0467.

A

T

ommunique

pedal power

I have enjoyed reading your excellent magazine for several years now, and I particularly like the reviews of new synthesisers. But one aspect of the various keyboards and synthesiser modules that I have not seen described is how they respond to the sustain pedal.

I don't know of any synthesisers that support the pianist's technique of half pedalling or the use of the sostenuto pedal to sustain notes whose keys have been released. Some dedicated electronic pianos - the Yamaha Clavinova, for example - do, however, respond to half pedalling.

Whilst most master keyboards will send the sostenuto on/off MIDI messages given a second pedal, I suspect that in most cases these master keyboards will be plugged into a synthesiser module incapable of responding to such messages.

Perhaps the synth designers consider half pedalling and sostenuto pedalling to be too specific to one instrument - the piano - to bother with implementing them. I would be interested to learn of any synthesiser or piano modules that support these pedalling techniques. What is your opinion on the matter?

Nicholas S J Willis Macclesfield Cheshire

My opinion is that you would indeed be interested to learn of any synthesiser or piano modules supporting half pedalling or sostenuto pedalling - otherwise you wouldn't have gone to the trouble of writing to us about it.

Perhaps a more useful answer is to point you towards last month's issue of MT and the new E-mu Proformance piano modules. If you check out Simon Trask's review, you'll find that these units (the Proformance/1 and the Pro-formance/1+) will respond to sustain pedal, sostenuto pedal and soft pedal information over MIDI. They also happen to give an excellent representation of a variety of acoustic pianos (and, in the case of the 1+, electric pianos, electric organs, vibes and basses). E-mu's decision to implement these controllers is obviously due to the "dedicated" nature of the units. Presumably, the more flexible nature of most synths and expanders - as well as their usual inability to produce anything too special in the piano department makes such specialised controllers of limited importance.

I must take this opportunity to endorse your attention to the subject, however, as the electronic representation of any instrument particularly one so well served by its expressive sound character, wealth of playing techniques and versatility of musical application - should not be made to sacrifice any desirable aspect of its nature. **Tg**

breakdown service

Could you please tell me which keyboard sampler I could buy that will break down a sound?

Say I want to sample a record and use only the bassline, but it has a vocal and keyboard part over it - I need to be able to get rid of the vocal and keyboard part. What I need is a sampler that allows me to sample the record, pull the sound apart and use only the bassline - or vocal or keyboard part.

Also, as I've just spent a lot of money on equipment, it would be nice if it didn't cost too much. Alan McKinlay

Newcastle

The simple answer to your query, Alan, is that the instrument of your imagination doesn't exist. Although a sampler will allow you to record sound in a digital form, and so have considerable power to edit it, it will not allow you to discriminate between instruments and discard any you don't need.

A form of what you're talking about

is presently in use, but not to the ends you have in mind - I'm referring to the rather elaborate processes offered commercially by systems like CEDAR and NoNoise, which are used to "clean up" old or damaged recordings entirely in the digital domain. These systems require considerable computing power to function and, of course, cost a lot of money.

To achieve what you want in practical terms, you're going to have to use filters to cut away sections of the frequency spectrum you don't want. Let's take a simple example: you have a bass drum part and a soprano vocal in a piece of music, and you want to sample the bass drum part. If you filter out the top of the signal, with a graphic equaliser for example, you will be left with the bass drum. Alternatively you could filter out the low frequencies and be left with the vocal, if this is what you require. This rather severe equalisation could be performed either as you make your sample or as it's replayed from the sampler. In practice, however, the musical parts you'll want to unravel aren't this distinct. But that's not to say it can't be done.

If we take the example of the bass drum and vocal again, but this time consider it to be a male vocal in a much lower register, it may not be possible to eliminate the drum without damaging the vocal too. But it's almost certain that the application you have in mind for the vocal will be running at the same tempo. If this is the case you may well be able to subdue the bass drum to the extent that it doesn't interfere with your new drum part, and is actually masked by the sounds in your new mix. This practice is adopted by remixers - often when they have to work from vinyl instead of the multitrack masters.

What you will have to research more thoroughly is equalisers and their uses - sweep EQ, graphic EQ, parametric EQ and so on - as there isn't space here to go into it. The other problem you're now confronted by is that you need to buy equalisers as well as a sampler. Who said sampling was a shortcut to making music? **Tg**

dj question time

Having read your excellent review of the Ensoniq SQ1 in October's issue, I knew you would be the best people to help me. I am a DJ with my own turntables, and I want to expand into using synths, samplers and so on.

A Roland S10, at about £400 secondhand, is in my price range, and I was wondering if it would be a wise purchase. I want to sample drum breaks and sections of records, does the S10 have adequate sample time? A friend has a Kawai K1r, will I be able to play it from the S10?

Also I've seen several Kawai Q80 sequencers for £350-400 secondhand. Could you tell me whether this would be a good buy or would it be better to have an Atari ST and software?

I would be grateful for any help you can give me.

N Blenkinsopp Co Durham

First question first: the S10 is a 12-bit machine with a 30kHz bandwidth and four banks of 1.1 seconds sample time. In English this means that it sounds good enough for what you want and, as the sample banks can be added together to give you a single 4.4 second sample, you'll be able to get a two-bar sample from a record running at 120bpm, for example. If you've any reservations, Norman Cook used one for much of his pre-Atari/Creator work.

Easiest question second: yes, the S10 will allow you to play the K1r over MIDI.

And finally: only you can decide whether a computer is a better bet than a hardware sequencer (it may cost more, require a longer learning period and will be less reliable if you want to gig but it offers more power and flexibility) but I wouldn't necessarily recommend the Q80. If it's hardware you want, check out a

CLAB



For thousands of successful musicians, arrangers and producers C-Lab is the heart of their system, providing the ultimate in 64-track MIDI recording and music-scoring software for the Atari ST computer. Whether you choose Creator or Notator you can start recording, arranging and editing your music immediately. C-Lab software and its great hardware peripherals, allow you the total control and creative freedom which is so important in making great music.

Simple to use but with the power to run up to 96 different MIDI channels on up to 6 separate outputs, you will never be limited by the C-Lab System and, with the high recording resolution of 1/1536th notes, Creator and Notator will always faithfully reproduce your performance.

Notator provides all the features of Creator plus realtime notation editing and professional score writing – all in one program.

program. C-Lab's famous-Priority Multitasking now extends to include Softlink, an environment which can allow up to 8

other programs of virtually any make to run interactively with Creator or Notator.

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brief

CELESTION SR1/SRC1 & SR3/SRC3 MONITOR SYSTEM

ANYONE FAMILIAR WITH the world of loudspeakers is certain to be familiar with the name Celestion. Star of hi-fi, studio and stage for more years than most care to remember, Celestion have a reputation for getting the job done without grabbing too much attention. So it is with Celestion's current SR (Sound Reinforcement) PA series - quality live sound without the hype. And while PA systems lie outside MT's usual coverage, the flexibility of the SR range makes it ideal for onstage keyboard monitoring. Getting more specific, I recently field-tested two pairs of SR cabinets - SR1s and SR3s - along with their "controller" units - SRC1 and SRC3 - to see how they performed.

The first thing I learnt was that the SR cabinets are designed to work in pairs along with a dedicated control unit. This unit sits between the



power amp and the speakers protecting them from any amplification excesses and allowing them to be driven harder than would otherwise be advisable. In this way, it's possible to get away with a lower-rated system than a particular situation would otherwise demand. The second thing I learnt was that the modest 8" drivers that occupy the SR cabinets are specially designed for the purpose. Nothing if not thorough, Celestion.

So, armed with SR1 and SR3 speakers and their control units, I faced several 500-strong audiences and the rest of my band (drummer, bassist, guitarist and vocalist). Somehow I wanted to hear myself as well as 504 other people.

Taking the lower-rated system first, I took a stereo feed from my keyboard mixer (additional to the one feeding the 2 kilowatt FOH PA) into a C Audio RA2000 amp and into the SR3s via the SRC3. Theoretically this gave me 290 watts/channel from the amp into two 150 watt speakers. What I got for my trouble was a crystal clear monitoring system that might have suited a more peaceful monitoring environment than mine (adjacent to a 300w Peavey bass rig). It might even serve as a full PA for a low-key acoustic band, but it really wasn't up to the row we produce onstage.

Substituting a pair of SR1 cabinets for the SR3s, an SRC1 controller for the SRC3, and an RA3000 (400 watt/channel) amp, however,

changed things entirely. With the SR3s' single SR driver replaced by the SR1s' two, the resulting 500 watt/cabinet power handling allowed me to cut my way through the onstage cacophony with surgical precision. Where Celestion offer an SR2 Sub-bass unit for PA applications, the SR1s alone provided an ideal balance of volume and clarity for serious keyboard monitoring. All the features of keyboard sounds (except deep bass, which finds its way back from the front-of-house PA) are well represented - bright pianos, icy digital synths, analogue filter sweeps.

. Much of the bass was reproduced too, although there's obviously a limit to what 8" drivers can do (Celestion claim 50Hz-20kHz for the SR1s and 60Hz-20kHz for the SR3s). I can only describe the clarity as perfectly-suited to keyboard applications.

What also became clear was the importance of driving the cabinets hard. This is made posible by the SRC unit which allows you to use an amplifier too highly rated itsfor the speakers, leaving the SRC controllers to protect the drivers - Celestion claim the SRC units make the cabinets "virtually indestructible". The SRC1 is actually an equaliser and thermal cutout that also filters out any low-frequency transients that would otherwise damage the drivers. I testify that it works. The SRC3 - intended for use with the SR3s at lower sound levels is only an equaliser, and so precludes the ability to drive the cabinets quite so hard.

Anyone familiar with the problems of regular gigging will recognise the importance of portability. It really wouldn't matter how good these monitors sound - if it were too daunting a prospect to cart from gig to gig, I wouldn't wish them on anyone. Fortunately, portability is one of the SR1 series' strengths - the control units are 1U-high rack jobs, the SR1s come in at around 12" x 22" x 14" and weigh a manageable 34lb, while the SR3s measure $10"\frac{1}{2}$ x 13" x $9\frac{1}{2}$ " and weigh an even more manageable 20lb. This has to go down as one of the SR system's pluses. On top of this, the SR1 units come with hard front covers (similar to those on Bose speakers) which double as low-level stands if Celestion's pole support system isn't to your liking.

Although I can't claim to have tested either model of speaker cabinet in a studio monitoring capacity, I'd anticipate the response being too coloured for such applications. In any case, objective monitoring at these sound pressure levels really isn't the way to get a good mix - just damaged hearing.

As a footnote to this review, I will personally be investing in a pair of SR3s (SR1s being out of my price range at present) and an SRC1 controller to allow me to obtain the monitoring levels I need. Furthermore, in the course of my investigations, the sound man who regularly handles our PA was sufficiently impressed by the SRs that he's anticipating the full SR system for professional PA use. While it's still only Victor Kiam who can claim to have "liked it so much I bought the company", I can't overstate how much Celestion's system impressed me. **I an Sherwood**

Prices SR1 cabinets, £529 each; SR3 cabinets, £195 each; SRC1 controller, £253; SRC3, £138. All prices include VAT.

More from Celestion International Ltd, Foxhall Road, Ipswich, Suffolk IP3 8JP. Tel: (0473) 723131.

PASSPORT TRAX

MUSIC SOFTWARE WATCHERS will have caught on to the fact that software programs proliferate with the proverbial speed of rabbits. What can the software developer do to make the customer - you and me home in on his work in a sea of software? There are three options - cheaper, newer and better (this generally means more features but too many can do more harm than good).

Passport's Trax for the Atari ST, Commodore Amiga, PC, and Apple Mac falls into the first

category and is affiliated to the third. It's a reworking of MasterTracks Junior but at a lower price (down from £109) and with extra bits. MasterTracks Junior is, in turn, a cut down version of MasterTracks Pro (£285) so if you like what you read here, refer to our September issue for more details of big brother.

brief

Trax (review v1.0) is a 64-track GEM-based sequencer. Operation revolves around five windows, three of which can be repositioned and resized like any GEM window. The Transport window contains "tape transport" controls so you can move around the score. There are Punch In, MIDI Thru and Count-in options here, too.

The Conductor window is where you set the tempo and time signature. A Conductor Track can be accessed from the Change menu. Conductors are becoming quite popular - they're one of Dr T's favourite devices. It is used solely to handle tempo and time signature changes. Trax' Conductor Track lets you enter a new time signature and/or tempo at any bar, along with programmed ralls and accels. This information is entered numerically, however, and doesn't appear on the track itself, which means you can't see where the changes occur in relation to the music.

The Track Sheet window lists the tracks. They can be named, looped, solo'd, muted, assigned a program change number (to be sent prior to play) and MIDI channel number. Oddly, you can set this as high as 128 although numbers above 16 wrap around. You can re-order the tracks by clicking and dragging.

The Song Editor shows the music in blocks which represent bars. These are numbered along the top of the window and it's easy to perform block edits such as cut, copy and paste (using a clipboard), insert and delete. You can highlight a section of the music by rubber banding and the Change menu offers duration, velocity, transpose and strip data functions. This is where you find Quantise, too. It's reasonably comprehensive with intensity and tolerance parameters and you can quantise the entire note or just the start of it.

And so to the Step Editor - which is the main addition to Trax over MasterTracks Junior. This is our friend the grid editor; notes are

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displayed as bars on a grid; the higher up the grid, the higher the pitch of the note, and the longer the bar, the longer the note's duration. This type of editor has found favour with many musicians and is especially useful if dots aren't your forte.

You can perform global edits here by rubber banding and individual notes can be moved by clicking and dragging (select the pencil icon). Double clicking on a note (using the pointer icon) brings up a dialogue box containing all the note's

parameters for editing. However, entering new values in the Start Time and Duration boxes overwrites the old ones and it lets you enter values outside the permitted range - a small bug which should easily be cured. There is a zoom facility but this resides in the Layout menu rather than in the Editor window itself.

This is Trax' method of step-time entry - you just click notes onto the grid. Note durations are shown in a box in the top left of the window. It's reasonably quick, although an octave indicator by the onscreen keyboard would have helped. You can also enter notes in step time from a MIDI keyboard, which I found to be far easier, being both quick and accurate. This method also records note velocity.

Other features include a Free Memory indicator, internal or external Sync, and a Record Filter to remove unwanted data such as aftertouch during recording.

Trax supports the MIDI File format which is good news - if you decide to upgrade to a similarly facilitated sequencer, you can take your music with you. It also lets you export into a scorewriter should that be your desire.

To alter most of the numeric data fields you click on the field, up pops a box and you can either type in a new value or use up and down arrows to scroll to it. I reckon it would have been simpler to use the left and right mouse buttons to alter the values directly. And I'd have liked a true event list - the individual Edit Note parameters dialogue box is rather slow. Picky, picky, Waugh.

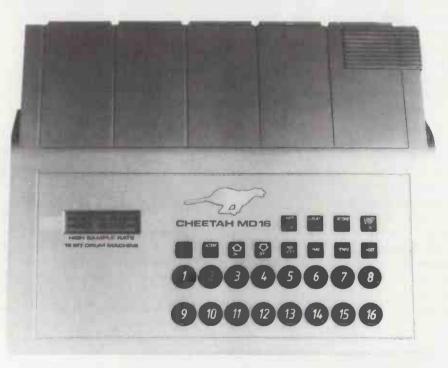
The manual is very helpful but why, oh why is there no index? Fortunately the program is sufficiently easy to use that I doubt if even the raw newcomer will have many operational problems.

So there you have it. If you want a budget sequencer which is easy to use with comprehensive editing facilities and a good method of step-time input, here it is. **I** *Ian Waugh*

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MASTERBITS Climax Collection Vol 1 Vocal Sample CD

atchwork

It's easy, in this age of synths, samplers, drum machines, MIDI and personal multitrackers, to record music. One person can handle everything from drum patterns to lead guitar breaks without venturing outside the convenience of the "electronic" domain - or the bedroom for that matter. Where the whole solid-state system breaks down is where the vocal comes in. And it's no coincidence that the distinguising factor between a commercially successful song and the sort of thing enthusiastic amateurs concoct in bedrooms every evening of the week is the vocal.

The trouble is that you can't program a "vocal" synth patch in the same way you can a string or brass patch. You can, however, avail yourself of the 664 vocal samples which make up the *Masterbits Climax Collection Vol 1* sample CD. And while even these won't allow you to turn your sampler into Aretha Franklin, Robert Plant or even Tom Waits, they will allow you to incorporate a wide variety of human intonations into your otherwise mechanical music.

This first volume of the Climax Collection is made up of "expressive" sounds rather than the words that comprise a conventional vocal per-formance - the grunts and moans that escape from the lips of singers in their more spontaneous moments. So it is we find a listing that includes such samples as 'Schubidubopbop' and 'Schabadabadui' as well as the more comprehensible 'Wuh-Hu', 'Dwey-Dap' and 'Ribble-It-Up'. It's entertaining reading, but far better sampling. The titles actually tell you as much about the samples as any print will (more than can be said of most synth patches) except to add that they have been sourced from a variety of vocalists - black and white, female and male, It's also worth adding that most of them lend themselves to "one shot" rather than looped applications.

By careful use of these samples you can give your music the feel of a live vocalist, if not a fully-fledged vocal performance. Of course, this isn't to say that the Climax Collection samples can't be used in conjunction with a "real" vocalist or even for ghosting - a process where some part of the recording is used to add feel to a track and subsequently removed once it has served to inspire the required performance from another musician (or, in this case, singer).

But there's a paradox presented by these samples: the more characterful they are, the more they contribute to your music, but the more they dictate the way you must shape the music to accommodate the sample. But of course, the same is true of a "proper" performance from a human vocalist.

Sadly, the more successful the samples on this disc are, the less useful they become. So distinctive are they that should they become common currency in commercial (widely heard) music, they will suffer the fate of sounds such as the Fairlight orchestral strike, DX "Rhodes" piano and Lyn Collins 'Think' drum loop. If you're going to avoid the modern sound cliche trap, you might have to get in fastwith some of these sounds and leave everyone else to follow you. Tg

Price £45 including VAT

More from AMG, Hurst Farm Barns, Hurst Lane, Privett, nr Alton, Hants GU34 3PL. Tel: (0730) 88383.

EMIS

TX81Z/DX100 Voice Library

Emis are a UK sound-programming house/ST music PD library which seems to have sprung quite recently onto the scene with hundreds of sounds for many popular instruments. Today it's the TX81Z we're interested in. The Library consists of four banks of sounds; the first contains 32 sounds but the others only have 24 in order to retain compatibility with other DX instruments. If you have a DX100, DX27 or DX21, banks two to four will be identical for your instrument and can be bought separately (this includes the 192 DX100 ROM sounds for DX21 owners). The TX library should also be compatible with the DX11 and the V50. Time to plug in ears.

Bank one is subtitled General Group and contains a mixture of sounds - mainly orchestral but with some synthy sounds, and lots of pianos. Particular personal favourites include 'Acoustic Guitar', 'Soft Bass' and 'Vibraphone'.

Bank two is called *Mixed Sounds* 1 and contains sounds of a mainly synthy type. These range from "synthy" versions of various instruments to ethereal sounds and heavily modulated effects. Being a sucker for a filter sweep, 'SynthSweep' was among my favourites here.

Bank three is *Mixed Sounds 2*. It's similar in concept to bank two but contains more imitative sounds and provided the majority of my library favourites. 'Distortion' is an excellent overdriven electric guitar; there are some very usable brass sounds here, plus pianos, plus instruments such as 'Saxophone', 'Harmonica' and 'Steel Drum'.

Bank four is Orchestral Voices and contains many solo instruments such as clarinet, oboe, flute, bassoon and piccolo. Favourites include the trombone with builtin growl, the rich tone of 'Bassoon 1', 'Violin' with its emphasised bow scrape and the clear percussive zing of 'Xylophone'.

Few of the sounds respond to velocity shame - but none fall below the level of workmanlike and some sounds do indeed shine and sparkle.

The TX81Z library contains 104 sounds and, for the asking price, it's a pretty painless way of adding to your own library. Available formats are Yamaha cassette or ST disk using the Chameleon demo program (see MT, December '89 review of Chameleon Universal Librarian). I particularly like the documentation telling you what the sounds are and how they can be used. I wish all libraries did this. An added-advantage of the Chameleon format is that Emis have categorised the voices using Chameleon's Display Groups.

If you want to know exactly what you get for your money, a demo cassette is available containing pieces recorded with a selection of TX81Z sounds on one side and DX7 sounds on the other. Yes, Emis have a selection of DX7 sounds, too - of course. *Ian Waugh*

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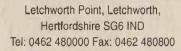


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EASING OFF ON THE THROTTLE THIS MONTH, THE EMPHASIS IS ON SLOWER RHYTHMS AND THE TREATMENT OF VOICES TO WORK WITHIN THEM. TEXT BY NIGEL LORD

ON THE

LOOKING BACK AT the example rhythm patterns published over the past 15 months of On the Beat, it occurred to me that the one area which has so far received scant attention is that of programming for slower tempi. Rarely have the patterns featured in the series ever ventured much below the preferred 120bpm dance tempo - even those which were never intended as dancefloor rhythms. Of course, I can imagine many people asking what it is about slower

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tempi that they should demand substantially different programming techniques; is it not possible to simply reduce the tempo of the patterns which we have already looked at? In some cases it might be, but as anyone who has tried to slow down a medium to fast tempo rhythm will know, a pattern played at well below its intended tempo range tends to sound rather like what it is - a pattern played well below its intended tempo range.

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r More often than not, the effect is of the MUSIC TECHNOLOGY DECEMBER 1990



rhythm being held back. Instruments seem to drag and what were previously interesting little rhythmic figures become unwieldy, rumbling sub-patterns which take forever to resolve themselves, and cease to complement the main rhythm. Another problem is the interrelation of the parts associated with each instrument. Ask a drummer (you remember - the human kind) to move from a fast to a slow groove, and the chances are that as well as reducing the overall tempo, he'll modify the number of bass drum beats in relation to those played on the hi-hat. If he didn't, the pattern would suffer in the way I've already outlined.

This relationship between instruments can affect quite significantly our perception of overall tempo, and it is often used as a means of manipulating a particular rhythm track to give it a slower (or faster) feel without doing anything to change the actual tempo. It is something that DJs (good DJs) quickly have to familiarise themselves with. I've often seen a dancefloor empty when a dance track has been followed by a record which sounds just as energetic but which is anything from 10-20bpm slower.

Of course it might be assumed that being written for slower tempi, this month's examples are unlikely to be of much use in a dance setting. But unless you're into all-night, open-air acid events (in which case I hope the harassment from police and insects hasn't spoiled things too much for you), I'm glad to say that even the hippest clubs still seem to end the evening with a couple of slow numbers.

If, on the other hand, you've no interest in dance music, this month's patterns could still prove to be a pretty useful addition to your library. One of the interesting things about slower rhythm tracks is that they tend to be far less stylised than up-tempo patterns. Adding a couple of keyboards to each of these examples, I found I was able to move into widely-differing areas without needing to alter the structure of the patterns in any way. This is not to suggest that further experimentation isn't needed. I'm only recommending that you try each pattern within a variety of contexts before deciding where you're going to use it.

After the relative simplicity of the last couple of articles, we're back to a more demanding level of programming, but even so, you should find few real problems. I keep wondering whether I should increase the number of dynamic levels to four or five, but the prospect of designing different patterned diamonds which would still be legible after being subjected to the rigours of the reprinting process is enough to convince me that it isn't such a good idea. And anyway, anything which potentially reduces the room you have for tailoring a rhythm to your own needs is something I don't believe I should be encouraging at this stage. Suffice it to say, three dynamic levels represents a bare minimum and you should be attempting to improve things in this area.

Right, to work. We'll start with a fairly conventional groove in Pattern one which, apart from a triplet figure that crops up in the castanet/clave line at the end of the second bar, shouldn't present anyone with any difficulties. Despite (or probably because of) this, the pattern is exceptionally flexible and capable of being used in more or less any situation, providing you don't need the snare coming down on the third beat of the bar.

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OR FAX US FROM ANYWHERE IN THE WORLD ON 0705 690626 NEVADA MUSIC, 189 LONDON ROAD, PORTSMOUTH PO2 9AE double-headed toms tend to sound better here, but whatever you use, make sure they are kept well below the level of the other instruments in the mix. I think I would also tend to opt for castanets in preference to claves in this pattern, but as they are absent from most machines, I can see most people being forced to use the latter - though you could try a highpitched wood block or even a finger click if this is available.

A triplet-based pattern with a rather more open feel, this month's second example, has, nevertheless, got considerable "clout" thanks largely to the space which surrounds the snare beats in every other bar. Also confirming its role as the dominant instrument are the flams incorporated into the cadence at the end of bar eight - as a general rule of thumb, these should be programmed as close together as your machine will allow and then moved apart until you're happy with the overall result.

The usual tendency for the hi-hat and ride cymbal parts to mask each other is overcome in this pattern by interlocking the two lines so that the two never coincide. However, you might still encounter problems with a long-duration ride voice overlapping the closed hi-hat and you could find you have to alter the pitch of one of the instruments to improve definition. The ride bell line, incidentally, is designed to accent the conventional ride cymbal during alternate bars, but if this instrument isn't available you could try simply accenting the ride using a higher dynamic level.

Another fairly spacious pattern, example three has a rather more straightforward feel and could be used wherever you need the solid one-two of a bass drum at the start of each bar. Actually, though I say bass drum, as you can see, the two beats are made up using a low tom as well as the bass drum. This, in fact, is particularly effective and helps overcome the somewhat cliched feel which this kind of pattern often has. That said, the tom figure at the end of bars four and eight give it something of a "rocky" flavour which might not be appropriate in some contexts. In this case, these are fairly easily dispensed with, and it shouldn't be difficult to devise a couple of alternative cadences using other instruments, if these are required.

A more demanding pattern in every sense, example four has much more going on than any of the previous rhythms and features a couple of rather interesting programming ideas. The first of these is the set of three snare notes in bars 1, 2, >

TEMP0: 85-100 BPM PATTERN No: 1a&c BEAT: R 2 ٥ Clsd HiHat 0 **Open HiHat** 0 Cabasa Â 0 dis. Claves 働 ۵ Side Stick 1 ٨ Snare Drum Mid Tom Tom 0 Lo Tom Tom Bass Drum TIME SIG: 4/4 BAR 1&5 BAR 2&6

BEAT:		24	3	4	1	2	3		4
lsd HiHat	$ \rangle$			0	*			0	
pen HiHat			Ť † † †						
abasa 🤇		\Diamond			\Diamond			>	
laves									
ide Stick									
inare Drum									
lid Tom Tom			\Diamond				$\langle $		
o Tom Tom									
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BEAT:	1		8		3		4	1		B		B		4	
Clsd HiHat		\Diamond				$\langle \rangle$		\$	\Diamond		-				
)pen HiHat							\Diamond								-
Cabasa	\diamond		$\overline{\langle}$					\Diamond		\Diamond					
Claves	•							-				1			-
Side Stick			-							1					
Gnare Drum															
1id Tom Tom				\Diamond							\Diamond				
O TOM TOM															
Bass Drum						-		1					\diamond		
	Π														

BEAT:	1	2		Pi-	.4	1	2	P	4	
Clsd HiHat										
Open HiHat								\Diamond	\Diamond	0
Ride Cymb	\Diamond	\Diamond	\Diamond	\Diamond	\diamond	$\Diamond \mid \Diamond$				
Ride Bell	\Diamond	\diamond	\diamond	\Diamond	\diamond	0 0				
Snare Drum										
Bass Drum										

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3, 5, 6 and 7 which, being given descending dynamic levels, are intended to simulate the effect of a quickly decaying drum beat. Despite only comprising three notes, the overall effect of this is quite convincing if you choose your levels carefully. It's certainly a technique I'd recommend you try even if you decide not to use this particular pattern.

The second idea is designed to complement the first and comprises an open hi-hat note which is left hanging during the decay period of the snare notes and then shut off by a closed note immediately after it's died away. Again, even if you don't use this pattern, this is a technique you might try incorporating into another rhythm. It works well providing you have an instrument with a fairly long duration. The two small snare beats which occur in the cadence at the end of bar eight, could, I suppose, be called grace notes in that they are intended to lead into the bass drum beats which immediately follow. Programming is simply a matter of raising (or lowering) their level until you just become aware of their existence - but no more.

Pattern five also has a lot going for it. It is kept ticking over nicely with a footclosed hi-hat (an instrument you really should try to add to your sonic arsenal), and demands a long duration, ambient snare voice and a very deep, open tom sound in addition to the three conventional toms which surface regularly throughout the pattern. If you haven't got anything suitable for the fourth tom voice, you could try using an open-sounding bass drum with its pitch raised, or even a bass note from a synth. Chosen correctly, the note should be of long duration (extending as far as the next bass drum beat), and be capable of giving the pattern a dark, brooding feel which is extremely effective when set against instruments such as claves and triangle. The pattern also makes use of grace notes - this time on the second beat of bars 2, 4, 6 and 8 in the mid tom line.

Returning to a lighter, more open feel. Pattern six is an extremely effective groove with a very distinctive flavour, but which nevertheless provides plenty of space for whichever bass instrument will be used alongside it. Care should again be taken with the overlapping ride and hihat parts: though perfectly complementary, the two really do need to be kept as distinct as possible. The pattern also features a cowbell, not normally one of my preferred instruments. But it does work rather well providing it ►

PATTER			1994C						TEMP		85 BPI
BEAT:	1		5	-Isl	_	4	1	2	3		4
Clsd HiHat			-								4
Open HiHat									\Diamond	\Diamond	
Ride Cymb	\Diamond	\Diamond		\diamond		\.	$ \rangle$	$ \rangle$	$\Box = \Diamond$		\diamond
Ride Bell	\Diamond	\Diamond		$\diamond = \diamond$		$\Box \overline{\Diamond}$	$ \rangle$				
Gnare Drum				\							
Bass Drum	-						è •				4
			-		1 .						

BEAT:	1		7	2-	4	1	Ę	3	4	
Clsd HiHat	5									
Open HiHat										
Ride Cymb	\Diamond	\Diamond		\Diamond	\diamond	\Diamond				
Ride Bell	\Diamond	\Diamond	$ \rangle$	\Diamond	\diamond	$\Diamond \top \Diamond$				
Snare Drum										
Bass Drum	0									-

Pr	ATTERN	No	: 3al	kc 🛛								TEMPO	80-100	BPM
	BEAT:	1		2		3	4	Ξ	1	13	2	З	4	
Clsd H	iHat	*				-								
Open H	iHat		0							\Diamond				
Claves				0	\Diamond									
Snare	Drum													
Hi Tom	Tom													
Mid Tom	Tom													
Lo Tom	Tom													-
Bass	Drum	0												
IME SI	G: 4/4				BA	R 1&	5					BAR 2&	5	

PATTERI	No: 3b						TEMP0:	80-100	BPM
BEAT:	1	2	3	4	1	ž,	3	4	
Clsd HiHat									
Open HiHat									
Claves		\Diamond	$\langle $						
Snare Drum									
Hi Tom Tom									
Mid Tom Tom									-
Lo Tom Tom									-
Bass Drum									
TIME SIG: 4/4			BAR	s			BAR 4		

PATTE	RN	No: 3d								т	EMPO:	80-100	BPM
BEAT:	1		14-		3	4	1		3		3	4	-
Clsd HiHat					-	-	-						
Open HiHat		\Diamond						\Diamond					-
Claves			$ \rangle$	\Diamond		0			\Diamond	0			
Snare Drum													
Hi Tom Tom													
Mid Tom Tom													
Lo Tom Tom													
Bass Drum													Ť

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Finally we come to two rhythms which both rely on the toms for their interest, but which have quite radically different feels. The first features a neat, descending tom figure which leads into the snare beats throughout the pattern and leaves room for only a single bass drum beat at the beginning of each bar. Though the small diamonds on beat 3 of the closed hi-hat line are the same as those I used to indicate grace notes in Patterns four and five, they are not, strictly speaking, used for the same purpose here. Rather, they are intended to shut off the open hi-hat notes which immediately precede them without actually sounding themselves. In practice, it might not be possible on some machines to reduce them to zero and still have them cut off the open voice, but as long as they're kept low enough in the context of the mix, this shouldn't be a problem.

The second of the two, Pattern eight, is an altogether faster groove at over 100bpm. I suppose it only just qualifies for inclusion this month. Having said that, it's the type of patttern which could prove very useful in those situations where something in between the usual slow and mid-paced rhythm is required - particularly as it is so adaptable. There's nothing out of the ordinary in terms of programming, but as the toms feature so prominently, it would be worth spending a little time choosing the right voices and adjusting the tuning interval to suit the rest of the rhythm track.

As you'll see, none of the patterns are so slow as to be useful in only specialised contexts. In fact, if you're not familiar with programming rhythms under the 100bpm mark, you'll probably be surprised how little they need to be reduced below this to sound quite slow indeed. You'll probably also discover that the usable tempo range is significantly less than it is for faster patterns. The reason for this is obvious when you think about it: a range of ±30bpm represents a far greater tempo variation of a pattern running at 70bpm than it does of one running at 120bpm. In practical terms, it simply means that >

BEAT:	1				- 10				101-				-	-				1			ł	14				3			4			
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Gnare Drum		T	T	T									<	>								•				\$			0			
li Bongo	Π	1	T	T	0	T	0					0		(>		1	5	\langle			1	1	5			T	T				
o Bongo	10	1	\$	0	T														1	0	0					T						
Bass Drum		-	1	1		1	Q				1	8			<	>	1										-				Ŷ	-

BEAT:	1	-18		3	4	1		2	3	4	
Clsd HiHat				Ī					• •		-
Open HiHat							($\langle $			
Ride Bell	$\Diamond \Diamond$	$\Diamond \Diamond$	$ \langle \rangle \rangle$	$ \rangle $	001	$\Diamond \Diamond$	0 (000	\diamond		1
Snare Drum					\Diamond						
Hi Bongo		$ \uparrow\rangle$				10	\Diamond				
Lo Bongo	$\langle \rangle$	\mathbf{b}					0				
Bass Drum			$ \rangle$	$ \rangle$						$ \rangle$	\langle

PATTER	N N	lo: 4	łd																	TE	EM	PO	1	85	-9	5	BF	M
BEAT:	1			2			3			6	4			1				ž I			3	3			4	ŀ		
Clsd HiHat	•		\$											1				4		-							\$	
Open HiHat		Π		\$		T						\rangle					<			Τ						0		
Ride Bell	0	\Diamond	0	\Diamond		\rangle		\Diamond	1	$\langle \rangle \langle$	\sum	<	$\rangle\langle$	>	$\left \right\rangle$		<	$\langle \langle \rangle$	\Diamond									\Diamond
Snare Drum				•						<	$\left \right $					Τ					{	$\left \right $	$\overline{\langle}$	$\left \right $				
Hi Bongo				\Diamond	$\left \right\rangle$	\rangle					\Box	\rangle			\sum				$\langle \rangle$									
Lo Bongo	\Diamond	$\left \right\rangle$	0													\langle	\rangle	\rangle		T								
Bass Drum						\rangle			\langle			<	\sum	1					$\langle \rangle$		þ	4	\$				Ý	
TIME SIG: 4/4						B	AR	7												E	A	R	8					

PATTERN	No: 5	ja&c											FEMPO	1 90	-105	BPM
BEAT:	1		24		B		4		_1_		2 L		19-		4	
Foot HiHat			\Diamond		$\left \right\rangle$		\Diamond				\Diamond		\Diamond		$ \rangle$	
Ride Cymb	\Diamond			\Diamond		\diamond	\Diamond			\Diamond		\Diamond		\Diamond		\diamond
Triangle								$ \rangle$								
Claves		TT	\Diamond	\Diamond			\Diamond				\Diamond	\diamond			\Diamond	
Side Stick							۲						1			
Snare Drum																
Hi Bongo	\diamond								\Diamond	\Diamond						
Lo Bongo						\Diamond	$ \rangle$	\Diamond						$\Box \Diamond$	\Diamond	\Diamond
Hi Tom Tom		\Diamond								$ \rangle$						
Mid Tom Tom	\Diamond								\Diamond		\Diamond	\Diamond				
Lo Tom Tom									\Diamond			$\left[\diamond \right]$				
Deep Tom Tom						Ó								$ \rangle$		
Bass Drum																
TIME SIG: 4/4					BAR	1&5							BAR	286		

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PATTERN	No: 5b	1333	1923								Т	EMPO	: 90	-105	BPM
BEAT	1	3	1	3		4		1		3		8		4	-
t HiHat		0		0		\Diamond				\Diamond		\diamond		\Diamond	
ie Cymb			0		0	0			\Diamond		0		0		\diamond
angle							\diamond								
ives		01	0			0				\diamond	\diamond			\Diamond	
ie Stick		0		•		-		-		•		*		-	
are Drum															
Bongo	0								\Diamond						
Bongo					\Diamond	0	\diamond						\Diamond	\Diamond	\Diamond
Tom Tom									\Diamond						
Tom Tom										\Diamond	\diamond	-			
Tom Tom											\Diamond				
p Tom Tom					0								\Diamond		
ss Drum															
E SIG: 4/4				ARS								BAR			

	TEMPO	: 90-105	BPM
2	3	4	
		0	\Diamond
	$\overline{\mathbf{A}}$		
		\diamond	\Diamond
	\diamond		
	\diamond		
		\diamond	
			-
		BAR	BAR 8

PATTERN	No:6a&c					TEMP0:	50-70 BPM
BEAT:	1	2	3	4 1	2	13	4
Clsd HiHat	1001	00	000		0010	000	
Open HiHat		\diamond		\diamond			
Ride Cymb							
Claves							
Cowbell							
Side Stick							
Snare Drum							
Hi Bongo							
Lo Bongo		000					
Lo Tom Tom							
Bass Drum							
IME SIG: 4/4		BA	R 185			BAR 2&	

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.....Post code..... Tel No..... you have to be rather more accurate in your use of the tempo control.

In an effort to save space and cut down on repetition i have only included one grid for parts 'a' and 'c' of each pattern - as these are indentical. But obviously, each example is intended to be programmed in the order a,b,c,d.

If you're using one of these patterns and you find yourself forced to modify the speed of an existing piece of music by too great a degree, then you'll have to start thinking in terms of slimming down certain instruments within the pattern so that they can run at a higher tempo. It's difficult to be more specific, but with a little experimentation what I'm talking about should become apparent. Whatever happens, you'll emerge with a far better understanding of how to program patterns for both fast and slow tempi, and hopefully come to appreciate the different techniques demanded by both.

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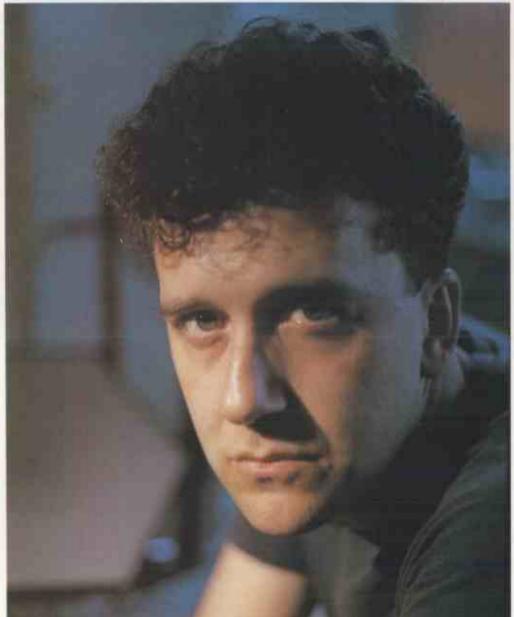
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PUSHING THE BEAT

With so much technical innovation centred on drums and rhythms, it's surprising so few drummers are conversant with high technology. Meet one who is: Roland Kerridge. Interview by Ollie Crooke.



DRUMMERS: THE BRUNT OF MUSICIANS' jokes the world over. But why, in this age of hi-tech innovation, shouldn't a drummer be as conversant with the details of MIDI, sampling, sync'ing, and so on, as any keyboard player or producer? The answer, if you were to ask drummer Roland Kerridge, would certainly be "no reason".

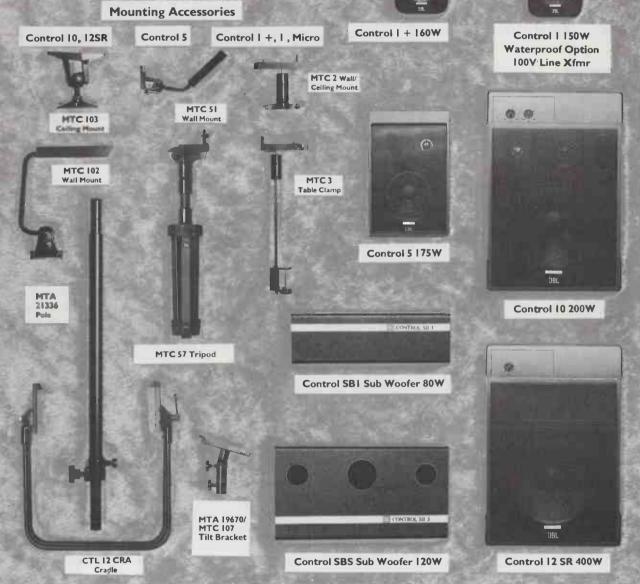
Over the past ten years or so, Kerridge has managed to establish himself as one of the rarest of drummers an electronic percussionist - and one who is at the forefront of today's percussion technology. His lengthy credits include two Mory Kante albums (one of them forthcoming), two Gary Moore albums, Sam Brown, the Adventures, Men without Hats, various world music projects with French record label, Barclay - and a Rick Astley world tour. Appropriately enough for MT, Kerridge's first professional gig was with the Kate Bush band. His main claim to pop faim, however, came with Re-flex, and the '84 hit, 'The Politics of Dancing'.

"We enjoyed reasonable success in England, but even more in America and on the continent", he recalls. "In fact, it's a shame the band folded, because we had a second album recorded for EMI, which was canned - I feel it would have been a really good record had it come out."

But fold they did. After the demise of Re-flex, Kerridge embarked on a freelance career which involved him in Mory Kante's *Akwaba Beach* album one of the most commercially successful African records made to date. Let's begin with *Akwaba Beach*, and '88's charting single 'Yeke Yeke'.

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Harman Audio Ltd, Mill Street, Slough SL2 5DD Telephone: (0753) 76911 A Harman International Company We did all the programming in four or five days", says Kerridge, "myself, producer Nick Patrick and keyboard player Mick Parker. It was pretty chaotic to say the least because my French isn't good and Mory doesn't speak English, so we were having to translate his ideas onto our instruments.

"At the time I was using an Octapad and a Linn 9000, which to my mind was one of the first userfriendly drum machines, and an S900. We played most

> of the parts in - I played some, Mory played others. Mory's drummer came down and was very excited about the whole thing but then didn't show up after that, so it was just between the four of us.

"It was based on a traditional rhythm called the Mandinka: a cowbell or sidestick part. We started programming the thing up and Mory was trying to tell us how the rhythm went. We were really having difficulties, especially myself, in finding 'beat one', which is a problem Europeans often have with African music. I programmed up the first two or three hours not actually understanding the rhythm at all and just going along with the flow. Suddenly the thing just turned around in my head and I had it. I'll

always remember that - it was fantastic.

"All the rhythm parts of 'Yeke Yeke' were arranged and recorded in one day - in fact we only spent three and a half days recording the rhythm tracks for the whole album, so that gives you an idea of what the budget was like."

Regardless of the fact that it was recorded on a budget, both album and single earned critical approval and chart status.

"All of us were stunned by the success of 'Yeke Yeke'", confirms Kerridge. "It's a great mix between the traditional and technology. We brought something into African music which had been hinted at before with stuff by Bill Laswell. All that stuff was done with the DMX drum machine - which is a wonderful machine but once you've used it on a couple of tracks it tends to sound a bit sameish. What we did was to put contemporary sounds to music which hadn't really had them before. And I think the mix really worked. The problem that we had was that Mory wanted the music to be more Western, more rock, and we struggled because we thought the African side of it was more interesting, so somewhere in between the two was where we fell."

After the success of the fairly low-budget Akwaba Beach, work on a new album was begun in October 1989, and concluded in March of this year. But while the music is complete, other aspects are still unsettled.

"God only knows what the title's going to be", exclaims Kerridge when asked. "We've done, I think at the last count, 12 tracks, all of which are storming with one exception which is a wonderful ballad. The material is a lot stronger than the first album, and because the budget's been increased on account of the success of the first album, Nick's been allowed a lot more time and space. Also, I've used more state-of-theart gear - I used my SDX and I sequenced everything on an MPC60. We spent a month just arranging all the parts. Basically I set up the SDX pads and we recorded the parts onto the MPC60 through MIDI and then adjusted them. I like to put the basis of a rhythm track down and then do what I call some 'live passes' on the kit, and do four or five different takes. I like that because I can play some pretty off-the-wall fills and quantise and edit them later."

Another description of some of Kerridge's work might be that of "drum consultant" - he comes in for the job with all his gear, but doesn't actually get to play it.

"I've been called in a lot to work with bands who have a drummer, and who want to sequence stuff, but the drummer hasn't any idea as far as programming is concerned. I work in one of two different ways. The better of the two is to set up the SDX kit, and get the drummer to play the pads, but if he hasn't had much experience playing pads, it's a very difficult adaptation to make, it takes time. So what I've done in the past is to get the drummer to play a bugged kit, and use a Simmons Trixer to then supply a MIDI note to the sequencer. It's a great way of working because you've got a drummer's performance which you can quantise or not, depending on how you feel about it. And if you want to change the drum sound as the song progresses, you've always got the facility to do so. I've sequenced some pretty interesting drummers in the past.

"I've also been called in a number of times to do rescue jobs when they've got an acoustic drum track on tape and it's just not happening by the time they get to the mix. Short of feeding sounds into an AMS or whatever, the best way of doing it is to feed triggers off the kit that's on tape, into the sequencer, quantise it and sort it out that way."

One of the things that has so far eluded Kerridge is a sequencing setup which would allow a drummer to record a track in human time, whilst simultaneously creating a "human" sync track. If this were possible, the bar divisions in the sequence would correspond to the feel of those of the track.

"I've been looking for a system that would free you completely, so you wouldn't have to follow a click track - something like a human clock - but it's very complicated. The C-Lab Human Touch is a similar sort of thing, but you can't run the thing in record and clock it at the same time, which is a great shame. In fact, the nice German people who design C-Lab should do something about it, because it would be absolutely amazing to be able to set up a sequencer and to play a performance part. You can do it freestyle and not bother about bar measures, but it becomes very complicated when you try and edit."

SINCE HIS DAYS WITH RE-FLEX, ROLAND

Kerridge has been almost a walking advertisement for electronic drum pioneers, Simmons. While the company explored the possibilities for electronics in the world of the drummer, they called upon a handful of drummers' services as consultants (Dave Simmons is actually a guitarist). Kerridge's involvement culminated

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the S1000 but I've always thought that the SDX has more power; it captures that transience, and the hard edge of a

"People go on about

drum."



 in the development of the mighty Simmons SDX, where he was responsible for compiling much of the sound library.

"I've known Dave Simmons for years and years", explains Kerridge. "He's an old friend of Paul Fishman, who was the keyboard player with Re-flex. Dave used to do all these weird and wonderful modifications to Paul's keyboards.

"I started using an SDS3 in the early '80s, and just went through it from there. The setup I used live with Re-flex was an SDS3, SDS5 and an SDS7 - in total 14 pads, a bit of an overkill, but in those days you had one pad per sound. Now you can just switch sounds on pads, it's very simple to do live. I was using the old bulletproof Simmons pads - you know, you hit them and your arm drops off.

"When the SDX was being developed, I was using an S900, and it was the S900 boom time. Dave was developing this 16-bit sampler/sequencer and drumkit, we went in and saw the SDX prototypes, and he invited me to sort out some of the drum library. Then I became a testing ground, I suppose, which I still am. Whenever they get something new they try it out on me.

"The SDX is a wonderful machine. It's the ultimate. at the present moment, in digital drumkits. The sound quality is phenomenal, and people go on about the \$1000 but I've always thought that somehow the SDX has more power; it captures that transience, and the hard edge of a drum, and really what you put into it is what you get back. I felt with the \$1000, when sampling into it, it tends to be a little bit bass-light in a similar way to the \$900. It's such a shame that Simmons went down when they did: having said that, they're up and running again, and they've got some really good things coming out. I've seen these Drum Huggers which they've been working on. They look good. They're strap-on pads about the same size as a woodblock, which bolt onto your kit and you hit them and they produce a MIDI note. So it's an instant pad if you like, without taking up the room. They've also got a triggering device called the ADT, which is hopefully coming out towards the end of the year. It's basically the triggering side of the Trixer, only much improved, and the fire-up time is supposed to be very fast indeed."

Triggering is a subject on which Kerridge has become something of an expert over the years...

"I've tried a number of trigger devices, one of them being this new Aphex Impulse, which claims to be the fastest trigger in existence - it's not.

"We actually measured it against the Trixer, and it's some half a millisecond to a millisecond slower. Having said that, we used it on one of the tracks on the Mory Kante album. Jeff Porcaro had recorded a live drum track, and the sound wasn't particularly inspiring, so we triggered some drums from it. We used the Impulse to do that and it was very good indeed. It was reliable, the triggers were always a reliable distance apart; in other words, the delay between hitting and fire-up never varied, which was the problem with the Akai ME35T. There is some nice stuff on the Impulse; there's a 'roll' facility, where it cycles on four different notes, so each hit you make on a pad will send out a different MIDI note, and it just cycles around the four. You can have great fun with that, having four completely unrelated samples and playing a roll on it."

As mentioned earlier, with the quality of electronic percussion and sequencing technology around at the moment, (most of it seemingly having passed through the hands of one Roland Kerridge) the quality of rhythm and rhythm programming on records these days should be at an all-time high.

"Generally speaking, I'm very disappointed that it seems to have regressed in the past few years", comments the percussionist. "It's gone back to making machines sound like machines, which I think is a bit of a shame. People tend to be very lazy in that they try to find rhythm loops from other people's records, and use that as a basis for their music rather than creating their own. It's a shame, because with the technology now available, you can make fantastic noises. A lot of the stuff I've done has been done almost by accident, or by messing around, where I might have got a conga part in the sequencer, and then I'll assign a completely unrelated sound to it, and reverse the phrase. A while ago I was asked to do a rhythm track with a similar feel to 'Slave to the Rhythm'. After messing around for hours trying to find a swing quantise that worked, I sampled a fourbar loop from the record, looped it around in the sequencer and jammed along. When I felt I was in the pocket with it, I dropped the C-Lab into record and recorded 20 or 30 bars, from which I found a two-bar part that felt good. I then took the part and generated a User quantise from it, which I then applied to the rest of the track. It was a good way to copy the groove of a track without directly stealing any of the part.

"You can come up with some wonderful things, but people don't seem to be doing that so much any more. They're listening to everybody else's records and saying 'well, that's how it goes, let's do that'. Having said that, there's some good things around at the moment. I like a lot of the house stuff and I especially like swingbeat."

Kerridge confesses to having drum heroes of his own, mainly those from the traditional rock school: Bad Company's Simon Kirke and the Beatles' Ringo Starr, for example. But one of his particular favourites is The Yellow Magic Orchestra's Yukihiro Takahashi not just for his drumming skills, but for his involvement with technology from very early on in the development of drum machines.

In addition to his general session and consultancy work, Kerridge still finds time to work with Paul Fishman ("He's got another thing going with Dave Harris who used to be in Fashion, and I've worked on various projects with them") and he has recently completed another album project with Mory Kante producer, Nick Patrick.

"It's due out this April some time", he reveals. "The artist is a guy called Roe who's Spanish. He's basically a flamenco rock artist - it's flamenco music meets The Rolling Stones. I think that's going to be quite big, bearing in mind that Spanish is the second most spoken language in the world. I imagine the market's going to be pretty huge, but the Gypsy Kings it is not."

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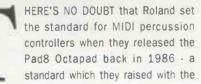


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SPD8



Roland's latest MIDI percussion controller can be used as a selfcontained drum module or MIDI drum expander - yet it costs significantly less than its padsonly predecessor. Review by Simon Trask.



subsequent Pad80 Octapad II, essentially an enhanced version of its predecessor. These days it's become common practice for drummers to add an Octapad to an otherwise all-acoustic kit, while many non-drummers have discovered the delights of thwacking the Octapad's eight pads when they would never dream of sitting behind a drum kit.

The SPD8 Total Percussion Pad follows in the tradition of the Pad8 and Pad80, offering eight pads and thwack-to-MIDI interfacing in one unit. But where its predecessors required a MIDI instrument to be connected before you could make a noise (unless you count the sound of stick hitting pad), the SPD8 can function as a self-contained performance instrument courtesy of 39 onboard drum and percussion sounds.

I say "performance instrument" because the SPD8 has no internal sequencing capability - in other words, it's not a drum machine with unusually large pads. However, in addition to being able to play the SPD8's internal sounds off its own pads you can trigger them via incoming MIDI notes - from a sequencer or a drum machine, perhaps. So does the Total Percussion Pad represent a wise move or a miscalculation on Roland's part?

PRICE OF PROGRESS

WITH THE INCLUSION of drum sounds, you might expect the SPD8 to cost more than the Pad80. In fact, it costs significantly less - £399 to the Pad80's £540. But before you give yourself a headache trying to figure out how they've done it (or start penning letters which begin "Dear Roland, until today I was a satisfied Pad80 user. . . "), I should point out that some sacrifices have been made to keep the price of the SPD8 down. In physical layout it's essentially the same as its predecessors, with eight sizeable pads (4" x 41/2") and a slender control panel - though now the panel is above rather than to the right of the pads. However, gone are the six external pad inputs of the Pad8 and Pad80, together with the latter's card slot for storing onboard patch data - though SysEx transfer of patch data is still possible with the SPD8 - while the Pad80's LED window has been replaced by a threedigit LCD (you can forget about naming patches).

Economies have also been made where the quality of the pads themselves is concerned. Where the Pad8 and Pad80 have eight physically-separate pads, the SPD8 utilises a single rubber pad surface which is divided by narrow raised rubber strips into eight pad areas. Fortunately this doesn't result in trigger "leakage" between the pad areas; if anything, a stray stick hit when you're playing near the edge of a pad is more likely to trigger an adjacent pad, due to the closeness of the pads. Maximum velocity response is only generated when you hit a pad centrally (immediately above its sensor); as you play further away from the centre, the sensor registers less force even if you play with the same force.

To get any response if you play the pads with your hands, you need to hit them firmly and centrally, and even then you get neither the dynamic range nor the volume from the sounds that you do when playing with sticks. When you do use sticks (and all you nondrummers will need to go out and buy some, because Roland don't include any with the SPD8), you get a reasonable amount of bounce off the pads, but - and admittedly I'm going on memory here - they don't have as good a feel or responsiveness as the pads on the SPD8's predecessors.

Turning to the rear panel of the SPD8, other changes are evident compared to its predecessors. Obviously now there are audio outs for the internal sounds (a L (Mono)/R (Stereo) pair but no individual outs, and a stereo headphone output on a 3.5mm jack rather than a quarter-inch jack), but the surprising inclusion is a stereo audio input (again a 3.5mm jack connection). The input signal is merged internally with your own playing, and the merged signal is then transmitted from the SPD8. Clearly the idea here is that you can plug in your Walkman and play along to whatever you've got on tape.

The SPD8 has MIDI In and Out sockets but loses the Thru of the Pad80. A less immediately apparent MIDI difference is the SPD8's omission of the Pad80's MIDI merge facility. If you're adding the SPD8 to a sequencer-based setup as a second controller to be used in conjunction with a keyboard, you have a choice between much lead-swapping, a MIDI selector box or ideally - a MIDI merge box.

The Pad80's rear-panel Edit on/off switch has been replaced on the SPD8 by a dedicated front-panel Edit on/off button, while the SPD8 loses one footswitch input compared to its predecessor. Gone is the Pad80's mod/bend/aftertouch footpedal input (which facilitated more control over external MIDI sounds than pad hits by themselves) and patch shift down footswitch input. The SPD8 has a dedicated Patch Shift Up input, a footswitch input which allows you to select an alternative set of pad assignments for each patch when depressed, and a footswitch input which can be set per patch to one of two functions: triggering an internal and/or MIDI sound, or acting as a sustain pedal for MIDI sounds. It's worth pointing out here that the SPD8's provision of an alternative set of pad assignments which can be selected at the press of a footswitch (and programmed per patch), is in many ways a better option than the external pad inputs of the Pad8 and Pad80. It's more convenient, doesn't involve any extra expense, and gives you a maximum of 16 as opposed to 14 pads per patch (if you include the footswitch option, the SPD8 actually provides you with up to 17 trigger sources per patch).

Other differences relate purely to changes in the software. Thus the SPD8 has 32 patches and one patch chain compared to the Pad80's 64 patches and eight patch chains, while the SPD8 forgoes the Pad80's ability to layer or velocity switch between up to three notes per pad. On the other hand, the SPD8 improves on one of the Pad80's shortcomings by reverting to the shorter minimum time and the finer timing resolution of the Pad8's MIDI Gate Time parameter - thus making it less likely that you'll need to edit the amplitude envelope of an external MIDI sound (a bass sound, for instance) specifically to fit the SPD8's performance requirements.

Optionally available for the SPD8 is the APC33 All-Purpose Clamp Set, which isn't as unfriendly as it sounds. In fact, it's a means of securing the SPD8 to the top of a drum stand, and requires only four screws to attach the stand holder to the underside of the unit.

PAD HITS

THE SPD8'S PAD parameters are divided into Sound and MIDI categories which, of course, govern how the pads control internal and external sounds. Successive presses of dedicated Sound and MIDI buttons cycle through each set of parameters; these are listed in two columns on the control panel, with associated pinpoint LEDs for each parameter indicating the currentlyselected parameter. Further useful feedback is provided by six numbered pad indicators on the control panel. These light up momentarily when the corresponding pads are hit in Play mode, but are most useful in Edit mode, where the indicator corresponding to the pad currently selected for editing blinks at you. You select a pad for editing by hitting it, so not

surprisingly it's easy to end up editing the wrong sound when you're trying out a rhythm or a pitch sequence in Edit mode. By visually reminding you which pad is selected, the indicators can help you out here - a neat touch.

The buttons on the control panel are all rugged rubber affairs which require firm pressure to activate. In addition to the Edit, Sound and MIDI buttons there are buttons dedicated to Volume up/down, Value up/down, Patch/Level up/down (controlling patch selection in Play mode and individual pad level

in Edit mode), Copy, AII/Enter and Patch Chain functions. Copy allows you to copy Sound only, MIDI only, or both Sound and MIDI parameters from one patch to another, while the AII/Enter button allows you to copy the value of a particular parameter on any one pad to all the other pads within the selected pad set (effectively, pads 1-8 or 9-16). This can be particularly useful where you want to set the same MIDI channel or the same velocity response curve for all the pads - you just select the parameter and set the required value for one pad, then press AII/Enter.

The SPD8 adopts the Patch Chain function of the Pad80, though as mentioned earlier, with only one as opposed to eight chains. As on the Pad80, a chain can consist of up to 32 steps, with each step comprising one of the SPD8's 32 patches. Once you've created the required sequence of patches, you can use the Patch/Level up/down buttons and the Patch Shift Up footswitch to move through the chain in Play mode.

The SPD8's Sound parameters are instrument assign (off/1-117), pitch (\pm 1 octave in semitone steps), decay (±30), velocity filter (1-10), pan (left 1-6/centre/right 1-6), velocity response curve (1-5) and individual pad level (1-20). Earlier I mentioned that there were 39 onboard drum and percussion sounds, so how come there are 117 possible instruments in the assign parameter? The first clue is that $3 \times 39 =$ 117. The second clue comes with the inclusion of the velocity filter parameter. The SPD8 doesn't just give you its sounds straight, it gives you three versions of each sound - routed through a low-pass, a high-pass and a band-reject filter respectively. As it turns out, the SPD8's use of filtering is a sort of halfway house between no filtering at all and the sort of sophistication available on Roland's D70 synth. Where the latter allows you to set your own filter cutoff point, resonance amount and envelope for each drum sound, the SPD8 merely controls the filter cutoff point in relation to the Velocity Filter setting for each pad and

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"The SPD8's alternative pad assignments are in many ways a better option than the external pad inputs found on the Pad8 and Pad80."

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the force with which you hit the pad. The higher the Velocity Filter setting, the greater the effect of the filtering in response to lower-velocity pad hits; harder hits progressively shift the cutoff point out of audio range (so the low-pass filter's cutoff would move progressively upwards), returning the sound to its unfiltered state. Here the differing velocity responses of the inner and outer areas of each pad can give you an extra degree of flexibility in performance. In contrast, obviously the footswitch-triggered sound can only be played with a fixed filter cutoff, because it can only be triggered at one velocity.

Given that filter cutoff adjustment on the SPD8 isn't tailored to individual sounds, the degree of effect at maximum Velocity Filter setting can vary greatly, from hardly any at all to virtually filtering the sound out of existence. Similarly, in some cases the character of the sound changes very little while in other cases it changes significantly. Overall, however, filtering is a worthwhile addition to the SPD8.

The SPD8's MIDI parameters are MIDI channel (off/1-16), note number (0-127), gate time (0.1-4.0 seconds in 0.1 increments), velocity curve (1-6), velocity sensitivity (1-16) and patch change (off/1-128). This is essentially the same array of MIDI parameters as are to be found on the Pad80, with the omission of the latter's note layer/switch and MIDI pan amount parameters.

The SPD8, of course, allows you to disable MIDI transmission and/or internal sounds for individual pads, so that you can trigger an internal sound only, a MIDI sound only or both internal and MIDI sounds off of each pad. You can also choose to trigger no sound at all, an option which is useful if you want to play two pads to help you create a rhythm from one of the pads.

You may have noticed that the SPD8 has six MIDI velocity curves but only five internal curves. This is because it has a flat-response curve for MIDI transmission but not for internal performance; the MIDI velocity sensitivity parameter determines which of 16 predetermined velocity values will be used (7-127). Once the selected value has been recorded into a sequencer, it will play back the internal SPD8 sounds at this constant velocity - so why not include a flat-response curve for the internal sounds in the first place?

The internal sounds and their MIDI transmit notes assigned to the pads within each patch also form the "drumkit" for MIDI reception purposes - receiving on a single, user-programmable MIDI channel. This has the advantage that rhythm patterns recorded into a sequencer can automatically be played back on the SPD8 as long as the same patch is selected via MIDI or from the front panel. The disadvantage is that if you want to play back a sequenced rhythm part on the SPD8 you can't select a different patch to play - say, a bassline on an external MIDI instrument from the SPD8's pads. It might have made more sense to include a parameter which allowed onboard and incoming MIDI selection of patches to be made independently - so that, for instance, while patch 16 was being used to play a sequenced rhythm part, patch 27 could be used to play a bassline. But maybe

I also can't help feeling that a local on/off facility wouldn't have gone amiss, as you can run into situations when using a sequencer where you're triggering internal sounds and MIDI notes off the SPD8's pads and having the sounds played via MIDI as well.

On a more positive note, internal and MIDI sounds play for their assigned duration regardless of SPD8 patch changes, so you need have no fear of notes being cut short. This also means you could, for instance, use the sustain footswitch function to hold a low orchestral strings note on an external MIDI module through different SPD8 pad assignments.

The SPD8 has nine-voice polyphony available for playing its internal sounds. Just as no more than one sound can be played per pad, so no more than one sound can be triggered from the same incoming MIDI note number. Where two or more sounds are assigned to the same note number, the sound assigned to the lowest-numbered pad is triggered. There is a way of triggering two sounds from one pad (one triggered internally only, the other out and then back in via MIDI), but it's too convoluted to explain here.

The SPD8's sounds, as you might expect, are derived from the R-series drum machines, which means clean, penetrating 16-bit sounds. These are: dry, room and TR808 kicks (the latter booming with its maximum three-second delay); dry, room and TR808 snares; side stick; room, dry, electronic and TR808 toms; closed and open hi-hats; crash and ride cymbals and ride cymbal bell; vibraphone; marimba; glockenspiel; xylophone; kalimba (verv techno/metallic); steel drum; timpani; mute high, open high and open low congas; cowbell, timbale; agogo; claves; bongo, shaker; cuica; triangle, surdo; TR808 clap; TR808 cowbell; record scratch; and glass crash. Bearing in mind that you can create three versions of each of these using the filtering, and that pitch and delay parameters allow for even more variety, the SPD8 provides you with a fair amount of flexibility in the sound department.

VERDICT

ANY ACOUSTIC DRUMMER who hasn't yet invested in an Octapad may well find the SPD8's self-contained nature makes it a friendly entry into the world of MIDI, keeping the option to add on other MIDI instruments open. Clearly this is one reason why Roland have added the SPD8 to the existing Octapads. But the SPD8 also offers MIDI-inclined non-drummers the opportunity to buy a well-specified MIDI drum expander and a MIDI percussion controller in one, at a very reasonable price.

Previous reviews: Pad8 Octapad: E&MM February 1986; Pad 80 Octapad II: MT September 1988

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competition

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MENTION OF THE corporate computer monster that is IBM, or their ubiquitous PC computer "standard" could - until recently - have been counted upon to put most musicians into a state of terminal bewilderment. After all, all that MS.DOS and "clone" business is hardly rock 'n' roll, is it? And yet in the Atari-dominated, Mac-aspirant '90s, the PC is making serious inroads into popular music.

Whether it's as a result of musicians picking up on secondhand PC-compatible bargains, or business computer users finding new recreational uses for their hardware, it's a fact that music software sales for the PC are increasing beyond those of the ST, Mac, Amiga or Archimedes. Never ones to stand in the path of progress, MT have called upon the generosity of Digital Music to put up some PC software for this month's competition prize. In fact, there will be a first, a second and three third prizes up for grabs. Don't say we're not good to you.

Winner of this month's first prize will receive the Musicator Integrated Sequencer and Notation package and a Music Quest MQX16 MIDI card with Chase Lock tape sync. For good measure, there will be a copy of RA Penfold's *Practical MIDI Handbook* and a pair of MIDI leads thrown in. (Worth around £640 in total.) Winner of the second prize will land what Digital Music call MidiPak - a copy of Prism sequencing software and another Music Quest MIDI card. Again a pair of MIDI leads will be included for good measure. (Total value, just under £200.) The three runners-up will collect a copy of Inspire 64-track sequencing software (worth £80). They will also receive a £20 voucher redeemable against a PC MIDI card through Digital Music. Sorry, guys, you'll have to find your own MIDI leads.

And so we arrive at the questions. Here your knowledge of the IBM/PC world will be thoroughly tested to ensure the prizes are awarded to only the worthiest of cases. Or something like that. . .

What does the "AT" stand for in the title of the IBM PC/AT computer?

a. Analogue Technologyb. Advanced Technologyc. Applied Technology

In which Gerry Anderson series did The Big Rat computer appear?

- a. Terrahawks
- b. Supercar
- **C.** Joe 90

Q2

Which of the following are PC sequencing software packages? (NB: One of them is a new arrival.)

- **a.** Symphony**b.** Genesis
- C. Applause
- d. Fasttrax
- e. Carousel
- f. Texture

ANSWERS SHOULD BE made on the MT competition hotline - (0898) 100768 - no later than Monday, 26th November. Please speak clearly and remember to leave your name and address with your answers. Undeterred by the appliance of science to the competition entry system, the multiple entries continue to arrive. They are, of course, all detected and deemed unsuitable for selection. As a consolation prize, we will be nominating persons guilty of making multiple entries for inclusion in Cilla's *Blind Date* series - a lorra, lorra laffs.

15

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oriental intrigue

WE'RE USED TO JAPANESE COMPANIES GUIDING THE HI-TECH MUSIC MARKET, BUT IT'S NOT OFTEN WE MEET THE FACES BEHIND THE GEAR - MT TAKES A RARE LOOK BEHIND THE SCENES AT TEAC JAPAN, AND AT SOME UNRELEASED EQUIPMENT. TEXT BY TIM GOODYER.

> "AS HE STARES optimistically into the future, Spalding is thinking constantly of designs", or so one of the many Japanglese phrases symptomatic of the current Japanese fascination with Western phrases would have us believe. This appropriation of the English language is invariably exercised in the interest of styling and marketing - anything from Art coffee to With Class cigarettes - and inevitably at the expense of grammar and obvious meaning. Not that spotting these delights of bastardised English was the sole reason for Teac inviting a party of select British music journalists to visit the Land of the Rising Sun, but it certainly provided one of the sources of entertainment.

> So, what do we know about Teac? Well, they're probably best known in common-orgarden musicians' circles for having invented the Portastudio - the first fourtrack, cassette-based home studio. With this alone, the company revolutionised the recording industry. So significant a development was it that the "Portastudio" part of its title has fallen into popular usage to describe any cassette-based multitrack machine - rather like the terms "Biro" and "Hoover" have been appropriated to describe ball-point pens and vacuum cleaners. Prior to this. Teac's A3340 and A3440 reel-to-reel four track recorders were to be found in many fourtrack studios alongside the company's two-track mastering recorders. Following the 144 Portastudio, the company

adopted the name Tascam for its music division and continued to innovate in an almost alarming fashion. The 144 was followed by a series of improved and varied Portastudios as well as the budgetline Porta-series. The Tascam 238 saw no less than eight tape tracks fitted onto the domestic Compact Cassette format; the MSR16 accommodated 16 tracks in a halfinch reel-to-reel format and the MSR24 was the first 24-track one-inch machine to appear on the market - causing further upsets in the recording studio business. More recently the term "Midistudio" has been used to describe Teac's four- and eight-track cassette machines that feature an unprecedented integration of MIDI into personal multitrack machines incorporating such refinements as semiautomated mixing and MIDI synchronisation in a single recording unit. The MIDlizer, meanwhile, is a comprehensive synchronisation unit capable of controlling tape transport functions and syncing to both SMPTE and MIDI - and the Midistudios come already equipped to interface with it. Then there are the company's lines of less revolutionary multitrack recorders, mixing desks (including the very cost-effective rackmounting, MIDI-controlled 20-input MM1), two-track cassette machines and the new DA30 DAT machine. Not a bad record by anybody's standards.

Meanwhile what we *didn't* know about Teac turned out to be pretty revolutionary too; did you know the company have developed data systems used for the training of pilots for the McDonnel Douglas F4 Phantom, for example, or that they are currently manufacturing in excess of one million $5\frac{1}{4}$ " and $3\frac{1}{2}$ " floppy disk drives every month? Neither did we...

The Teac story began back in 1953 when three Japanese engineers pooled their resources to involve themselves in the development of a professional stereo tape recording system. The prototype of the company's first commercial stereo tape recorder was built by one Tomoma Tani and went into production in 1957 as the TD102. Today it is the elder brother of Tomoma Tani, Katsuma, who is the Teac Corporation's president. Originally called the Tokyo Electro-Acoustic Company, Katsuma Tani suggested to the visiting British that the initials might equally stand for Technical Experience, Ability and Creativity. It could be that he's been talking to our friend Spalding...

From these humble beginnings, Teac have become specialists in magnetic media. Although the development of a stereo recording system might suggest pursuing the sound recording angle to you or I, Teac concentrated on the industrial applications of magnetic storage. In 1961 this resulted in a licensing agreement with computer giant IBM to manufacture tape memory systems. In 1964 they produced the first slow-motion video recorders for use in broadcasting the 18th Olympic games held in Tokyo. This line of video machines went on to become a part of the space program.

Alongside the various tape storage devices manufactured by the company -Winchester disks, digital cassette data streamers, PCM recorders, video cassettebased communications recorders - it is with floppy disk drives that Teac have had their greatest commercial success. At the time of our visit 900,000 disk drives were being produced every month. These units find their way into a surprising quantity and variety of other manufacturers' equipment and help make Teac Japan the foremost manufacturer of data recorders. By the time you read this the production will have topped the 1,000,000 mark. Then there's Teac's hi-fi range to consider. . .

The company consists of three separate divisions - audio-visual, instrumentation and data storage production - and Mr Tani was eager to make clear "we want to be number one in every area".

But the hospitable Japanese had more in mind than facts and figures when they decided to entertain the cream of the British hi-tech music press. First on the itinerary was a film dubbing studio, an audio-visual school and a commercial 24-track studio all in central Tokyo. The film studio, called TAVAC (Toei Audio and Video Arts Centre), specialised in dubbing cartoon soundtracks and professed to be the largest film company in Japan. While certain aspects of the various studio suites we saw were certainly impressive, the greatest surprise came in the form of the older technology still in use. Much of



the recording was still taking place on 16mm film sync'ed with mechanical sprockets. At the other extreme, one of the TAVAC suites gave us our first sight of the Tascam DA-800-24 DASH machine. DASH - or Digital Audio Stationary Head is a new digital multitrack format capable of putting up to 48 channels of digital audio onto half-inch tape without needing to use the rotating head systems presently employed in R-DAT machines and video recorders. The standard is currently being supported by just three manufacturers -Sony, Studer and Teac - the DA-800-24 being Teac's 24-track application. Apparently the error correction on the machine is such that the tape can be edited using a good old-fashioned razor blade.

Moving on to the Chiyoda Institute of Technology, we found a well-equipped facility (part of a larger educational complex) that offered recognised courses in industry, art, audio-visual arts and design. Courses run for two years, with a third optional year, and take students direct from high school at 18. Funding comes entirely from the students' fees which come in at a tidy 1.6m Yen (around £6000) per course. The school has been running for over 30 years and is the most prestigious Japan has to offer. Of a total capacity of 400 students, there are just 250 places on the audio-visual course. It's fair to say that the UK has nothing that comes close to this facility; not only does the course appear exhaustive in its coverage of the area (starting with basic

electronics and working through to the psychology of audio-visual arts) but it is incredibly well equipped. Apart from a fullyequipped television studio and editing suite, there is a recording studio kitted out with Tascam DA-800-24 DASH 24track and ATR-60-61 16-track machines: Soundcraft 200 series desk, Macintosh SE running MOTU's Performer and Composer. and Blank Software's Alchemy software; several Akai S1000 samplers and MPC60 sampling drum machine; Korg M1; Yamaha DX7 II; E-mu Emax and so on. And this is for learning. . . If it's any consolation, after their intensive education, graduates can expect to start work on around 140,000 Yen/month (around £7000 per year).

The last of the studio visits took us to Nota Studio: a privately-owned 24-track in central Tokyo. Again the Teac presence was inescapable, this time taking the form of an M700 desk and ATR-80-24 multitrack machine. The surprise awaiting us here was the size of the studio - or lack of it. The reason given was the cost of real estate; expect to pay around £180 per hour next

time you're recording in Tokyo.

The object of these visits was to demonstrate Teac's presence in a variety of recording environments; this they did. A few years ago, Seigen Ono (some-time David Sylvian collaborator) told me that recording studios all over the world are alike because the gear was common to them all. While not untrue, this certainly doesn't take into account other social and economic factors which are reflected in the studios' working environment.

NOT CONTENT WITH having impressed us with the results of their efforts, our Japanese hosts were eager to take us further into their operation by showing us the factory installations at Iruma and > Muriyama. Here a variety of the company's equipment is manufactured and tested. Much of the manufacture is typical of many modern production line factory methods enabling efficient assembly of large numbers of pieces of equipment. Less typical is the extent to which Teac's units are tested during and after assembly. Such is the extent of the long-



duration testing of disk drive insert and eject mechanisms that the test equipment is showing advanced signs of wear itself. The value of this rigorous testing is borne out by head of Teac UK Bob Thomas' claim that he has no problems with equipment returns.

It was at this stage of the visit that we were introduced to the effervescent Mr Tani. Although his English isn't up to the standards of some of his younger colleagues, his vigour and enthusiasm for the music industry are unmistakable. This encounter was one of several during which both Japanese and British parties were able to level questions at each other: "how much life is there left in magnetic tape as a recording medium?", we enquired. "More than my lifetime" came Mr Tani's reply. "What about alternative methods of data storage?", we suggested. "It's prohibitively expensive at present", we were told. "Will Teac be on the case when it arrives?", we wondered. Of course they will.

What much of these open question-andanswer sessions revealed was that many of our lines of enquiry had already been investigated by the diligent Japanese R&D departments and were quite within the reach of present technology - if we, the consumers, were prepared to pay for it. Here, it seems, magnetic tape still offers the most cost-effective way of offering both analogue and digital recording to you and me. They have the technology; we're short of the cash. What the Japanese definitely did have for us, however, was a sneak preview of some of the company's forthcoming equipment.

Carefully covered in dust sheets (in best TV-melodrama style) lay the next generation of Tascam recorders and mixers. With obvious satisfaction the units were uncovered. Starting at the bottom of the range. . .

New to the Tascam Porta-series is the Porta 03 Ministudio, an entry-level, fourtrack, two-channel personal multitracker with switchable Dolby B noise reduction. Expect it to cost around £229. Next out from under the sheets were a pair of Portastudios, the 424 and 488. The 424 is a four-track machine, the 488 an eight track, featuring four-channel and eightchannel mixers respectively. Both units have switchable dbx noise reduction and will sync to MIDI clock. UK prices are anticipated to be £479 for the 424 and £999 for the 488. Both these units and the Porta 03 should be available by Christmas.

Moving over to mixing desks, one of the demands created by Teac's own budget 16- and 24-track machines (as well as Fostex' B16/E16/G16) is for a similarly cost-effective mixer. Enter the Tascam 2500-series desks. The 2516 is a 16:8:16 format desk designed to complement a 16-track recorder, while the 2524 is a 24:8:24 format desk intended to do the same for Teac's MSR24. Both are in-line monitor desks featuring four auxiliary sends, and three-band, threesweep equalisation. Perhaps most significantly of all, the 2500-series incorporates the 99-scene mute memory system (all channels plus aux returns) introduced on the MM1 and more recently seen on the Midistudio series. This facilitates partial mix automation that can be integrated into a MIDI sequence if required. Availability is projected for late this year or early next year, while the price is promised to be "competitive".

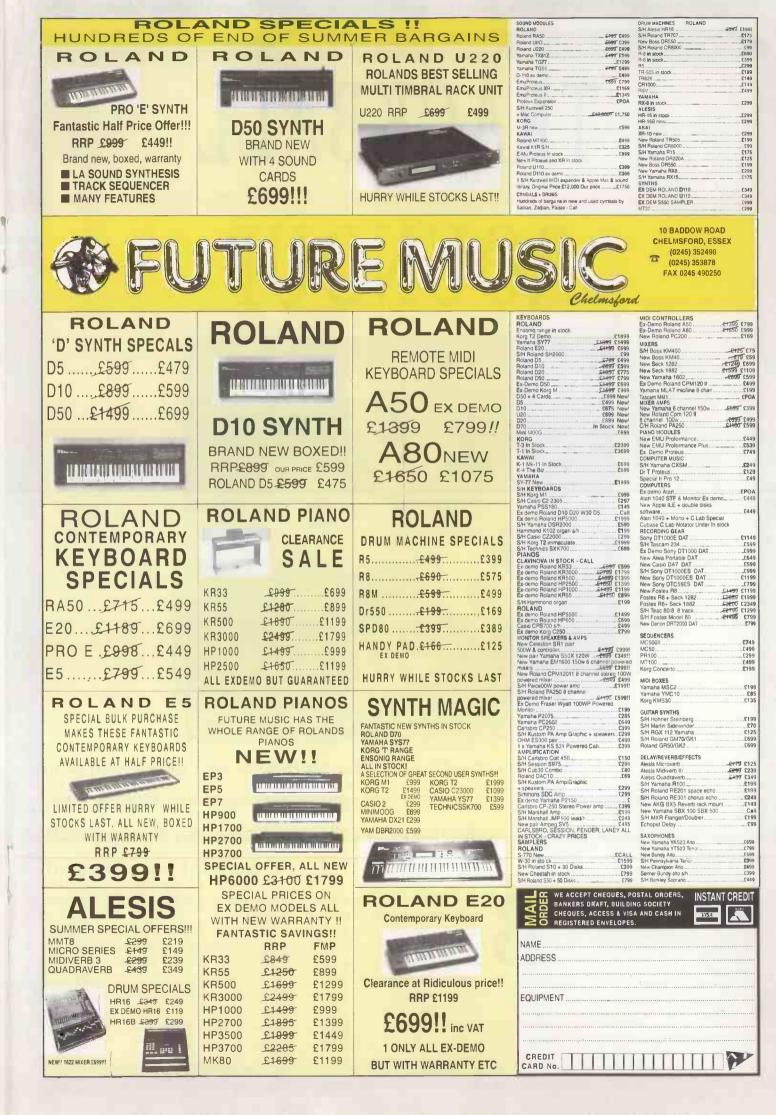
Still on the mixing desk trail, the session's final secret was the top-of-theline M3700 desk. As a follow up to the company's M3500-series desks, the M3700 inherits their in-line configuration, eight sub-groups, linear faders and so on. What it offers that's completely new is its automation system. Unlike the 2500series mute automation, the automation system on the M3700 is capable of storing fader information (VCA), channel, monitor and aux mutes, and equalisation on/off. Storage of mix automation information is facilitated by the 3.5" floppy drive fitted on the right of the desk above the sub-groups, and a mix can be synchronised to tape using SMPTE, MIDI timecode or MIDI clock information. The automation system will work either in snapshot mode, where all mutes and fader settings are stored as a scene or as a dynamic real time performance. In scene mode the 3500 offers 99-scene storage capacity which can be recalled by (amongst other things) MIDI program changes - like the MM1, Midistudios and 2500-series desks. Still under development for the M3500 is a flying fader system, which will bring it in line with the facilities offered by alreadyestablished automated mixing systems. The price of the M3500 has yet to be set, but it should become available sometime in 1991.

Leaving the dust sheets on the floor, Teac's staff led us away for their final demonstration: their MSR24S. The machine could be explained away simply as the MSR24 (one-inch 24-track machine) fitted with Dolby Labs' budget version of their SR noise reduction system, but that would be to ignore the implications of a system that made 24-track recording as cheap as the MSR24 but used a noise reduction system which allowed it to approach the performance of digital recording systems. Much argument has taken place about the relative merits of digital systems and Dolby SR-equipped analogue systems, but they have always accepted the necessary expense. The MSR24\$, however, looks set to upset the recording business once again.

On the basis of the demonstration we heard - recording and playback of CDs and a drum machine including A/B comparison of material - there was no appreciable difference in signal quality except with the drum machine which actually sounded better off tape with Dolby S treatment. If the system takes off in the domestic audio market, watch out for cassette performance comparable to that of DAT machines.

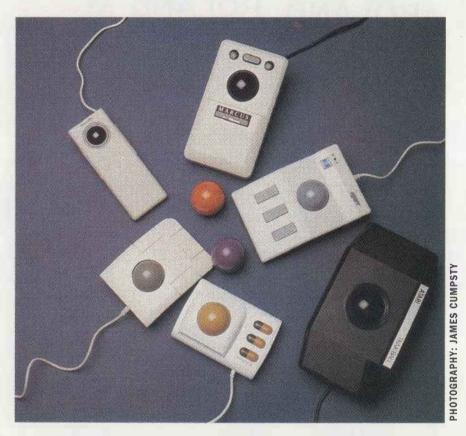
All business done, the weary British press were on their way home - taking in some of the tourist sights in Nikko and enjoying a little more generous Japanese hospitality on the way. Apart from witnessing some of the effects of the worst typhoon Japan has seen in 15 years, all that was left for us to do was reflect on the events of the past week. You know, if Spalding isn't a victim of a Japanglese translation or a figment of a Japanese imagination, he probably works in one of Teac's R&D departments. They too have their sights set optimistically on the future...

Thanks are due in particular to Mr Tsuda, Mr Miyata, Mr Hanabusa and Teac UK's Bob Thomas for a valuable insight into their company and an enjoyable trip. By the way, take no notice of any stories you may hear circulating in music circles about MT's editor dressing up as a Geisha - they're probably true.



ATARI/P&G/CONTRIVER/MCS/MARCONI/KRAFT

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> EFORE THE heyday of popular computer usage, the only kind of mouse most people were familiar with was the small furry rodent type famous for intimidating elephants and consuming cheese. These days, "mouse" often refers to the pale grey plastic creature which resides happily to one side of your Atari (or Mac, or Amiga, or IBM. . .) There's no fur on this kind of mouse - though it does have a kind of tail and with a bit of imagination

(depending what you've been on) you can see why it's so called.

Review by Vic Lennard.

Trackballs

It could be argued that the mouse has completely changed our computer working methods - indeed with many of today's programs, the only real reason to use the computer keyboard is to input names where required. However, there are certain mechanical and ergonomic problems inherent in regular mouse (ab)use - if you haven't encountered them yourself, read on...

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MOUSE SURGERY

IF YOU'VE EVER opened up your mouse (and you really should have, if only to clean the little blighter), you'll have found a small, heavy, rubber ball. A closer look will also reveal three small rollers. Two of these handle the vertical and horizontal movement of the mouse by rotating a slotted plastic disc in the path of an optical beam. The speed of rotation dictates the speed of the cursor on the screen. Diagonal movements are carried out by a mixture of the above. The third roller is spring-loaded and keeps the ball against the main two rollers.

Keeping a mouse in good working order is difficult. Whatever surface you choose to run it on, dirt is picked up by the ball and transferred to the rollers. Some of the Atari mice have nylon rollers which don't suffer from this but have a poor feel to them. Generally, using tape head cleaner or isopropyl alcohol once a week or so will keep the rollers clean. If this isn't done, you run the risk of losing the smoothness of your mouse and reducing its life considerably - people have been reported to the RSPCA for less.

Atari mice tend to break down for two reasons. Firstly, the left-hand button stops working, simply due to long-term use. The switches used on these mice are of the mechanical rubber pad variety, similar to the technology behind a computer keyboard, and given enough presses, the left-hand switch collapses - after all, this is the one which tends to be doubleclicked. Consequently, some manufacturers have started using micro-switches, which are far superior. Secondly, the mouse cable may break just behind the cable strain relief - although this problem can be avoided if you treat your mouse carefully.

The main disadvantages of using a mouse are the space it requires on your working surface and its speed across the screen. To an extent this latter problem can be improved by using a piece of software called a "mouse accelerator". This causes the cursor to move proportionately further on screen than the mouse itself does on its mat in the real world. However, these accelerators vary widely in terms of quality of programming - and at worst, they can interfere with the running of your software. Some sequencers have an accelerator option included within the software but this means that you have to get used to a decidedly sluggish mouse when you quit this program.

Though the mouse speed problem can be ameliorated to some extent, the space problem isn't so easily dealt with. You can't fail to have been irritated when you reach the edge of your mouse working space and have to pick up the mouse and move it back to where you started from. This "lift-upand-replace-to-the-other-side-of-the-space" routine becomes very tiring, especially if you're working in a small area.

ENTER TRACKBALL

A TRACKBALL IS basically a mouse turned upside down. Instead of rolling the ball on a surface, you

move it around with your fingers. The switches are, of course, on the top of the unit but can be in a variety of different positions.

There are various advantages in substituting this type of device for your mouse. A trackball only takes up as much room as the unit itself - and they're usually quite small. In operation, the palm of your hand usually rests on the unit itself or on the surface just behind it. This means that there is practically no wrist movement involved in operating a trackball - I'm sure that someone must have invented the term "mouse-wrist" for the ache that occurs after some hours of mouse use.

Additionally, the large ball featured on most trackerball units leads to far greater accuracy when working with the graphic edit pages in most sequencers and synth editors. Because the trackball itself is static, you can just take your hand away from the unit while drawing a curve or moving a slider. You can't do that with a mouse. The quality of switches and rollers in trackballs is generally superior to those found in mice - they have to be, due to the weight of the ball which bears down directly on the rollers. That said, you don't rest your whole hand's weight on them in the same way that you do with a mouse. Couple this with the fact that far less dirt gets into a trackball and you have a recipe for a much longer life.

Trackballs also eliminate the need for a mouse accelerator. Most trackballs will have you across the screen in half a shake of a mouse's tail, so you end up with the same feel and speed no matter which piece of your software you are using.

This all said, trackballs do have a few disadvantages. The first has to be cost. A decent trackball isn't going to give you any change out of £50 - but this has to be taken in context. A trackball will last you for years with practically no maintenance or decrease in efficiency, a comment which cannot be made for any mouse. Trackballs also take a little getting used to.

The only other problem may be with the design. Moving the ball quickly may cause the cursor to "skate" on screen and so effectively stay in the same position. We'll examine this aspect of each different unit in turn.

ATARI TRAK-BALL

THIS IS THE original trackball, having been originally designed to go with the old Atari 8-bit range of computers and video computer systems. The design is pretty long in the tooth, dating from 1983. It measures some 9" by 5" - hardly small - and is encased in black plastic. The two switches are situated in the top corners of the unit and so are some 7" apart. This makes life awkward when you have to press down both switches for an operation and absolutely impossible if you then have to move the ball. You could use two hands but that does somewhat negate the whole point of using a trackball in the first place.

The ball itself is large and very rough in use. In fact, it's distinctly noisy. The resolution is also very low in that it takes about four rolls to get across the



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Welcome

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screen, but it is very accurate with no skating. I used one of these for about nine months with a mouse accelerator because it really is too sluggish without one. I just had to accept that some pieces of software were unstable with this extra little program in memory and so turned the accelerator off when necessary.

In addition, the switches on this trackball are fairly unresponsive; consequently, it is heavy going if you're having to double-click a lot. Still, there is something very solid about the unit - it certainly doesn't move around.

Atari no longer stock these but most shops have a few left. The RRP used to be somewhere between $\pounds 25$ and $\pounds 30$ but if you really want one, they should be available secondhand for around £15.

P&G TRACKERMOUSE

PENNY & GILES are better known for the high-quality faders they manufacture for mixing desks than for computing peripherals. Trackermouse (who has a distant cousin, Danger) is a highly slimline 7" by 2.5" unit with the top face having a slope of around 10. The actual ball is rather small but the innovative part is the switches. These are positioned on the sides so that the palm of your hand rests on the unit, your first finger on the ball and your thumb and second finger on the two switches. These are micro switches, and

	Atari Track-Ball	Contriver Contrack	Penny & Giles Trackermouse	MCSMG Track	Marconi Marcus	Kraft Tripletrack
Smoothness of ball roll	3	7	6	8	7	8
Switch responce	; 4	6	8	9	7	8
Accuracy of control	3	4	7	8	9	6
Ease of use	4	5	7	9	6	8

are as responsive as possible, requiring only the slightest touch to trigger.

The ball is reasonably smooth, although a bit sticky. Two rolls and you're across the screen and while "skating" is evident, it is not too obtrusive. While Trackermouse has a great feel to it, perhaps a slightly bigger ball would have been better. It is difficult to place two fingers on it and so continuous side-to-side motion can be a little slow. Also, you can move the ball slightly in any direction without the cursor immediately picking up.

The real problem lies in the fact that the unit is very lightweight. Once your thumb gets a little sticky, double-clicking on the left-hand button becomes difficult. If you try it gently, your thumb sticks and only gives a single click, while any degree of force moves the whole unit sideways. This also causes trouble when you have to hold down the left button and move the ball at the same time.

As for the RRP, take a deep breath. A not inconsiderable ± 101.20 inclusive of carriage and VAT. As they say, it's good - but not that good.

CONTRIVER CONTRACK BALL

CONTRIVER HAVE BEEN making replacement mice for the Atari ST and other computers for some time, and the Contrack Ball under examination here is a small white unit measuring about 5" by 4" with a large, light brown ball to the right-hand side and three switches placed vertically on the left-hand side. You need to leave a space of around three inches behind the unit in order to operate it.

Taking this trackball out of the box and attempting to move the ball is likely to fail dismally - that is, until you turn off the lock on the bottom of the unit which is intended to prevent damage in transit. Nice idea. Lock duly turned off, the ball is quite smooth in operation but skates badly - move the ball fast and you end up behind the point where you first started. However, as the ball is very large you only need one careful roll to move from one side of the screen to the other.

Unfortunately, the switches are in a silly position. It is very difficult to have your fingers on the top and bottom switches and comfortably roll the ball - and if you're left-handed, forget it. The middle switch appears to duplicate the bottom one but as Contriver also make IBM and Amiga versions, I assume that this switch is primarily for one of these other computers. On the right-hand side of each switch is a small locking device which locks the relevant switch in an "on" position. Unfortunately, it is practically impossible to do this one-handed unless you have very strong nails, as the locks are far too stiff.

I've also experienced the same problem with the Contrack trackball as with a mouse I've used which was also made by Contriver. Every now and then, for no apparent reason, the cursor moves of its own accord on-screen. Sometimes this movement is just a centimetre, sometimes half the width or length of the screen. The same phenomenon occurs on different versions of the ST with the same result. Contriver should definitely look into this.

From a cost point of view, it is the cheapest trackball currently available on the market, with an RRP of ± 34.99 .

MCS MG TRACK

ANOTHER SMALL TRACKBALL, measuring 5.5" by 4", the top face of the MG Track is curved downwards towards your hand with the grey ball at the top of the slope. Again, you need to leave a small space behind the unit for the palm of your hand to rest on. The three switches are part of the white casing with one either side and the third next to your palm. The whole unit looks like something out of *Star Wars*.

The ball is fairly large and extremely smooth in operation. You can cover the width of the screen in just over one roll. Skating is evident but the resolution of MG Track is high so you don't tend to move the ball that fast anyway.

The switches are superb - just about the best micro switches I've encountered anywhere. A good micro

switch not only requires minimal movement, but has a positive feel and a distinct "click" when operated - MCS' switches have all of these qualities. The third switch has been implemented as a latching left-hand button. This means that instead of having to hold down the left switch when drawing controller curves or filling in a MIDI note grid, you simply press the bottom switch once. When you've finished your edit, you press the left switch to disengage. Very useful.

The price is a bit high at $\pounds 63.19$, but this really is one very good trackball and well worth the price.

MARCONI MARCUS

MARCONI AS A company need no introduction. Marcus is one very solid piece of engineering and measures around 8" by 4.5". It doesn't seem this large, however, because the top face is angled at around 10 degrees and at the same height as a standard ST/STE. Consequently when you place the unit at the side of the computer it looks like an extension of the keyboard. The bottom 4" is designed for you to rest your palm on and has the ball above this and the three switches in a horizontal line above the ball.

The aforementioned ball is smooth but quite noisy. However, it rolls very freely and so you tend to roll the ball with your thumb and catch it when the cursor gets to the required position. The feel is most reassuring and very accurate - it is very difficult to get it to skate.

The right and left switches are round with an elongated oval switch in between. This was disconnected, although Marconi said that it could be a latched version of the left one. The switches certainly aren't of the micro variety. but are positive in their action and very heavy duty. However, they are the "wrong" way round. This is because you tend to lean your hand on the right-hand side of the casing and so the right switch is nearest to you. As the left switch is most often used, this has been wired as the one which is effectively easiest to reach. Fair enough, but I did get confused when working with software which requires you to press the left and right buttons in a particular order. Also, the argument doesn't hold for left-handed people. There should be a switch on the rear of the unit to let you configure Marcus to your own taste, because after years of using a mouse a particular way round, changing the way you naturally think is quite difficult.

The RRP is $\pounds 54.95$ which is most reasonable - this is one trackball which will probably never break down.

KRAFT TRIPLET/RACK

MEASURING SOME 7" by 4.5", Tripletrack is a multi-computer trackball. It can be used with the Atari ST and the Commodore Amiga and 64 by selecting the relevant switch position on the side

of the unit. It also has a button-lock switch for selecting and holding down the main button and an auto-fire option for games use.

The three buttons are positioned towards the bottom of the unit, so requiring a space to be left behind for the heel of your hand. The right and left buttons double for the standard left button, so suiting Tripletrack to both left and right-handed people. The centre button then acts as the standard right button. This unit has a nice positive "click action" with good quality micro switches, although they are a little difficult to operate with your thumb as the switches move in and out of the casing.

The ball is very smooth to roll but, as with most other trackballs, suffers from skating. A couple of gentle rolls and you're across the screen so there is no real problem. Ergonomically, this trackball is quite comfortable, with the ball part on a kind of plateau above the buttons.

Its RRP is £44.95, which represents very good value for money on a trackball which has a fiveyear guarantee and a custom-made cover to keep out the dust.

VERDICT

EACH TRACKBALL HAS been marked out of ten on four categories. "Smoothness of ball roll" is pretty obvious, as is "switch response". "Accuracy of control" relates to how precisely the cursor moves across the screen and how much of a problem is presented by skating, while "Ease of Use" includes position of switches, and use of both switches and ball at the same time.

Both the Marconi Marcus and the Kraft Tripletrack rate highly, but top marks go to the MG Track by MCS - it's smooth and positive to use, and offers the plus of the locking third button. In fact, I bought one.

The subjective change from using a mouse to using a trackball is far less tiresome than from a keyboard to a mouse. More to the point, the first time you use a decent trackball will probably be the last time that you put up with using a mouse

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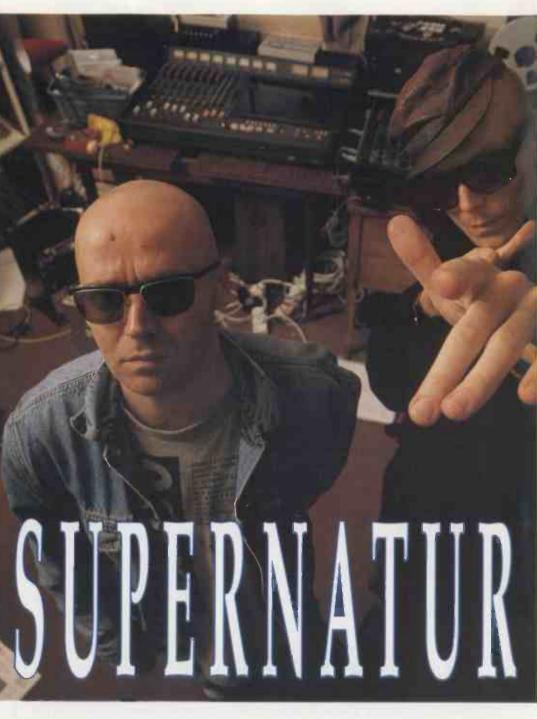
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Tales of the

The Stereo MCs' second album **Supernatural** confirms them as a creative force in British hip hop. Yet much of the album was recorded in their flat using modest equipment setup. Interview by Simon Trask.

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SURVIVING AS A HIP HOP ARTIST IN THE UK demands determination and self-belief. Part of the problem is that there isn't the vast audience to support the music and the artists in the UK that there is in the States (where even a hardcore hip hop record can sell in huge quantities, and the market can support a tremendous number and variety of artists). And with such a vital, thriving American scene, it's difficult if not impossible for British artists to make an impact there.

In what is still essentially a black music form expressing black culture and pride, a hip hop group which is both white and British could be said to have a double disadvantage. On the other hand, there are those who would contend that the colour of their skin gives them a significant advantage.

In their three-year history the Stereo MCs have heard it all. But the duo of rapper Rob B and DJ The Head - Rob Birch and Nick Hallam - who are augmented on live dates by drummer Owen If, are intent on letting their music speak for itself. Steering clear of both commercial compromise and an exaggerated hardcore stance, the Stereo MCs display a dedication to the essence of hip hop as an artistic musical form. Their philosophy is perhaps best summed up by Rob B's words on '1'm a Believer', the opening track off their new, second album *Supernatural:* 'Well, I ain't one of those who wanna be a picture of something I'll never be/Your own identity's a true form, fashion disappears but we still go on'.

Where the group's first album 33-45-78 has a raw urgency to it, with a dense, compelling sound and a largely upbeat tempo, their new album keeps the rawness but is mellower, more relaxed, with an earthier sound. They do much of their recording in their South London flat, and it's here that I meet them. What explanation do they offer for the different quality of Supernatural?

"As far as the album being relaxed is concerned, I think we feel more confident now", says The Head.

MUSIC TECHNOLOGY DECEMBER 1990



"We know more about what we want to do. When we first started out it was quite tough getting our music over. Also, there was a stage when we were doing the first album when our DJ at the time, Cesare, wasn't on quite the same wavelength as Rob and me. It can be a bit unsettling when you have negative forces working on you like that. We used to do remixes with him as well, but only because we didn't want to upset him by not including him. You can get into situations where, unless you're a complete asshole and say 'fuck off', you end up doing something for the wrong reason."

So what makes the partnership of Rob B and The Head work?

"Rob and me have known each other since we were six, so we know what we want to do and there's no ego problems", explains The Head. "If Rob wants to do a whole track on his own, it doesn't matter. Basically we're just looking out for the sum of what we're doing."

"Sometimes I'll put a track together but it always steers in a certain direction because we're still collaborating on it", Rob B concurs. "It reaches the

destination that bears our name. If you start having definite roles then you turn into a group."

"And then people start getting problems about what their role is", The Head continues, "and you can end up putting a whole track down just because you don't want to upset somebody."

"When Cesare was DJing with us", Rob B recalls, "we used to feel bad about wanting to get on the decks and mess around with some ideas. It's like you're stealing somebody's glory, when really everybody should be trying to get some ideas down. Who cares who does it when in the end you've got a nice bit of music down?"

"Since we split up with Cesare I think it's been much easier for us to do exactly what we want to do", adds The Head, "Sometimes you can know what you want to do but you get disturbed, and you end up not putting it down quite right, whereas if you're left alone it ends up sounding right because it's able to come out naturally. So perhaps that's why this LP sounds more relaxed." "I think if there's an earthier sound then it's got a lot to do with the fact that the music was started here on the eight-track", continues Rob B. "We've always hated the idea of having to do a demo, because when you've done a track once it's really boring to have to go and do it again. Also, if you just do it once then you keep the initial inspiration that you had for the music in the recording."

"Also, a lot of people are so finicky about things", adds The Head. "We could have a whole track that's got a little click going through it that you don't even notice, but in studios you get so much more of a focussed sound that people spend hours trying to get rid of stuff like that. We tend to let distortion and any little aberrations go onto tape, because it all adds up to the sound that we want. I think you can get away with a lot more when you're recording than people think you can."

"The important thing is to have the music sounding natural", Rob B continues. "If you mess around with something for too long, rubbing little bits out here and there, you end up messing it up so much that it's no longer natural. You're thinking about the icing layer instead of the feel of the music. It's the overall feel that people hear, they're not listening out for clicks."

"What we're trying to do is make a record with a feel", The Head concurs. "It's not like we're making a record that's meant to be a demonstration of how well the equipment in the studio works. I think that's what a lot of people are doing these days - it's all about how great you can get the music sounding with all this equipment. Whereas we see our equipment as a vehicle for getting our music down. We don't believe in treating equipment with respect - it's basically there to do a job."

The Stereos' equipment setup is modest, but it suits the way they like to work. At its heart is a Bel BD320 sampler/delay, which they use for sampling all their breaks.

"Breaks are the basis of what we do", explains The Head. "Every track that we've done has breaks on it, and we always start with a break. At the most our breaks are two bars long; sometimes we might let a sample run for longer, but then more often than not it'll go out of sync. Most of the breaks we use have a real drummer playing on them, so the timing goes out pretty wild."

Once the sample is in the Bel, it's fired off an audio trigger from a TR808, pitch-shifting the sample on the Bel to get it in sync with the drum machine. In fact, the 808 is rarely used as a drum machine, though it does act initially as the timing source for laying a sync code to tape on their Tascam 388 eight-track via a Korg KMS30 synchroniser. A second KMS30 acts as standby in case the first one breaks down. At one time they used the SMPTE sync of their other drum machine, an E-mu SP12, but the SP12 broke down on them and is currently gathering dust on a shelf.

"It seems like every time we've started to use SMPTE something's gone wrong, so we think 'why bother?", opines The Head.

With one break sampled into the Bel, the duo can then experiment with layering up to two others using their SL1200 turntables. However, as the Bel can only >

"We tend to let distortion and any little aberrations go onto tape, because it all adds up to the sound that we want." hold one sample at a time, each break has to be recorded onto the Tascam before another can be sampled.

The astute among you will have noted that neither MIDI nor sequencing figure in the Stereos' working methods.

"It's a fairly prehistoric way of working", The Head acknowledges, "but it's nice working like this because it's so simple. One reason why we've never bothered getting something like an Akai sampler is that the Bel is so quick to use. We like to do things instantaneously, otherwise it gets boring. If it takes more than half an hour to get a drum loop together then you start to lose the vibe of what you wanted to do in the first place.

"Doing things the way we do them is a lot faster than the way I've seen people working on computers. A lot of people program all their drops on the computer, but I think it ends up sounding sterile. OK, so you may need to program some drops when things start to get difficult, but the mix should be a performance in itself.

"Some people get totally sidetracked by equipment, and they end up not doing anything, they're on this constant search. They make it an excuse, like they can't do something because they need this particular bit of equipment."

ROB B AND THE HEAD GOT INTO HIP HOP around five or six years ago, influenced by electro music and by tapes of Red Alert's and Marley Marl's radio shows from New York.

"We got into it really naturally", says The Head, "and from there it developed into what we're doing now. We were messing around with drum machines to begin with and it progressed from there. I remember we had a really old turntable, and although you couldn't scratch with it, we were making drum loops taking a bit off a record and running a tape loop of it on our Revox."

"Before we knew about mixing I had one bit of music running on tape and I found that it sounded nice having this other bit of music running alongside it", Rob B recalls. "You can put a different vibe on something just because somebody's made a record in a different place, and you can take a little bit of it and create a whole new aura. And you're not really stealing because you're building something new with it, a vibe nobody's heard."

The Head picks up the argument: "People say you're using other people's records, but you can hear the same break on two records and it'll sound completely different. It's down to individual taste, how to put breaks together."

It's this process of combining things in such a way as to create something new out of existing ingredients which lies at the heart of the Stereos' approach. However, there's no particular recipe which says how many breaks should be used or where they should come from.

"We just layer them till it feels like we've got enough, till it sounds like the track's finished", says Rob B.

"We try and get the feel more than anything, so that

it's like an old group playing", adds The Head.

And is there any particular style of music that the Stereos will turn to for breaks?

"Quite often you go for oldish records, where you know that there's going to be a drummer playing", says Rob B. "Obviously '70s funk records are a good bet because a lot of those records have drum breaks on them. Also, with a lot of records from the '60s you find things where people break out and do something stupid. Some of those psychedelic records have got weird stuff on them."

"But there's breaks on just about anything", The Head observes. "Black Sabbath, for instance. It needn't be heavy metal guitar, there could be two seconds which sound completely different when taken out of context. That's the brilliant thing about sampling."

It could be argued that if sampling has fallen into disrepute it's because it's been used all too often as a recreative rather than a creative musical tool. In itself, sampling *is* a recreative process, so the art comes in transcending this through the choice of samples and the way in which they're used. Creative sampling is not about going for the obvious - the 'Funky Drummer' break that everyone and their dog has used - and that means being prepared to consider anything as a potential source of breaks.

"Sometimes we go down junk shops and secondhand record shops", reveals Rob B. "I've bought really expensive records before, but it makes no difference when you're looking for breaks. You could find a break on a naff record that cost you 50p. It's down to luck, really. You've got to think of it in terms of sounds, and maybe not look at the record cover."

The Head offers a specific example: "On the first track we released on Gee Street Records some three years ago, the break was from a cover version of Stevie Wonder's 'Superstition' on some really dodgy record label. It was a crap cover version, but the drum break at the beginning actually sounded better than the drum break on the original."

While breaks lie at the heart of the Stereos' music, they also like to add live instrumental parts, in the first instance using the instruments they have in the flat. No, not an M1, K1 or even DX7, but Fender Rhodes, Crumar Multiman and Roland SH101. The Head has a simple explanation for why they turn to these ageing instruments: "They sound brilliant. If somebody comes up to you with a sample disk and says they have a Rhodes on disk, you just know it won't sound the same as the original. Also, there's nothing like a real bass guitar. All we've got is a $\pounds 20$ Satellite bass, but we can record a track of it and then sample and loop the nicest bits."

Or as Rob B would have it: "We treat everything as a break".

But while the Stereos invariably start working on tracks at home, when they've filled up the tape on the Tascam or they want to add the raps, they lug the 388 along to a commercial studio, transfer their work across to 24-track tape and continue working from there. Thus alongside Lavender Hill in Battersea, the *Supernatural* album sleeve contains recording credits for Terminal 24 Studios in London and Calliope Studios in New York - the latter notable for being the

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"Record companies want to sell records on the strength of remixes when they've already got the real music there."



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Acoustic Research Speakers Aiwa Cassette Deck Alesis MIDIverb II Bel BD320 Delay/Sampler Boss RCL10 Compressor/Limiter Phonic MRT60 Mixer Revox B77 Tape Machine Sony Amplifier Tascam 388 Studio 8 Tape Machine studio where the Jungle Brothers, De La Soul and A Tribe Called Quest record.

"We have recorded a couple of vocals in the flat", says The Head, "but it's much easier to do them in a studio."

"It's quite hard to get the voice sounding good here", adds Rob B. "That's where you really do need to have a good microphone. Also, just being somewhere else with an engineer and maybe a couple of other people around you gives it a bit more distance, so that you get more objective about what you're doing."

Working in a studio also gives them the opportunity to get in live musicians - including their regular drummer on live dates.

"If there's a vibe for Owen to put something down, he'll do it", says Rob B. "Even just a tambourine or something can add a feel to the music."

The new album also includes sax, trumpet, bass and vocal contributions from guest performers, reflecting what seems to be a growing trend in hip hop.

"We're not opposed to using anything if we get the result we want", asserts The Head. "The only thing we are opposed to is taking too long about doing it. Even if somebody performs something for us, they've always done it at most in two takes, a lot of the time in one. If you don't get it quickly then it's probably not really happening anyway."

Rob B sees the increasing use of live musicians in hip hop as just another aspect of something which has always been a part of the music.

"The music's never going to lose its roots of being a DJ and a rapper in front of a crowd", he says. "Rap's about lyrics and rhythm, and it either comes over or it doesn't. The crowd comes to test you. That's the first situation. It's like anything, if the vibe's there then it's brilliant. Nothing but hip hop can do it like that - but I think it's good that some people are doing other things, like including more live elements in the music, because it just means the music's going to be more entertaining."

WORKING UNDER THE NAME ULTIMATUM,

Rob B and The Head also function as remixers from time to time. They first established themselves with an inspired remix of the Jungle Brothers' 'Black is Black', and from there have gone on to remix such records as the JBs' 'Doin' Our Own Dang', Queen Latifah's 'Ladies First', X-Clan's 'Funkin' Lesson' and Mica Paris' 'Contribution'.

While a commercial studio is usually the finishing point for their own music, for their remixes it's the starting point, as The Head explains.

"We go into a 24-track for an hour, transfer the vocal and any other bits we like off the original tape onto quarter-inch, then bring it home, put down a code at the right tempo and then a basic loop. Then we sample the vocal off tape and spin it in and build it up from there. Because we have the vocal on tape already we don't have to go back into the studio."

Here the Bel's 32-second sample time comes into its own, allowing them to spin in extended vocal sections if they want. But what is it the Stereos set out to achieve with a remix? "Just to get the same inspiration that we do when we're working on one of our own tracks", Rob B replies.

"The record companies have a boring attitude", says The Head, "they do remixes for the sake of it. We were asked to do a remix of a Monie Love track, but we really liked the original mix that the Fine Young Cannibals did and we couldn't see any point in remixing it. The record company were expecting us to do a radical remix with totally new music, but what we ended up doing was more a traditional kind of 12" remix using what was already on the tape, because it sounded so nice.

"We gave it to the record company and they didn't accept it as a remix, they wanted a radical remix. So we did them a radical remix with totally new music, just keeping the vocals, but it was the one they'd turned down originally that they used on the A-side of the remix 12", and that's the one that got in the charts.

"When they said they didn't accept that mix, we explained to them why we'd done it like that, and obviously a few weeks later they must have changed their minds. In effect we might as well have been the A&R men as well, because we were the ones that told them the track didn't need new music on it."

"When you've got a track that sounds really good, what's the point of putting new music on it?", Rob B asks. "That's the trouble with all this remixing stuff, record companies want to sell records on the strength of remixes when they've already got the real music there, which is what people should be satisfied with."

Sometimes it seems the record companies panic. They have to make their money back somehow.

"...and then they'll get someone to remix a record for the name of the remixer", The Head confirms, "which isn't really a good reason for getting a record remixed. I think also they take remixers for a bit of a ride. If we've written completely new music for a track and we mention publishing. ... But why shouldn't we get publishing? If the original track was using other people's breaks, those people get publishing, so why doesn't somebody who does a remix get publishing?"

How would they feel about having one of their own tracks remixed?

"'On 33' from the first album was remixed by the 45 King ages ago, but I actually hated what he did to it", recalls The Head. "I thought he was taking the piss. I can't really think of anybody I'd like to have do a remix of our tracks, apart from maybe Marley Marl. I really like what he does. But I wouldn't like CJ Macintosh or anybody like that to do a remix, because I think he naffs things out a lot of the time.

"Actually, we were thinking of doing an Ultimatum remix of our own stuff. We use the same method with other people's stuff as we do for our own, but we thought we could approach it from a slightly different angle."

Have they ever wished after a track has come out that they'd done it differently?

"Often you think you could have done something different", replies The Head, "but that's just how it is, it's part of what you're doing. That's the nice thing about it - always wanting to do something different."



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MP44 MIDI PLAYER

When your computer isn't up to the rigours of life "on the road" and your music is demanding a live audience, the need for a robust diskreading MIDI unit becomes obvious; perhaps the designer of the MP44 plays live. . . Review by Vic Lennard.

T IS NOW commonplace for sequencers to be used to make music "live". Drum machines allow drummers to forsake time keeping duties in favour of clever rhythms and fills, while keyboard players leave basslines and pads to the machines and play the stuff that interests them. Guitarists even use sequencers to change their effects units, ending the traditional foot-pedal ballet.

But computers - as in computers running sequencing software - don't travel well. Monitors play up due to electrical fields on stage, and few computers are actually built to last one night on the road, let alone a tour. The alternative - hardware sequencers - have limitations. Some cheap units don't even have an onboard disk drive, as anyone who's tried to load up a sequencer from a cassette will agree. Transferring MIDI data from a computer system to a hardware sequencer is also fraught with problems.

Another problem area is that of MIDI connections. The usual MIDI In-Thru chain isn't practical if more than three devices are to be linked. MIDI merging, filtering and processing may also be necessary, depending on the setup.

The solution: the MIDITEMP MP44 MIDI player.

THE LOOK

THE MP44 COMES in a 1U-high black rackmount case. The front panel has a 2 x 20-character backlit LCD and various colour-coded buttons. To the left are buttons for up and down cursor movements on screen and altering parameter values. Two blue buttons entitled Matrix Mode and Seq Mode select which set of functions are to be edited. Ten numeric keys double as MIDI In (1-4) and Out (6-9) selectors and panic button (0). Finally, a pair of grey Exit/Load and Enter/Save buttons facilitate movement between screen pages, numeric input and disk control. The drive is a standard double-sided, double-density affair, and the only other control is the power switch.

The rear panel has four MIDI Ins and Outs, and a quarter-inch footswitch socket. The mains cable is of a non-removable type. In use, the casing around the display and PSU gets very hot which would probably necessitate the leaving of a 1U gap above and below the unit.

USE ME

ANY USE OF the MP44 involves the use of information off disk. The MP44 will read both Atari ST and IBM PC formats, but has no option for

formatting. The reason for this is that the MP44 saves all data in the form of a Standard MIDI File (SMF) which can then be read by any sequencer supporting SMF. More to the point, you can create a song, save it as an SMF and then load the song into the MP44 without any conversion of data.

Songs can be loaded into a slot in one of the two song banks: P and S. Each of these has 128 slots and can have a MIDI channel assigned, so allowing selection of all 256 songs via MIDI Program Change commands. The initial memory available for songs is 247KBytes which gives perhaps five or six songs concurrent in memory. The MP44 is not a disk reader like the Elka CR99 - the songs have to be loaded into memory first. To this effect, loading from the disk drive is very fast at around 20KBytes/second. The RAM can be increased to a maximum of four Megs.

The MP44 also has a 4 x 4 MIDI matrix (based on the facilities of the PMM88 MIDI patchbay). Two banks of 128 different selections of settings can be stored in battery-backed RAM.

Pressing the relevant Mode button selects either Sequencer or Matrix mode. Double-pressing the current Mode button takes you to Function Select, where you select a function with the numbered buttons. It's a simple system as there are only a dozen or so functions to remember.

Having recorded a song on your sequencer and saved it as an SMF, put the disk into the MP44 drive, select the memory slot (in Sequencer mode) and double press Load. You now select the required file from those displayed.

Back in the initial screen, Enter plays the song, Exit stops it. A single press of the Sequencer mode button takes you to a screen where the bars are counted through as the song plays. From here, you can use numeric buttons 1-4 to fast rewind, rewind, forward or fast forward respectively; the up and down buttons to vary the tempo, which is shown on screen.

Loading a set of songs can be made much easier by using MP44's "assignment" system. Here you select the songs that you want to be loaded at the same time: choose the memory location and select sequencer function 9, Assign to File lets you select the song to be loaded into this position. Repeat this procedure for as many files as you wish and finally save the assignment, having named it first. When you load an assignment, double presses on the Sequencer and Load buttons will load all song data into memory, starting from the current memory location. This is useful, because if the entire assignment cannot fit into memory, you can choose which songs get left out by ensuring that they would be the last ones to be loaded. The assignment



feature is one of the most powerful on the MP44. Assignments can be loaded while songs are playing and can be merged together.

The naming procedure is not completely documented. The mode buttons move the on-screen cursor while the up/down keys select the letters. However, pressing the numeric keys increments the current letter by the numerical amount. For example, starting with "a" and pressing "5" gives you "f". For those of you who are mathematically minded, this is very fast.

RECORDING

OF COURSE, YOUR sequencer may not support SMFs, in which case you'll have to transfer songs via the MP44's MIDI In: sequencer function one selects the MIDI port(s) through which data will be received while function two deals with the synchronisation (internal or external - the MP44 can be either the master timing device or a slave). You can also choose which ports MIDI timing data is sent/received on.

You can start recording externally or internally, but it would have been reassuring to have a MIDI activity light indicating that data was being received. When the MIDI data flow finishes, either the external sequencer sends a MIDI Stop command or else Exit stops the recording, which then has to be saved to the song. Any further MIDI data will be recorded as the MP44 is always in record-ready mode and can then be appended to the song or erased when the saved data is replayed. This is very flexible because not only does append mean adding to the end of the song, but also merging. Each "overdub" recorded in this way can be directed to any of the four MIDI Outs, effectively giving 64 discrete MIDI channels. Sixtyfour concurrent tracks can be played, subject to memory restrictions - powerful stuff.

Sequencer functions three (tempo) and four (time signature) can be altered as required, while function five shows how much memory is currently free. The manual has a couple of errors here: sequencer mode 88 is supposed to let you set the resolution in terms of a crotchet, 1/1536 being the highest possible on the MP44 (384ppqn) but this facility is accessed via

function 33. Function 88 brings up a disk dialogue box searching for .MPF files - there was no mention in the review copy manual, but this is for loading additional functions including formatting. It states that "the highest recording resolution is a 1534th of a note", which is incorrect. There's also the comment that the "highest SMF playback resolution is a 1920th of a note" which has no foundation in the Standard MIDI Files 1.0 spec.

MATRIX FACILITIES

BEARING IN MIND that the MP44 is designed to be able to run an entire live setup, a comprehensive routing and processing section is essential. And indeed, the sequencer and matrix sections are entirely independent. All matrix programs can be saved as one .M44 file on disk.

Matrix function one deals with the routing of MIDI data. Each MIDI In is treated separately with three possibilities: Standard (data on a MIDI channel is passed directly through to the same channel on the

same Out); Multi-converting (data on a MIDI channel can be routed to any channel on any output so allowing multiple merging); and Manifold (data on any receive channel can be sent from many MIDI channels on any Out simultaneously). This is useful with MIDI Mode 4 where a different voice can be played from data received on each MIDI channel.

Once the received MIDI data has been routed, various processing can be

carried out: Filtering - various types of MIDI data can be removed on input or output, and per MIDI channel. You have the option of filtering all notes, all MIDI channel messages excepting notes, all MIDI controllers, program change, channel aftertouch, pitchbend, SysEx, system common, system real time, active sensing and individual MIDI controllers. The >

"Function seven lets you pre-program MIDI volume levels and program changes per MIDI channel and per Out - your system can be configured differently for each program."

manual doesn't mention polyphonic aftertouch, which ≻ the MP44 will filter, and fails to mention that filtering system common also takes out MIDI Time Code and song select. The latter on input will prevent the MP44 from being able to respond internally to this message. The active sensing filter was permanently on, but this has now been fixed. Other quirks to beware of include filtering out notes, which doesn't remove the all-notes-off command championed by Roland. Pressing keys on a keyboard will shut off any notes playing on that MIDI channel. The all-controllers filter will take out messages for MIDI Mode change, Local Control, all-notes-off and All Controllers Reset. Finally, filters can either act locally for the specific program or globally for all programs.

Velocity processing - the velocity response of your connected keyboard can be altered in various ways. In the same way that you have split points, you have thresholds for velocity to divide up the velocity range up to a total of 74 divisions. For each range, you can alter the response by a factor of between -16 and +15.88. Velocities will be multiplied by this factor within the selected range. Offset then lets you add a certain value to the velocity. Next, you can carry out velocity switching, crossfading and limiting per range as well as being able to turn the velocity off and reverse the effect. This is a great facility for improving the response of average synth keyboards and will let you create any special effects from any velocity-sensitive keyboard.

Split - up to four splits are available, the lowest taking the MIDI channel that the connected synth is transmitting on and then incrementing by one from each split to the next. By using multi-converting, any split can drive any MIDI channel from any of the four Outs. You can also decide which MIDI channel the controllers will operate on as these are MIDI channel specific. A transpose option is also offered for each split.

Transpose - any Out can have a transpose value set between -64 and +63 semitones.

Once in Matrix mode, an extra press of the matrix button takes you to the MIDI Analyser page where small bars show the flow of MIDI data at the In and Out ports.

SPECIAL FUNCTIONS

A STRING OF bytes can be set up and sent from each of the four outputs each time a program is selected by using "send data". You could use this to send out a dump request or edit buffer request which could then be saved in a MIDI File. You could also set values for any MIDI controllers or send out MIDI Mode changes. You could even set a different chord to play for each program by setting up the required note messages (but you'd have to hit the panic button to stop them). A total of 250 bytes can be sent which will handle most procedures except for those which require handshaking or acknowledgements. You can key in numbers in hex or decimal.

In a similar manner, function seven lets you preprogram the MIDI volume levels and program changes per MIDI channel and per Out. Your system can be configured in a different way for each matrix program.

The panic button is used for muting "hung" notes, and works by sending out zero values to various MIDI controllers, and individual notes off on all MIDI channels from all Outs, simultaneously.

Other facilities include being able to program and remove time signatures and tempo changes from song files.

LIFE LIVE

EARLIER I MENTIONED that each recorded take or track could be assigned to different Outs. These can be saved within the assignment file so that as a song loads up, it knows where to direct the MIDI data for each track. Add to this the fact that song programs can be called up by either program change commands or song select, with each song bank (S and P) being on a different MIDI channel.

To allow maximum control over your system in a live situation, sequencer function 55 exists. This lets you create "Jobs" - macros to carry out various commands in a specific order. This uses the following commands:

0: Stop	1: Matrix
2: Song	3: Footswitch
4: Start	5: Wait for Stop

These work on the current assignment file. Let's say that your assignment has eight songs. The command chain of 2-1-4-5-2-4-3-2 would do the following: the first song would be loaded and set ready to play followed by the relevant matrix program for that song which, in this case, will work for the set. The first song would then start to play and continue to the end. If the second song is already in memory, it will start to play immediately. Otherwise it will be loaded and then play. If you hit the footswitch midway through this song, the next song will start to play, if already loaded. Or you could wait until the end of the second song, milk the applause and then hit the footswitch for the start of song three. A Job is saved as a song program with a .MPJ extension. This can then be called over MIDI.

The final facility is Installation, matrix function 88. From here, all-notes-off when you change a matrix setting can be supressed. This lets you smoothly overlap the beginning of a song from the end of the previous one without notes being cut off. You can also decide whether a song will start immediately after selection via MIDI or wait for a footswitch press. Best of all is the ability to automatically load the file called Assign.asg on power up and to also load the songs within that file into memory.

All you have to do is to put the disk in the drive, turn the MP44 on and select the Job program number via MIDI.

SMF & SYSEX

I SPENT A lot of time loading and saving songs in SMF format on the Atari ST using Steinberg's Cubase, C-Lab's Creator and Hybrid Arts' SMPTETrack With note and controller data, there were no problems. This included recording MIDI data on the MP44 and playing back on the various software packages. Bear in mind that most sequencers use events not transmitted via MIDI, the most obvious of which are tempo and time signature changes. There is the facility within SMF to incorporate these as part of the file but Cubase won't write its tempo/key signature mastertrack to an SMF or acknowledge changes when loading in via an SMF. Creator only seems to write these changes to a MIDI File if they're made on the first beat of a bar. Other facilities such as track muting cannot be transferred. It would appear that the MP44 can read tempo changes and key signatures if the sequencer software encodes it into the SMF, but how the MP44 will cope with a sequencer whose internal resolution is not a multiple of 96, which usually causes timing problems, I can't say.

Without delving too far into SMF's, let's say that there are two ways of handling SysEx. One of these treats the SysEx data as a block while the other breaks it down into small packets with timing info between each packet. The review version MP44 didn't seem able to handle this latter type, but MIDITemp assure me it can. The jury is still out.

One other oddity: There are two SMF formats; 0 for a single track and 1 for multiple parallel tracks. The MP44 saves all songs as format 1, with single track songs being saved with a second, zero data track. It works fine, but is a little unorthodox.

VERDICT

BEFORE PASSING JUDGEMENT on the MP44, the question has to be asked whether there is a need for it? Consider the alternatives: one is a computer system with monitor (or portable) with all the hassles regarding reliability and electrical fields. Then there's the Elka CR99 which lacks the ability to read SMF's it's certainly cheap but lacks any degree of automation. The Alesis Datadisk Plus has only just been released but will apparently record all MIDI data. No other device will currently read SMF's, as anyone who's spent weeks transferring data via MIDI from one device to another will appreciate.

Consequently, I have to conclude that the MP44 is an absolute powerhouse. To be able to have an entire set loaded and controlled by one footswitch is unprecedented. Admittedly there were problems with the review model (v1.04) - the manual was awful to read and factually inaccurate in places. MIDITemp maintain much has been done to improve the manual and machine (now up to v1.09).

For live use, the MP44 gets a standing ovation; if you're discouraged by the cost, remember you're buying a processing MIDI matrix, 64-track sequencer and MIDI File playback system.

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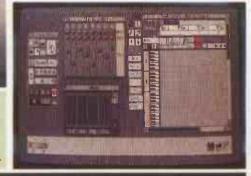
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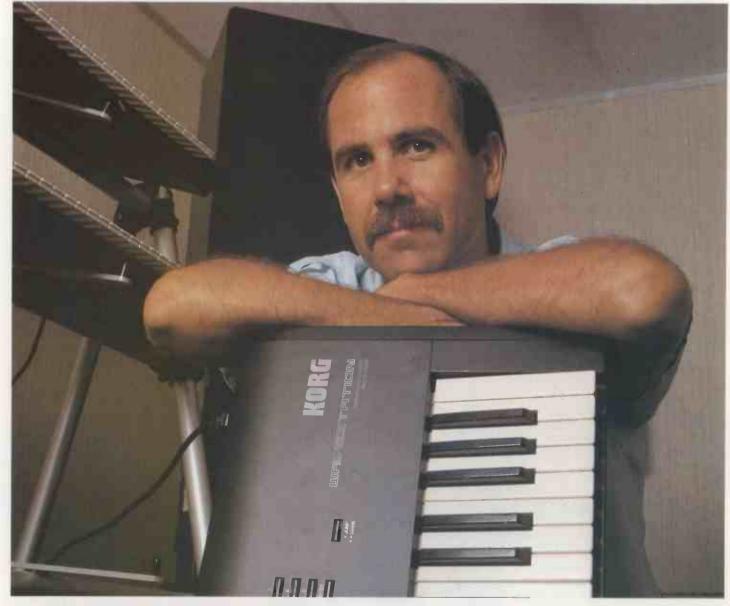
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THE PROPHET AND THE RISING SUN



IN THE CONCLUSION OF THIS TWO-PART INTERVIEW, SEQUENTIAL CIRCUITS FOUNDER AND CURRENT VICE-PRESIDENT OF KORG R&D DAVE SMITH TALKS ABOUT MIDI, POLYPHONY, USER INTERFACES AND PROGRAMMING. INTERVIEW BY SIMON TRASK. DAVE SMITH GRADUATED from the University of California, Berkelee, in 1971 with a degree in electronic engineering and computer science, and started working in the electronics industry in Silicon Valley. Shortly afterwards the Minimoog was released, and seeing in it an opportunity to combine his interests in electronics and music, he bought one and began designing add-ons for it - purely for his own use, in his spare time.

Smith founded Sequential Circuits in 1974 as a part-time, one-man operation working out of his home. His first development was the Model 600 analogue sequencer, a CV-based unit for use with the Minimoog, which offered three banks of 16 notes. The Model 800 sequencer followed around two years later, offering 256 notes organised as 16 x 16. Where Smith only sold four or five Model 600 units, the Model 800 sold around 200. He also produced the Model 70 Programmer for the Minimoog and ARP 2600, again selling a couple of hundred units.

However, it wasn't until April '77 that he was able to quit working as an engineer and treat Sequential as a full-time concern, moving into modest business premises in San Jose and taking on a couple of part-time staff. It was at this point that he started thinking about the synth that was to become the Prophet 5.

MUSIC TECHNOLOGY DECEMBER 1990

"It actually worked out nice", Smith



recalls, "I was able to take my time and learn how to do things in the beginning, because I wasn't counting on it to make money since I had a regular day job."

Smith struck it big with the Prophet 5, but could such a story happen today? With the ever-greater R&D investment needed to generate technological breakthroughs these days, isn't it inevitable that the burden of significant technological development will increasingly fall on the shoulders of the big companies, and that consequently such development will become more centralised?

"There's still always the niche markets", Smith contends. "Probably one of MIDI's biggest contributions has been that it opened up that whole cottage industry where one or two people could get together and do this little piece of software or this little hardware box. But to do a real full-blown instrument is pretty much out of the question these days."

Talking of boxes, isn't there a certain irony in the fact that MIDI was supposed to do away with them, yet in practice it's spawned a whole new generation of the things: MIDI Thru boxes, MIDI patchbays, MIDI mergers, MIDI filters, MIDI-to-CV converters...

"We kind of envisioned that". Smith replies. "MIDI was supposed to be real simple to do on straightforward topologies where you only had two or three things going on, but obviously if you're going to do a lot of things. . . In fact, at Sequential we thought MIDI connections should always be in a star network. It was the Japanese who were big on daisy-chaining that's where the MIDI Thru came from. We always wanted it to be one instrument on one cable. If people did that and the processors in the synthesisers were fast enough to do even the simplest filtering on continuous controllers, there would really essentially be no MIDI timing problems. Some people still think there are, but really that isn't a limitation of MIDI, at least not the way we were envisioning it."

But could the MIDI pioneers possibly have foreseen the explosion of applications for the Musical Instrument Digital Interface? The very name suggests that the original concept has been somewhat superseded.

"We had a lot of it in mind", Smith replies. "Part of the reason for MIDI was the home computers coming in, so we knew there would be a lot of things you could do with it. We may not have actually envisioned something like MIDI Time Code being used, but we certainly knew that MIDI would be used as a clocking device as well as for notes. And, of course, we knew it would be used for sequencing and for patch saving. I wouldn't have guessed that MIDI would take over the whole studio quite as much as it has, that it would get built into tape decks and mixers, nor that it would be included in some of the new CDI stuff or on lighting controllers."

The omnipresence of MIDI as a simultaneously unifying and diversifying force in today's hi-tech musical world is a validation of the perception which Smith and his colleagues had in the early '80s.

"We all knew that if we really wanted the market to go somewhere we could help it along quite a bit by having something where everything could talk together. At that time we all had our own interfaces, but we were smart enough to say it was silly, that there was no need for it to be that way.

"It was mostly the big companies that were thinking this at the time, whereas a lot of the small companies were saying 'no, we're not going to do that, it's not good enough, it's not fast enough'. The

"PART OF THE REASON FOR MIDI WAS THE HOME COMPUTERS COMING IN, SO WE KNEW THERE WOULD BE A LOT OF THINGS YOU COULD DO WITH IT."

big companies were all able to see that if they compromised they'd be able to make something reasonable, and if we wanted it to take off then it really was necessary to do that.

"The industry was small enough at the time that we were able to do it. Even now, let's face it, this isn't a huge conglomerate marketplace, it's a really Small, specialised marketplace. On that level it's a lot easier to do things than if you're building three million compact disc players a week or whatever, which is a whole different ballgame. See, we were lucky. There were only five companies involved in the development of MIDI, and out of those companies it was Roland and Sequential who did much of the work."

Such co-operation wasn't without its difficulties, however. Smith found that he had to push for the inclusion of what became MIDI mode 4, or multitimbral mono mode, without letting on *why* he wanted it included.

"At Sequential we were envisioning the day when all synthesisers would be multitimbral and you could do a bunch of stuff on one instrument, but we didn't want to lecture the Japanese too much on it because then we'd be saying 'what you really should be doing is designing a box like this'. So it was a little tricky! In fact, there was some confusion about what mono mode was supposed to be."

Over the years, mode four has become the MIDI guitar mode by default, but Smith, who started his musical life playing guitar and bass, claims that that wasn't its original purpose. He also confirms the old story about how MIDI mode two came into being:

"Yamaha completely misinterpreted mono mode. They had it as a mono mode that was *really* monophonic, on one MIDI channel."

If such confusion could exist among a relatively small number of manufacturers, what chance would a MIDI II stand today?

"I wouldn't even want to start a MIDI II now", Smith says. "I suppose someday somebody's going to have to do it, and good luck to them. It's going to take a lot of work, and because there's so many more people involved now it's going to be real hard. You have all these small companies, and I'm not saying this is bad, but all of them are going to want to have input, which is going to make it hard for everybody to agree on anything. Personally I don't think the current version is all that bad. It works and it will continue to work for a long time, and of course it's costeffective. Looking back, there were some rough spots and there continue to be some rough spots, but I think what people have to do is stand back and compare it to any other industry, then they'll realise how remarkable it is. Ultimately MIDI can never be universal, because everybody designs things differently, but I think it does pretty well."

And who did actually come up with the acronym MIDI?

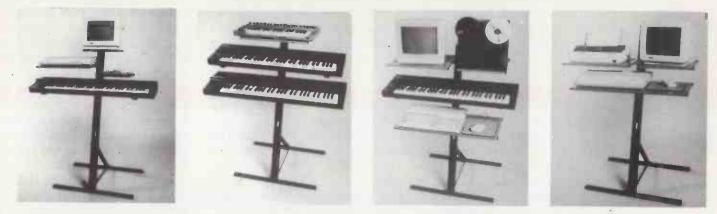
"I did", Smith replies. "I remember the meeting. It was at our factory, and Kakehashi from Roland was there. The Japanese had presented the name UMI, for Universal Musical Interface, and they thought it was cute because of the double meaning with 'you-me'. We kind of cringed at that, so we sat there and bounced a couple of things around, and all of a sudden Musical Instrument Digital Interface came to me. 'MIDI' had a nice ring to it, and Musical Instrument Digital Interface was specific and yet generalpurpose at the same time."

Turning to the subject of polyphony, the textural sophistication available on synths and samplers has seemingly always led the number of voices available. A good current example of this would be Korg's Wavestation. Does Smith see the number

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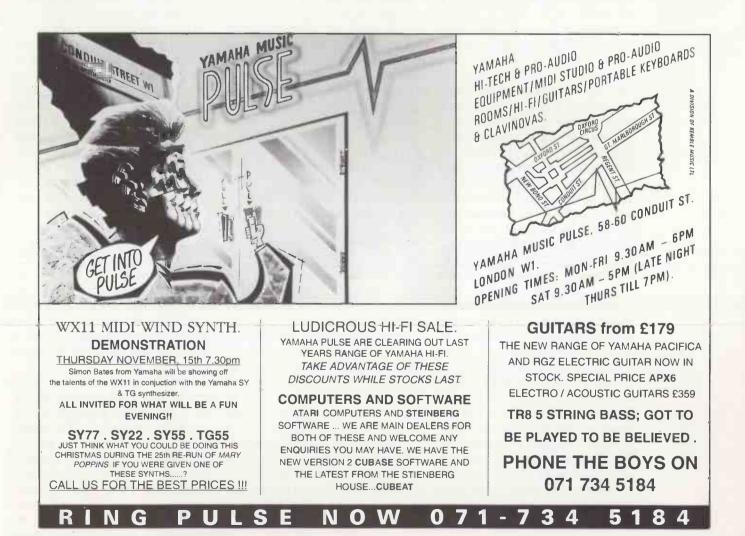


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of voices increasing still further in line with the multitimbral and layering possibilities of today's digital synths?

"It's all a matter of time", comes the reply, "but for most keyboard playing I'd argue that you don't really need that much more than what you have now. It's only when you're trying to do everything in one box, if you're trying to drive it from a sequencer and you're trying to do 14-part multitimbrality then yes, you need more voices. But if you're using it as a sit-downand-play type keyboard, it's plenty, 'cos even when you stack things, the more you stack 'em the less notes you have to play, unless you're really into thickening up the mix. Then you end up with the type of sounds that sound great when you play them in a music store or by yourself, but when you go in and try to lay down tracks they don't fit because there's too much there

"In real use on a real record it's too much. But if you just have a home studio and you want one box where you can do everything by yourself and drive it from a sequencer, then yeah, 64 voices or 128 voices. . . The limit there is going to be what it is now, and that's with the microprocessors keeping up with it all. It'll probably make more sense to go out and buy two M3Rs and a Wavestation, buy your individual boxes rather than have it all in one box.

"Besides, most people would rather have the variety in sound, because there's always going to be some sort of a signature sound to any unit out there, and rather than have all 100 voices coming from that one box it might make more sense to separate it. A lot of us get pretty jaded with the voice-count, how many megabytes, how many megahertz, how many patches, how many sounds. . . A lot of people tend to use those things for gauges, but we feel it doesn't really matter how many ROM waves you have, what really matters is what the instrument sounds like. But we have to play that game to a certain degree, so we have to list all the numbers just to keep up with everybody else. It gets a little crazy."

A lot of people still pine for the old analogue front panels with their sliders. Does Smith feel that a reversion to this kind of approach will happen?

"It's the parameter problem", he contends. "These same people probably want all the control of all the MIDI stuff, and how are you going to do that with knobs? It really isn't conducive to single front-panels. You could do something like Roland have done on the D70 where they have four assignable sliders - that sort of thing makes sense to make it easier to get to things. Obviously there could be bigger screens, more knobs which could be software-programmed, that sort of thing.

"I tend to think a lot of that's a minor part of the equation. I'm looking more for what generates the sound, 'cos if you look back historically speaking at the instruments that have done the best, it's because of the sound. It has nothing to do with the user interface, it has nothing to do with what it looks like, it has nothing to do with any of those things, what the manual's like, how much it costs. None of that counts, the only thing that counts is what it sounds like.

"Obviously we could use that as a way out more than we do, I'm not saying that we don't try to have a real good userinterface, because we do. But the only thing that really matters and that really makes an instrument sell is the sound. I get into trouble for this a lot at work, but I tend to put less emphasis on the user interface, because a lot of it to me is just details.

"What it comes down to is that one way might be a little faster than another. But either way you're not going to be able to program the instrument and make significant changes unless you really understand it. You can have a control to make a sound more or less bright, but what's that really going to buy you except real simple changes? If you came up with a simpler user interface it may help beginners more, and it may get more people deeper because they'd be less scared of it. But if you really want to do something serious, you have to understand the instrument to do it, you have to get down deeper.

"Again, I'm personally not real big on user interfaces. We have some people at work that are real good at it, fortunately. User interfaces always improve, because at each level of technology you get a bigger screen and you get more 'bang for your buck' out of the processor. Personally I really like the user interface we had on the Prophet 3000, where everything's softkey driven - similar to the approach we have on the Wavestation, where it's real concise and it leads you because you can see what your choices are, it's kind of self-teaching. Once you get the basic tree structure down, it's pretty simple."

All the same, one thing that can baffle people with today's instruments is the sheer number of parameters. Perhaps what we need is a way of synthesising sound which doesn't have a great number of parameters but which allows you to create sounds in a more directly musical way.

"There's a lot of talk about doing that", Smith comments, "and I guess we already do a little bit of that on the macro level of things, where you can say 'I want this type of an envelope' and not have to go in and set breakpoints, and the same for filter settings. So we do that to a certain degree.

"The biggest problem is that at some point if you have fewer parameters you have fewer possibilities, that's the bottom line no matter how you look at it. So, the instrument that has fewer parameters is going to be more limited in what you can do with it. I think the idea is to continue what we've been doing - which is to have different levels of programming. On the one hand there's a higher level where it's easier to change things but because there aren't as many possibilities you're not going to get the full range of things, but there's also a deeper level where if you really want to go in and twist things up you can, but you have to know what you're doing and you have to keep track of a lot of things. Something for nothing is a tricky one to do."

The difficulties of programming digital synths from the time of the DX7 on have led to a preset culture, where most people want ready-made sounds on cards and disks. But when everyone has access to the same sounds, you can get a situation where you keep hearing certain sounds coming up on records and in commercials.

"I think it's an unfortunate side-product of the market", admits Smith. "People, understandably, don't have the time to sit there and learn an instrument, because it does take time. I find that myself, now that I've built a little studio in my house and I've been spending more time in it. I'm finding that I do the same thing. The first thing I do is go through factory presets and find something that's close enough, then maybe edit it a little, but it's rare that I say 'Oh, I've got to have a sound like this' and sit down and create it from scratch, because I'm lazy and it's not worth the time, usually. Which I think is another reason why the factory presets are so important now. because as a practical matter that's how it's going to be used most of the time. Coming out with a bad set of sounds can almost kill a new synthesiser these days."

Finally, something a lot of people like is the noise inherent in older technology. Yet digital instruments seem to be getting more and more perfect, with more emphasis being placed on quality. What about an option to 'dirty the sound up a bit'? Smith feels that this is an ongoing trend:

"Each level of digital technology gets a little bit better at what the manufacturers like to call 'analogue' sounds. We're guilty of that, too: here's an analogue brass sound. Everybody does that, but it's true, digital synths are getting more analogue, each generation is a little bit more. Some day there'll probably be a grunge parameter that you can turn to 11 if you want to!"



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MBABY



Young British jazz pianist Jason Rebello has made a name for himself as a performer over the past two or three years; now his debut album shows him to be a talented composer as well.

Interview by Simon Trask.

SO OFTEN A BYWORD FOR THE TRIUMPH of virtuosity over musicality, of cleverness over substance, fusion music has become the stick with which musicians who can't play keyboards as well as Chick Corea, or bass as well as John Pattituci, can beat their more technically accomplished musical brethren.

A Clearer View, the aptly-named debut album from young British jazz pianist Jason Rebello, suggests a more intelligent direction for fusion music. Listening to the album you're aware that the musicians - Rebello on keyboards, David O'Higgins on saxes, Julian Crampton and Lawrence Cottle on basses, Jeremy Stacey on drums and Karl Van Den Bocsh on percussion - are very capable players, but ultimately it's the quality of the music rather than the dexterity of the musicians which holds your attention and brings you back for more. The ten tracks on the album are first and foremost compositions, not vehicles for the musicians to show how well they can play. Rebello is the fertile and intelligent musical mind behind all the tracks, composing music which combines the classical composers' sense of structural balance and motivic detail with the jazz musicians' flair for improvisation and spontaneity in a way which avoids sounding contrived or stilted. With the emphasis on ensemble playing, solos are tightly reined, more an extension of the ensemble than individual self-indulgence. As a composer Rebello orchestrates many shades of mood, from the effervescent to the reflective, and different musical feels, from tight, measured funk to fluid jazz, in a natural way which suggests he has not only absorbed a healthy variety of musical influences but

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managed to find common ground for them in his own mind. It's possible to see the likes of Weather Report, Lyle Mays, Miles Davis and Keith Jarrett as musical references, but at the same time there's clearly an individual musical mind at work.

Rebello is very aware of the trap which many American fusion musicians have fallen into: "There's this kind of formula in America where everybody's churning out superclean, perfect fusion albums, and they've lost the feel, the music lacks wildness and soul, I didn't want my album to sound like that. In fact, it's not that polished in some ways. There's some things on it that would never have got onto albums by Dave Weckl, Mike Stern or Chick Corea, but at the same time it can be the unexpected things which help to make the music. I don't think it's particularly important for music to be flashy. It's the substance that's important. Like a good pop record, it's good because they've gone for a simple idea but it's a strong idea, something that's economic in terms of that's all there needs to be. Prince's 'Sign 'O' The Times' is a good example. Music doesn't have to be complicated to be good. There again, if it's complicated and it has substance then that's fine."

Only 21 years old - though on the evidence of his boyish good looks you'd say he was more like 17 -Rebello has already worked with the likes of Courtney Pine, Tommy Smith, Steve Williamson and Cleveland Watkiss, playing on Smith's second album *Peeping Tom* and Cleveland Watkiss' debut *Green Chimneys*.

In 1988 he was voted most promising newcomer of the year by the readers of Wire magazine, polling four times as many votes as his nearest rival; he has also won the Pat Smythe jazz award. Not bad for someone who was first turned onto jazz in 1984 after seeing Herbie Hancock and the Rockit band perform in London. Fascinated by Hancock's playing, Rebello began investigating the keyboard player's recorded history, taking in the Headhunters' jazz-funk, Miles Davis' jazz-rock and the pre-electric Miles group with Hancock and Wayne Shorter, which he regards as the classic jazz group. In turn he discovered the music of such jazz pianists as Wynton Kelly and Erroll Garner and the broader vista of jazz.

By this time Rebello was already a skilled player, having taken up classical piano at the age of nine. He learnt to play jazz by listening to records, transcribing the music and analysing what made it tick.

"I don't think there's really any other way you can learn", he says. "Doing it that way gives you the best training: ear training, timing, feel, memory. . . If you do it for long enough, your ear gets to the stage where you can hear anything you want to. Forget all the books and all that rubbish, just learn by listening to the music."

But what was it that attracted Rebello to jazz?

"It's the only living improvised music", he replies. "At one time the classical pianists were composers and improvisers too, but that seemed to die after Liszt. It was jazz that took over as the improvised music, and it's that improvisational aspect which attracted me to it. Maybe if I hadn't become a jazz musician I'd have been a composer, I don't know. I've always wanted to know why things work in music."

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As well as Herbie Hancock, Rebello lists Joe Zawinul, Chick Corea, George Duke, Lyle Mays and Nat Adderley Jnr (Luther Vandross' keyboard player) as his inspirations when it comes to synth playing. For acoustic piano he singles out Keith Jarrett, Hancock, Corea, McCoy Tyner, Wynton Kelly and Erroll Garner. When I observe that Jarrett and Corea have both recorded classical music as well as jazz, Rebello replies "That's because they're not jazz pianists, they're true musicians. Obviously they're going to be into things that are good. That's what I'd like to be as a musician."

Rebello himself is equally at home playing jazz-funk or straight-ahead jazz, and it's the way in which he utilises both styles in the compositions on *A Clearer View* which gives the music its identity.

"The whole thing about music is that style isn't really that important, and if the whole basis of your music is a particular style then in time it's going to sound dated and irrelevant. CPE Bach's music was all style and it does nothing for me, whereas JS Bach's music has so much substance to it that the style isn't that important. It's like some of Herbie's records, he uses bits from the style of the era, like disco, but it doesn't disturb me because there's something relevant there that you can get out of it today. What's important is having something worthwhile to say."

Anyone who can mention JS Bach and Herbie Hancock in the same breath must have a broadminded outlook on music. But then while Rebello was playing in jazz clubs by night, he was taking a three-year graduate diploma course in classical music at the Guildhall School of Music and Drama in London by day, studying and analysing the music of the classical composers. It was this background which led him to adopt a more traditional compositional approach to A *Clearer View*. All the parts are scored out for the musicians, the music is more carefully structured than the traditional jazz format, and classical composition techniques like motivic development are employed.

"Hopefully it doesn't sound contrived", Rebello comments. "Theory should be a tool, it should be a means to an end, not an end in itself. The point isn't to be clever in using certain musical techniques but to make the music feel right instinctively. I do tend to rely on my instinct about things, and if something doesn't feel right to me then I won't use it. It's almost like you find the thing in you that you think other people have as well. If you rely on intellect, the chances are other people don't have the same intellect towards music that you do, so they're not going to relate to it." "We can't really relate to computers like we can to other people - there again, mixing real players with computers is interesting."

A CLEARER VIEW WAS RECORDED AND mixed at London's Wessex Sound Studios, during June this year, with another of Rebello's musical heroes, Wayne Shorter, at the production helm. Why Shorter?

"It was his writing that made me think there's so much more that can be done with jazz and fusion", Rebello explains. "He seems to have started venturing out into that area, so I thought 'who else could I want to do it?'. I like people who go against the grain of what almost everyone else thinks, and he's one of those people. I find that fascinating, to meet someone who

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"I try to keep up with what's going on, but I just can't listen to some of these dance tracks because they're

so banal."

you talk to and you think 'how on earth is your mind working?'."

So how did Shorter approach his role as producer?

"He didn't take over", Rebello replies, "which is good because I'd written the music out in a quite detailed way, so there wasn't much room in terms of the playing and the production. But he'd come up with ideas and suggestions, and some of them, when I hear the result, I think 'Brilliant, that's made the tune for me, more than the stuff I'd written on it'. It'd be exactly what I wanted. And sometimes, he'd say 'I hear this sound'. Just things I wouldn't have thought of."

The virtues of experience. Talking of experience, what does Rebello feel he's learnt from recording the album?

"I've learnt what's possible in a studio, and about compromising between having a live sound and an album sound", he says. "I wanted to do the whole album live, but now I realise that, being realistic, it's quite a tall order. I think it's the time as well, realising that you're working with human beings not with computers and allowing for that more. If I did it again I'd have breaks in between mixing, things like that the human side."

The human side of music-making is something that Rebello places great importance on, not least because he feels there's not nearly enough of it in today's technology-obsessed music. However, he's no latterday Luddite advocating a wholesale return to "real" instruments, more a cautioning voice against letting technology do all the talking.

"I don't want to sound snobbish about it", he says, "because I respect anyone who works honestly at what they're doing and puts in an effort - it doesn't matter what style it is, they're entitled to be called musicians. But not someone who comes up with a simple bassline and gets someone else to program it on a computer. There's a limit where I have to be honest and say something's a pile of rubbish. And I see people who have the cheek to call themselves musicians. What do you class someone who can press a button? I try to keep up with what's going on, but I just can't listen to some of these dance tracks because they're so banal. I'm not saying that in a snobby muso way, there's just nothing to them.

"People should use equipment to further something in their minds, not rely on it for their ideas. I think what happens is that people are thrown into a studio and given loads of money, and then they get excited because suddenly they've got a drum machine that sounds like a record they've heard and they think 'Yeah, I really like this'. But that's it - they don't go any further because they don't see the possibilities. There's no effort, no perseverance in thinking it through rather than having an equipment orgasm, and so with a lot of records today you're listening to the equipment. It isn't being used as a means to an end, it's an end in itself. But what's the point in dancing to a microchip?

"It seems to me that the whole mood of music is going back to the human touch, like there's a lot more real drums coming back on records. For me, the more human feel there is, the more it does for me. And I genuinely believe that as far as music goes - people are happier hearing something human, whether or not they believe it themselves. The more contact people have with other people the better, it gives them more of a sense of belonging, and it's the same with music. People want to hear weird personalities and interesting people. To me that's the whole beauty of music, when what some-one has to say is so completely different from what some-one else has to say. We're human beings, and we're eccentric and unexpected, that's the way we are. We're not computers and we can't really relate to computers like we can to other people. There again, mixing real players with computers is interesting; for me, that's what really makes the computer valid."

Rebello's own equipment setup consists of a Roland D50, Korg M1 and SG1D electronic piano, Alesis MIDIverb and an Atari 1040ST running C-Lab's Notator software. He sees Notator as a writing tool rather than a compositional necessity - "Composers have been writing orchestral pieces in their heads for centuries, they didn't need computers. It's more what you can hear in your head that's important." In his case it allowed him to compose all the music for the album, print out the parts for the musicians, and let them hear the music so they could get an idea of how he wanted it to sound.

"Rather than me saying 'do what you like", he explains, "I wanted them to realise what I was after and then do their own thing based on that realisation. For instance, when the drummer plaved he was influenced by a lot of the things that I'd programmed using the M1 drum sounds. He did a lot of his own stuff, but also he kept the vibe of the programmed parts. It wasn't totally spontaneous on his part, because there were patterns that I told him I wanted him to play. I can play a little drums myself. I'm not any good, but I know enough to understand the approach a drummer would have. What I did when I was sequencing a lot of the tracks was, rather than work out an eight-bar pattern, I played as if I was a drummer playing along to the music. So a lot of it's quite free on the sequences. In a way they have their own feel and vibe that's different from the album."

These days it's common for musicians using sequencers to work in short sections, building-block style, but Rebello sees virtues in playing straight through a track.

"If I'm playing along, I find that things come up that I wouldn't have thought of if I'd been sitting there planning it all out logically. Then I can take the ideas I like and kind of tidy them all up. Another thing is to record several takes of a part and then separate out the things I like and the things I don't like, and put together a bassline from the different run-throughs."

For the album, Rebello augmented his M1 and D50 with a VFX and a Prophet 5, while the SG1D not surprisingly lost out to a Steinway concert grand ("I'll always prefer to play an acoustic piano over an electronic piano."). He explains how the music for the album was recorded.

"Two tracks, 'Back to Back' and 'Siobahn', were recorded live by the whole band, with the synths overdubbed afterwards. The rest of the tunes were initially laid down by me on the piano together with the drummer, because I'm very used to playing with him. Basically, the two of us did the whole album in a >



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day, then the bass, sax and synth parts were added afterwards, along with some percussion stuff. The important thing is that because the piano and drums were playing together, there's quite a live sound to the music. Especially in fusion it's the piano and drums that are linked together rhythmically, that's where you get a lot of the excitement from."

While much of the music was written out, Rebello also wanted to incorporate an element of spontaneity into the compositions, and where better to do it than with that jazz staple, the solo.

"Because I wanted to keep the jazz element there, what I did was say to the other musicians 'there's no fixed part, so improvise'", he explains. "All I had were the chord symbols, as if it were a straight-ahead jazz piece. So in that way I wanted to get the structure of the composition combined with the freedom of the solos. It's like the best of both worlds."

Rebello confirms that the solos, though improvised, were intended to be extensions of the compositions rather than exercises in scale-mania. His own solos, particularly those on piano, are intelligently constructed with a composer's ear for melodic and rhythmic motifs.

Use of synths on the album is mainly confined to subtle yet integral colourings of the music, provided by the VFX, M1 and D50 MIDI'd together. More prominent synth parts occur with the marimba line on 'Golden Fleece' and the calliope melody on 'Siobahn', while 'Tone Row' and the title track are the only two tracks to call forth synth solos from Rebello - cue the Prophet 5. It's clear that for his debut album Rebello wanted to showcase his acoustic piano playing.

"Probably for the next album I'll get more into the synth side of things", he says. "I like playing synths, but I feel that what I've got at the moment isn't really enough to do a synth album with. Also, I'm really into using up the potential of what I've got before I buy anything more, and I don't feel that I've done that yet, although I've done quite a bit of programming on the D50. I like the D50 for percussive sounds and weird soloing sounds, like I've got quite a good Moog-ish sound out of it, and an electric guitar sound which is Herbie-ish. It's good for those sort of things."

And what about the M1?

"I use that a lot for pad sounds", he replies. "I tend to make up my own Combinations rather than create new Programs, because I find it's a lot harder to get something original out of it at the Program level. The D50's much more flexible in that way."

While Rebello may not be about to invest in a mass of gear just yet, he's keen to add an analogue synth to his existing two digital synths. As he explains: "When I hear my setup, it lacks the power and projection that analogue synths have."

DURING THE PAST FEW YEARS, YOUNG

British jazz musicians have had to deal with more than the demands of forging their own musical style and identity. Players like Courtney Pine, Steve Williamson and Andy Sheppard have all had to contend with the unstoppable marketing machine, which has sought to build up a market for the New Jazz as much through stylish imagery and packaging as anything else. Rebello is aware that, now that he has a debut album to support, he'll probably find himself in the sights of the marketing gurus - who won't fail to notice those good looks. However, he's sanguine about the prospect.

"It's one of those things", he says. "I don't want to reject it out of hand, but at the same time I don't want to take it too seriously and believe that it's important. My approach to it is that it's fun but at the end of the day I don't let any of my personal happiness rely on the hype. I think there are much much more important things in life."

Throughout the interview Rebello has listened attentively to my questions and given thoughtful responses, but when I ask him what he finds most rewarding in his life - admittedly not a light-hearted question - he becomes especially philosophical. After pausing for thought, he answers slowly but deliberately, giving due weight to each sentence:

"Once I would have said when I play well or when I write a good tune, but now, without getting too deep, it's lying much more outside music and much more looking at everything as a whole and seeing music as being a part of it. The reason that I might get satisfaction from it maybe isn't the actual music but is maybe something much more to do with my attitude towards the things around me.

"I really\enjoy doing music, but there's so much more to life. You can get very depressed if you take music too seriously. There's bound to be a time in my life when it's not going so well for me musically, so if I'm clinging on to this one thing then I'm going to be devastated when it goes.

"I enjoy music now more than I used to because it's not so much of an obsession. One of the main reasons I did loads of practice in the past was because I wanted to be the best piano player. Which is such a dodgy thing, but that's what drove me. It wasn't a genuine pure love of music, it was this ego thing. I used to be unhappy if I didn't play well, I'd be really pissed off, really upset. I took it so personally, whereas now I'll just think 'Oh well, I'll have to practice more'. It's just common sense, really, seeing how it all works and realising I don't want to go down that alley otherwise I'll end up as this drunken musician who's frustrated and depressed.

"Music should be like a hobby, something you find fascinating. People don't do a hobby because they feel they have to do it, or to gain anything, it just fascinates them. To me that's what it's about, being fascinated and excited like a child."

For now Rebello has plenty to be fascinated and excited about. During November he's touring the UK with his own band to support the album, then in December he'll be heading off to Japan with a variety of other musicians to do "something completely different", while January will see him embarking on a solo piano tour back in the UK.

"It's brilliant that I get a chance to do different things", he enthuses. "I'm already planning my piano tour. If I had to do the same stuff for a year it would probably drive me mad."

With his sights fixed firmly on the future, it seems that Jason Rebello has a very clear view in front of him.

EQUIPMENT LIST

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STEINBERG

MIDEX+



When you're working with several dongleprotected programs and trying to sync everything to a timecode like SMPTE, things can get complicated unless you opt for an integrated system such as MIDEX. Review by

Nigel Lord.

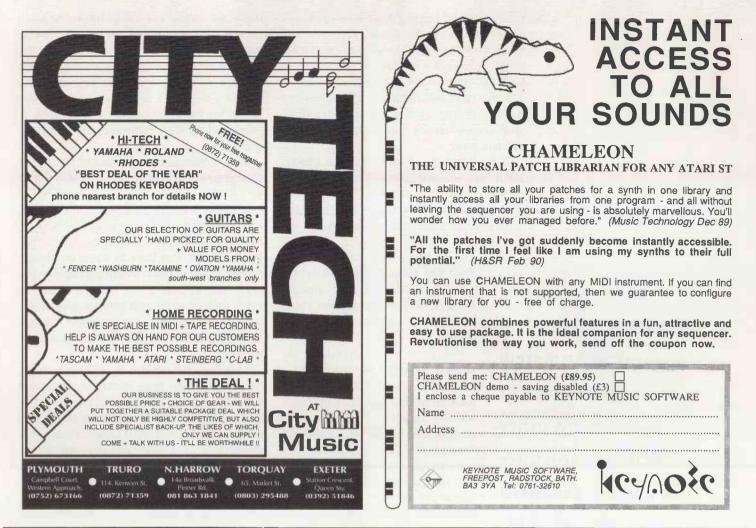
OU ONLY HAVE to look at the packaging of their recent software to realise that Steinberg are the type of company who invest more than a little time and effort in making sure their software looks the business, as well as acts it. There's something about the colour scheme and the graphics on a Steinberg floppy that makes you want to slip it into the disk drive to see what delights it holds. The fact that it's a Steinberg disk, however, means you'll almost certainly need to insert the requisite dongle into the side of the computer in order to find out. As many a luckless hacker has discovered, the best software comes with the best protection these days. No dongle, no dice.

Of course, if you have the sort of computer that's bristling with extra RAM and the disk you're about to load is a program such as Cubase, the chances are you'll want to explore the possibilities presented by the multitasking facilities now at your disposal. But even if you intend nothing more adventurous than tailoring a couple of synth voices to suit a new song you're working on, you have a problem. Your computer has only one slot and you need to insert two dongles. Needless to say, this is a problem Steinberg anticipated when they released Cubase, and a key expansion board was immediately made available for those who wanted to avail themselves of the kind of advanced computer control M.ROS has opened up.

The trouble is, after shelling out over a grand for a Mega ST (or at least, an extra few hundred for the additional RAM to beef up a 1040), five hundred for Cubase, and two to three hundred for a couple of synth editors - potential multitaskers were (understandably) miffed at then having to fork out another hundred for a small board with four extra MIDI sockets to get the system working. Steinberg would no doubt claim that it wasn't just four extra sockets they were paying for; I'm sure there was some serious electronics on that small board. But the fact remains that punters who had quite legitimately bought copies of Cubase and other Steinberg software were being penalised for the nefarious activities of the pirates.

Enter the MIDEX+ - an object lesson in lateral thinking. If a key expander has to be used and the one you make is already as cheap as it can be, what do you do? Answer: you make a much more expensive version. But - and it's a big but - you include on it various other bits of associated hardware which ST/Cubase users are almost certain to find themselves needing in their quest for a fully integrated MIDI system. Like, for example, an output port expander offering a further four MIDI Outs to alleviate the problem of time delays in larger >

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systems. And for incoming data? There can be few people using computer-based sequencers who haven't found themselves in need of an extra MIDI In (or two) at some time or other. The pair included on the MIDEX+ gives you a total of three to play around with and that means being able to input signals from your synth and your drum machine whilst simultaneously receiving clock information from your MIDI sync track.

On the subject of sync tracks, how does a built-in SMPTE read/write time code synchroniser grab you? Those who have not yet addressed the problem of synchronisation would find this the perfect solution for keeping tape and sequencer locked together. And with SMPTE still the preferred choice of synchronisation on most professional equipment, it

> could also prove useful for those who already have a MIDI sync unit by providing the option of SMPTE code when this is required - in video or film work, for example.

And since this is actually a key expander, wouldn't it be handy to have a small LED next to each of the keys to let you know which is currently in operation? With the connection of up to four keys possible using the MIDEX+, I think you'll find it would.

The MIDEX+ could have been built into a grey oblong box with ugly pink lettering and a tendency to put undue strain on the ST's cartridge slot. In other words, your average piece of utility gear. That it comes in a rather fetching shade of red, has a truly unique shape and is designed to fit perfectly alongside the ST is further testament to Steinberg's design sense (again) and their obvious familiarity with

the ST as users, rather than simply manufacturers of software and computer peripherals.

The MIDEX package includes a disk from which you're asked to copy an M.ROS folder containing the latest driver software (currently v2.03) onto your program disk so that it is automatically recognised each time you load up. Also included in the folder are all the other driver modules which have been developed by Steinberg. At the present time these include the Fostex R8/MTC1 combination (see MT, September '90 for full review), Steinberg's own SMP24 and Timelock systems and (rather sportingly), C-Lab's Unitor.

INS & OUTS

THE EFFECT OF MIDI time delays has been welldocumented, and there can be few people these days who (by choice) would daisy-chain more than two or three MIDI instruments within their setup. However, the greater reliance placed on System Exclusive as a means of addressing specific MIDI functions has, in recent years, served to compound the problem considerably. The difficulty stems from the fact that MIDI protocol gives priority to SysEx messages, and being a serial data system, this means that while these messages are being transmitted, no conventional MIDI data (notes and controller messages, for example) can be sent. Given the length of some SysEx messages and the fact that software utilities such as Steinberg's own MIDI Manager (included on Cubase) rely on them quite heavily, this clearly constitutes a very real problem even in systems where instruments are only linked in chains of two.

Whether the four Outs provided by the MIDEX+ (five, when you include the ST's own MIDI Out) is sufficient for your needs, only you can decide. But I'd have thought it offered a pretty good starting point for the average setup. Of course, the real beauty of the MIDEX/Cubase combination is that the selection of output ports takes place on screen and doesn't rely on any form of manual switching. Besides being a much more elegant system, this should make it easier to optimise the MIDI Outs you have at your disposal - as well as making it possible to record setups as part of the song data for each track you're working on.

If the five Outs provided by the MIDEX system represents a useful figure for the average setup, I think I'd have to say that three MIDI Ins still rates as a bare minimum and would demand a setup with a master keyboard at its heart to be sufficient. Only then could all your keyboard data be entered into the sequencer through a single MIDI In, leaving the other two to handle (say) a drum machine and sync track. That said, if you're making use of the onboard SMPTE timecode, this would obviously free one of the ports, and we shouldn't forget those readers who aren't involved in recording at all. Even so, I think many of you will find youselves with a certain amount of plugging and unplugging to do if you wish to avoid the expense of a MIDI merge box.

'Speaking of which, I could have lived without the manual offering me a useful "tip" for inputting data to my sequencer and finding that even with MIDEX's additional ports I still don't have enough inputs. "Just use a relatively cheap MIDI merger" it advises. Thanks, Steinberg, glad to have had that one sorted out.

EXPANDING HORIZONS

RECORDING AND SYNCING to the SMPTE generator/reader proved completely trouble free, though the standard warnings about noise reduction systems and EQ settings still apply. In conjunction with Cubase, the MIDEX+ can read and write in all the common formats - 24, 25 and 30 frames per second (as well as 30fps drop frame) - and the system locks in within (typically) half a second. You have to ensure that the timecode is read in the same format it is recorded (or generated by third-party equipment) but on Cubase you're provided with a very straightforward editing window for this, accessed via the Options menu.

The key expander needs no explanation from me except to say that it works in conjunction with Steinberg's Switcher program (incuded with Cubase) and that care has to be taken to ensure dongles are

that punters who had quite legitimately bought copies of Cubase and other Steinberg software were being penalised for the nefarious activities of the pirates."

"The fact remains

inserted the right way up. It might be imagined the MIDEX+ would offer some kind of buffer to the effects of inserting and withdrawing dongles whilst the computer is switched on. Not a bit of it: and dire consequences are forecast for anyone foolish enough to try such a move.

Dutifully, when the time came for me to unplug the sleek red form of the MIDEX+ from my ST, I made sure the power was off and that I withdrew it at ninety degrees so that no damage was done to the socket. It wouldn't budge. A little more force; still no joy. I began to worry. The MIDEX+ had to be sent back and I couldn't get the damn thing out of my computer. I had visions of damaged pins and a huge repair bill. My mind went back to an incident a few years ago when our golden retriever, having never previously shown any interest in the mongrel bitch that lived next door, suddenly decided to make her the object of his desires. But somehow, throwing a bucket of cold water over my ST and the MIDEX+ didn't seem altogether appropriate.

It then occurred to me that there might be some kind of locking device to prevent the MIDEX being accidentally pulled out while the computer was switched on. And sure enough, I discovered a notch in the black plastic inset running across the top of the unit which engages part of the ST's casing and locks the two together. Pressing the strip immediately allowed the MIDEX to be withdrawn from the computer. Thinking about it, it's actually a very neat idea but one which I feel would benefit enormously from being mentioned at some point in the

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instruction manual. Still, I suppose it does allow me to say, you read it here first . . .

VERDICT

AS WITH MANY recent pieces of equipment, the MIDEX+ is the kind of tool which relies to a considerable extent on people realising just what it can do for them before deciding whether or not it represents value for money. There can be no doubt that if you were to add up the cost of the individual pieces of hardware it comprises, it would appear pretty cost effective. Having said that, I imagine many people would have to give serious thought as to whether they need an extra SMPTE facility if they already own a sync unit. I suppose it depends whether you're likely to find yourself working with SMPTE in the future. If you decide you're not, then Steinberg can offer you the same expansion facilities of the MIDEX+ in the shape of the MIDEX. And this translates to a cash saving of some £125.

Either way, Steinberg have effectively turned what under normal circumstances would be a handful of deadly boring accessories into a rather desirable piece of MIDI hardware - and that kind of imagination is always to be congratulated.

Prices MIDEX+ £475; MIDEX £350. Both prices include VAT.

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A magazine about creative music

Most guitar players know more about sounds than most synthesiser players. Brian Eno. I like error. It leads to re-creation. Ryuichi Sakamoto. The house music that I like is, well, not to say Brechtian, but I like the method to be visible . . . Mixmaster Morris. I try not to be dull.

John Hassell.

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SEQUENCERS

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ROLAND MSQ700 sequencer, superb, can run TR808, MC202 or TB303, tape sync, £130. Tel: 051-520 2943.

YAMAHA QX1 sequencer, with disks, £250; Yamaha FB01 module with editor/librarian disk, £140; Casio SZ1 sequencer plus CZ101 synth, £260. Tel: (0295) 68114.

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ROLAND R5, perfect, boxed,

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YAMAHA RX11, hardly used, boxed, manuals etc, £175. Tel: Birmingham 021-471 4157.

YAMAHA RX17, £125; Yamaha QX21 sequencer, £110, both home use only, boxed, manuals etc. Tel: (0633) 894889.

COMPUTING

AMIGA 500, Music X, MIDI interface, joysticks, games, vgc, £400; Yamaha DX100, vgc, £150. Rick, Tel: 021-704 2646.

ATARI 520ST, plus SM125 monitor, inc software, hardly used, £375. Tel: (0892) 822858.

ATARI 1040ST, with extra drive, hi-res mono SM125, Steinberg Pro24 with manual, £350. Tel: (0932) 68468. ATARI 1040STF and SM124 Atari colour monitor, boxed, immac, with current games. Tel: Stevenage (0438) 723630, after 5.30pm.

BARGAIN: CX5 system, CX5MII/128 SFG05, disk, colour monitor, YK10, printer, mouse, software, £250. Tel: (0865) 57089.

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YAMAHA CX5 music computer, 2, hardly ever used, with sequencing and synthesising software, games, joystick etc. Tel: (0992) 713844. YAMAHA CX5M computer, with DX editor, composer, large keyboard, £150-ish. Tel: (0924) 401206. YAMAHA CX5M, keyboard, real, steptime sequencers, £220 of software, £180 ono. Tel: (04868) 21905, after 6pm.

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APHEX STUDIO CLOCK, stripes tape, SMPTE-TO-MIDI, Mac interface, audio trigger to MIDI clock, versatile studio tool, £400. Ian, Tel: (0734) 585935. BERGBAND 16:4 mixer, with flightcase, £250 ono. Tel:

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FOSTEX A8 recorder, Ram 16:4:2 mixer, Drawmer gates and compressor/expander, £1350. Tel: (0743) 65506.

FOSTEX X15 multitracker, good cond, still boxed, £149. Paul, Tel: (0302) 538304.

GLI PMX9000 mixer, boxed, very rare, two Technics SL1210 turntables, Stanton 890AL chrome cartridges, all boxed, offers. Kevin, Tel: (0273) 605883.

REVOX PR99 master machine, with remote control, home use only, £500. Tel: (0843) 586485.

ROLAND vocoder, SVC350, Casio CZ5000, Oberheim SEM, others, sensible offers. Tel: (0597) 822138, eves and weekends.

SONY DTC1000ES, vgc, re-aligned, £850; industry-standard DAT tapes, £5 each. Marc, Tel: (0865) 514622. STUDIOMASTER Series V, 32:4:2, perfect cond, £2000; Ensoniq SQ80 workstation with mega-RAMs, mint cond, £850. Tel: (0383) 737762. STUDIOMASTER PROLINE 16:8:4:2

mixing desk, perfect cond, very versatile and quiet, home use only, boxed, with manual, £950. Tel: (03543) 5239.

TASCAM 144 portastudio, good cond, double speed, full mixer, £195 ono. Tel: Cambridge (0223) 276311. TASCAM PORTA 01, mint cond, boxed, manuals, very little use, £300 ono. Tel: (0708) 47740. TEAC A3440, 4-track reel to reel cassette recorder for sale, flightcased, £400. Tel: (0242) 261194.

TWO Aces 150W stereo or 300W mono power amps, £150 each; one MacGregor 300W mono, £150; one M&M 16-channel mixer, £180; two Carlsbro mini bins, full range, £200; two custom sound column speakers, very loud, £120; Sherpa van, MOT, tax, seats six with a separate area for the gear, regular service, £800. Tony, Tel: (0743) 240882.

YAMAHA MT2X, 4-track and YMC2 synchroniser, £299; TR626 drums, as new, £200. Tel: 081-878 0512. YAMAHA MT2X 4-track recorder, with YMC2 MIDI sync, double-speed 6channel mixer, boxed, £350; Casio CZ5000 synth, on-board 8-track sequencer, stereo chorus, manuals, patch book, data lead, recently serviced, £360. Tel: 081-558 1413. YAMAHA MT44, complete 4-track recording system, inc mixer, graphic, echo, patchbay, flightcased, £250. Tel: (0932) 68468.

AMPS

BARGAIN: 6-channel PA amp, £90; Korg 16-track sequencer, plus disks and tape interface, £250 ono. Declan, Tel: (0706) 341370. CARLSBRO COBRA 90 keyboard combo, much loved, much gigged, hence £115 ono. Steve, Tel: (0203) 404958.

CARLSBRO MARLIN 4-channel 130W PA amp, with reverb, also HH Pro 150 150W full-range cabinet. Nice live keyboard rig, £300. Tel: (0353) 665577 X162, office hours.

PERSONNEL

COUNT ZERO looking for

synthist/sampler into techno RSW electro dub. No raversi Tel: 021-384 5264.

HOUSE/TECHNO acts needed for compilation to help fund a project in Rumania. Ian, Tel: (0225) 766340. ROLAND W30 owner seeks others for sample swapping. Tel: (0273) 541406.

SCHOOL OF SOUND graduate requires studio work in North West area. Jamie, Tel: (0704) 67239. SOUL STYLE female vocalist wanted to join electro-bass dance band. John, Tel: 081-785 4482.

MISC

ACOUSTIC RESEARCH AR15s, 60wpc, £60; Hofner Senator acoustic £60. Tel: 051-653 3416, between 9-3. **ROLAND GR50** plus GK2, £750; Casio RZ1, £150; Tascam 244, £400, all excellent cond. Tel: Warrington (0925) 418062. X-STANDS, 2, one single tier, £10; one two-tier, £15. Tel: (03543) 5239.

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PITCH tracker mic interface, Roland VP70 or whatever make. Tel: London 071-837 8023.

PROPHET VS RAM, ROM cartridges, and patch data sheets. Nigel, Tel: 081-533 3207, eves.

ROLAND D550, cash waiting. Tel: (0883).652386.

ROLAND RD1000 digital piano, plus stand, pedals, good cond. Peter, Tel: (0843) 225595, eves/weekends. ROLAND TR808 wanted for £200 or TR909 for £250. Tel: 071-435 7598. SEQUENTIAL CIRCUITS DrumTrax wanted for £150. Tel: 071-435 7598. SIMMONS PADS, white, especially bass drum, cash waiting. Steve, Tel: (0202) 581141 or (0425) 276532. WANTED: Ensoniq ESQm, will exchange for Ensoniq SQ80 plus cash. Simon, Tel: 081-533 7756. WANTED: Kurzweil 250. Sean, Tel: 081-806 8674.

WANTED: operating instructions for Nomad SMC Nomad SMPTE generator 1.0, also preferably rackmounted graphic EQ, doesn't have to be rack but stereo. Tel: (04023) 42415. WANTED: Yamaha EMT10 piano module. Tel: (0296) 631405, after 4.30pm.

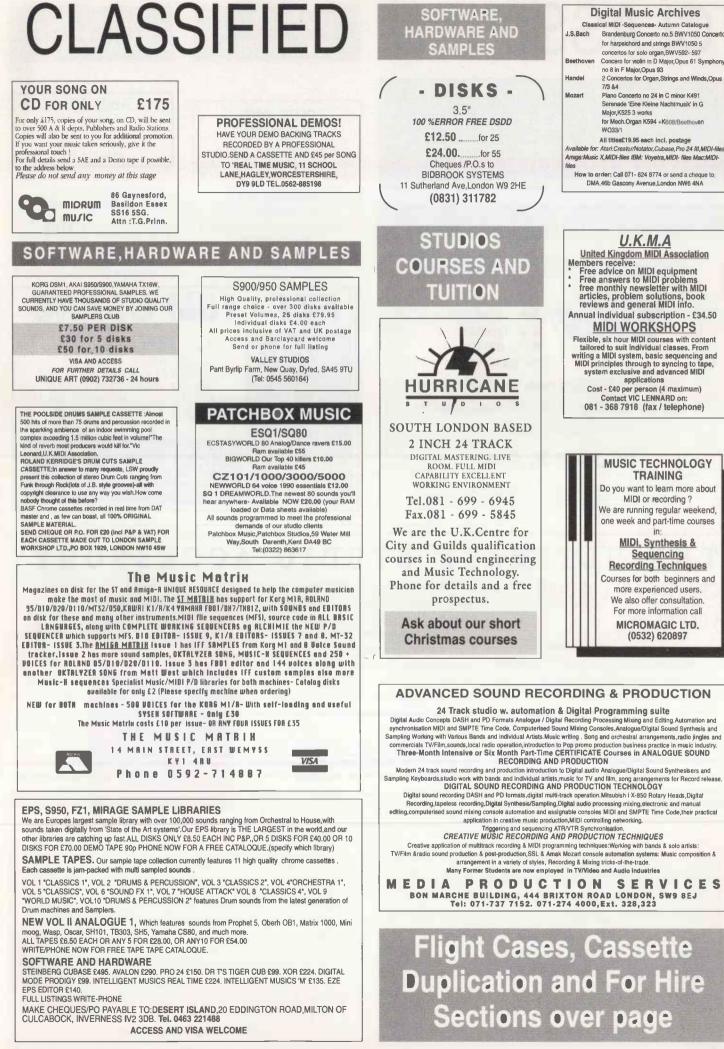
WANTED: Yamaha WX7 wind MIDI controller, cash waiting. Tel: 031-664 3456, anytime.

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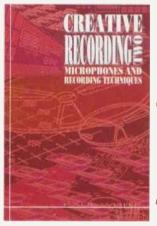
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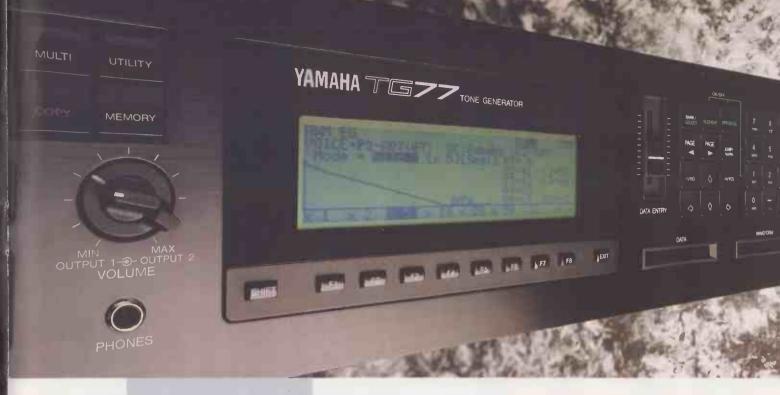
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