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# Music Technology

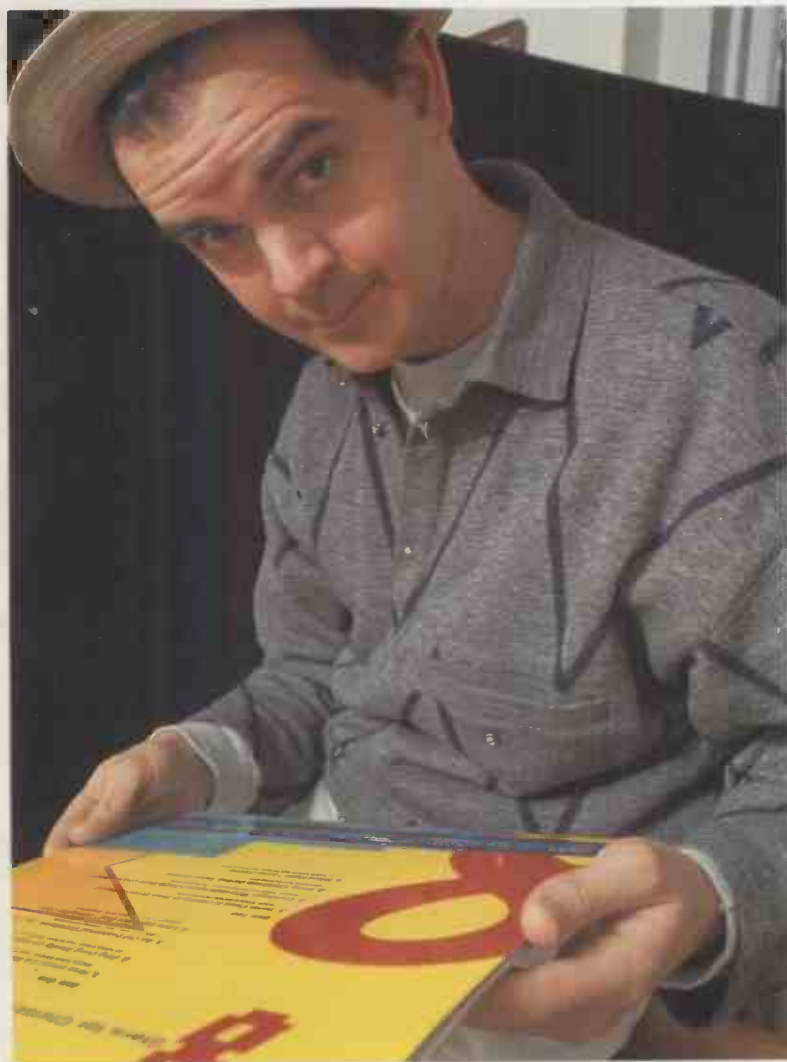
THE WORLD'S PREMIER HI-TECH MUSIC MAGAZINE

March 1991

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## WORKING WEEK working in the '90s



ROLAND MV30  
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system?*

YAMAHA TG33  
*new synthesis meets old*



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*a casio dat machine*

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*Alesis Microverb III  
Multi-fx Processor*

*Anatek Pocket Sync  
Synchroniser*

*Cheetah MD16  
Drum Machine*

*Mega Beats  
Drum Samples*

*Roland MRM500  
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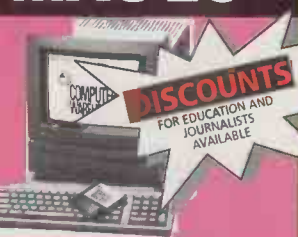
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- 6 MIDIMOOG 19" RACKMOUNT ANALOGUE
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"Love for sale. . . advertising young love for sale" - OK there's no love, but there's loadsa synths, samplers, and recording gear in the largest hi-tech readers' classified ads in print.

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Is it a bird, is it a plane? No, it's a multitimbral synth module, it's a sequencer, it's an automated mixer. . . Simon Trask puzzles over Roland's Studio M.



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One of software's greatest strengths is its ability to evolve. Ian Waugh looks at the refinements now available in one of the most popular sequencing/notation packages.

## CHEETAH MD16 56

Possibly the most requested review in recent years, Cheetah's MD16 drum machine is finally here and ready for inspection. Simon Trask gives it a good beating.

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Latest in the SY/TG line of descent, the TG33 module offers post-FM synthesis combined with the vector control pioneered on the Prophet VS synth. Ian Waugh expands on the '33.

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Back in the '60s it was Jefferson Airplane, then it was Jefferson Starship, then it was simply Starship. Brad Leigh Benjamin compares notes with the Synclavier king of one of rock's institutions.

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Now in its third revision, the popular Microverb has attained full rackmount status and boasts an incredible 256 effects programs. Nigel Lord is drowning in reverb.

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Accusations of replacing "real" musicians have shifted from drum machine to sampler, but there may be other changes upon us. Steve Wright investigates the significance of the sequencer.

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Acoustic drum samples from producer Bob Clearmountain rub shoulders with *Mega Beats* drum machine samples, while SSU sounds for the Yamaha SY77 complete the lineup in this month's Patchwork.



# MONEY WHORES

HOW IMPORTANT IS sampling? Stupid question really - it depends on who you are. To the average production-line assembly worker, it's probably a tiny element of the music the radio plays every day; to the modern musician, however, it is almost certainly of paramount importance. And since you and I are both musicians, it's pretty important, right? How about accountants - superficially, it seems unlikely they'd give a flying buck about sampling. Yet no less a financial newspaper than *The Wall Street Journal* recently devoted an article to this very subject.

Under the snappy headline "Record Industry Artists and Executives Are Spinning Over Digital Sampling Use", Robert Tomsho described the activities of Polygram Records' vice president as he "painstakingly listens to dozens of new recordings on other labels for traces of singer James Brown's trademark scream". Polygram, you see, own the rights to much of JB's catalogue, and its unauthorised use represents lost revenue to them. While it's been technically possible to use one musical recording within another since recorded music first appeared, both Polygram and *The Wall Street Journal* appear to hold the hapless sampler singularly responsible. Of course, the sampler has been instrumental in popularising musical lifts, but that's not really what interests the record company or the newspaper. What interests them, of course, is ca\$h.

So, with a new-found interest in musical technology, *The Journal* despatch a staff reporter to research an article on sampling and its applications. In fairness, some of the research is pretty thorough: quotes from the likes of Bob Moog, Frank Zappa and music attorney Evan Cohen litter the piece. The technology, however, gets a pretty raw deal. For a start there's an assumption that a sampler takes the form of a computer

(complete with alpha-numeric keyboard and VDU) and that it takes a "skilled technician" to "alter numerical codes" to "change a sampled sound's pitch or rhythm, rearrange the notes or, by layering sampled material, summon up the sound of an entire orchestra using a single instrument". It's a far cry from the reality of a Casio FZ1 or Akai S950 and the streetwise kids who can lift-n-loop a breakbeat before you can say anti-aliasing. And having introduced the idea of substituting a sampler for orchestral players, *The Journal* claims that the Dean of New York's Juilliard School (which runs courses in sampling) "scoffs at the idea of samplers replacing whole orchestras in live performance". Hardly an accurate indication of what's actually happening.

When it quotes a figure of \$27.5 million for sales of music software in 1989, however, *The Journal* is undoubtedly accurate. Mention of this being a 10% increase on the previous year's takings, and of some 114,750 keyboards having been shipped to US retailers in '89 (twice the volume of five years earlier) are certainly equally correct. The newspaper is in its element.

It also warms nicely to American law suits involving De La Soul and '60s band The Turtles - obviously with cash settlements in mind. Evan Cohen goes as far as to say "If you have a big hit, you're going to get sued, that's all there is to it".

Where, then, is our music in all of this? From being an artistic pursuit enjoyed by you and I as musicians, as well as you and I (and the record-buying public) as consumers, it has become another source of revenue for the money men - not even solely in the form of music, but in the lawyers' bills that it can be used to generate. Next time somebody throws you the old line "money talks", you can tell them that money has now also learnt to sing. *Tg*

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# CRIMEWATCH **MT** *Loads a Gear*

The tea-leaves have been out and about again - this time to the cost of Newcastle-based Devotion Records, who recently (on the 11th of January, to be more specific) had a lengthy list of equipment stolen from their premises:

Roland D70 synth (serial number ZB45714); Roland Juno 60 synth (s/n 277844); Roland SH101 synth (s/n 282056); Korg Poly 800 synth (s/n 016623); Yamaha SY55 synth; Aiwa AD-F370 cassette deck (s/n P-D89090055); Casio DA2 DAT recorder (s/n 001382); Roland TR505 drum machine (s/n 686374); Gibson Les Paul Custom guitar, left-hand, and Gibson Protecta case (s/n 403880); Epiphone FT-140 acoustic guitar (s/n 855345); two Jose Mas y Mas classical guitars (s/n 82/U); Lowden acoustic/electric guitar;

Gordon Smith Gemini guitar and case (s/n 00803); Peavey Bandit 65 amp; four reels Ampex 456 half-inch recording tape; Ibanez stereo chorus pedal; Boss flanger and distortion pedals; Sennheiser headphones; one pair latin percussion bongos; King Cleveland alto sax and hard case; one pair tablas; assorted hand percussion; Hitachi ghetto blaster.

Of course, it almost goes without saying that the assistance of any reader who has any info regarding the above would be much appreciated. Information can be passed on to Newcastle police on 091-232 3451 X2444/5, quoting crime number B3/389/91) or to Mick Routledge of Devotion Records on 091-272 5404 or 091-477 6052. Or if you prefer, you can of course call us at the MT office. **Dp**

## MY KINGDOM FOR A **DAT**

Alesis announced several new launches at the NAMM show, first being the ADAT Digital Recording System, a 16-bit 8-track digital tape recorder in a 3U-high 19" rack format with LRC remote which will retail at around £3700 including VAT. The Alesis Digital Audio Tape will record at 48kHz with 64 times oversampling on S-VHS tape. Sampling frequency is continuously variable from 42.76kHz to 50.85kHz. If you're rich, you'll be interested in the BRC full function remote control/autolocator with SMPTE input and output, MIDI time code and MIDI clock with Song Position pointer, which enables control of up to 128 tracks, using up to 16 ADATs locked together (to 1/48000th second accuracy). Each unit has an optical digital interface. The BRC will retail for around £1700 including VAT, and it doesn't

take Norman Lamont to work out that if you're in a position to need digital recording, the ADAT will make a lot less of a dent in the exchequer than most other digital systems.

Also new from Alesis is the D4 16-bit drum module, a 19" unit with over 400 sounds on board. Features include a trigger-to-MIDI converter with six audio inputs, 32 programmable drumsets and four outputs configured as two stereo pairs. A large preview button allows you to trigger and audition each sound from the front panel as you edit sound and drumset parameters. It's expected to retail at £399 including VAT.

More information from Sound Technology, Letchworth Point, Letchworth, Herts SG6 1ND. Tel: (0462) 480000. Fax: (0462) 480800. **Dp**

The New Year sees no let-up in the continued flood of MCM info coming through our fax machine. This month, we're informed that MCM are the new UK distributor for Oberheim equipment. You may have heard that this venerable company has recently been purchased in the US by guitar giant Gibson, and while old Oberheim favourites will still be available, some new products are also on offer. Older instruments being relaunched include the Matrix 1000 (rrp £449 and Matrix 12 (of which a limited supply will be available from March), and the three original Perf/X units, Navigator, Systemizer and Cyclone. These have been joined by two new models in the range, the Strummer and the Drummer.

The Drummer "allows you to release the drum power in your synth". The unit offers over 1000 possible rhythms and an auto-randomise function with intelligent variations. Interactive Volume, one of its many features, enables your programmed drumming to respond to the dynamics of your playing or sequencing - for example, when you are playing quietly, the drums will be playing rimshots, the occasional fill and perhaps congas. As the music gets busier, the drums start playing harder. The rimshot turns into a snare, the fills get heavier, and so on. Sounds good if it works.

The Strummer is designed to perform a trick which many keyboard players would like to do but find difficult - no, not land a lucrative recording deal, reach No. 1 in the charts and become a millionaire within six months; this little gismo will actually convert keyboard chords to guitar voicing technique. You can select strum rate and direction, there is a Riff Record function and 96 presets (64 factory, 32 user). Both of the new units will be available for £149, while the older units in the range retail for £129. Finally, there's also a new synth from Oberheim, the OBM, a 6U-high real analogue synth with knobs, sliders and MIDI. We don't have much information on this at the moment but a review is

on the cards, and more news as soon as we have it.

MCM are also pleased to announce that, with immediate effect, they are also the new UK distributor for Waldorf. The Microwave 2 has been updated with new operating system software allowing extensive system exclusive MIDI control. The retail price of the synthesiser remains at £1099 and the software upgrade is available now. New to the Waldorf stable is the Waldorf WaveSlave voice expander (rrp £699). This 1U-high rackmount expands any Microwave with a further eight voices, doubling the capacity of the original module. Once connected, a WaveSlave will be operated entirely from the MicroWave front panel.

On the software front, Opcode have four new Mac music packages and two significant upgrades to existing software. OMS (Open MIDI System) is a new MIDI operating system which tackles the sometimes overwhelming task of managing the mass of MIDI devices many musicians accumulate and have to organise. OMS allows the musician to set up a description of his studio once, and have all Opcode programs automatically know what is master controller, multitimbral module and what channels they can receive on, and so on. Opcode are also announcing Galaxy Plus editors, an integration of Opcode's universal librarian program Galaxy and their range of editors. New editors include the Korg Wavestation, E-mu Proteus 2 and InVision's Protologic enhancement. Another new software launch from Opcode is Track Chart software, a studio management package designed to simplify the mixing process by providing the mix engineer with printed charts or realtime on-screen track substance and movement. The charts can be created automatically by opening a MIDI file.

Software updates from Opcode include Vision version 1.3 and Studio Vision 1.3.

More information on any of the above from MCM at 708a Tudor Estate, Abbey Road, London NW10 7UW. Tel: 081-963 0663. **Dp**



# The Home Front

Following a rapid expansion in its festival events and the blurring of the distinction between home and professional keyboard instruments our sister magazine, *Home Keyboard Review*, will shortly be changing its name to *Keyboard Review*. KR festivals now number three: the Easter Keyboard Extravaganza at Pontins Seacroft Centre near Great Yarmouth (March 28th to April 1st); an autumn weekend on the Isle of Wight, held at Warner's Puckpool

Holiday Village near Ryde from October 25th to 28th, and a New Year Party at Pontins Wick Ferry Holiday Centre near Bournemouth from December 29th to January 2nd. Readers interested in more information on these events can call (0353) 665577 during office hours and ask for Clive Morton or Veronica Harris, or write to *Keyboard Review*, Alexander House, Forehill, Ely, Cambs CB7 4AF. Failing this, you can, of course, tell your Grandad about it. **Dp**

# RESULTS... RESULTS...RESULTS...

On the competition trail once again, we're pleased to announce that the name of the winner of the *incredibly* popular Tascam 644 Midistudio offered in our August '90 competition has been pulled out of the editor's trousers (he told me to say that), and is Andrea Jones of

Stockton Brook. As always, the prize is on the way at the time of writing and no doubt will provide much amusement and satisfaction when it arrives. Our thanks are due, once again, to Tascam's Bob Thomas for providing such a generous prize. **Dp**

New goodies from Roland are in abundant supply in the wake of the NAMM show and the run-up to the Frankfurt Musik-Messe - at the time of writing, the office personnel are gradually disappearing under the weight of Roland, Boss and Rhodes press info which we're painstakingly sifting through.

New on the synth front is the Roland JD800 (rrp £1699) which features a stunning new departure in synth technology - a front panel with "knobs" and "sliders", new-fangled gismos, apparently, which will revolutionise the synth/user interface in the 1990s. Seriously though, the JD800 "combines the high sound quality of a digital synthesiser with the flexible sound manipulation capabilities of analogue synths", according to Roland. A sizeable array of dedicated sliders are provided on the JD800's front panel, with each slider assigned to a separate parameter, facilitating easy sound modification in real time. The JD800's "newly-developed" sound source offers 108 preset waveforms, which you can modify with a range of parameters including a high-performance TVF. The new synth is multitimbral (naturally), 24-voice polyphonic, and has built-in multiple effects - distortion, phaser, spectrum enhancer, reverb, chorus, delay, three-band parametric EQ, and mix out filter. Other features of the new synth include envelope generator/LFO, two independent LFOs including a fade control that creates gradual increase and decrease of LFO modulation, triangular, sawtooth, square, sample and hold and random modulation and layering of up to four tones. The JD800 also has a large LCD display, and from the

## ROLAND: THE NEXT GENERATION

brochure we've seen looks very nice indeed.

Sticking with keyboards for the moment, the new JX1 "Performance Synthesiser" (rrp £535) is being touted as a "great first synth for live applications". The JX1 offers 64 factory presets and 32 user memory locations, dual mode for sound layering, a 61-key velocity-sensitive keyboard, 24-voice polyphony, adjustable TVF with resonance, cut-off, attack and release parameters for extensive sound modification, four front-panel sliders for quick and easy editing and digital reverb/delay and chorus with user-definable parameters.

Roland sampling grows apace with the introduction of the S750 (rrp £2750), based on the high-end S770. The new sampler is a 16-bit linear, 24-voice stereo machine, sampling at 48kHz, 44.1kHz, 24kHz or 22.05kHz, with the same software as the S770 - but of course is considerably cheaper. The S750 has a 3.5" floppy drive (forgoing the 770's built-in hard drive) but also features a SCSI port for connection of a hard drive or optical disk unit, or a CD-ROM player. An S770 can also be connected via SCSI, should you have one lying around. The S750 comes with 2Mbyte RAM as standard, expandable to 18Meg, which would allow a maximum sample time of 94 seconds at 48kHz sample rate.

Roland are also introducing a new digital piano, the FP8 (rrp £1599). Featuring a full 88-note keyboard with weighted touch response, the FP8 is still portable

and comes in a choice of three colours (pearl white, suede grey and metallic red); it also has a built-in MIDI recorder to allow you to record and play back performances, and built-in effects including eight types of reverb and chorus textures.

Other new goodies from Roland include: the SC55 Sound Canvas, a

(naturally) and other features too many to go into here. One to watch out for. Polishing off the Roland novel, you'll also be seeing in the coming months the launch of the CR80 Human Rhythm Player, a partly preset rhythm composer, the A220 MIDI Separator, and new sound cards for the D70 and GR50.

Moving on briskly to Roland siblings Boss and Rhodes, from Boss we have the FC50 MIDI Foot Controller, a sturdy metal unit which allows foot control of program change and other



1U-high, half-width sound module, with 16-part multitimbrality, 315 sounds plus nine drum sets, built-in digital reverb and chorus and 24-voice polyphony; and its partner the SB55 Sound Brush, a portable rackmount sequencer in a 1U-high, half-rack case, which promises simple, CD-like operation, 17 tracks of data with 16 MIDI channels per track, and a 3.5" disk drive. A new multi-fx unit is also in the offing from Roland, namely the RSP550 stereo signal processor (rrp £750), a 1U-high unit offering "exceptional sound quality", as well as 160 user memory locations and 39 presets, 39 effect algorithms, real-time control of effects parameters using footswitch or MIDI control change messages, stereo ins and outs, effects including pitch shift, various chorus effects, numerous reverbs

expressive MIDI control data, and the BE5M Programmable Multiple Effects unit in compact floor pedal form, aimed at the live performer. Roland's Rhodes division is offering the VK1000 drawbar keyboard (rrp £1850), the '90s successor to the VK1. This new keyboard features not only tone-wheel organ sounds, but also classical pipe organs, bass organ, chime and lead sounds. Real-time sound modification is facilitated by the use of 13 drawbars in traditional organ style. The VK1000 has a full MIDI spec and master keyboard capabilities.

More information on the above will be forthcoming as soon as we have it. Roland can be contacted at Rye Close, Ancells Business Park, Fleet, Hampshire GU13 8UY. Tel: (0252) 816181. **Dp**

## hearing is believing

Much as I enjoyed Simon Trask's article on the E-mu Proformance in the November issue of MT, I feel it is inaccurate in one respect. I quote: "Proformance's acoustic piano presets are clean, dynamic and detailed, with no glaring changes in tone between multisamples..."

Having bought myself a Proformance, it's my opinion that, coming down the keyboard at around E<sub>4</sub>/D<sub>4</sub>(it varies between presets) there is a very noticeable change from a mellow tone to a rather harsh metallic tone. This can be particularly noticeable with more mellow presets. I realise sounds can be very subjective, and for £400-500 one can't expect miracles. Nevertheless, I feel this instrument is flawed and I was disappointed that your reviewer hadn't commented on this.

I contacted the store that supplied my Proformance (Argent's) and they replaced the unit, but there was no improvement. I also contacted E-mu and although both they and Argent's were extremely helpful, there is nothing more they can do. I suppose I should have noticed the problem when I bought the unit, but playing an unfamiliar instrument in an unfamiliar environment it's difficult to take in everything at once. Quite frankly, I think I was so overawed by how good it was in general that six or eight notes in one spot on the keyboard failed to register.

Is there a solution to my problem? I feel the chip should be re-engineered and made available as an upgrade - chargeable if E-mu wish. I would gladly pay considerably more for such a unit because - make no mistake - it is,

indeed, a very fine module otherwise.

Thank you for the excellence of Music Technology and Simon Trask's reviews in particular (although I don't get to try all the equipment he reviews). One general comment about music magazines: I feel that many reviewers go over the top on sounds. How often have we read that an electronic piece of gear had arrived that was truly comparable to its acoustic counterpart? Yet still the search goes on... I suppose it's all subjective!

**Dermot Walls**  
**Co Dublin**  
**Ireland**

*Subjective is the word, Dermot. Simon Trask - not normally a man noted for making rash judgements on anything, let alone going into print with them - was obviously happy with the way E-mu had selected their samples at the time of writing his review. You, sadly are not, and I'm not prepared to pronounce either one of you wrong.*

*Unfortunately Simon no longer has access to the review Proformance, and can only restate that he liked what he heard at the time of writing. Into his corner, however, I can recruit Derek Johnson - whose name will be familiar to readers of our sister magazine Home & Studio Recording as one of the regular in-house reviewers. After very careful listening, he assures me that he can detect some of the sample transitions, but that he doesn't think they would be evident in any ordinary musical performance. And Derek knows his pianos...*

*Something else Derek knows is that, while the multisamples on the Proformance impress him, he prefers the piano voicings found on Yamaha's SY77 or their old EMT10 piano module for his own use.*

*As we all seem to agree, whether an instrument sounds good is a matter of personal preference, and one of the hardest aspects of a review which a reviewer has to deal with. Certainly, the next time any reviewer tries to tell you that an acoustic instrument has been replaced by an electronic one - or even that a new electronic instrument is so good it makes all older ones obsolete - I'd carefully re-assess your reading habits. Tg*

## vive la revolution

I don't mind competition but what we've got now isn't competition, it's slaughter and waste on an unparalleled scale. Using the same methods that have brought our planet to the brink of destruction, the two-year turnover record companies are creating a wasteland of empty music. Musicians do the work, the record companies stick their labels on it and take the money. Alternatively, they leave immense amounts of talent to stack supermarket shelves. Surely we cannot allow ourselves to be used in this way? Musicians shouldn't be business-men (John Lennon couldn't rub two sticks together on a corporate level, yet he did what he did musically exceptionally well), but if we are to become businessmen, let us do so absolutely and remove the unnecessary layers of middle-man profiteering. The MRA (Musicians' Revolutionary Army) will be the organisation to even the game. Using guerilla warfare and new technology we can take back what is ours.

Proposal 1: Alternative methods of recording, distribution, production and marketing will be at the

disposal of the musician and the audience, not the accountant.

Proposal 2: Establish MRA recording label and distribution for product from artists and studios.

Proposal 3: New venues to be created, allowing new talent to be seen and, more importantly, to learn and develop. Special nights to be arranged to showcase new acts - not Butlins, more the New York Apollo on a Wednesday night where every major black artist has appeared as an "amateur" to open themselves to a wider audience.

Proposal 4: The audience will choose their favoured acts - not A&R juniors (usually failed musicians) who think they know what the audience wants.

Proposal 5: Nobody has to be the puppet of SA&W to have a fair chance in the biz. The MRA will provide alternative opportunities.

Things are already in progress. I'm talking to TV and radio stations, newspapers and magazines, but I need your help. If you are, or know of, an alternative book store/record store, radio station, DJ, producer, video producer, studio, club, pub, or a band, or musician with material, or can donate some business or organisational knowledge, write to me.

I'm 100% sure that the MRA will work if you help. It will produce a music scene that's been missing for some time. Otherwise things are going to get worse. The time is right - as technology makes it easier for us to produce music, it gets harder for them to control it.

**Jaques**  
**MRA**  
**PO Box 17**  
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*Er, if you say so. Bonne chance. Tg*

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# GET YOURSELF A DA!

THE WHOLE WORLD'S going digital. It doesn't matter whether you're looking for a music editing system, a washing machine or a guided missile, the odds are you're going to hear the word "digital" somewhere in the sales pitch. Of course, us musicians (or technicians or beauticians) are likely to be more familiar than most with the digital world, it having revolutionised the working methods of most of our number over recent years. From synth patch memories to samplers, we've done more than our fair share of "going digital".

Down at "street" level the latest phase of the revolution has taken the form of affordable DAT recorders. As an alternative to the expense of half-track reel-to-reel machines, and the vagaries of domestic cassette decks, we have been offered a high-quality, cost-effective recording format that's quickly becoming an industry standard.

Take Casio's new DA7 DAT recorder, for example: it's a portable 16-bit recorder supporting 48kHz and 44.1kHz sampling rates. It will also accept direct digital signal input, supports sub-coding (providing track numbering, and a variety of time elapsed and remaining displays), and comes with a battery pack and sturdy carrying case for those Richard Attenborough or Kate Adie-style sampling expeditions. (A full review can be found in last month's MT.)

And to take a DA7 away as a competition prize, all you have to do is answer the following questions. . .



PHOTOGRAPHY: JAMES CUMPSTY

**Q1**

If the DA1 was the first of Casio's portable DAT machines and the DA7 is the current revision, how many DA models have there been?

- a) 3   b) 5   c) 7

**Q2**

SCMS - or Solocopy - is not the first copy-inhibiting system discussed in conjunction with DAT recorders. What was the system proposed by CBS called?

- a) Procopy   b) Copy Code   c) Copydex

**Q3**

The recording system used in the DA7 is more properly known as R-DAT; what significance does the "R" have?

- a) The designer's surname began with the letter R  
 b) It was the 18th revision of the DAT design - the first 17 being denoted A to Q  
 c) The recording head rotates

ALL ANSWERS SHOULD be called in to the MT Competition Hotline - (0898) 100768 (calls cost 33p per minute cheap rate and 44p per minute at all other times). Please remember to speak clearly and don't forget to leave your name and address with your answers. The hotline deadline this month is *Thursday, March 28th*. Employees of Music Maker Publications and Casio and their relatives are ineligible for entry into this competition. Multiple entries will not be accepted. The Editor's decision is final and no correspondence will be entered into.

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# ROLAND MRM500 MIDI FILE CONVERTER

FOR THOSE OF you not already familiar with it, the Standard MIDI File format provides a method of saving songs via the disk drive on one sequencer, and loading into another. If the sequencers are software running on the same computer, there's no problem with disk format. However, very few of the hardware sequencers use a compatible disk format and so loading a MIDI File would be impossible.

While Roland's MC-series of sequencers are renowned for their reliability and sturdiness, there's no substitute for the power and level of visible information available when editing on a computer. The inclusion of MIDI File compatibility for these sequencers, therefore, would make them even more useful to the editing musician - and that's precisely what the MC-series' MRM500 optional software provides.

MRM500 can be used in any of the MC series - MC300/500 and the new MC50 (reviewed MT, Jan '91) and facilitates the use of the Super MRC software. You are supplied with a System Generator disk, from which you create an MRM system disk; this contains the software program for MIDI File conversion which the MC sequencer loads each time you need to do a conversion. The idea of using different "system disks" is a good one because a MIDI device can be continuously updated without the need for sending it away to have a new ROM fitted.

There are four modes in which the MRM software works. Mode 4 lets you initialise (or format) a disk to IBM PC format (it is also compatible with the Atari ST range of computers). If you're using an Apple Macintosh (you lucky people), then you'll need to use the Apple File Exchange program (on the Mac) to format a disk for IBM PC compatibility. Mode 2 lets you choose whether an MRC (MC sequencer) song file will be written as a Format 0 or Format 1 MIDI File. Format 0 writes a single track only while Format 1 writes multiple, parallel tracks. You would usually use the latter unless the sequencer you are going to use for editing will only accept Format 0.

Mode 1 then allows you to convert between MC sequencer file format and MIDI File format, or vice versa. The MC screen prompts you to change disks when necessary, and you can also change the name of the converted file if you wish. The final mode, Mode 3, is Restart, which lets you boot up another system disk on the MC-series sequencer - the MRB librarian, for example. Alternatively, you can switch off and on, and go back to using the sequencer.

Conversion of an MRC file to a MIDI File is a very thorough affair - Roland have done their homework well. Testing the software with an MC50, all MIDI information (including system exclusive) and tempo changes gave satisfactory

transfers, and the time signature changes from the rhythm track were also correctly encoded into the MIDI File. Steinberg's Cubase and Hybrid Arts' SMPTETrack correctly reformed all information. However, C-Lab's Notator ignored the time signature changes.

MIDI File to MRC transfer gave rather more interesting results. Generally, time signature changes are written to the rhythm track with the actual patterns being filled with rests (a good implementation). Tempo changes are written to the tempo track, and if there are more tracks of information than available sequencer tracks, these are automatically merged into the last available track - track four on the MC500/300 and track eight on the Super MRC/MC50.

Unfortunately, there were problems with various of the sequencer programs. Notator writes the default tempo and time signature to the first track, and any changes to the second. The MRM software only looks at the first track for changes and so doesn't "see" those in the second track. While the use of more than one track for tempo changes is permissible within the MIDI File spec, it has become usual to write any changes to the first track. Without either party stepping outside the MIDI spec, therefore, there is a compatibility problem between Roland's software and C-Lab's.

A bigger problem arose with SMPTETrack. Without going into detail here, there are two distinctly different ways to write system exclusive to a MIDI File, and Hybrid Arts use the method that the MRM software will not recognise. Not only does Roland's software not convert the Hybrid Arts SysEx, it won't touch the song file at all. Surely it could have ignored the SysEx information and converted the rest.

While not all file transfers gave perfect results, the errors are not down to the MRM500 software. Some inaccuracies occur due to the different resolutions of the sequencers - the MC range uses a resolution of 96ppqn (pulses per quarter note) while many of the modern sequencers have double this accuracy. More to the point, few, if any, sequencers correctly write their MIDI data to a MIDI File - yet the MRM converter will accurately handle what it is given. With this and the sheer reliability of the MC-series in mind, I have to conclude that if you use an MC sequencer live, this piece of software will revolutionise the way in which you work. ■ **Vic Lennard**

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# Sampling's as easy as ABCd

## Bob Clearmountain's Drum CD Only from AMG

This CD, from the man who is famous for his superb work with the likes of David Bowie, Bruce Springsteen, INXS, Tina Turner, Bryan Ferry, Simple Minds, Tears For Fears, Macca and many more of the biggest names in Rock and Pop, is every bit as good as you would expect. The CD features 259 Drum Samples especially recorded by Mr. C for this CD. As a recent Keyboard Review put it '...top-ranked producer Bob Clearmountain has just removed any excuse you may have had for putting wimpy snare, tom, and kick sounds onto your sequenced demos...This CD is a treasure-house of great drums suitable for a variety of styles...The main thing, is that the miking is superb. These drum hits are extremely crisp and realistic.' If you only buy one drum CD this year this has to be the one. Volume 2 - Bass and Percussion will be with us very soon, uniquely it will feature the new 3D sensation Q-Sound. Volume 3 is also planned but we're going to keep you in suspense for a while on that one. Whilst not the cheapest CD we offer at £69\* it still represents superb value. (\*£59 + P&P + VAT)

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Hit Music Productions, famous for creating the Valhala International Gold Series ROM Cards, have just released their first sampling CD. The first volume is entitled 'Pure Gold Synth' and features some of the best sounds from the International Gold Series. A range of timbres including superb atmospheric, classic strings, huge analogue sounds and cutting basses from all the latest synths including the Korg WaveStation, M1, T-Series, Yamaha SY-Series, Ensoniq VFX, Roland D70, D50 and more. All captured on one gold CD. Volume 2, 'Old Gold Synth', is already in production and will feature new sounds from Hit Music on a range of classic synths such as the ARP 2600, MiniMoog and Mellotron. Future volumes are set to feature guitar, percussion and drums along with a few big names and unique features. We'll keep you posted on developments. In the meantime Volume 1, and perhaps Volume 2, are available now at the fully inclusive price of £45 each. There are also plans to make these samples available on ready-to-load disk, the choice is yours. Call for more details.

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# ANATEK POCKET SYNC

THE REASONS FOR wanting to sync a sequencer to tape are fairly obvious - running your sequences *with* your multitrack saves tape tracks and keeps editing options open. Then, at the mastering stage, your sequenced instruments will be going to tape for the first time, hence optimising sound quality.

The problem with MIDI's own clock is that its bandwidth of 31.25kHz is beyond the recordable frequency of an analogue tape recorder. The cheapest solution to this incompatibility is to use a tape sync-to-MIDI converter. These use a technique called Frequency Shift Keying (FSK) which encodes MIDI clocks into a signal the tape machine can record as the sequencer is playing - by using this method, tempo changes may also be recorded. On playback, the converter regenerates the MIDI clock and uses it to keep the sequencer in sync with the tape recorder.

However, FSK units have the disadvantage of requiring you to run the song from the beginning each time, as the sequencer needs to receive the MIDI Start command from tape before it will play back a sequence. Consequently, some FSK units also use MIDI Song Position Pointer information; this allows you to run the tape from any point during a song safe in the knowledge that the sequencer will pick up the correct point in the song. This system is referred to as Intelligent FSK, and the latest unit employing it is Anatek's Pocket Sync.

Well, if you've seen one pocket device, you've seen them all - it measures around 3" x 2" x 1", and boasts only MIDI In and Out, and Audio in and out connections. Two LEDs on the top have multiple uses: a red LED indicates MIDI status - it stays on constantly if no MIDI data is passing through, showing that Pocket Sync is powered, goes off when MIDI data is received, and flashes in time with the tempo when receiving MIDI clocks from sequencer. A green LED indicates tape status - it's off if no tape signal is being received, on when tape sync is present, and it flashes in time with the tempo of the MIDI clocks being read from tape.

With any FSK-to-MIDI converter, the song has to be completed on sequencer, including any tempo changes, before you're ready to stripe timecode onto tape. Your sequencer has to be able to transmit MIDI Clock (practically all can), and support MIDI Song Position Pointer. The audio in and out from Pocket Sync are connected to the output and input sockets respectively of the tape track chosen for the purpose (usually one of the



PHOTOGRAPHY: JAMES CUMPSTY

outermost tape tracks). The level of the sync signal on tape is critical - using Pocket Sync with a Fostex 280, a level of between -3dB and -8dB was fine but anything lower gave occasional dropouts in sync. On the other hand, if the level is too high, you get crosstalk (where the sync signal is clearly audible over recordings made on an adjacent track). Many modern multitrack recorders have a noise reduction defeat on one outer track, especially if they use dbx (which badly interferes with a sync signal). If your recorder has Dolby B or C, then you probably don't need to worry

- Dolby C was left on during tests of the Pocket Sync and the results were still perfect.

On playback, the unit's green LED comes on as soon as the sync signal on tape is received. It then blips away quite happily to the tempo of the decoded MIDI Clock. Consequently, it's easy to use and very reliable.

If the MIDI In of the sequencer is connected to the MIDI Out of Pocket Sync, how do you connect your keyboard when your sequencer is locked to tape? Unfortunately, the answer is that you'll need to use a MIDI Merge box, as Anatek haven't put a switch on the MIDI In to turn it into a "soft thru" (which allows you to use Pocket Sync to merge the incoming MIDI note information with the MIDI Clock data being created).

Tape dropouts are bound to occur when working with cassette-format recorders. To get around this, Anatek have included a "jam sync" facility which causes Pocket Sync to continue to send out MIDI Clocks at the current tempo if the sync signal from tape is temporarily lost. This will continue for either  $\frac{1}{4}$  of a second or 1 second depending on whether the Audio In jack is plugged in before or after power-up. Finally, the tape speed can be changed by up to 20% without losing sync - the tempo changes accordingly.

In conclusion, I can say that Pocket Sync is quick and easy to use - and cheap at £99 - but it's a shame that you need a merge box to record MIDI data to a sequencer while it is running in sync with a tape recorder. ■ **Vic Lennard**

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# ON THE

# DRUM MACHINE

## Part 18

**CONTINUING LAST MONTH'S  
THEME, THE DIGITAL DRUM  
MACHINE IS FURTHER  
INSTILLED WITH THE HUMAN  
SPIRIT OF JAZZ - CAN IT  
REALLY BE DONE?  
TEXT BY NIGEL LORD.**



IN THE INTRODUCTORY article to this series I promised that the patterns would be fairly simple to begin with, but would grow in sophistication as the series progressed. Well, some 18 months down the line things have indeed taken a more complex turn - triplet patterns, five dynamic levels, grids resolved to 16 and 24 divisions per bar. . .

As we will see from this, the second part of our investigation into jazz

rhythms, there's some pretty serious programming to get your teeth into. Though there are only five patterns, they require some 27 separate grids in their notated form - and that doesn't include those which are repeated within a pattern and which, to conserve space, have been combined.

In fact, you'll even be spared my usual preamble this month: if you need convincing as to the viability of jazz programming on the drum machine,

MUSIC TECHNOLOGY MARCH 1991



ILLUSTRATION: CLIVE GOODYER

check out last month's article. Better, program the patterns into your machine and see what you think. Better still, program this month's patterns into your machine and see what you think about them. Your next song might just find itself built round a jazz rhythm track.

As drum tracks must be programmed out of context (without the benefit of other instruments characteristic of the genre) it is often

necessary to fall back on some of the more recognisable idioms to give a pattern an authentic flavour. In the case of these examples, this has been achieved by adopting triplet programming throughout, and by pressing into service a ride cymbal part to give each pattern "that swing" (without which, it has oft been commented, it don't mean a thing).

This isn't to suggest that all jazz rhythms are in triplet time or have a

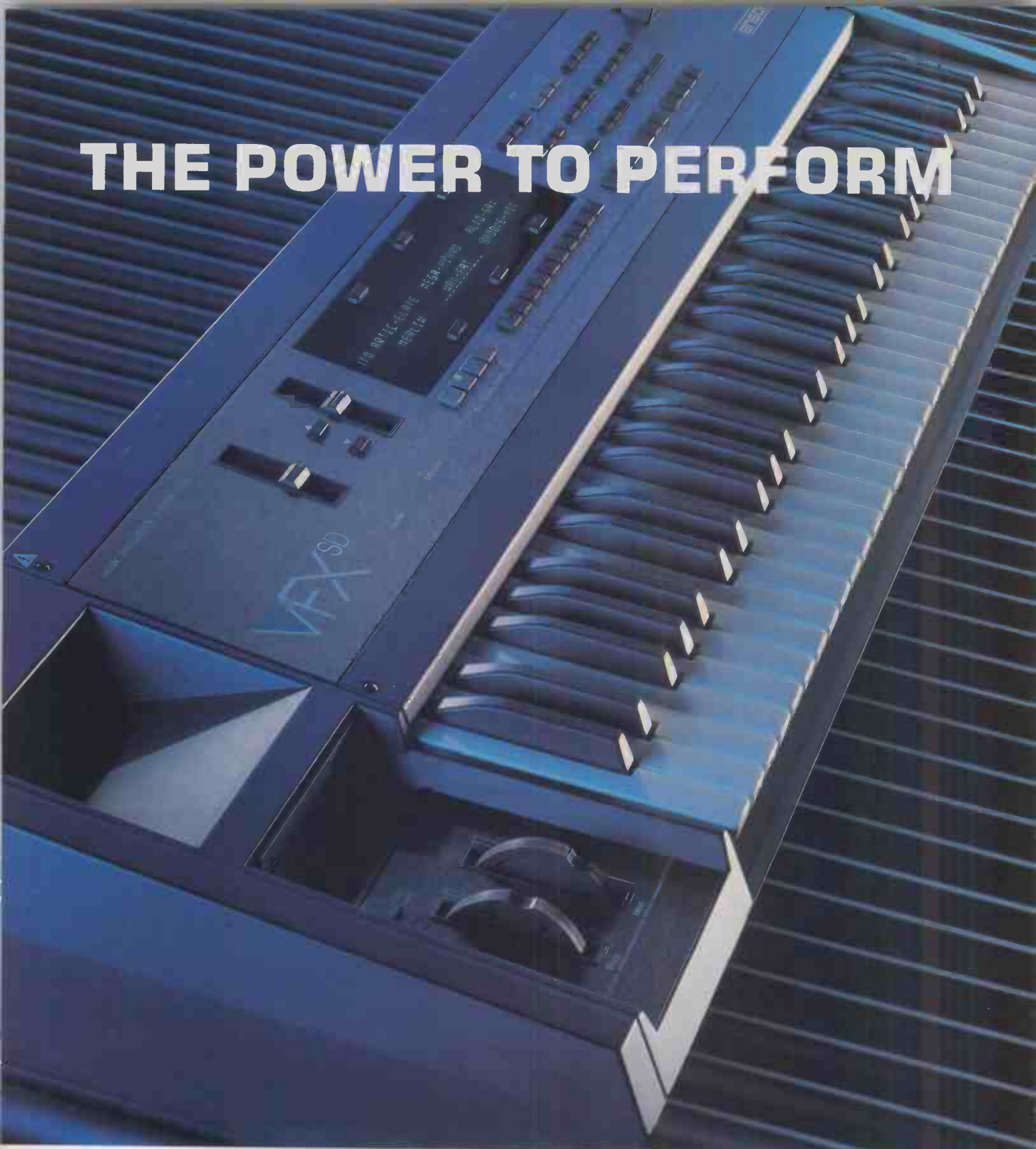
ride cymbal sizzling away in the background. But these elements do serve a useful purpose in making the patterns instantly recognisable as jazz, and should at least be preserved until you have the rhythms firmly in your machine (and in your head). After which, you can do with them what you will; indeed, if you have any intention of producing truly authentic jazz tracks, your work in programming these rhythms will have to be regarded as just the start of your efforts.

The appearance of bongos in three of this month's patterns (and last month's) may puzzle some of you - though not, perhaps, if you were a fan of jazz in the '60s. The fact is, the bongos - and also the congas - are two undiscovered/forgotten jazz rhythm instruments which can be relied upon to add an extra dimension to a track. Bongos are particularly effective as they stand in welcome contrast to the softer, rather "woolly" (by rock standards) sound of the jazz drum kit. And being played by the hand rather than the stick, they can also be much more expressive.

Whilst I'm not claiming the bongo parts in these examples achieve anything like the expression of the real thing (to prevent the patterns becoming too complex, I've deliberately limited their dynamic range) I'm sure you'll agree each of these patterns sounds better with the instruments than without - although as ever, the choice is yours.

While there isn't room to go into individual descriptions of each pattern (and finding the words to describe six different jazz grooves would be somewhat harder than writing them in the first place) there are, nevertheless, a few programming details I should include, particularly for those who missed last month's ►

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► article where the grid designs were changed. The four different dynamic levels - from low to high (1,2,3,4) - are represented by open, lightly-shaded, heavily-shaded and solid diamonds. These should be programmed at intervals of 25, 50, 75 and 100% of the volume range of your machine.

In addition, grace notes - represented by smaller open diamonds - should be programmed at 10% or less of the available volume level. Once patterns have been programmed, individual beats can be adjusted in volume in either direction and the overall mix (which is *not* expressed in the dynamic range of individual instruments) may be set up. Where there is a choice of instruments, opt for softer, shorter voices in preference to heavy, more ambient sounds (particularly the snare drum), but once programming is complete, be prepared to experiment.

Patterns should be programmed in the order a, b, c, d, e, f, g, h for each example; as mentioned earlier, where identical bars exist they have been printed only once, but are clearly indicated as being repeated. In pattern two, notice that the medium (2) dynamic snare beat at the end of bar four is programmed midway between the low (1) and high (4) beats and not midway between the beat divisions. Flams are indicated by the letter "F" in an open diamond and need to be adjusted to match the feel and tempo of the patterns in which they occur. Tempo itself should be kept to within the range indicated unless the pattern is altered in any way; if it is, you may find yourself having to make adjustments to accommodate the changes you've made.

And that's about it - except to say that if you decide any of these patterns are so utterly brilliant they've changed the way you think about drum machines, you could express your appreciation to me on the back of a £10 note via the editorial address. . .

PATTERN: 1a&e		TEMPO: 85-110 BPM			
BEAT:		1	2	3	4
Ride Cymb		◊	◊	◊	◊
Clsd HiHat					
Open HiHat					
Side Stick		◊	◊	◊	◊
Snare Drum					
Hi Bongo			◊	◊	◊
Lo Bongo		◊	◊	◊	◊
Mid Tom Tom					
Lo Tom Tom					
Bass Drum		◊			
TIME SIG: 4/4T		BAR: 1&5			

PATTERN: 1b&f		TEMPO: 85-110 BPM			
BEAT:		1	2	3	4
Ride Cymb		◊	◊	◊	◊
Clsd HiHat					
Open HiHat					
Side Stick		◊	◊	◊	◊
Snare Drum					
Hi Bongo			◊	◊	◊
Lo Bongo		◊	◊	◊	◊
Mid Tom Tom					
Lo Tom Tom					
Bass Drum		◊			
TIME SIG: 4/4T		BAR: 2&6			

PATTERN: 1c&g		TEMPO: 85-110 BPM			
BEAT:		1	2	3	4
Ride Cymb		◊	◊	◊	◊
Clsd HiHat					
Open HiHat					
Side Stick		◊	◊	◊	◊
Snare Drum					
Hi Bongo			◊	◊	◊
Lo Bongo		◊	◊	◊	◊
Mid Tom Tom					
Lo Tom Tom					
Bass Drum		◊			
TIME SIG: 4/4T		BAR: 3&7			

PATTERN: 1d		TEMPO: 85-110 BPM			
BEAT:		1	2	3	4
Ride Cymb		◊	◊	◊	◊
Clsd HiHat					
Open HiHat					
Side Stick		◊	◊	◊	◊
Snare Drum					
Hi Bongo			◊	◊	◊
Lo Bongo		◊	◊	◊	◊
Mid Tom Tom					
Lo Tom Tom					
Bass Drum		◊			
TIME SIG: 4/4T		BAR: 4			

PATTERN: 1h		TEMPO: 85-110 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Side Stick	◇		◇
Snare Drum		◇	◇
Hi Bongo		◇	◇
Lo Bongo	◇		◇
Mid Tom Tom			◇
Lo Tom Tom			◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 8	

PATTERN: 3b&f		TEMPO: 130-150 BPM	
BEAT: 1 2 3 4			
Ride Cymb		◇	◇
Clsd HiHat		◇	◇
Open HiHat	◇		◇
Claves		◇	◇
Side Stick	◇		◇
Snare Drum		◇	◇
Hi Bongo		◇	◇
Lo Bongo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 2&6	

PATTERN: 2a&e		TEMPO: 130-180 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Snare Drum		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 1&5	

PATTERN: 3c&g		TEMPO: 130-150 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat	◇		◇
Claves		◇	◇
Side Stick	◇		◇
Snare Drum		◇	◇
Hi Bongo		◇	◇
Lo Bongo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 3&7	

PATTERN: 2b&f		TEMPO: 130-180 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Snare Drum		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 2&6	

PATTERN: 3d		TEMPO: 130-150 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat	◇		◇
Claves		◇	◇
Side Stick	◇		◇
Snare Drum		◇	◇
Hi Bongo		◇	◇
Lo Bongo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 4	

PATTERN: 2c&g		TEMPO: 130-180 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Snare Drum		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 3&7	

PATTERN: 2d		TEMPO: 130-180 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Snare Drum		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 4	

PATTERN: 3e		TEMPO: 130-150 BPM	
BEAT: 1 2 3 4			
Ride Cymb		◇	◇
Clsd HiHat	◇		◇
Open HiHat		◇	◇
Claves		◇	◇
Side Stick	◇		◇
Snare Drum		◇	◇
Hi Bongo		◇	◇
Lo Bongo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 5	

PATTERN: 2h		TEMPO: 130-180 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Snare Drum		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 8	

PATTERN: 3h		TEMPO: 130-150 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat	◇		◇
Claves		◇	◇
Side Stick	◇		◇
Snare Drum		◇	◇
Hi Bongo		◇	◇
Lo Bongo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 8	

PATTERN: 3a		TEMPO: 130-150 BPM	
BEAT: 1 2 3 4			
Ride Cymb	◇	◇	◇
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Claves		◇	◇
Side Stick	◇		◇
Snare Drum		◇	◇
Hi Bongo		◇	◇
Lo Bongo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4T		BAR 1	

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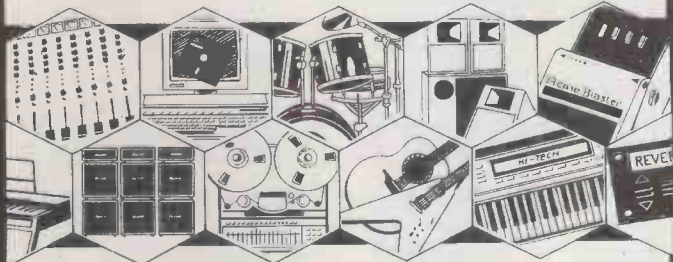
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**PATTERN: 4a&e** **TEMPO: 90-120 BPM**

**BEAT:** 1 2 3 4

Ride Cymb	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat									
Open HiHat									
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb									◆
Snare Drum	◆	◆	◆	◆	◆	◆	◆	◆	◆
Bass Drum							◆	◆	◆

TIME SIG: 4/4T **BAR 1&5**

**PATTERN: 5a&e** **TEMPO: 95-115 BPM**

**BEAT:** 1 2 3 4

Ride Bell	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat	◆	◆	◆	◆	◆	◆	◆	◆	◆
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb	◆								
Side Stick									
Snare Drum									
Hi Bongo			◆	◆	◆	◆	◆	◆	◆
Lo Bongo			◆	◆	◆	◆	◆	◆	◆
Bass Drum	◆							◆	◆

TIME SIG: 4/4T **BAR 1&5**

**PATTERN: 4b&f** **TEMPO: 90-120 BPM**

**BEAT:** 1 2 3 4

Ride Cymb	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat									
Open HiHat									
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb									
Snare Drum									
Bass Drum									

TIME SIG: 4/4T **BAR 2&6**

**PATTERN: 5b&f** **TEMPO: 95-115 BPM**

**BEAT:** 1 2 3 4

Ride Bell	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat	◆	◆	◆	◆	◆	◆	◆	◆	◆
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb									
Side Stick									◆
Snare Drum									
Hi Bongo		◆	◆	◆	◆	◆	◆	◆	◆
Lo Bongo			◆	◆	◆	◆	◆	◆	◆
Bass Drum	◆								

TIME SIG: 4/4T **BAR 2&6**

**PATTERN: 4c** **TEMPO: 90-120 BPM**

**BEAT:** 1 2 3 4

Ride Cymb	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat									
Open HiHat									
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb									
Snare Drum	◆	◆	◆	◆	◆	◆	◆	◆	◆
Bass Drum									

TIME SIG: 4/4T **BAR 3**

**PATTERN: 5c&g** **TEMPO: 95-115 BPM**

**BEAT:** 1 2 3 4

Ride Bell	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat	◆	◆	◆	◆	◆	◆	◆	◆	◆
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb									
Side Stick									
Snare Drum									
Hi Bongo		◆	◆	◆	◆	◆	◆	◆	◆
Lo Bongo			◆	◆	◆	◆	◆	◆	◆
Bass Drum	◆								

TIME SIG: 4/4T **BAR 3&7**

**PATTERN: 4d** **TEMPO: 90-120 BPM**

**BEAT:** 1 2 3 4

Ride Cymb	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat									
Open HiHat	◆	◆	◆	◆	◆	◆	◆	◆	◆
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb	◆								
Snare Drum	◆	◆	◆	◆	◆	◆	◆	◆	◆
Bass Drum									

TIME SIG: 4/4T **BAR 4**

**PATTERN: 5d** **TEMPO: 95-115 BPM**

**BEAT:** 1 2 3 4

Ride Bell	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat	◆	◆	◆	◆	◆	◆	◆	◆	◆
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb									
Side Stick									
Snare Drum									
Hi Bongo		◆	◆	◆	◆	◆	◆	◆	◆
Lo Bongo			◆	◆	◆	◆	◆	◆	◆
Bass Drum	◆								

TIME SIG: 4/4T **BAR 4**

**PATTERN: 4g** **TEMPO: 90-120 BPM**

**BEAT:** 1 2 3 4

Ride Cymb	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat									
Open HiHat									
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb									
Snare Drum	◆	◆	◆	◆	◆	◆	◆	◆	◆
Bass Drum									

TIME SIG: 4/4T **BAR 7**

**PATTERN: 5h** **TEMPO: 95-115 BPM**

**BEAT:** 1 2 3 4

Ride Bell	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat	◆	◆	◆	◆	◆	◆	◆	◆	◆
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb									
Side Stick									
Snare Drum									
Hi Bongo		◆	◆	◆	◆	◆	◆	◆	◆
Lo Bongo			◆	◆	◆	◆	◆	◆	◆
Bass Drum	◆								

TIME SIG: 4/4T **BAR 8**

**PATTERN: 4h** **TEMPO: 90-120 BPM**

**BEAT:** 1 2 3 4

Ride Cymb	◆	◆	◆	◆	◆	◆	◆	◆	◆
Clsd HiHat									
Open HiHat	◆	◆	◆	◆	◆	◆	◆	◆	◆
Foot HiHat		◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb	◆								
Snare Drum	◆	◆	◆	◆	◆	◆	◆	◆	◆
Bass Drum									

TIME SIG: 4/4T **BAR 8**





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# MV30 STUDIO M



PHOTOGRAPHY: JAMES CUMPSTY

Combining 16-track MIDI sequencing, an eight-part multitimbral sound source and an automated mixer, the MV30 enters workstation territory - minus a keyboard.

Could this be the start of something?

Review by Simon Trask.

**W**ITH THE WORKSTATION concept fading in the synth world, Roland have chosen to opt for a different angle on the all-in-one box, and the MV30 Studio M is the result. For a start, it doesn't have a keyboard - and that's an important part of its attraction, because as a result it's readily transportable and you can use the keyboard of your choice with it. This could be a large controller keyboard in your studio and a dinky portable keyboard in your hotel bedroom (for those late night flashes of inspiration when touring). It's this kind of flexibility of use which Roland presumably have in mind - and they've further encouraged it by giving the MV30 the capability to

read MIDI Files off Atari, IBM PC and Apple Mac disks, so you can port files between the dedicated unit and a wide range of computer-based sequencers. With a 16-track MIDI sequencer, a multitimbral sound source and an automated mixer also included in the MV30's compact frame, is it the ideal unit for both stage and studio?

## PANEL BEATING

MEASURING 15 $\frac{1}{4}$ " x 12 $\frac{1}{4}$ " x 2 $\frac{3}{4}$ " (the fashionable sloping front panel) and weighing a little under 8lbs, the MV30 is reasonably compact and portable. It also looks very smart. Roland have got the sleek professional look down pat now, and the MV30 with its sober grey casing, smooth low-profile buttons and profusion of pinpoint LEDs is a fine example of this.

A metal stand (provided) slots securely into the unit's specially-moulded bottom panel, angling it further towards you so that it's at a very comfortable angle for operation and for viewing the LCD. Very thoughtful.

Roland haven't skimped on the MV30's front-panel features either. In addition to a 64 x 240-pixel backlit LCD (soft blue variety), the panel includes five function buttons and associated Shift and Exit buttons below the LCD, Up/Down/Left/Right cursor keys to move you around the screen parameters, a dial and a numeric keypad for entering parameter



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values, a volume slider, and a tape transport-style sequencer control panel including Song Select, Status, Locate and Mark buttons. Also provided are Mode select buttons (offering direct access to the various operational modes), eight track select buttons and eight faders for the Compu Mix section. Conveniently located on the front of the MV30 are a stereo headphones jack and the 3.5" DSDD disk drive for saving sequence and sound data. The MV30's System software is provided on disk, and has to be loaded each time you switch the unit on - which has the advantage that software updates can also be provided on disk (MT's review model had v1.0 software).

The rear panel reveals the power switch and power supply jack (for an external power supply which comes with the unit) together with a cable hook to anchor the power lead; an LCD contrast knob; two card slots to accommodate ROM sample cards; a footswitch input jack; a metronome output jack together with level adjust knob; tape sync in/out jacks; MIDI In, Out and Thru connectors; and an effected stereo audio output pair together with two dry output pairs. Like the MC50 sequencer, the MV30 utilises Roland's new Tape Sync II (intelligent FSK) which interleaves Song position information into the sync signal so that the unit can lock to tape at any position within the Song.

## SOUND GENERATION

THE MV30'S EIGHT-PART multitimbral sound source is based on Roland's U20/U220 RS-PCM sample playback units, but significantly it adds the company's latest generation digital filter as introduced on their S770 sampler and D70 synth.

At the heart of the MV30's sound-generating capabilities is the Tone, which can be a sample or a waveform. The unit has 220 Tones held permanently in onboard memory, and can access others via its two card slots. As it can read U-series and D70 cards, it already has a reasonable library to draw on.

The 220 Tones of the internal memory are divided into three categories: Instrumental (108), Synthesiser Waveforms (84) and Rhythm sounds (28). Many of these will be familiar to anyone who owns or has played around with a U20 or U220. The instrumental sounds include acoustic and electric pianos, electric organs, acoustic guitars, slapped basses, choirs, strings, brass, saxes, flutes, shakuhachis, cymbalon and balaphon. Synth waveforms include the standards as well as various digital waveforms, noise, bells, harps, bass and strings, while the rhythm sounds are the typical Roland "drumkit section", providing basic kit and percussion sounds (including, inevitably, a few 808 samples) which are adequate without being stunningly original or versatile. On a bit of a down note, the MV30 provides only one Rhythm Timbre ("drumkit" assignment of sounds across the keyboard). However you can incorporate any of the MV30's Tones into the Rhythm Timbre, assign a Tone to each note within the range B1-D7, and give each note/Tone its own pitch transposition, separate up and down bend amounts (+12/-36 semitones), source/mute setting (where

playing one sound can cut short another), panning and output assignment (so some sounds can be routed via the effected output and others via one or other of the dry outs). The bend amount parameters are particularly effective as a means of creating different-sounding kits - all the more so for being programmable per note/Tone and for being so readily controllable from your synth's bend wheel.

Over and above these features, each note/Tone is routed through the full sound-generation works including the filter, so you can get into some extreme editing of drum and percussion sounds with the filter cutoff and resonance.

The MV30 can hold one Timbre Bank in memory, and can save and load others to and from disk. A Bank contains 128 Timbres and the one Rhythm Timbre. A Timbre is a Tone plus parameter settings for the MV30's LFO, Pitch, TVF, TVA and Output sections. It's really the excellent digital filter which turns the MV30 into more than a sample playback unit. You get a choice of low-pass, band-pass or high-pass filter and can program filter cutoff and resonance together with a five-stage cutoff envelope and various dynamic modulation possibilities such as controlling the cutoff point from keyboard position, channel aftertouch and LFO and envelope time from keyboard position and velocity.

The digital effects provided on the MV30 are, as we've come to expect from Roland, limited but of good quality. Basically, you get eight reverb/delay types with programmable time, level and feedback, and five chorus/flanger types with programmable level, rate, depth and feedback. You can then select reverb processing only, or reverb with either pre or post chorus. Settings are programmable into five Effect patches for a Song.

## SEQUENCER

THE MV30 COMES fitted with 512Kb of sequencer memory, providing approximately 50,000 Song data steps, but it's possible to upgrade to give a capacity of 120,000 data steps. If you're going to be getting into some extensive automated mixing (see below) then it's probably a good idea to do this.

The sequencer's 16 tracks are divided into eight internal (playing the internal sound source) and eight external (playing out via MIDI, but also able to play the MV30 Timbres assigned to tracks 1-8). Each internal track can play one Timbre at a time and can be assigned one MIDI channel together with output routing, pan, level and voice reserve number. External tracks, on the other hand, can store data on all 16 MIDI channels and record SysEx and Tune Request data. In addition to the 16 sequence tracks you can also create a Tempo track and a Mixer track per Song.

The MV30 can hold up to 20 Songs in memory, each of which can last for up to 9,998 bars - providing there's enough room in memory to store the data. An MV30 Song isn't a chain of patterns, though individual tracks (internal and external) can be set to either Standard (continuous) or Pattern. Each track can have Patterns programmed for it regardless of whether the track is set to Standard or Pattern - up to 999 Patterns per track! A Pattern can itself last for

**"The MV30 could function as the sequencing centre of your MIDI setup, but you can uproot it and take it out as a self-contained unit wherever you need to go."**

**“What's great about the RPS is not only that you can spontaneously combine a variety of musical parts, but that you can experiment with their rhythmic placement against one another.”**

➤ up to 999 bars, so you needn't necessarily confine yourself to short loops. Each Pattern can be assigned its own Timbre and time signature.

Real-time recording of Standard tracks can start anywhere within the current length of the Song, and either end within the current length or set a new length. Various record modes are available, including normal, mix, key on, manual and auto punch in/out and loop (drum machine-style - so pattern-type recording needn't be limited to the Patterns). Other features allow you to insert patch changes at any position in a track (for Timbre and MIDI patch changes) and to erase selected types of data from any section of a track. Track editing allows you to merge and copy tracks, to copy or merge the data of a Pattern to any position in a Standard track, to post-quantise a track (key on, key off or gate time with an offset option for sliding quantised data forward or backward in 96ppqn steps - the MV30's maximum record resolution), to insert and delete bars, to extract a section of one track to another, to change velocity, gate time and MIDI channel data, to convert a Pattern track into a Standard track, and to thin out data in the Mixer track (highly useful). Phew. It's also possible to copy any part of a Standard track into a Pattern, so it's easy to extract the good bits from an extended keyboard “doodle”. Additionally, both Standard tracks and Patterns can be transposed  $\pm 99$  in semitone steps.

Roland's familiar Microscope (event-level) editing is available for Patterns, Standard tracks and both the Tempo and Mixer tracks. Step-time recording is also available, with the MV30's numeric keypad and MIDI input as possible sources. Keypad input means you can record into the MV30 without having any external input source to hand, though it's not the most enticing of prospects.

Finally, Chain Load mode allows you to create a Song list which the MV30 uses to automatically load Songs off disk, one at a time. A loaded Song can start immediately or be Started from the front panel or the footswitch. Very useful for automating the running order of a set.

## PHRASE SEQUENCER

THE REAL-TIME PHRASE sequencer (RPS) comes as a welcome surprise, as it wasn't mentioned in the preliminary spec. Basically, the RPS allows you to assign MV30 Patterns to MIDI notes and construct a piece of music “live” by triggering them from your MIDI keyboard. Roland can't really claim originality here (it's been possible to do this sort of thing for a long time using the Open mode in Dr T's KCS sequencer), but that doesn't make it any the less welcome.

The RPS allows you to create a list of 20 notes (playing the relevant notes from your keyboard is the quickest way), and to assign one MV30 Pattern to each note. As each track (1-16) can have its own collection of Patterns, you need to specify both the track and the Pattern. The advantage of this is that Patterns from different tracks can each play their own Timbre or external sound. With Patterns from the same internal track it's a slightly different situation. Remember that each Pattern can be assigned its own

Timbre. If you don't play Patterns from the same track together, each will automatically assume its assigned Timbre. However, if you trigger a second Pattern before the first has finished playing, the first Pattern assumes the Timbre of the second. What this means in practice is that you can't play more than eight Timbres at once in RPS mode - which is quite reasonable when you consider the MV30 is eight-part multitimbral. Anyway, you can always turn this to your advantage as a means of spontaneously switching to a new sound partway through a Pattern. There doesn't appear to be any limit to how many of your 20 Patterns you can have playing at the same time apart from your sanity, innate musical good sense and the available polyphony (remember, Patterns from tracks 9-16 can play external sounds).

Each of the 20 RPS notes can be set to play its Pattern as a one-shot, a loop (until note off), a quick one-shot or a quick loop. The latter two are so called because they begin playing straight away from the first recorded event in the Pattern - which needn't necessarily be on the first beat.

The RPS also allows you to set a Stop By note. Whenever you play this note, all active Patterns within the RPS are abruptly cut short - a very valuable feature, especially if you accidentally trigger a long one-shot pattern.

Patterns triggered within the RPS are automatically played at the current tempo. If an MV30 Song is playing, the Patterns will follow the Tempo track. However, this won't hide poor timing on your part - if you want a Pattern to play on the beat, you have to trigger it on the beat.

Being able to trigger Patterns live while a Song is playing means that you can have a pre-recorded rhythm track playing while you trigger other things on top of it. Equally it means you can do without a pre-recorded rhythm track and, instead, construct your rhythm track live by triggering the rhythm Patterns within the RPS. Or you could have a pre-recorded rhythm track to fall back on and mute it if you feel like going for the live option instead. RPS-triggered Patterns can also be useful for dropping in percussion breaks over a basic pre-recorded rhythm track of bass, snare and hi-hats - or you could have the percussion in the pre-recorded track and the bass drum and snare parts in the RPS Patterns. As you might gather, I've been having some fun here.

Patterns need by no means be limited to rhythms, however, and can include basslines, melodies, chord sequences, horn riffs, ambient effects. . . whatever you want. And consider this: as Patterns from tracks 9-16 can be used to play external sounds, you could RPS-trigger Patterns which themselves trigger breaks and/or vocal samples on your sampler. But what's so great about the RPS is not only that you can spontaneously combine a wide variety of musical parts, but that you can experiment with changing their rhythmic placement against one another.

As noted earlier, Patterns have to be recorded in isolation. While this may be OK for rhythm patterns, once you start to get into a diversity of uses for the Patterns you might find it difficult holding everything in your head. The best way around this that I found

was to create a number of blank Patterns across the 16 tracks, assign an assortment to the 20 notes in the RPS, and then flip between the Pattern Record and RPS screens so that I could record a Pattern and quickly try it out in context. This process is also useful as a quick means of trying out Pattern combinations which you can later "immortalise" in an MV30 Song (remember, one Pattern can be the length of an entire Song if need be).

The RPS responds to notes received on the specified Control Channel. If this is the same as the receive channel of an Internal track, then notes which don't have Patterns assigned to them will play the Timbre for that track. RPS Patterns can be triggered from the Play, RPS, Chain Load and Compu Mixer pages. Although you can trigger them while an MV30 Song is playing, there doesn't appear to be any way of recording your RPS performances (the trigger notes) into the onboard sequencer, nor of using notes recorded into any track of the sequencer to trigger RPS Patterns on playback. Of course, recording an RPS performance into an external sequencer is no problem, but that's not really the point.

Perhaps this shortcoming could be rectified in a software update. However, it shouldn't take away from what is a very positive aspect of the MV30.

## MIXING TRACKS

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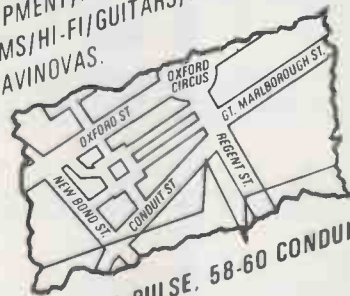
sequencers and drum machines was known as an electro-musician, compu-musician or even micro-musician. On a historical note, Roland were dabbling in automated mixing as far back as 1981 with the Roland Studio System CPE800 Compu Editor and associated VCA800 Voltage Controlled Amp, which provided SMPTE-referenced fade and mute automation for up to 15 audio channels - at a cost of several thousand pounds.

The Compu Mixer section on the MV30 allows you to record level, pan and output-assignment data for the eight internal tracks and MIDI volume and pan data for the eight external tracks into a dedicated Mixer track, using the eight front-panel faders located below the LCD window. You can also use the Compu Mix section to sequence Effect Patch changes (by holding down the Shift button and pressing the F1-F5 buttons at the relevant positions during mix recording).

The Compu Mix display screen includes eight faders which move to reflect physical front-panel fader movements or data being played back from the Mixer track during Song play and record. Which takes precedence depends on the mixer mode. There are two Compu Mix modes: Compu and Manual. Compu mode allows fader movements to be recorded and Mixer track data to be played back. The onscreen faders move on playback, but not the physical faders, which aren't motorised. To record fader movements, you first have to move the physical over the onscreen >



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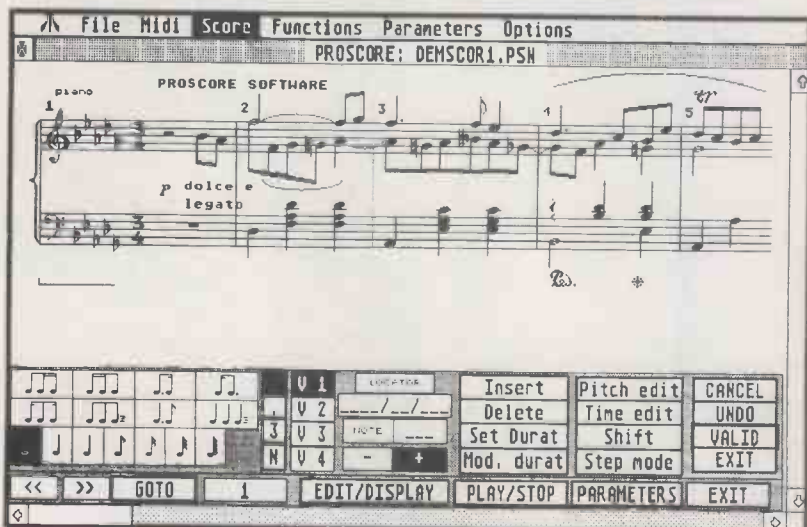
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position, which it then "picks up" and moves.

In Manual mode, the MV30 reads the positions of the front-panel faders and ignores data recorded in the Mixer track. If you select Manual on any display page other than Compu Mix, the faders are automatically set to control the levels of tracks 1-8.

While in Compu mode, the track buttons above each fader can be used to determine whether each track will record new mix data or play back existing data, with the pinpoint LED for each button indicating which is selected (red for record, yellow for play). You can drop each track in and out of fader record mode at any time while recording into the Mixer track, and start and stop recording anywhere in the Song.

On the Play and Track Record displays, the track buttons function as track mute on/off controls. However, while the initial mute status of each track is stored as part of a Song, to record track mutes during a Song it seems you have to rely on rapid fader movements or on inserting INT Lvl events with a value of zero into the Mixer track in Track Microscope mode (you can edit and insert fader data with the same degree of accuracy as you can note, controller and tempo data).

## MIDI FILES

WHICHEVER WAY YOU look at it, it makes sound commercial sense for a manufacturer to provide sequence data compatibility within their own range of equipment. Thus Roland have ensured that the MV30 is able to load from disk and convert sequence data from their W30 sampler, all their MC-series MIDI sequencers (including the recently-reviewed MC50) and their S50, S550 and S330 rack-mount samplers (SYS-series software). Not only this, but Songs recorded on the MV30 can be saved to disk in W30 and Super-MRC (MC500MkII/MC50) format.

Roland have also given the MV30 the ability to load and save sequence, tempo and mixer level and pan data in Standard MIDI File format. Mixer data for the MV30's internal tracks is recorded in a format unique to the unit, and so there wouldn't be any point in transferring it via MIDI Files. However, Roland have thoughtfully provided a Track Edit function which converts level and pan data into the relevant MIDI controllers (seven and ten), which can of course be read by another sequencer. Equally, volume and pan data contained in a MIDI File from another sequencer can be converted by the MV30 into its own mix data format.

The MV30 can read from and write to disks formatted on an Atari ST, IBM PC or Apple Mac (the latter in IBM PC format only), thus realising what was always potentially one of the most exciting applications of MIDI Files, namely transferring sequences between computer-based and dedicated MIDI sequencers. The ability to save sequences in MIDI File format has become

*de rigueur* in the world of computer-based sequencers, so the MV30 has access to an extremely large number of sequencing packages.

The MIDI Files software in the MV30 is essentially the same as Roland's MRM500 software for the MC sequencers. As you'll find the latter reviewed elsewhere in the issue, I won't dwell on it here. Instead I'll just comment that it's been well thought out and sensibly implemented by Roland, and observe that not *everything* can be transferred from one sequencer to another via MIDI Files. At the end of the day there can only be a certain level of compatibility, because, even if they agree on the fundamentals, different sequencers exist *because* they're different, because their designers have different ideas about how sequences should be constructed and about what features should be included on a sequencer. However, within these constraints, MIDI Files have a valuable role to play in facilitating the circulation of MIDI data around different sequencers and related software - such as algorithmic composers - so that you can take advantage of their individual strengths.

## VERDICT

THE MV30 IS straightforward and accessible in use, yet it's powerful and flexible in application - from the individual sequencer, sound source and mixer components to the application of the unit as a whole. The MV30 could function as the sequencing centre of your MIDI setup, but equally because it's not just a sequencer you can uproot it and take it out as a self-contained unit wherever you need to go. Here the unit's compactness and portability really score for it.

Personally I wouldn't be satisfied with just the MV30's own sounds for finished tracks (and, incidentally, it's a shame Differential Loop Modulation didn't make it across from the D70 along with the TVF), but the eight external sequencer tracks make it easy to incorporate other sound sources into the MV30 sequencing environment. The unit's MIDI Files capability is another important feature, allowing transfer of sequences between it and a wide range of computer-based sequencers. You could also use the MV30 as a multitimbral expander to be played from an external sequencer, with the additional benefit of automated mixing of the unit's sounds. If you use it this way, you can also sequence Real-time Phrase Sequencer performances. The RPS is an aspect of the MV30 which is well worth investigating for its implementation of what must be the way forward for sequencing: live manipulation of sequences (made sequenceable in itself, please, Roland). ■

**Price** £1499 including VAT

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# STARSHIP TROOPER



***Starship's keyboard virtuoso Mark Morgan began playing organ before playing with Chaka Khan; right now he's playing with a new album on his home Synclavier system. . . Interview by Brad Leigh Benjamin.***

WHO'D HAVE THOUGHT THAT STARSHIP keyboard virtuoso, Mark Morgan, would have started out at age seven with organ lessons? Where many of his pre-B3 brethren, however, fell prey to a life of beer-barrel polkas, Morgan's passion was jazz; Chick, Herbie, Miles. . . Morgan's studies took him to Berklee. Returning to Los Angeles, his first gig was with Stargard who had a hit in the Richard Pryor movie *Which Way is Up?* This led to session work and tours with Ricki Lee Jones, and Chaka Khan, promoting her major hit, 'I Feel For You'.

Contributing keyboard skills to projects for Steely Dan's Walter Becker, Morgan navigated the LA studio scene doing everything from albums to ad spots for



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Michelob, Dos Equis, and Levi's. It was Morgan's association with ex-Zappa keyboardman-turned-producer Peter Wolf, that led him to Starship. Their single, 'It's Not Enough', prompted a tour and an appearance on America's popular Arsenio Hall Show - noted for its live music and quality of sound. Currently, Morgan is preparing to go back out on the road with Starship while working with the Synclavier in his home studio, on a solo instrumental album.

It's a rainy afternoon when I arrive at Morgan's home in Northern California. He greets me and ushers me in. I'm immediately taken by the surroundings: steeped in the tradition of the Orient. Erte, ikebana, bonsai, Vasarely, and a black baby grand. (Strictly uptown.) I'm introduced to Morgan's wife, Wendy; assured of our comfort, she disappears.

"This is Koto", Morgan says, introducing me to his dog. "Koto's kind of Japanese".

"Yeah - the top-knot gives you a hint, but his obi and short-sword give it away".

Koto bows. "Bow", says Mark, gesturing to me.

"Bow-wow", I reply. (Word association.)

"Really; you'd better bow or he won't leave."

"Konnnichi Wa, Koto", I say, bending slightly at the waist. Triumphant, Koto grunts and saunters back to his favourite zabuton in front of the TV.

"So Mark", I begin, one eye on the dog, "tell me about Starship."

"I was on the road with Chaka and doing an album for this guy, David Palmer, the first singer in Steely Dan. This was '85 and we were working at the same studio as Starship. They were mixing *No Protection* and I started hanging around with Peter Wolf - he was producing Starship. He said 'Starship's looking for a keyboard player. Are you interested?'. I thought 'Sure'. I liked what they did. I liked their records - *Knee Deep in the Hoopla* was out at the time. Peter had a Synclavier at the time, so the tracks sounded different than a lot of pop records that were coming out then. I jammed with them, which led to a tour, and eventually they made me a member."

Morgan especially enjoyed the Arsenio Hall Show.

"That's a good show because the sound is great. They really spend the time getting the sound. It sounds more live than our record. I listened to the record, then I watched the videotape of Arsenio and it was 'live' but it still sounds like the record because they really work on the reverb settings and all that kind of stuff. The cool thing is that you can use all your technology on that show, full keys, and outboards. They have enough inputs on their board for all that. You can't lip-sync, you gotta play live. It's like doing a live show - only better."

Morgan's range of keyboard tones and patches have come together over a long period of time. He is not one to constantly chase after the newest technology. Instead he prefers to incorporate newer technology into what has consistently worked for him on tour and in the studio. He traces the beginning of his sound back to the *I Feel For You* tour with Chaka Khan.

"Chaka's tour was a lot of TX racks and Jupiter stuff, because of the strong R&B element. I didn't use any sampled stuff. In Chaka's band we didn't use any sequencers or any of that type of technology. It was

really a great band, a players' band, which was really cool because her record was totally sequenced. The MIDI thing was starting to take off and I was really into the idea of utilising MIDI to run multiple patches from several keyboards, blending several keyboards simultaneously to create these multi-textured tones. I still use a lot of those patch combinations today, like TX816 FM attacks blended with warm analogue envelopes from the Jupiter. You get great horn sounds that way, real punchy on the front end, warm on the decay. Also, I like blending TX bass attacks with Minimoog underneath to get this really fat bass sound.

All of the bass tones on our recent Starship album are TX/Minimoog blended, except for a couple which are sampled Yamaha bass from an Akai S1000 or Synclavier sampled bass. I've got to say though, I'm moving away from heavy analogue technology, toward more organic sounds. I like analogue for pads and strings but I don't like the buzzy stuff out front."

MORGAN MAKES A CLEAR distinction between his use of music technology for studio and "live" applications.

"For live performance MIDI is strictly for layering and blending sounds to make them interesting, or maybe using a sequencer to call up effects. Otherwise, I don't enjoy sequencers 'live' at all. I'd rather have a band, burning.

Although you have to sound close to the record during live performance, perfection is not quite as important as the level of energy and degree of intensity. The audience is there to interact with the artists. Recording albums and filmscores, however, is different. All the sequencing technology keeps things clean and precise. That's what people have become accustomed to."

I enquire about the type of sequencing used for *Love Among The Cannibals*. Morgan replies: "A lot of the record was sequenced on an Atari with C-Lab Notator software, and of course the Synclavier sequencer was used also. Synclavier is really the ultimate sequencer; it's totally accurate and quantises perfectly without sacrificing performance and 'feel'. It locks right in on the groove. Given its orientation toward motion picture work, it operates in 'song' mode relying on its cues from SMPTE, so there's no pattern mode. This means you can't work on a song section-by-section and then piece it together, you've got to play it all the way through from start to end. In some cases, where you want a live feel that's great, but in other cases, say, on an R&B tune where you want to just work on one section of a groove, I find 'pattern mode' preferable. That's where C-Lab comes in."

*Love Among The Cannibals* contains tracks from several songwriters, and is the combined effort of >

**"What's hip about technology is that I've got entire sampled orchestras at my disposal - tones ranging from analogue, to digital, FM, additive, LA, you name it."**

**"Listen to a recorded acoustic piano on a rock ballad: it's EQ'd to cut across the power chords. In the mix it sounds great, but it's nothing like the original sound."**

➤ various producers, including Larry Klein (Joni Mitchell), Mutt Lange (Def Leppard), Tom Lord-Alge (Orchestral Manoeuvres in the Dark) and Starship members Mickey Thomas, Craig Chaquico and Morgan. The varied methods of production amongst this cast of characters presents us with a wide and dazzling array of music technology utilised in the production of the album. Morgan is quickly becoming acclimatised to his Synclavier and welcomed the opportunity to use Synclavier technology on the album tracks produced by Starship.

"The cuts that the band produced, 'Love Among The Cannibals', 'Dream Sequence' and 'We Dream in Colors' were tracked entirely on the Synclavier in Studio 01 at The Plant. We used it for everything - drums, bass, percussion, even guitar stuff like Craig's power chords - we'd sample into the Synclavier, and move around with the digital editor. On 'Love Among The Cannibals' there's a lot of African stuff, so we used tons of percussion hits from the Synclavier library along with kick, snare, all the cymbals and this really happening R&B slap-type bass. We did all Mick's vocals direct-to-digital, and if he was pushing or rushing, we'd just pull him back in the track with the digital editor. If Mick had any questions about his pitch in particular spots, we'd raise or lower it to his satisfaction. It's great to have that kind of control and flexibility, although you don't need to do much of that with Mick because he's a great singer. We sampled all the background vocals on both Synclavier tunes. We'd do one chorus and fly them around wherever we needed them with the digital editor. They sounded great.

"On most of the other cuts we used my keyboard rig consisting of two TX racks, a Jupiter 6, a pair of Emaxes, Minimoog, and PPG 2.3. The PPG was one of the first hybrids of analogue and digital technology; you have digital filters in an analogue-based machine. The first time I heard it was on an old Thomas Dolby album. It can get really grainy and metallic, but it can be real warm because of the filters. I use it for metallic sounds or bells. Most of my bells are blended TX and PPG. The

PPG adds that dimension to a bell that you just can't get from a TX or any FM technology.

"I really like working with the Emaxes also. We used them for vocal oohs and ahhs, blended with some kind of analogue Jupiter pad. They're really user-friendly and I like all the sample processing parameters, the analogue filters and all that. The Emax actually offers more sample post-processing and modification than the Synclavier.

"My main effects for keyboards are a Yamaha Rev7 and a Lexicon PCM70. I like the Rev for the graininess of the chorusing, and some of the gated effects. The PCM I use for all the longer, warmer reverbs. I always have my keys running through at least one of these.

"On the Tom Lord-Alge cuts, we supplemented my rig with an Akai S1000 and sampled some of his drum sounds from DAT. Tom's an engineer so he's really into the technology aspect of things. He'll do whatever it takes to get the sound he wants, whether it's massive EQ, or blending a drum sample with a vocal sample. No rules. He goes on his instincts; I admire that.

"On the Mutt Lange, Larry Klein cuts, we used the Akai S1000 for sampled Yamaha bass as well. Larry Klein also contributed his skills on a Fairlight Series III. All these cuts were sequenced on an Atari using Notator software."

**MORGAN'S LOVE AFFAIR WITH HIS Synclavier** knows no bounds. Its contribution to *Love Among The Cannibals* is only the beginning of what he expects to accomplish using Synclavier technology.

"The Synclavier directly locks to SMPTE, no interface or boxes necessary, and its features are all onboard. It's the ultimate workstation with massive storage and a ton of RAM. You can store on optical disk or HD. Mine is 32-voice, 32Meg, with a 160Meg HD and an optical disk. It samples at somewhere close to 100kHz which can severely limit your sample time, but if you've got Direct-to-Disk, it doesn't matter because that's giving you memory for days. The sequencer never drifts more than a hundredth of a millisecond. The computer is so precise and the resolution goes beyond description. I'm not into music that's robotic but the sequencer locks on without sacrificing the 'feel'. Anyone who questions the accuracy of this sequencer should examine their samples. How much air is in front of them? Are they truncated for optimum attack? That's a big part of it.

"What's really hip about all this technology is that as a singular artist, I've got entire sampled orchestras at my disposal, along with a vast palette of tones ranging from analogue synthesis, to digital, FM, additive, LA, you name it. Combine that with good sequencing software, outboard and all the rest, and an artist can become a one-person orchestra, a one-person band. I like that. This technology helps me get things done right here, right now, at home."

But isn't it all getting out of hand? Especially in the domain of rock 'n' roll?

"There was a time when keyboard/MIDI technology was totally new and people were experimenting", comments Morgan. "Keys tended to be a little overdone and obtrusive. Now I think artists and producers are striking a balance and using the technology to enhance the basic elements of rock 'n' roll. Some styles don't require heavy keyboard orchestration or technology - I won't put a synth in a song just to have a synth in the song."

Doesn't it influence songwriting? Don't modern songwriters get distracted by tones and sounds, at the expense of melody and harmony?

"Some may be", he agrees, "but you've to change with the times. On R&B tunes, for instance, I'll find sounds, or textures, build grooves around them, and then write a tune from that. 'Send A Message' from the album, is a good example of a song which emerged from my experimentation with a synth-bass patch. For ➤

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> thematic music, I might compose around a string tremolo that I like, the modulation presenting a rhythmic quality of its own. Many composers begin with the colours of the orchestra before they've developed any harmonic or melodic ideas. Sometimes, however, I sketch out a tune on the acoustic piano and then develop its arrangement through samplers and synthesisers. The approach really depends on the idea."

Then what is Morgan's overall approach to music and technology?

Running one hand through his long black ponytail, he ponders, then responds: "To be as organic as possible, and create patches that aren't too synth-sounding. A lot of my textures have that pluckiness or mallet feel because that's the organic part of the sound. Where a pad is needed under an initial attack tone, I'll substitute a human breath underneath it instead, make it as organic as possible. These days I like to blend percussive, wooden sounds with TX attacks, or take a marimba sample from the Synclavier, and combine it with a TX click or pluck. On the record, Tom Lord-Alge had me use plucks and clicks even under synth pads to give them a strong entrance. I like approaching pop music that way, especially rock. It's so guitar-oriented that keyboards need strong attacks to carve out a space. Unfortunately, sometimes my keys are subject to massive EQ so they'll jump out of the track, creating a slight buzziness which detracts from their original organic quality. It's a necessary evil relative to keyboards on rock recordings - overlapping frequencies and all that. Just listen to a recorded acoustic piano on a rock ballad. Generally, it's heavily EQ'd to cut across the power chords. In the mix it sounds great, but if you solo the piano track and listen, it's brash and bright - nothing like the original sound. That's one of the reasons why I'd like to work on more thematic and cinematic music. It affords one the opportunity to work with more natural sounds, free of the constrictions of rock band instrumentation. I'm getting more and more into composing for films. The passion involved in that kind of music is so inspiring. Pop music can be kind of cut and dried. In film, you can take it a little outside, and that's what I'm after."

He continues, "I listen to film scores all the time. One of my favourite composers is Ennio Morricone. He has an extremely organic approach to orchestration,

lots of pan pipes, and strings blended with acoustic guitar. Peter Gabriel's score for *The Last Temptation of Christ* is another great one. He's a great example of a successful pop artist whose film scores are incredible and defy the parameters of pop/rock music."

I ask Morgan to elaborate on his overall perspective and philosophy in regards to music. Adjusting his black framed glasses he reflects a moment: "I'm into architectural design, so my music is rooted in that concept. I look at notes and rests the way an architect looks at form and space. I like things to be very spacious and uncluttered. I don't like overly ornate, lavish buildings or musical compositions. Simplicity presents a minimalistic beauty. When you employ a small quantity of sound sources, each one exerts a greater impact. The fewer the sources, the more presence each one has. You could say the same about the composition itself, and the number of notes you play. Peter Gabriel is great at that. He knows how to make just a couple of notes really speak."

"I embrace a Japanese approach to design and lifestyle, blending the organically simplistic, with newer, more contemporary motifs. Bamboo pavilions and glass high-rises, side by side; rice paper on polished steel; shakuhachi and TX tones, blended, contemporary, yet uncomplicated."

Wendy's footfall on the stairs captures our attention.

"Here Toto", I call out to the dog. Instantly, he's up on his hind legs, sword drawn high above his head between his front paws. Rage is in his eyes.

"That's Koto", says Wendy. "You shouldn't ever call him Toto. He hates the Wizard Of Oz. He's ruined every pair of ruby slippers I ever owned."

"That's quite a dog", I reply nervously. "Sorry, Koto".

He exhales slowly, resheathes his sword, and settles back down in front of the TV, muttering to himself like Toshiro Mifune on a bad day.

"Guess I better take off", I offer awkwardly. Picking up my coat and some newly-bought CDs, I head for the front door.

"New CDs?", asks Morgan.

"Yeah", I reply.

"Who's the band?"

"Toto."

Whoosh - the sound of an angry dog's sword. ■

## EQUIPMENT LIST

### INSTRUMENTS

Akai S1000 Sampler  
E-mu EMAX Sampler  
E-mu EMAX Rackmount (x2)  
Moog Minimoog (MIDI) Synth  
NED Synclavier 9600  
PPG Wave 2.3  
Roland Jupiter 6 Synth  
Roland MKS50 Module  
Roland MKS20 Module  
Roland D50 Synth  
Roland D550 Module  
Yamaha DX7 Synth  
Yamaha TX816 Module

Yamaha TX416 Module  
Yamaha KX76 MIDI Controller

### RECORDING/COMPUTERS

Apple Macintosh II  
Atari ST  
dbx 160X Compressor  
Fostex B16 Tape Deck  
Fostex 4050 Autolocator/SMPTE Synchroniser  
Lexicon PCM70 Reverb  
Norberg BCS16 Monitors  
Ramsa NRT820 Mixing Desk  
Yamaha Rev7 Reverb





# PERFORMING MUSICIAN *endangered species?*



ILLUSTRATION: ANDREW KINGHAM

**THAT ADVANCES IN TECHNOLOGY HAVE DRAMATICALLY CHANGED THE FACE OF MUSIC IS CERTAIN, BUT DO WE UNDERESTIMATE ITS IMPACT? TEXT BY STEVE WRIGHT.**

WE ARE ABOUT to witness the demise of the session musician. An extravagant claim? Perhaps, yet there are good reasons not only to believe that it will happen, but that the decline has already begun.

The main cause of this is what could arguably be called the greatest technological leap for musicians in the last decade - no, not the sampler, but the sequencer. Without the controversy that has surrounded sampling, the sequencing revolution has been comparatively quiet and bloodless, leaving many largely unaware of the changes it has already wrought on the way that musicians work. In his 1983 book, *The Musician and the Micro*, Ray Hammond said of computer-aided music:

"What really is profound in this revolution is the shift of emphasis that will follow: a shift from the performer to the composer!"

This prophecy, made three years before Simon Trask reviewed Steinberg's Pro24 for *Electronics and Music Maker* (MT in an earlier guise), nowadays may seem like little more than a statement of the obvious. But as sequencers have evolved and become widely available, the statement has acquired a deeper significance. Questions now arise about the nature of performance itself, and what it means to be able to play an instrument.

As far as recorded music is concerned, sequencers all but eliminate the need for rehearsal. They do this in three stages - allowing retrospective correction of mistakes, step-time note entry and the ability to record at any tempo. These mean that provided there is sufficient musical understanding, the music need no longer be hampered by any limitations of technical performance skills. The only limit now, if you'll excuse the marketing talk, is your imagination - or at the least, your compositional ability. In its most brutal form, sequencing has made it possible to create music without any manual dexterity whatsoever being involved.

Of course, there are still those who claim that the greatest music is associated with, or emanates from, performance. There's something about the spectacle of a great performer - a hand tracing a graceful curve through the air, a face tilted heavenwards, an aggressive strut, or maybe just a flick of the wrist - these signifiers of mastery could be taken as evidence of a sacred connection between the performer's movements and the resulting musical output. Contrast this with the image of a lone figure hunched over a computer, entering and adjusting notes one at a time, and it's difficult to see how this  
MUSIC TECHNOLOGY MARCH 1991

cramped, static body could produce music with dynamism, expressivity or soul.

The real-time performer, whether live or in the studio, has challenges which his computer-based counterpart does not; not least, to play a piece "perfectly" from beginning to end. Success depends on the level of mental and physical co-ordination acquired through practice. It's necessary to have rehearsed the piece to a stage whereby playing it becomes almost second nature - partly to avoid mistakes, but also to be free to "feel" the music as it is being played. The player has to be familiar enough with the music to be able to be consumed by it whilst producing it. To play "with feeling" involves not just the body playing the music, but also the music playing the body.

In live performance, audiences respond to theatrically exciting artists. Apart from any ritual aspects, the spectacle of exaggerated gestures is enjoyable, if only because the audience derive pleasure from identifying with the performer's involvement with the music.

Now, a concert pianist's hands can only control certain parameters: when the piano keys are pressed (the order in which the notes are played and the time distance between notes), how hard the keys are pressed, and how long they are held down for. Any piano performance, regardless of the complexity of the music or of the sounds, can be reduced to these three factors alone. The sequencing equivalents are, of course, note start-time, velocity and duration.

Non-keyboard instruments give the player control over more parameters, such as vibrato, glissando, and timbre. Here, MIDI controllers are the nearest sequencing equivalents, but there is still some way to go technologically before an equivalent level of control can be exercised by computer-based musicians, so for the purposes of argument let's stick to the piano, where parity already exists.

Without trying to suggest that music's most profound social, cultural, political or emotional meanings can be understood by reducing music to start times, velocities and durations, I'm simply pointing out that the computer musician has access to the same parameters as the pianist. (This is true at least since Yamaha announced the Disklavier - a real piano with MIDI, and sequencer clock durations became shorter than the ear can register.)

If the pianist's movements are understood as the effects of the music playing the body - a necessary part of the real-time performance demand of playing "with feeling", (plus, in the live situation, the optional benefit of theatricality), then

MUSIC TECHNOLOGY MARCH 1991

no reason remains why a piece of piano music created note by note with a sequencer and played back on a MIDI piano cannot have the same qualities as a piece that has been played directly on the piano. In other words, in a studio situation at least, there is nothing sacred or necessary about the pianist's physical contact with the piano that guarantees a superior result, whatever the musical style.

Composers have rarely been able to play every instrument they have written for but, by knowing the capabilities of the instruments, they have been able to provide adequate instructions to performers. That is, the ability to perform has never been a precondition of becoming a composer. But the composer now has unprecedented freedom to test ideas and accept or reject them at any stage of the writing process. Sequencing is freeing the composer completely from the limits of human performance.

The fact that without being able to play a note, it is possible to create great music (that may, incidentally, be too difficult for anyone to play), is still hard for many people to accept. But it is precisely this fact which makes sequencing such an important and exciting development.

Are we ready for it? Have the limits of human performance, over the centuries, conditioned our listening tastes to such a degree that we are unmoved by the unplayable-sounding nature of music which transcends those limits? Just as we find it difficult to comprehend distances that are greater or smaller than our eyes are able to perceive, maybe it's hard to conceive and appreciate music that cannot be physically played. It may be significant that of all the sounds made accessible by sampling technology, the dominant tendency is still to use the sounds of playable instruments in a "natural" way. Yet since the boundaries of playability have never been clearly fixed, no great leap of the imagination is required to use a sequencer to artificially push them a little further this way or that. This too is a process already underway.

SEQUENCED MUSIC DOESN'T have to sound different if we don't want it to. Regardless of the type of music we choose to make, some form of composition is an essential ingredient, but performance is still an option. As composers, we have been empowered by the greater musical control and flexibility of sequencing, and as we develop our compositional and sequencing skills, advances in instrument and sequencer technology will take us closer to the time when instrumental

players will be neither necessary nor desired in the recording studio.

What, then, of non-keyboard instruments? Well, there is no way (so far) that a computer-based musician controlling saxophone samples can do everything that a saxophonist controlling a saxophone can - even using the latest sampling technology and the best velocity-switched samples. There are simply too many ways of playing a sax. So will session players continue to be booked for the sake of instruments that cannot be easily emulated? Or will the inconvenience and expense of it all lead to the demise of the instruments and consequently the players? Apart from the aforementioned advantage to the composer of being able to test, then accept or reject musical ideas, time spent programming at home is very much cheaper than studio time plus session musician's rates. If it happens, it would not be the first time that instruments have died of inconvenience.

As long as there is a demand for live performance (coupled with revulsion at the sight of people pretending to play) there will continue to be a demand for skilled players. Besides, playing an instrument is therapeutic and an excellent aid to musical education and development. But there

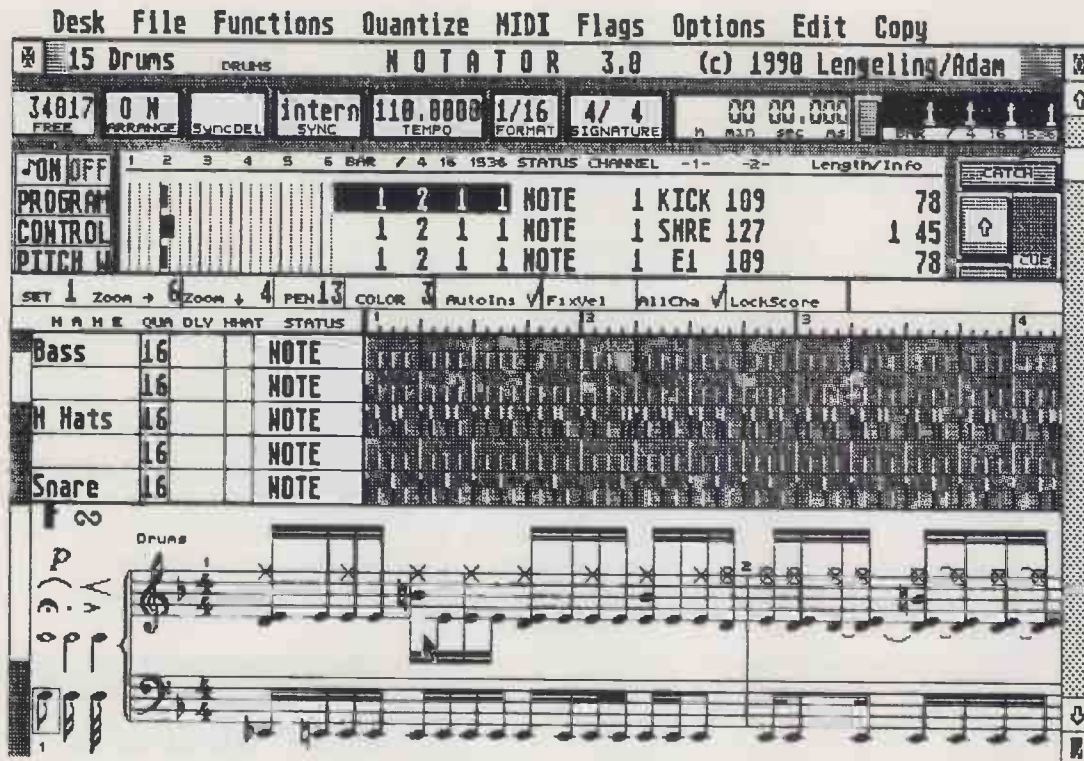
**"REGARDLESS OF THE TYPE OF MUSIC WE CHOOSE TO MAKE, SOME FORM OF COMPOSITION IS AN ESSENTIAL INGREDIENT, BUT HUMAN PERFORMANCE IS STILL AN OPTION."**

must already be parents who are weighing the cost of Junior's piano lessons against the cost of a MIDI keyboard, computer and software.

Where does this leave the human body? After all, the body insists on responding to music along with the mind - where would dance music be otherwise? Is there any form of performance dexterity which will always remain essential?

The most reassuring answer lies with the human voice. It is certainly the oldest of all instruments, and we can rely on it surviving all currently-foreseeable technological advances. That which is at the heart of folk and popular music and which makes a song a song, is also the only thing which ensures that the body will continue, not just to respond to music, but, with pleasure, to speak it. ■

# CREATOR/NOTATOR V3



If it's a fully-professional ST sequencer or scorewriter you're looking for, don't make a move until you've checked out the latest versions of C-Lab's **Creator and Notator**. Review by Ian Waugh

**T**HROUGH THE UPS and downs of the music software business many companies have come and gone (Sonus, Iconix. . .), but some names seem to go on forever. C-Lab is one such eternal - its heritage can be traced back to 1985 and the Softtrack 16+ sequencer for the Commodore 64.

These days, C-Lab is best known for Creator and Notator, state-of-the-art sequencer and notation programs which are used by thousands of professional and amateur musicians worldwide. The latest update brings both programs to v3 and includes many enhancements and additional features as well as a new manual.

## VERSION 2.2

THERE'S REALLY NOT room in a review of this nature to fill you in on the existing features of Creator and Notator (see MT, Feb '89), but before we start on the brand new features, it's worth mentioning some of

the enhancements made since the program's last MT appearance. Soft Link lets you switch between up to nine programs - not just C-Lab's - co-resident in the computer's RAM. You'll need at least 2 Meg for this, although a Director program is available which can direct music output of other programs to Export and Unitor MIDI ports.

In Creator, the user-defined Dynamic Groove enables slave tracks to take their velocities from a master track. Fast Delete and keep keystroke functions are now part of the Event page. The use of Pseudo events allows one song to load while another is playing - useful for live work. The increment/decrement function of the mouse buttons can be swapped, and an Output Channel Filter is available for each track to suppress the transmission of certain types of MIDI data.

Notator updates include repeat bar signs, the ability to group bars of rests and to use fermata on lines and rests. There is also a Kill Score facility which removes the score program to free computer

memory. This could prove useful in an emergency. To regain it you must reboot.

## NEW CREATIONS

WE'LL BEGIN OUR look at new facilities with Creator, as everything it can do, Notator can do too.

There are additions to the arrange mode. You can freeze the cursor by pressing Shift/L which disables Catch mode until re-enabled by clicking on Catch or pressing L. This is useful if you want to keep the cursor on one particular entry.

Pattern Overview in the Options menu displays all 99 patterns. For each pattern it shows the name, whether it contains data, whether it's in an arrange list and whether it's in more than one arrange chain. You can exit to any pattern by clicking on it.

## GROOVY BABY

QUANTISATION HAS ALWAYS been one of Creator's fortes. There are three levels of quantise: standard quantise (which should be familiar to all sequencer users); Groove Design (which provides preset and user-definable quantise patterns to give music a "swing"); and Adaptive Groove (which selects its error-correction procedure from a range of pre-defined templates). Adaptive Groove will analyse the structure of the music and quantise or groove segments of the track separately, depending on the results of its analysis. Clever stuff. Groove Design encompasses standard quantisation and Adaptive Groove encompasses Groove Design, so you can use the system at whichever level you wish.

In v3, Groove has an additional Free mode which lets you play with a "freer" degree of swing (it doesn't correct notes falling between positions "1 1 2 1" and "1 1 2 17"). It also adds eight new user-definable, namable Adaptive Groove settings, the first four characters of which appear in Quantise Track Parameter on the main screen.

You can select up to eight Quantise and Groove templates simultaneously. So, to give a simple example, selecting 16 and 24 would correct 1/16th note and 1/6th note triplets. A Bend To column lets you apply a second correction template which may be necessary if the first template is a Groove.

There are also Segment, Minimum and Advantage settings which determine the range over which the analysis will take place, the minimum number of notes to be analysed and how much priority one groove will have over another.

It is rather complex, and often the results are extremely subtle. The best way to experiment is to record something absolutely straight and then run it through the mangle, although some quantise settings will have no discernible effect on certain types of music.

## THE GENERATION GAME

THE REALTIME MIDI Generator (RMG) has undergone several enhancements. It consists of a control panel with 16 faders, one for each MIDI channel. You can generate any MIDI event here - except notes - and use the faders to alter its value. For example, Control 7 (volume) lets you create fade ins and outs with the

faders which can be recorded onto a track. On playback, the faders move to reflect the volume changes. For reasons of memory conservation, they only move when Control 7 is used and it's worth remembering if you only have a 1Meg machine that mass fader movement can generate an awful lot of data. You can now select a group of faders and move them as one - particularly useful for fades - and you can delete just one fader's movements from a track so you can overdub it.

Selecting P-User events 5-8 adds an extra dimension to the RMG. Above each fader a digital readout appears which can be substituted for an on/off switch. This is mapped onto a P-User event four more than the selected one. For example, P-User 5 has the faders and P-User 9, the digital readout/switch. Click on an element (a fader or readout/switch) and you can allocate it maximum and minimum values. You can name the controls, too.

Click on Listen To MIDI, and the program will interpret and display incoming MIDI events - including notes. Certain data, particularly System Exclusive data, may contain several parameters. There is room in the display for 14 and these can be shown in decimal, hex or ASCII.

This is powerful stuff and correspondingly complex. The manual suggests it may be used for real-time control of sound parameters, and the boot-up definitions include an Editor for the Lexicon LXP1 and an M1 Effects Editor.

## HYPER HYPE

ONE MAJOR ADDITION to the editor page is Hyper Edit. Whereas the Score and Matrix editors are designed to display notes' pitches and positions, Hyper Edit can be configured to single out events such as a particular note or MIDI controller. It shows data on one track only although on first acquaintance it may seem as if more is being displayed.

Events are shown graphically. There are eight Hyper Sets, each of which can display 16 "instruments". Values are shown by a vertical bar and there are both horizontal and vertical zoom functions.

You can assign any note, MIDI event or P-User event to an instrument. These use screen space but after defining the instrument names and settings, you can drag the display to cover the other parameters - neat. Quantise lets you stipulate the resolution of new data that you enter - it doesn't alter the resolution of existing data - and you can add a delay.

The Hhat option creates mutually exclusive instruments so they can't both be active at the same time. For example, you could draw in a run of 1/16th note closed hi-hats, set the resolution of a lower instrument to 1/4 and draw in open hi-hats - hence the name.

There are other functions to assist with Hyper editing, including global increase/decrease, insert and delete on specified quantise steps. The manual includes quick tips on how to use it as a drum editor. In Notator you can combine this with the drum map to make editing even easier. You can copy one instrument's data to another, swap instrument >

➤ positions in the display and apply Groove to an instrument. You can convert all the events of an instrument into any other event - convert a snare to a tom, for example (you can do this with Transform, too).

You can lock the Score to Hyper which will line up the notes, but zoom in too much and you'll get the proverbial spider's web (this is actually a Rorschach test).

Hyper Edit also provides an alternative way of creating fades - just draw them in. Incidentally, can I be the only Notator user who never uses the Matrix editor? All my editing is done using a combination of Note display and Event editor.

Other Creator facilities include the ability to trigger a MIDI note using C-Lab's Human Touch. Also, if you enter "!" in the top left-hand corner of the Notepad and save the Song, the Notepad will auto-appear on loading.

## MAKING NOTES

NOTATOR HAS ALL the features mentioned above, plus...

The Macro Function will remember a sequence of key presses - and even mouse movements - which you can store under a single key or combination of keypresses. The manual suggests using this to jump from the event editor into the RMG and to name tracks automatically - "Bass", "Lead" and so on. This should have been implemented in Creator but it got left out for one reason or another. It is, however,

promised for the next update.

There are many additions to the scorewriting facilities. For example, Diatonic Snap (a low-calorie soft drink?) will only allow notes to be entered at the note pitches of the current key signature - this saves a lot of time.

You can convert normal notes into mini notes for use as cues. You can also convert them into grace notes although this requires a bit of fiddling (polyphonic mode on, rests off). But they look and act like grace notes - very welcome.

There are more note heads for drum notation: you can print stems without heads and you can hide the stems of single notes or a whole track. Other new Partbox symbols include an arpeggio and a "quarter note equals tempo" symbol (for display only). Notes which are tied but whose partner note is off the screen are now shown as tied.

Notes now have a set of attributes which are revealed by double clicking on a note. These include tuplets, syncopation, force accidental, enharmonic shift, accidental distance, horizontal distance, stem and beaming. These give more precise control over the display. You can enter any triplet (up to 15 subdivisions of the beat), adjust the distance between a note and its accidental, "micro-shift" a note (this is how grace notes are placed) and force an accidental (re-affirm it when it may not be strictly necessary). Syncopation will show a quarter-note, eighth-note, quarter-note grouping as exactly that. Previously, the eighth note would have been shown as two tied quarter notes.



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## FONT-ASTIC

UNDER NOTATOR, UP to 16 different fonts can be shown on the screen simultaneously. As well as the three in-built fonts, another 13 can be loaded from disk if in G.DOS format (G.DOS drivers are not required). If you have a 1Meg machine, it probably won't be able to hold your music *and* lots of fonts. However, there are sizing options which help you get more from the fonts without using too much precious RAM.

The 16 font style slots are allocated a font plus sizing attributes. One font can, therefore, be placed in several slots. You can assign a style to track names, bar numbers, chords, tuplets (optionally italic), multi-rests and tempo. There's a new "boxed text" style, too.

One thing to be aware of is that the font configurations are saved as part of a .SON file and if they're not found on reloading, the Control Line will report a Load Error and move on to the next font - just in case you think there's a rabbit off somewhere.

An associated problem may arise if you boot from a hard disk as the program tries to access drive A to check for fonts. To prevent this, after loading, access the fonts page, click on a font slot, the file selector pops up, set the default drive to that on your hard disk (you don't actually have to load a font); quit the fonts page and save the file as AUTOLOAD.SON. Perhaps an option to set drive paths would be helpful.

Fonts from Notator v2.2 and earlier don't map onto the new fonts exactly, but running them through Transform 1 (Load System from FONTDEMO.SON file) will convert the font styles.

Dragging the lower and header printing limits shows how many lines will print per page. Use this in conjunction with Page Preview which gives you a miniature view of the score as it will appear on the printed page. This alone is incredibly useful but you can also turn pages in the display, print individual pages, override the number of bars-per-line setting, and format individual pages independently.

On the subject of printing, constructing your own printer adapter is as complex as ever. However, 42 adapters are supplied for over nine printer types including nine-pin, 24-pin and inkjet/laser printers so there should be no need to do this.

## MORE MANUAL

THE NEW MANUAL is so large that it requires a new binder. If you bought your program since the development of Soft Link, the binder will have SL marked on it and will be large enough, otherwise you'll need to upgrade your binder, too.

The manual is divided into 31 chapters, each separated by a plastic, tabbed page separator. The layout is far better than the old manual and although there's no tutorial, it's easy to find a particular section.

There are illustrations on almost every page and, yes, there's an index - 18 pages of it coupled with an extensive 28-page contents list. The Notator section and references to Notator in the index are shown in red (actually a sort of lilac).

Included is a pull-out listing of computer keyboard commands. While these offer many shortcuts, there are a lot to commit to memory. Most functions can be accessed with the mouse, but some can only be triggered from the keyboard. I've always maintained that if you have a mouse you should be able to use it for everything bar name entry. Having to use keystrokes increases the learning curve, but that's the way the program is.

Like most musicians, wading through a manual isn't my idea of a good time. But in order to get the most from any piece of musical equipment - hardware or software - you have to read everything to make sure you don't miss any features. I can guarantee the new manual will reveal many aspects of the program of which you were previously unaware - unless your name is Will Mowat. Will heads the C-Lab software support team - and also translated the manual. User support is free - or is included in the price of the update, whichever way you want to look at it. But note, there are no extra user registration fees. If you have any queries, in the first instance call Mark Gordon or Simon at Sound Technology.

## THE GOOD, THE BAD

MY BIGGEST NIGGLE with Notator is that even after two updates it still doesn't handle 12/8 note groupings correctly. Perhaps they don't use 12/8 time in Germany but the rest of the world does. Next time for sure, eh lads?

Because of the internal structure of the sequencer, time signature changes belong to a bar position, not to a track or pattern. This is an integral part of the way the program operates but it does mean you have to plan any time changes carefully, especially when using arrange mode. Also, although you can display elapsed time in hours and minutes rather than bars, in arrange mode if there are tempo changes you don't get an accurate reading of the total length of the piece. It would be useful.

## VERDICT

IF YOU'RE A dedicated C-Lab user you'll want this update - not just for the extra features but for the manual. If you haven't yet got a scorewriter, Notator must be very near if not top of your list. Although other programs are trying hard to catch up, it's still the most sophisticated and comprehensive sequencing/scorewriting package for the ST that money can buy.

QED

**Prices:** Notator 3.0 £499; update £49; Creator 3.0 £299; update £39; SL Binder £10. All prices include VAT.

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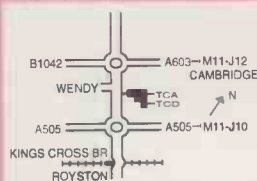
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PHOTOGRAPHY: JAMES CUMPSTY

# WORKING BEATS

***The Working Week partnership of Simon Booth and Larry Stabbins has lasted for over seven years and five LPs - Booth reflects on success and failure, new directions and life outside of the Week. Interview by Simon Trask.***

WORKING WEEK WERE BORN OUT OF THE excitement of the early '80s jazz-dance scene, which founder member Simon Booth witnessed first-hand at Camden Town's Electric Ballroom in 1983. From the outset, the nucleus of the group was guitarist Booth and saxophonist Larry Stabbins, augmented by further players as and when required and featuring singer Juliet Roberts.

The band's debut single 'Venceremos' and first two albums, *Working Nights* and *Companeros* sold well on the crest of the jazz wave, and established their style of mainly self-penned songs combining elements of Latin, funk, jazz and soul in an accessible manner. Political statements on the liberation struggles of Latin America and South Africa served to give the band more lyrical substance than many of their contemporaries. In fact,

Working Week have always managed to steer clear of pop frivolousness.

For their third album, 1987's *Surrender*, Working Week went to New York and producer Carl Beatty. In hindsight it wasn't a good move.

"The main thing to say is that there's an identity and a sound within our songwriting that we probably only really lost on *Surrender*", says Booth. "We were trying to launch the band into the American market, and people were telling us that the jazz influences in the band were detracting from that. I suppose it became more of an attempt at a mainstream R&B album, and in the process the producer failed to capture the essential Englishness of the band.

"We should have gone for the rare groove sound, for a sort of stripped-down pre Soul II Soul sound. It's

easy to say now, but when we played live we used to try and get that Harvey Mason-type early '70s jazz/funk feel."

The album didn't sell well, lost the group a lot of fans and got them dropped by Virgin Records. It was time for a break. While Stabbins went off to live on a boat off the southern coast of Spain, Booth took to DJing at the Nicaragua Solidarity Campaign's roving Club Sandino, spinning a mixture of soul, rare groove and jazz. From there he became involved in the burgeoning acid jazz movement, co-producing the *Acid Jazz and Other Illicit Grooves* and *Acid Jazz - The Freedom Principle* albums for Polydor in '88 and '89.

'Eighty-nine also saw Booth and Stabbins re-emerge in their Working Week guise with a new album *Fire in the Mountain*, which they wrote, produced, financed and even designed the sleeve for themselves. Ironically, it was picked up by Virgin subsidiary, 10 Records.

*Fire in the Mountain* represented a triumphant reaffirmation of the group's strengths and met with critical acclaim, though popular acclaim was less forthcoming.

"It probably sold around 35-40,000", Booth says, "but I'm not worried about that, because if we can sustain album sales at that level, then that's fine. What was important was that the album re-established Working Week in a fusion of contemporary music styles. We're a song-based band that incorporates jazz elements and has its own identity. That's the only way I can describe us."

Following the release of *Fire* . . . , Booth and Stabbins became involved in other projects, Booth producing Cameroonian saxophonist Manu Dibango's latest album, *Polysonik*, Stabbins forming his own band QRZ to try out musical ideas which weren't appropriate to Working Week. Stabbins is also active in his guise of free jazz saxophonist, with a tour of Germany in the company of the mighty saxophonist Peter Brotzmann in the offing.

"It's this flexibility in our working relationship which has allowed Working Week to survive", comments Booth.

If the frequent songwriting credits to Booth/Stabbins are to be believed, the pair work as a songwriting team. However, it turns out that all is not quite what it seems, as Booth explains: "Larry and I made a decision after the first album that we were going to co-credit everything regardless of who actually wrote what, because it gets very silly when you start having to argue out the percentage points - and it's also very unfair, because one song may be chosen as a single and if you wrote that song you get the PRS jackpot. The sound and the concept of Working Week is something that Larry and I have been working at together for years, and you can't really split that up into publishing fees."

But while Working Week may be a long-term commitment for Booth and Stabbins, Booth is scornful of people whose only interest is in what's next and new.

"I hate the desperate trendiness of people trying to be one step ahead of everyone else", he opines, "and this thing that a band only lasts for six months and then no-one's interested - like Dee-lite. They made a brilliant record, and I'd like to see them progress, but

they've had it. There was a Dee-lite sound and then people went on to the next thing. I'm really proud that we've survived through a lot of that, that we've had a longevity that's taken us on to our fifth album."

Which brings us to *Black and Gold*, an album which updates the Working Week rhythm section and the Working Week sound to take account of current tastes without slavishly adhering to them. At the same time, what gives the new album continuity with the previous ones is the stylistic continuity of the songs.

The new album has a sparser quality than before, a fact which Booth puts down in part to the all-pervading influence of the first Soul II Soul album.

"One of the things we learnt from that album was that we really wanted to strip things down", he says, "make them more direct and as rootsy as possible. In the past we've always tended to over-arrange, to use ten instruments where one would do. It's the easiest thing to get musicians into the studio and start adding on pads and keyboard lines and doubling things up.

"The time to decide when to stop is when you're writing the songs and programming them before going into the studio. For the new album we had the songs demo'd and we pretty much knew how they were going to sound - with the exception of backing vocals.

"Eyvon helped, too. She kept saying 'Well, it's all there, you've got the drums and the bass and the vocal line, what else do you need?'. The old answer would have been 'well, there's a Latin piano line that could go here, then there's a horn line that could complement that, then there's pads behind the verse. . .'. You can do that, but it takes time, and we didn't have the time."

Female vocalists have been an important part of the Working Week sound from the outset, with soulful singer Juliet Roberts lending her rich tones to the first three albums while Julie Tippets took the vocal spotlight on *Fire in the Mountain*. The new album sees the introduction of a new singer, Eyvon Waite.

"As a songwriter I really like working with singers", explains Booth. "You get to know them, you find out their mood, what their personality is, and you make the song very personal around that.

"We wrote a lot of the new album with Eyvon very much in mind. She's a dancer, and hasn't really had any vocal experience, but we really wanted to work with someone who was primarily a dancer and who came out of the club scene. That's really where Eyvon was coming from, and she got involved in the grooves."

As a songwriter, Booth was facing lean times a year ago.

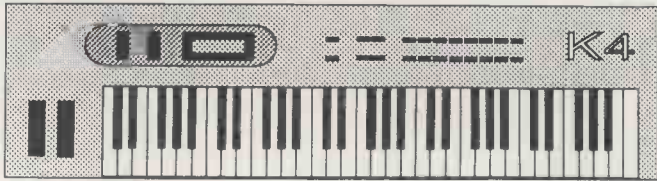
"I couldn't even get arrested as a songwriter", he exclaims. "Everyone wanted to work with DJs, with people out in the clubs who had breaks and beats, and then they'd get in a singer who would just go 'Everybody dance now' or 'Can you feel the music?' and they'd have a song - except that it was really a retreat from the song. But now the phone's constantly ringing, because people are getting back into writing songs. In fact, I'm writing with some singers at the moment.

"I listen to Stevie Wonder, I listen to Bob Marley, Burt Bacharach and John Lennon as well as a lot of contemporary soul and pop. At the end of the day, I >

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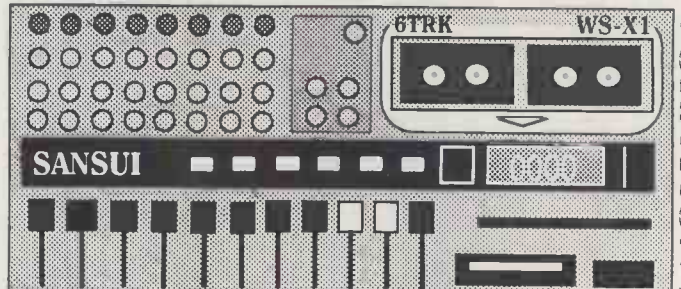
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> feel my craft is as a songwriter, and everything else, the whole array of technology, is there to develop that skill."

Technology, in Booth's view, should be kept firmly in its place. Presumably, then, he doesn't have much time for the current upsurge of music which celebrates rather than disguises the electronic nature of synths, sequencers and drum machines. Not so.

"What's great about that kind of music is that a lot of it comes from hardcore working-class culture and it's offensive, it's like punk. What punk was to progressive rock, bleep is to the technical wizardry of some of the best Atari programmers. It's just kids going 'right, we're going to buy the machines and we're not worried if it's not quantised properly. . . ."

"I really like the rudeness of it. It's very *avant-garde*. All that music, when it first comes out people freak out, you know, 'there's no melody, no tune' - but they end up using it in the end, one way or another. The next Quincy Jones record will have bleeps all over it, no doubt."

IT WAS BOOTH'S PRODUCTION WORK ON the two *Acid Jazz* albums, together with the eclectic music on the Working Week albums, which brought him to the attention of Manu Dibango. He, in turn, decided that the Working Week man would be the ideal producer for his next album. Booth explains what Dibango had in mind:

"Manu wanted his record to sound tough, he wanted it to be played in a club and to stand up against contemporary dance music, but he didn't want to lose the dirtiness. He wanted to take all the elements of the stuff done in Working Week and on the Acid Jazz albums, all the hip hop and the fusion of modern jazz with breakbeats. . . ."

The result, recorded in Paris and London and mixed in London, is *Polysonik*, an album which is set to be even more significant for Dibango in the '90s than the 12" 'Abele Dance' and the album *Electric Africa* were for him in the '80s. With its subtle, organic blending of fluid but funky makossa rhythms and modern dance grooves, jazzy horns and rapping from London's finest, MC Mell'O' (Dibango's own choice), *Polysonik* could be the record which brings down the barriers between African and Western dance music - and if so, technology will have played a significant role.

"We did a lot of programming on the album", says Booth, "and we got as far as we could with modern technology. Manu was really committed to that because he loves modern music, and he feels that African music deserves the same access to modern technology that we have in Western Europe and America. I remember he said to me 'Simon, we're going to do one of the best albums to come out of Africa. We're going to go back to Africa, I'm going to show you African roots and African music and we're going to take our Atari computers and our MPC60s and our S1000s with us' - because you can't get hold of this stuff in Africa."

"Manu's very progressive in his outlook, he doesn't have this rather reactionary third-world purism that a lot of world music critics have. If any journalist were to

say to him that as an African musician he shouldn't be using modern technology, he'd just say 'that's the most reactionary, retrogressive thing and you've got no right to say that'. Any African musician wants to get into the best studios, work with the best gear and learn how to use the equipment. You've got to be into it, really. It's the way forward. The programmers we used on the second part of the record were African, and it was great the way they were programming. They were absolutely brilliant to work with."

Not that there weren't problems in reconciling the technology of sequencers and drum machines with musicians who were used to following their own timing, as Booth explains:

"Manu's musicians are really good but they can't play to a click. As soon as they hear anything metronomic they can't really relax, so it's best just to let them play and then sample the best bits afterwards. That way you can build up a track which sounds totally metronomic but which was initially completely live, not played to a click track. You just take the steadiest bits."

We know what any musical purists reading this will think - that their worst suspicions have been confirmed. Not surprisingly, Booth sees it as a perfectly valid solution to a problem - and one that's preferable to the alternative.

"With a lot of African guitarists, they're live players and they're not used to playing to drum machines", he elaborates, "so rather than having to spend three hours with them trying to get their timing tight, and watching them get increasingly depressed and begin to doubt the validity of the project, just let them play naturally. Then you can create a great feel out of what they've done just by sampling two-bar sections."

"You have to do it carefully - like you have to sample some of the subtle variations - but it's better to do that than get to your 35th drop-in. You actually end up with a more turgid rhythm track if you work that way, because the best takes tend to be within the first three or four."

"A lot of producers will spend days and days trying to get drummers playing precisely to a click, but I think if you're going to do that then you might as well use a drum machine. People *are* a lot more fussy about timing nowadays. If you want to be a session player now you have to really be able to play precisely to a click. What I do if I'm playing is just play along, then sample the bits that I like into an S1000 and trigger them from the sequencer, which makes me sound like a session player with consistently perfect timing. It's really old-style production adapted to fit today's requirements."

On the subject of production, Booth recalls a lesson which he learnt early on in his musical career - what's more, one which he feels others would do well to learn.

"The first album I did, with Weekend, Robin Millar was there on the studio floor with the band, waving his arms around and really getting the excitement going, getting the band playing together. . . I remember that well - that inspirational side of production is important, and you should never lose it, otherwise you end up making clinical, antiseptic American soul music. A lot of American R&B ended up sounding awful, there was

**"I'm going to show you African roots and African music, and we're going to take our Atari computers and our MPC60s and our S1000s with us."**

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*D50 Review, Music Technology, November 1990.*  
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*M1 Review, International Musician, March 90*

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nothing there that reminded me of the R&B I grew up with, like Stax and Motown. Then Soul II Soul came along and it was soul again, their music was all dirty and rootsy and played with feeling."

One technique which Booth has used on both *Black and Gold* and *Polysonik* to give a sequenced rhythm track more of a human feel is to combine programmed rhythms with sample loops of a real drummer or percussionist playing.

"You can get a great live feel by sampling kit players and percussionists", Booth states. "We've been working with Lisa Stansfield's drummer, who's brilliant at playing drum loops. He loves to play kit patterns over programmed patterns."

However, just as significant in today's dance music are what could be called *inhuman* feels - feels which can be created only on drum machines and sequencers because they allow degrees of timing independence and accuracy which human beings find difficult, if not impossible, to achieve.

"A lot of the feels that are coming out now from dance music aren't natural in terms of the human element of playing", Booth concurs, "which isn't to say that in ten years' time you won't get people playing like that. The way a salsa musician plays or the way an African musician plays is very different to the way a Western musician plays. I was talking to some African musicians yesterday and they were saying they can't get African percussionists to play with any sort of swingbeat feel, they just play straight percussion. Another thing is that musicians can find it hard to play one feel against another, like you can get in a musician to play to swingbeat hi-hats and tell him 'Don't play with a swing feel', and he'll say 'but that's the only way I can feel the track'. So creating all these unnatural combinations of different feels is one area where programming is essential.

"But equally, for me, if a song needs the human element starting from the bottom up, from the bass and drums, there's no point in programming it, you've just got to get the musicians in. On *Manu*'s album there did come a point on some of the tracks where we just decided to get the musicians in. We'd get 12 musicians in the studio and it was fantastic - by the second or third take we'd have the track down. The only problem was that they'd play for ten or 12 minutes and I'd then have to edit it down to six or seven minutes, and of course because they weren't playing to a click track that presented incredible problems. We had to use a lot of computer-based digital editing, crossfading digitally between samples. I think on some of the edits, if we'd had to do it in the old razorblade and cutting block way we would have lost it.

"Also, the musicians often didn't stick to the arrangements. They're not used to playing to modern song structures with middle eights and bridges, they just get down and play. This is something I talked about with *Manu*, and we decided to just let them play and enjoy it, then afterwards we'd sample the sections we wanted into an S1000 and position the samples in the sequencer so that the performances were sitting comfortably behind the beat, which is how they play. Some of the tracks, like the vocals, were very late, so

we'd move the whole drum track back and then the vocals would sound brilliant."

**AS SOMEONE WHO HAS BEEN IN AND OUT** of recording studios for the past seven to eight years, Booth is well placed to observe the many changes which have occurred within studios in response to the rise and rise of digital technology and changing musical demands. It's a subject which he gives careful thought to when I raise it.

"The tape ops and engineers who are coming up now have to be really versatile with MIDI and timecode", he begins, "much more so than in the old days when they had to cut their teeth by setting up mics and learning how to drop in. That in turn reflects the move away from live music, from recording bands.

"I think a lot of engineers would freak if they were faced with recording a group of 16 singers, which is what we had to do with *Manu*. I was producing the session, but I spent the first two hours checking the microphones and the headphones, making sure the foldback was OK. Nowadays you come into the studio and you get your Atari sequencer happening, make sure it's receiving code, then you lay down the drum track and the bass, and right at the end you get the vocals down. I think there's something very unhealthy about that, because the vocals often tend to suffer.

"I find it weird that on a lot of mixes an engineer will spend six hours on the drums, six hours on everything else, and then spend an hour on the vocals, just whacking on a bit of plate and pre-delay, whatever, and that's it.

"Another thing is that people are tending to get less fussy about the signal that goes onto tape. As long as it's recorded onto tape without distortion, that's all that matters. There's none of this 'we've got to put the guitar through an amp, make sure the amp's miked up properly, and let's put a microphone at the back of the room and one at the front'. You just plug in and do it and then worry about it at the mix, or else someone comes in with their guitar sound programmed into whatever box of tricks they're using. "Probably the biggest change now is that studios are being used for mixing, with more and more people starting to get their tracks set up at home. You can't afford a thousand pounds a day any more - record companies haven't got it, bands haven't got it. It's just not feasible."

Booth reveals that he's planning on taking the plunge into home studio ownership himself.

"I hope, if I can get the money together, that I can set up a studio in my basement", he says. "I'm at the stage of wondering what to do, not wanting to feel that I'm going to be intimidated and alienated by it, not wanting to feel that I'm entering into an area that's going to end up sacrificing the initial skill and the initial inspiration, which is songwriting. One side of music is the emotional and spiritual content, and that can get driven out of a song by drum machines and modern technology."

Listen to the warm and very human music on both *Black and Gold* and *Polysonik*, and I think you'll agree that this is a trap which Booth has successfully avoided. ■

## EQUIPMENT LIST

### Simon Booth

Akai MPC60 Sampling Drum Machine/Sequencer  
Akai S1000 Sampler  
Korg M1 Synth  
Roland D50 Synth  
Roland Juno 106 Synth  
Roland TR626 Drum Machine  
Yamaha DX7 Synth

### Larry Stabbins

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Atari 1040ST Computer  
Ensoniq Mirage Sampler  
Fostex R8 Multitrack Tape Machine  
Korg M1 Synth  
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# software

Welcome to Music Technology's software service. It is designed to help you get the most from the magazine and your computer. Here you will find demonstration versions of some of the software you have read about and may be considering buying. You will also find two virus killing programs (Vkiller for general use, Penicillin for cleaning out boot sectors) and a number of fully-working utilities (like Hollis Research's D50 librarian and Quinsoft's MIDI rechanneliser) which are free for you to use as you wish. Please make use of the virus-killing programs as viruses are an ongoing problem which continues to threaten your work and your equipment. Vkiller is quick and easy to use and may save you a lot of time, trouble and money.

The disks have been arranged to make best use of the available storage space, so the combinations of programs on any disk are a result of this attempt to make the service as friendly and cheap as possible, not for any other reason. Please note that not all the programs will be accessible to the 520ST due to the nature of its disk drive, but the disks will run on all other STs. If you're using a 520ST we will supply each "Disk" on two single-sided disks, thus ensuring all programs are accessible to you.

## DISK 1

*Vkiller, TDM Prodigy, Mididrummer.*

The original virus killing program by George Woodside (written in May '89 and able to cope with almost all viruses currently in circulation). Also includes demos of **TDM Prodigy** (reviewed MT, April '89) and **Mididrummer** (reviewed MT, June '89) with only save routines disabled.

## DISK 2

*Flu, Hybrid Arts Ludwig.*

**Flu** (written by George Woodside) is a simple program which demonstrates some of the less-harmful screen symptoms of viruses currently circulating. **Ludwig** (reviewed MT, April '89) is Hybrid Arts' powerful algorithmic composition program.

## DISK 3

*Gajits Sequencer One, Keynote Chameleon, Dr T's Proteus Editor.*

All recent software: **Sequencer One** (reviewed MT, March '90) is a comprehensive entry-level sequencer, **Chameleon** (reviewed MT, Dec '89) is a new-style generic patch librarian that will run as a desktop accessory and **Proteus Editor** (reviewed MT, March '89) is Dr T's editor for E-mu's popular sample reader.

## DISK 4

*Intelligent Music Realtime, Dr T's X-Or.*

IM's **Realtime** (reviewed MT, April '89) is an "artificially intelligent" sequencing program which is designed to encourage the gentle art of experimentation; **X-Or** (reviewed MT, November '89) is Dr T's powerful generic patch editor.

## DISK 5

*Hybrid Arts EZ Track Plus, Quinsoft Trax studio accessories.*

**EZ Track Plus** (reviewed MT, Dec '88) is a budget sequencer which retains the feel of Hybrid's upmarket Edit and SMPTE Track packages; **Trax** is a new nest of studio management programs: track sheet, cuesheet, cassette labelling, address book (including industry contacts), invoicing forms. . .

## DISK 6

*Hollis Trackman, Quinsoft FB01 & 4-Op FM librarians.*

**Trackman** (reviewed MT, March & Dec '89) is Hollis Research's friendly, cost-effective 32-track sequencer (demo includes fully-working D50 librarian and 500 6-Op FM patches). **Quinsoft's Price is Right** librarians for Yamaha FB01 and 4-Op FM synths (reviewed MT, Feb & March '90 respectively) includes fully-working MIDI channel and controller accessory.

## DISK 7

*Penicillin, Passport Mastertracks Junior.*

**Penicillin** is a virus killing utility written by George Woodside - it specialises in cleaning the boot sector of infected disks - use with care! **Mastertracks Junior** (reviewed MT, June '88) is a 64-track budget sequencer which retains many Pro features.

Disks cost £5 each (please add a further £1.50 if you want software supplied on two single-sided disks).

NB: This is the library available at the time of writing. More disks will be added to the list as soon as they are ready. This service is for you, to help you try out software before you buy - we will continue to run it as long as the interest is there to support it. This is not a profit-making venture on behalf of MT.



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# MD16



PHOTOGRAPHY: JAMES CUMPSTY

Cheetah's long-awaited 16-bit drum machine has finally made it to the marketplace - but in the face of stiff competition, has it got what it takes?

Review by  
Simon Trask.

**N**O-ONE CAN ACCUSE Cheetah of rushing their latest drum machine - the MD16 appeared in an early form at the 1989 BMF. Had it been released a year ago, it would have been able to sail along clear streams. As it is, the MD16's release at present is only serving to stir up already muddy commercial waters, for the budget market at which it's aimed also has the Boss DR550, the Akai XR10 and - perhaps most significantly - the Alesis SR16 to choose from.

But while its budget price may place it in the company of the above machines, the MD16's conceptual approach and programming sophistication have more in common with Roland's R8 Rhythm Composer. Given that the MD16's origins lie in a time when the R8 was newly-crowned king of the drum machines, perhaps this shouldn't be surprising. However, in these times of careful budgeting, most musicians will be considering the MD16 alongside

the SR16 (reviewed in last month's MT) on the basis that they cost the same amount of money. The fact that conceptually they reflect different priorities on the part of their designers - programming detail and sophistication on the MD16, operational immediacy and spontaneity on the SR16 - only serves to make the choice more interesting.

## EXTERIORS

THE MD16 COMES in a cheap-looking plastic casing measuring 15" x 11" x 2" (rear), with a flat top panel (5" deep) and a shallow-sloping front panel, and as such looks unnecessarily large next to Alesis' dinky SR16 - in fact, the latter can sit quite comfortably on the MD16's top panel. At 3lbs Cheetah's new drum machine is a lightweight, though the SR16 weighs in at an even more modest 1.5lbs.

Good news is that, unlike the SR16, Cheetah's new drum machine has a backlit LCD (2 x 16-character). Front-panel buttons are not surprisingly of

the rubber variety, but have a reasonably firm response and trigger reliably. Absent is a dedicated volume controller - instead a software function allows you to select between four volume levels.

The 16 closely-spaced circular rubber playing pads, each measuring  $\frac{3}{4}$ " across, need to be hit centrally and accurately to trigger their sounds, and are velocity-responsive. In fact, the MD16's velocity responsiveness via the pads and MIDI for both performance and recording purposes is far more satisfying than the SR16's.

Operationally the MD16 is a little on the fiddly side but reasonably accessible. Due to the sheer number of parameters (142), it takes a while to familiarise yourself with where they are, what they do and how they interact, but once you've developed that familiarity and once the button-pushing - of which there's a lot - becomes automatic you can move around the machine fairly quickly.

The MD16's rear panel is packed with connections. Along with the power input socket (the drum machine comes with an external power supply) there are MIDI In, Out and Thru sockets, tape in and tape out 3.5mm sockets (for tape storage and tape sync - with sequence position recorded along with the tape sync signal), a 3.5mm footswitch input socket, an expansion socket for further sounds on ROM cartridges, a stereo  $\frac{1}{4}$ " jack socket which outputs the stereo audio mix - software-switchable to a mono mix - to a mixer or to headphones, and four stereo  $\frac{1}{4}$ " jack sockets which provide eight individual monophonic outs. Because Cheetah had to resort to stereo sockets in order to fit all the audio outputs they wanted, you'll have to invest in a few stereo-to-two-mono convertors in order to take advantage of them.

Realising that the MD16's casing may not be to everyone's taste, Cheetah have produced an alternative 1U-high, 19" rack-mount version (the MD16R), which utilises a more "professional" metal casing. This has all the software features and hardware connections of the MD16 while providing two footswitch inputs to the MD16's one and 16 on/off buttons as opposed to the MD16's 16 velocity-sensitive pads.

## SOUNDS & VOICES

THE MD16 HAS 41 16-bit, 44kHz drum and percussion samples stored in 1Mb of internal memory, while the rear-panel expansion port allows access to up to 192 more samples. It looks as if Cheetah are going to opt for a single ROM cartridge which will plug directly into the expansion port and provide all the extra samples. At the time of writing, the selection of samples has yet to be finalised, as has the price, but according to Cheetah we can expect to see a wide range of both traditional and more off-the-wall percussion sounds included.

Cheetah's new drum machine has the potential to offer a far greater variety of sounds than Alesis' SR16. And before we go any further, it's worth clarifying that while the SR16 may allow you to select from 233 *sounds*, the actual number of *samples* is fewer than that. This is because a number of the sounds are differently-pitched versions of an

individual sample (as in the various hi/mid/lo tom, percussion, bass and snare sounds) while others are reversed samples and others are internally-reverbed versions of dry samples. Providing preset "versions" of samples accords well with the SR16's philosophy of immediacy and accessibility, however. The MD16, on the other hand, allows you to do your own pitching and reversing of samples (though it has no reverb capability), and all in all offers more possibilities than does the SR16 for creating new sounds out of existing ones - while the ROM cartridge, when it arrives, will further extend the MD16's vocabulary of sounds.

Cheetah's new drum machine offers you 'Gated' (tight boom with hiss), Hip (woody thud), 'Slap' (wet), 'Thump' (clicking thud) and 'Electro' (snappy booming thud - not the 808) bass drums, together with 'Killer' (sort of a gated dustbin crash), 'Acoustic' (snappy rattle with body), 'Fusion' (bright and meaty), 'Ska' (light and snappy), House (yes, 909) and 'Up' (as in Cameo's 'Word Up') snares. The Percussion category offers a well-chosen, versatile collection of sounds: 'Cowbell', 'Electro Bell' (808), 'Acid Flick' (Kraftwerk-type filter cutoff 'blip'), 'Sidestick', 'Temple Block', 'Claves, Castanet', 'Snap', 'Tambourine', 'Shaker', 'Cabasa', 'Tabla', 'High Bongo', 'Agogo', 'Samba Whistle', 'Claps' (not 808) and 'Timbale'. Also provided are 'Electro', 'Hi', 'Mid', 'Low' and 'Deep' toms (snappy and thudding on 'Electro', rich and vibrant with plenty of body on the others - the last two sound like the same sample, though), 'Closed', 'Mid', 'Open' and 'Pedal Closed' hi-hats and 'Crash', 'Ride' and 'Splash' cymbals. There's also one clipped, throaty bass guitar sample. Overall the MD16 is a bright-sounding drum machine, with a penetrating top end which lets the high-frequency samples really cut through. The percussion samples work particularly effectively, boding well for the ROM cartridge.

The MD16's Voice parameters allow you to program per pad, at each of four pad "levels", the sample number (currently off or 1-41), tuning ( $\pm 1$  octave in semitone steps if Chromatic Tuning is enabled,  $\pm 1/6$  octaves in fine-tune steps if it's disabled), reverse sample play on/off, pan position (0-15, with 0 instructing the MD16 to vary the pan position according to which of the drum machine's eight voices is being used), volume envelope (1-8), fixed volume response on/off, volume level (1-31), velocity curve (1-8), voice output (1-8), the number of voices the Voice can use (1-8), and a MIDI transmit/receive note number (0-127). The MD16 is a modest eight-voice polyphonic, with voice output being routed to the main stereo out and/or the individual mono outs. Where a Voice has been assigned more than one voice (ouch), successive pad hits for that Voice rotate around the relevant mono outs (three voices beginning from output four would rotate around 4, 5, 6).

Also included among the Voice parameters are what Cheetah call "humanising" parameters: randomise sample start point, randomise pitch and human level. These allow the sample start point and/or the pitch of the sample to be varied per pad hit, with the human level parameter determining the

**"The MD16 lacks the immediacy of the SR16, but I wouldn't consider that a criticism - the MD16's strengths lie in its sophistication and flexibility."**

> degree of variation (from subtle to extreme). Human Levels 1-5 link the variations directly to the volume of each pad hit, and so aren't actually random. Levels 6-10 add or subtract a random amount from the volume amount of each pad hit, and then link the variations to the resulting volume amounts, while levels 11-15 randomise sample start point, pitch and volume separately.

Movement within the stereo image can be produced using several Voice pan parameters. When enabled, Opposite Pan shifts the Voice to the opposite side of the stereo image from its programmed pan position (useful if applied to selected pad hits), while Roll Pan allows successive pad hits for a Voice to "roll" the sound across the stereo image (useful for, say, tom rolls) and Auto Pan allows a Voice to be panned across the stereo image as it plays.

Other Auto parameters are Auto Pitch (for pitch sweeps) and Auto Reverse (forward/backward or backward/forward sample playback, depending on whether the Reverse playback parameter is enabled). Envelope length, Auto Pan rate and direction, Roll Pan rate and direction and Auto Pitch shift amount and direction are programmed as global parameters per Pattern. You can program two sets of values, A and B, and assign one or other set to each pad.

## PADS

THE FOUR PAD "levels" mentioned earlier are effectively four 16-pad "kits". These can be cycled

around at any time by holding down the Shift button and successively pressing the Accent/Level button. In addition you can program an Auxiliary set of four levels and switch between the two sets (from the front panel or using MIDI controller #70), giving you access to 128 pad assignments in all. However, there's a price to be paid here: if you want to define the Auxiliary set you must be prepared to lose around 3% of the Pattern and Song memory.

When you record a pad hit into a Pattern, its Voice parameter settings are stored in a lookup table in memory. Each time a pad hit with new parameter settings is recorded, these settings are added to the lookup table, while the data recorded for each individual pad hit includes a pointer to the relevant parameter settings in the table. In this way each pad hit can "memorise" its Voice parameter settings without the need for those settings to be stored with every hit - neat memory economy.

Several things follow from this. For a start, when you edit the Voice parameters for a pad, you aren't affecting hits already recorded from that pad - effectively you're creating a new Voice. Secondly, the more Voices you have, the larger the lookup table will be. Thirdly, you can't delete a pad hit during real-time record unless its Voice parameter settings are assigned to a pad (in which case you can hold down the Shift button together with the relevant pad at the relevant place(s) in the Pattern). If they're not, you need to go into step-time record/edit mode and delete recorded pad hits individually.

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Pad levels 1-3 allow you to assign one sample at a time to each pad, while level four allows you to assign up to three samples per pad, each with its own Voice parameters, and crossfade between them using different velocity curves for each sample.

The Chromatic Pad function provides an easy way of setting up a pitched sound on the pads for recording tunes or riffs. With it enabled, you can select any pad and its sound will be spread across the 16 pads at its pad level in semitone intervals. Deselect the function and the pads revert to their programmed settings.

Pad levels three and four can each be programmed with their own Echo effect. This is a software-generated effect which is created "live" using the MD16's own voices. For each pad level you can program the number of pads to be effected, the repeat rate, the number of repeats (1-16) and a fade amount (-8/+8, allowing fade-outs or fade-ins). If you use fading Echoes in conjunction with the Voice parameter Randomise Pitch, you can get the echoes to rise or fall in pitch.

Usefully, the Echo repeat rate is measured in MIDI clocks, so the echo is automatically synced to the current tempo. Thirty-two rates are provided, ranging from 1-120 MIDI clocks and allowing for both straight and triplet timings. Of course, with a fast repeat rate set you can use the Echo effect to play rolls and flams from single pad hits. On a related note, so to speak, with the Pad Fill function turned on you can record a series of pad hits into a Pattern at the selected quantisation rate by holding the relevant pad(s) down - useful for anything from hi-hat 16ths to snare rolls.

Pad level three also allows you to trigger up to 16 Patterns - one from each of its pads. There are two triggering modes: Queue-Trigger and Retrigger. The former allows you to spontaneously drop in a Pattern during Song or Pattern play. This could be a traditional drum fill or a Pattern which drops out the bass and snare parts.

The MD16 plays the drop-in Pattern once before continuing with the Song or Pattern it was previously playing. However, by triggering it again before it stops playing you can get it to play more than once.

Perhaps more interesting is Retrigger mode, because, instead of acting as a "supplement" for a Song or Pattern which is already playing, it allows you to create a rhythm track live from a predefined collection of up to 16 Patterns. Patterns are played at the currently-defined tempo, and you can set a Pattern repeat amount of 1-8 or continuous. With Continuous selected, a triggered Pattern continues to play until you hit one of the other pads, at which time the new Pattern starts playing immediately. This approach has its advantages for some uses, but I'd like to see another option whereby the active Pattern plays through to its end before the new Pattern comes in.

As each pad on each level can be assigned its own MIDI note number (0-127), you can trigger your 16 assigned Patterns via MIDI from a keyboard or a MIDI percussion controller. Where you're triggering Voices rather than Patterns, MIDI input to the MD16 can be

used to trigger more than one Voice at a time by assigning from 2-8 pads to the same MIDI note.

## OF HUMAN FEELING

CHEETAH HAVE INCLUDED a number of parameters on the MD16 which allow you to play around with the timing of recorded pad hits - an important aspect of humanising the drum machine. For a start, you can change the feel of a Pattern by sliding, say, a snare part forward or backward in time in 96ppqn steps (the MD16's maximum resolution). Once you've selected a recorded pad hit in step-time edit/record mode and set the amount of time slide, the MD16 gives you the option of sliding all pad hits with the same sample or all pad hits with the same set of Voice parameter values - the latter allowing you to slide only selected hits in your snare part.

Time-sliding allows you to do much more than subtly push or delay parts against one another. You can independently "rotate" different instrumental parts around a Pattern, creating new rhythms in the process. What happens is that pad hits which are slid a number of steps beyond the Pattern end "reappear" the same number of steps in from the Pattern beginning.

Swing timing on the MD16 can be applied as you record or live on playback. A swing depth range of  $\pm 8$  offers a good variety of swing feels, with negative depth values moving the second note of a pair towards rather than away from the first. Swing works in conjunction with the Timing Quantise parameter, with quantisations ranging from 1/96 to 1/6 (for example, you can "swing" a triplet quantisation).

Timing randomisation is another significant feature of the MD16. Every recorded pad hit can have timing randomisation turned on or off. If on, the timing of the hit is randomised live on playback within a  $\pm$  range centred on its recorded position. This range is specified globally via, surprise surprise, the Timing Randomise parameter, which allows you to select one of ten values ranging from a 1/384th note to a 1/16th note - subtlety is not necessarily the intention here.

Cyclic Randomise is a repeating effect which causes timing on playback to shift from ahead of recorded pad-hit positions to behind them - within the range specified by the Timing Randomise parameter - over a user-specified number of beats. Whether the change takes place gradually or not depends on the number of beats and on how many pad hits have timing randomisation enabled.

## PATTERNS & SONGS

WITH 254 PATTERN and 254 Song memories to its name, the MD16 must surely qualify for a place in the *Guinness Book of Records*. Whether you could actually record - or would want to record - so many Patterns and Songs is another matter. As a guide to memory capacity, a Pattern consisting of 64 pad hits and ten different Voices takes up 1% of the memory, according to the MD16's % Free Memory display, so if all your Patterns had this number of hits and Voices you'd be able to record up to 100 Patterns. Of course, they won't and you won't. It's worth bearing

**"With 254 Pattern and 254 Song memories to its name, the MD16 must surely qualify for a place in the *Guinness Book of Records*."**

“Opposite Pan shifts a Voice to the opposite side of the stereo image while Auto Pan allows it to be panned across the stereo image as it plays.”

➤ in mind as you get into fine-tuning the Voice parameters of individual recorded pad hits (and thus create a lot more Voices), that storing Voice parameters is more memory-intensive than storing pad hits themselves. There again, all the sophistication is there to be made the most of. It's worth mentioning that the MD16's memory can be dumped not only to tape but also via MIDI SysEx to a remote storage device.

A Pattern can be from 1-682 beats long, which gives you the flexibility to record extended performances lasting several minutes (memory allowing, of course) as well as the more usual pattern-based rhythm sequences.

There are three real-time recording modes: Cycle Mix, Cycle Overwrite and Tape. Cycle Mix is the familiar drum machine-style looped recording mode, while Overwrite is an intriguing variation: if you record a Pattern and then leave it to loop twice, any pad hits after that will delete the existing Pattern and initiate recording of a new Pattern - effectively it's a quick way of deleting a Pattern you've just recorded but aren't happy with.

Both these modes require you to preset the Pattern length before recording. Tape record mode, on the other hand, allows you to record a pattern without presetting its length. You can also use this mode to extend a Pattern which has already been recorded in one of the Cycle modes.

Quantisation can range from 1/192 to 1/4 including triplet values, or be turned off, and is applied as you record. Pad Quantise, however, can be applied on playback.

Patterns can be recorded not only from the MD16's pads but also from a MIDI source. The MT review model, running v1.01 software, wouldn't record via MIDI properly, but this has apparently subsequently been fixed in v1.02 software. The only other bug I came across, which arose from switching pad levels while a Song was playing, will, I am assured, be fixed in v1.03 software - which should be in the shops by the time you read this.

All the MD16's parameters can be edited while a Pattern is playing or recording, or while a Song is playing. The MD16 can also play a Pattern while you're recording it from scratch or editing it in step time, which is extremely useful. Step-time mode allows you to edit the Voice parameters of individual pad hits, all hits with the same set of parameter values or all hits with the same sample assigned. You can also alter the timing position of each hit and delete individual hits. A Pattern can be stepped through in either direction using the Up/Down buttons, moving either from pad hit to pad hit or by a selected quantisation amount. The LCD window displays the current position in bar:beat:clock format together with the sample or other Voice parameter for the selected pad hit and an event number which helps to clarify how many hits exist at the current position. New events can be entered by hitting the relevant pad(s) at the appropriate positions in the Pattern.

An unusual but welcome function at the "macro" level of pattern manipulation is Pattern Merge, which

allows you to merge a source Pattern into a destination Pattern. One possible way you could approach this would be to build up a library of bass 'n' snare patterns and a library of percussion breaks, and experiment with the combinatorial possibilities. You can optionally specify a timing offset for the merge, to clock resolution, which allows you to place a shorter pattern anywhere within a longer pattern, or to append one pattern to another (with or without a gap in between the two patterns).

MD16 Songs are constructed in the traditional fashion of chaining Patterns together. Unlike the SR16, the MD16 doesn't allow you to do this in real time. Each step can be assigned one Pattern and a repeat value from 1-255. You can also program a tempo track for each Song. This consists of a Start tempo and subsequent tempo settings recorded at bar:beat positions. Included with each tempo setting is a bar:beat position and a Rate parameter. If the rate is zero, the tempo changes at the specified position. However, if the rate is a non-zero value then the position becomes the point at which the tempo starts to change to the specified tempo, with the rate defining how long it takes to change. A gold star for this one, I think.

The MD16 allows you to link up to 20 Songs in a single Chain and to program a pause between each Song. Zero delay is a special case, in that the MD16 waits for the footswitch, Start/Stop button or incoming MIDI Start command before playing the next Song in the Chain.

## VERDICT

MUSICIANS WANTING A straightforward programming system and who aren't really interested in the sort of sonic and rhythmic weirdness the MD16 makes possible will probably be inclined towards Alesis' SR16. Cheetah's new drum machine lacks the immediacy and easy understandability of the SR16, but I wouldn't consider that a criticism. Each machine has its own strengths, and the MD16's lie in its sophistication and flexibility. Sound quality-wise they're quite evenly matched, though my overall impression is of the MD16 sounding brighter and sharper and the SR16 having more balls at the bass end and a more polished sound.

If you're into the aforementioned weirdness, time spent familiarising yourself with the MD16 (while doing your best to ignore its casing, which really doesn't do justice to it) will be time very well spent.

On facilities alone the MD16 should be serious competition for the Roland R-series, but I suspect that while Cheetah products don't have the professional look and feel which engenders confidence and says "take me seriously", many musicians will turn to Roland first. Which is a shame, because in so many other respects the MD16 is the biz. ■

**Price** MD16, £299.95; MD16R £349.95. Both prices include VAT.

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# demo takes

To quote Gary Glitter: "Did you miss me when I was away, did you hang my picture on the wall?" Well I'm back - back from a well-earned vacation and determined to take my analyst's advice to improve my self-image by being charitable towards others. And I'm going to begin by being sympathetic towards you, the demo-making public. No more sarcasm, no more cynicism, instead boundless enthusiasm. *So let's go!*

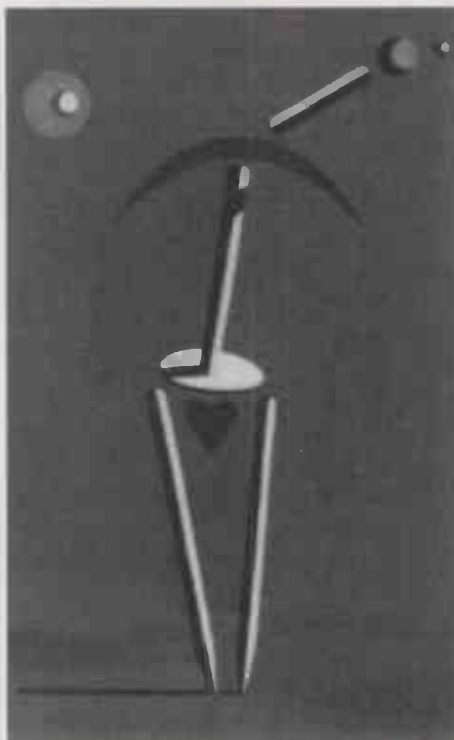
Great, the first tape conjures up images of The Madchester Scene: loadsa spanners with basin haircuts boogying around in dodgy flares and naff T-shirts, being utterly crap over the same drum pattern track after track after track. I love it. **The Belly Wheels**, proudly native of that very part of the world, love it too. But the BWs are clearly taking the piss.

The tape opens with a sensitive solo rendition of that all-time classic, Kelloggs' "Honey Nut Loops" - just to get us in the right frame of mind, I suppose. Nice one chaps. After a bit more bugging about, the track (there is only one, but it's on both sides of this tape) kicks in with a keen, indie-acid shuffling drum pattern, produced, I imagine, with the help of the band's Korg DDD1 drum machine. Not bad. It's then joined by a deep buzzy, sustained bass part (probably from their Roland Juno keyboard) - and I'm actually getting quite interested. Eight minutes later, I'm still waiting for something else to happen - honestly. The track - called 'Baby', incidentally - doesn't feature any words to speak of, unless you count David Lee (I presume) wailing "Baby, you know it's true" and making increasingly more frenzied grunts and groans, something along the lines of "Je t'aime (moi non plus)" - if you can imagine this coming from a Manchester lad of unspecified age. This could have Stockport totty positively wetting their knickers, especially if David looks anything like Shaun Rider of the Happy Mondays or the lead spanner from the Charlatans. Seriously though, David insists in the accompanying letter that he's only after upholding the reputation of the BWs as "the worst musicians and engineers in the north of Manchester". And he's quite aware of the shortcomings I've already pointed out, so what can I say? The track is reasonably well-recorded on their (his?) Tascam 38, through an Allen and Heath desk and using a Roland DEP5 for effects processing. There's a good choice of long reverb time to give the sparse vocal a suitably far-away and cavernous feel, and much against my better judgement I actually quite like

this track. So tough titty, David, you don't cop for the Worst Tape of the Month crown. Yah boo sucks.

Time, methinks, to pick another tape at random from the happy obscurity of the black magic bin bag - meet **Delph**, two lads from. . . Manchester.

OK then, Kevin Pocock and Steven Smith, you're purveying pretty up-to-date stuff in the mould of 808 State or perhaps Front 242 without the noise and violence; tight, crisp, trendy drum patterns with sounds which must be coming from your Roland D110 since you haven't mentioned any drum box, bouncy competent basslines (possibly from your Bit 99 or TX7?). The first three tracks on your professionally-packaged cassette bounce along happily and wouldn't be out of place on the dancefloor; some bits of interesting pitch-shifted speech, but no sung



**Delph**

vocal. Now I personally think that the ambient house niche is becoming more than a bit crowded, so might I suggest you try and find a good vocalist and write some songs? You've certainly got your heads together when it comes to recording, with good results being produced from that Fostex A8 and RAM 10 mixer, and good use of timed delays from your Yamaha SPX90 to keep everything moving very effectively. All four

tracks are well-programmed on your Atari and Cubase system and you sure as hell haven't over-arranged - sparse but effective techno-pop grooves being the order of the day. Until, that is, we get to track number four, "Coastline". Who's been listening to early Kraftwerk then? It's a pleasant, dreamy choon, but a bit derivative, lads, *n'est ce pas?* However, I find it difficult to be cruel to these boys (it must be spring in the air) and I was very soothed by the polite and suitably respectful note enclosed with the tape. . . OK boys, I'm prepared to admit that you've got potential.

From the (almost) sublime to the (faintly) ridiculous: let me introduce **Gary Barber**, who's "23, plays keyboard, drums, writes and composes songs and instrumentals". His 14-track tape opens with "Playtime", a track which frankly could have been written for *Rainbow's* Rod, Jane and Freddy. What a sinful waste of a DX7, Alpha Juno 2, TR505 and Tascam Porta 05. Mr Barber says he has a list of publishers to send off to and would be grateful for any suggestions I have: I don't think I should make them in a family magazine before 9pm. On the whole, although his playing is technically very good, Mr Barber's melodies are twee, his drum patterns hackneyed, his choice of sounds pedestrian in the extreme - apparently confined to the kind of tame and tinkly presets most of us vow never to use. I'm trying hard to feel sorry for being so negative, but then the 12th track droops in and I simply can't help it - this really is some of the blandest music I've heard for a long time. I'd guess Mr Barber's influences include the music in between schools programmes on the BBC. But I suppose someone has to write that kind of rubbish, and if he can get someone to pay him for these 14 tracks, he's probably a whole lot smarter than you and me. Failing this, perhaps a job writing the music that goes with crap local cinema advertising would fit the bill?

Well, it's back to the analyst's couch for me: an innocent-looking bag of demos has reduced me to a bitter and twisted victim of the music biz in less time than it takes to drink a bottle of Jack Daniels. I hold you all personally responsible, of course, so I'm going to be inaugurating a *Worst Tape of the Month* award. It'll run along the lines of MT's sister mag Home & Studio Recording's *Tape of the Month* - but where a "best" demo wins its sender a box of cassettes, the perpetrator of my chosen "worst" will be receiving all my analyst's bills. **Skum**





# TG33



PHOTOGRAPHY: JAMES CUMPSTY

Latest in Yamaha's SY/TG line of descent is the TG33 - a valuable addition to the range or another exercise in repackaging for Yamaha?

Review by Ian Waugh

**Y**OUR STARTER FOR ten - complete the third pair of instruments: SY77 and TG77, SY55 and TG55, SY22 and... If you answered "TG33" it means you've read the title of this review; I'm not impressed with your powers of deduction. Those of you who usually read magazine articles from the second line down, meanwhile, will still be wondering why the answer isn't TG22.

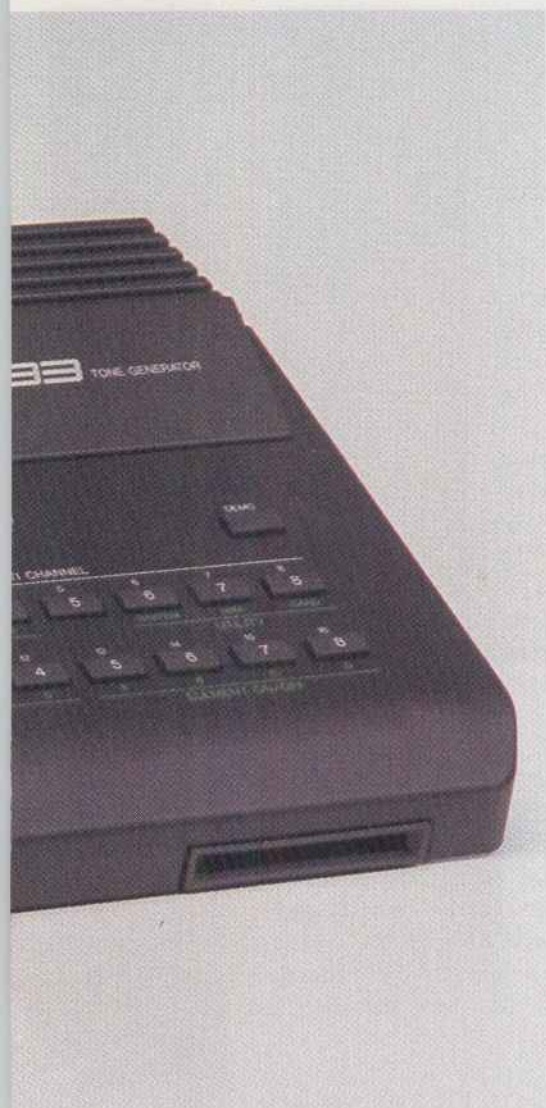
Although the TG33 has similar features to the SY22 it has more of them. It's 32-note polyphonic for a start (the SY22 is 16-note polyphonic) and 16-part multitimbral (the SY22 is eight-part multitimbral). Also, while the SY22's Multi mode is designed for performance, the TG33's Multi mode is edged towards use with sequencers and is more in line with Multi mode on the SY77.

But, like the SY22 (reviewed MT, July 1990), the

MUSIC TECHNOLOGY MARCH 1991

essence of the TG33 lies in its use of Vector Synthesis and its claim to fame - in a world of multi-menueed, multi-synthesis, multi-complex instruments - is its ease-of-use.

Rack-mounted Vector Synthesis raises an interesting practical problem: how to rack mount a joystick. Yamaha have dodged the problem by making the SY33 a module - although you can rack it using the rack lugs included with it. It doesn't rack vertically as you might expect, instead it sort of slides into the rack space. The lugs can be adjusted



so it sits in or out of the rack and it can be tilted. I reckon you'll need at least 3U of rack space, 4U or 5U if you tilt it.

## SOUND ADVICE

THE SOUNDS ARE arranged in eight Banks of eight Voices, which can be selected with the front-panel Bank and Voice buttons. There are two preset Banks, an Internal Bank (programmable) and room for a Card.

Voices are named using Yamaha's recent naming convention (evident on SY/TG77 sounds, too) which defines the basic nature of the sound with a two-letter prefix. SP is a Synth Pad, SE is a Sound Effect, ME is a Musical Effect, BR is Brass and so on. However, I couldn't find an explanation of the prefixes in the TG33 manual.

MUSIC TECHNOLOGY MARCH 1991

There are about 20 prefixes which should be able to contain most synth-generated sounds. This is an excellent idea. How useful it would be in librarian programs which let you assign attributes to voices. A clever program could assign them for you automatically. Regardless, I'd be surprised if other manufacturers follow suit. I await developments with interest.

Inside the TG33 are 128 AWM preset waveforms and 256 FM preset waveforms. In keeping with SY parlance, these are known as Elements. A sound can be constructed from either two Elements (one AWM plus one FM) or four Elements (two AWM plus two FM). These are assigned to the north, south, east and west positions of the joystick - labelled, A, B, C and D respectively. The AWM Elements always occupy positions A and C and the FM Elements occupy B and D.

One of the AWM sets contains drum sounds mapped across five octaves. There are some excellent sounds here including a record scratch, backwards cymbal, cuicas, an "oo" (or an "uh") and timbales. You may detect a soupcon of noise in a couple, but this would probably be lost in a mix.

The manual lists each Voice along with the waves and effects it uses and a comment about what the sound is, what it does or how to play it to best show it off. I like this documentation idea, I just wish all sounds on synths and sound cards/disks carried the same information.

## VECTOR ACCOUNT

YOU CAN ALTER either the Level or Tuning of the Elements by selecting the relevant option on the front panel and waggling the stick. This is fun and easy, too. But as well as altering the sound in real time, you can record the stick movements as part of the sound. Subsequently, each time you play a note, the sound goes through these same changes. This is accomplished by a sort of sampling process - the position of the joystick is "sampled" at regular time intervals. You can set the "sample rate" (10-160ms) and 50 samples can be taken. You can edit the position of the joystick at each of these steps and, therefore, program vectors in step time. You can loop them, too.

As you waggle the stick, the unit transmits MIDI Controller 16 and 17 data which you can record in a sequencer to create long vectors. However, this can only be active on one channel at a time, so you can't program different vectors for different Voices and play them back simultaneously in Multi mode.

With all this crossfading going on you won't be surprised to learn that the sounds have a synthy edge to them, although there are very usable piano, brass, bass, organ and string sounds and so on. The TG33 has the "overlap" facility of the SY22, which means that a sound doesn't stop suddenly when you change patches but overlaps into the next. Very useful for live work.

## NORMAL SERVICE

YOU CAN EDIT the sounds using more traditional methods, too. As well as being able to select two or four waveforms for a Voice, there are Frequency Shift, ➤

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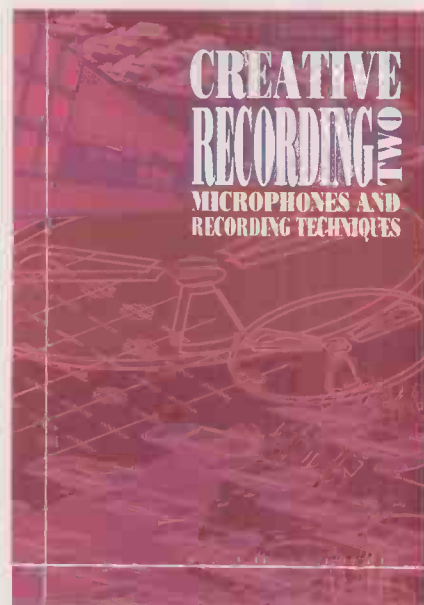
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➤ Volume and Pan parameters. The Velocity and Aftertouch Sensitivity is adjustable and you can see the amount of Amplitude Modulation applied to an Element by Mod Wheel or Keyboard Aftertouch.

If you faint at the sight of an algorithm, fear not, because the only control you're given over the FM Elements is the TG's Tone, which adjusts the brightness of the sound.

As for envelopes - there are six preset types but the adventurous can construct their own using an Attack, two Decay and a Release rate settings. There are also Delay and Initial level settings plus Level and Rate Scalings. On a global scale you can construct overall Attack and Release envelopes for individual Voices.

One of my favourite functions is the Random Element/Level/Detune generator which randomly assigns Elements to a Voice or makes changes to the Level or Detune setting. Yet another easy-program option. Wouldn't it be useful if such random voice generation functions were included on more upmarket - and more complex - instruments? Steinberg's SY77 Editor includes a similar generation facility but taken a few stages further. How many K of ROM would it take to build this in? The TG's Voice Recall function recalls the last edited Voice, even if you've exited edit mode. A handy safety net.

There are 16 built-in digital effects including Reverb, Delay and Distortion along with Balance and Level controls which replace the SY22's depth setting. While they're not very flexible, they do a good job of enhancing the sounds.

## MULTI PURPOSE

THE TG33 HAS 16 Multi Play setups, and this is the main difference between it and the SY22. Rather than assign MIDI channels to the Parts, you assign Voices to the MIDI channels. It's ideal for work with sequencers, but it means you can't layer Voices when playing live (neither can you on the SY77) which would have been really neat.

Each Voice has Volume, Detune, Note Shift and Pan parameters and you can assign the Voices to one of two sets of audio outs. Although the unit has a maximum polyphony of 32 voices, four-Element sounds will reduce this. Voices are assigned dynamically and a modicum of care will ensure that you're never caught short. There's no reserve voice function, but you can dynamically assign a minimum number of Voices to the separate outputs.

## SWITCHING CHANNELS

UNDER THE UTILITY menu you'll find Master Tune, Transpose and Controller Reset facilities. There is Bulk Dump transmission and you can switch the transmission and reception of SysEx data on and off.

The effect of Program Change messages depends on the mode the TG33 is in. Basically, 0-63 select a Voice and in Multi mode, 64-79 select a Multi. However, the TG33 also supports the new Bank Change messages recently added to the MIDI spec, the first instrument I've come across to do so (apart from a MIDI mapping device from Quasimidi). This uses Controllers 0 (MSB) and 32 (LSB) to transmit a Bank Number. This must be followed by a Program

MUSIC TECHNOLOGY MARCH 1991

Change number for the change to come into effect. That's a total of three messages but it means you can select any Multi, Voice or memory area.

The Bank Numbers as implemented on the TG33 don't seem to follow any particular pattern: 0, 1, 2, 4 and 5 select Voice Play and one of the banks; 16, 17, 20, 32, 33, 34 and 37 select the Multis and various voice/memory areas. This may be due to internal memory organisation or to provide compatibility with other (unreleased?) Yamaha units. It'll be interesting to see how the Bank Change messages fare. What is required is for a synth to transmit a message (messages?) when you press a Bank button. But if the numbering isn't consistent we're going to have the same problem we had when voices were first put in banks and selected by Program Change numbers 0-15, 32-47 and so on as on Casio CZ synths. The TG33 sidesteps this problem by not transmitting any Program Change messages at all.

The card slot can take MCD32 and MCD64 memory cards for additional Voice and Multi storage. The TG33 can also read SY22 Voice cards and, as there are already several on the market, there's a ready-made library of extra sounds. As the SY22 doesn't have effect balance or effect level controls, these are set to their default values.

Is it just familiarity or are Yamaha manuals getting better? This one has a couple of tutorial sections to get you started, followed by a reference section containing the nitty gritty. That said, the instrument is fairly easy to use and doesn't have a mountain of parameters.

## VERDICT

YOU CAN LEVEL a few criticisms at the TG33 although, given what it sets out to do, it's debatable whether or not they would be entirely justified. For example, it has no filter - but this would further complicate the programming and increase the price. We can dismiss comments about lack of control over the FM Elements and lack of individual output sockets for the same reasons.

The biggest niggle I have is the two-line LCD and a touch of the multi button-push syndrome which results in some operations being a little involved. Still, the TG33 doesn't have nests of menus and if this was the most complex synth I ever saw I'd be a happy reviewer. When all's said and done, operation is relatively straightforward.

The change in Multi mode operation (from the SY22) marks the TG33 as a sequencer's expander. The extra polyphony testifies to this although you can use it live, too - the SY77 uses the same Multi arrangement. But sure, it would be useful if you could layer sounds. Take into account the lower price, and the loss of a keyboard seems like a very good trade-off indeed.

It's difficult to play with this unit and not thoroughly enjoy yourself in the process. To paraphrase Atari's slogan - power without the complexity! ■

**Price** £499 including VAT

**More from Yamaha-Kemble Music (UK) Ltd, Mount Avenue, Bletchley, Milton Keynes MK1 1JE. Tel: (0908) 371771.**

“The idea of rack-mounting a Vector Synthesis instrument raises an interesting practical problem: how to rack mount a joystick.”

## PROSAMPLES 1

*The Ultimate Drum Collection*  
Drum Sample CD

I'm surprised it took so long - after all, it's such a logical step to take. The "it" in question is the dedicated drum sample CD. For years drum samples have been relegated to being a small section of larger sample collections. Take Korg's old *Sound Sampling Collection*, for example - of the two volumes made available, Volume 1 alone contained drum and percussion sounds. They weren't bad, either, just a bit thin on the ground.

Today, however, the drum sample CD is taking off. Apart from the obvious attraction of being able to turn your sampler into a wide variety of percussion sources, there's the advantage of being able to assemble a set of sounds unique to you and your music. Then there's the cost - few of us can afford to buy (or buy access to) the number of acoustic drums and percussion devices, or the variety of drum *machines* that can appear on a CD. Although sample CDs appear expensive when compared to their musical equivalent, you consistently get an incredible amount of sounds and expertise for your cash. And on the subject of expertise, rock producer Bob Clearmountain must rank very highly amongst those in the business of putting "real" drums onto tape. Lucky for us then, that he's been generous enough to put his experience at our disposal in the form of his *Prosamples 1* sample CD.

While not a cheap addition to your sample collection, *Prosamples 1* is rather special when it comes to content. A glance at the booklet tells us that, while lifting drum sounds from this disk is a convenience, recording it was not. Take the Ludwig Black Beauty 6½" snare on track 11 - there are no less than 29 separate recordings of this drum, using exhaustive combinations of mics (Shure SM57, AKG451, Neumann U87. . .) and mic techniques. Additionally, these particular recordings were made at Bearsville Studio in the US through a Neve desk - trying to imitate that on a tight budget. Other studios used in the preparation of *Prosamples 1* include A&M Studio A (Neve desk) and A&M Studios B and D (SSL desks).

On to the samples. As suggested by the Black

Beauty, all drums and cymbals (exotic percussion falls outside the scope of this disk) have been miked and recorded almost to absurdity. Instrumentation falls soundly in rock territory, and the recordings have been made with this in mind. That said, few breakbeats have found homes in music similar to their sources. . .

Accepting that most prospective purchasers are going to be slotting Clearmountain's samples into a rock context, he's given us as near to a definitive breakdown of the drumkit as is currently possible. The recording standard is immaculate - it simply couldn't be bettered with any of today's technology. Add to that Clearmountain's understanding of drum miking, and this CD gives you quality and expertise you are very unlikely to have yourself - pretty cheaply at that. In use, the samples are solid, clean and eminently usable. Recording a drum kit has never been easier.

If I have one reservation about *Prosamples 1* it concerns the choice of drum sounds on offer. One of technology's consistent failings is that of obscuring the music itself, and I fear for those who aren't decisive enough to make a musically sensible decision between Mark McKenna's Noble & Cooley piccolo snare recorded with four U87s, and Paul Jamieson's 1920s Ludwig solid maple piccolo recorded

with a Shure SM57, AKG451 and MD421 overhead. ■ **Tim Goodyer**

**Price** £69 including VAT and p&p.

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

## PROSONICS

*Mega Beats*  
Drum Sample CD

Another remarkable fact concerning drum sample CDs is their variety. Far from offering the same choice of sounds from a variety of manufacturers, these disks seem to complement each other remarkably well. Take Prosonics' *Mega Beats* disk - where Bob Clearmountain has exhaustively explored the rock kit, Prosonics have made a full-frontal assault on the drum machine. *Mega Beats* contains the sounds of no fewer than 30 popular beatboxes, potentially turning your sampler into anything from a humble Korg DDM110 to a Roland R8.



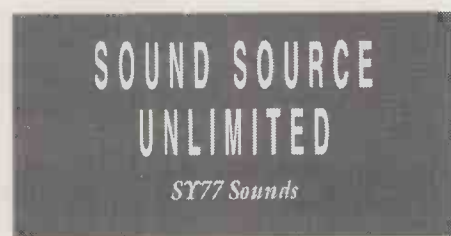
Where *Prosamples 1* milked snares and mics, *Mega Beats* milks drum machines: whether you're seeking the fashionable sounds of the TR808, the obscurity of Dr Bohm, or the individuality of a Simmons kit, *Mega Beats* has something to offer. Amongst its many "firsts", this disk marks the first CD appearance of Roland's currently hip TR909 (what took so long?), but there's no shortage of choice of machines or sounds - Roland TR727, Linn 9000, Sequential Tom, Oberheim DMX, E-mu Drumulator Alesis HR16B. . . Whatever you want, it's almost certainly here.

Like *Prosamples 1*, *Mega Beats* uses two hits per sound for ease of sampling; where *Mega Beats* can't quite measure up, however, is in its recording. Although many of the variable sounds (the TR808 bass drum, for example) have been recorded with a number of possible settings, some have also been gated - and a couple of them poorly. In certain circumstances this will save you gating them yourself, but I'd have preferred the options left open to me. But then the comparison may be unfair in terms of the asking price of *Mega Beats*.

Two things are for certain, however. Firstly, there couldn't be an easier or more cost-effective way of gaining access to more drum machines than you're ever likely to need; secondly there are no easier samples to make than drum machine samples off CD - no looping, no hassle, no reason not to buy this disk really. ■ **Tim Goodyer**

**Price** £29.95 including VAT & postage

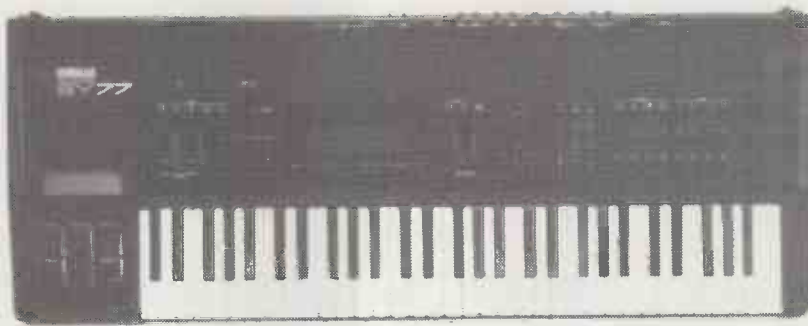
**More From** Patchworks, Frederick House, 211 Frederick Road, Hastings, East Sussex TN35 5AU. Tel: (0424) 436674.



Although Grandmaster Trask beat me to the SY77 review, I was sufficiently impressed by Yamaha's latest flagship that I bought one myself - and a powerful and exciting instrument it is. The factory presets are interesting enough and are certainly usable, but factory sounds are only ever the starting point in the performance of a synth. A team called Sound Source Unlimited have produced four disks of 64 sounds, collectively called the *American Collection*. This team includes Manny Fernandez and Mike Peake (who worked on the SY77 presets as well as those for Yamaha's V50 and the Kawai K1). As a further incentive to the programmers, SSU pay them on

a royalty basis: no sound sales, no cash. In this way the company reckon to be selling sounds of a high standard.

The cards' titles give a (not so subtle) clue to their contents. Each disk contains All Data, Synth All and Seq All files. Only one Multi has been set up and this is used for the demo song. *California Collection (LA and Studio Staples)* contains a goodly selection of pianos (mainly electric), strings and basses - the sort of sounds you often turn to when first laying down a track. There's also a range of choirs, each with added "atmospherics". Other sounds include strings,



organs, guitars (electric and acoustic), brass and synth sounds (full and lead), and miscellaneous atmospheric timbres.

Many sounds make use of the SY77's second mod wheel, often to control brightness. The demo is a laid-back guitar-based rock number.

*Alchemy Collection (Fairlight and Synclavier Simulations)* is definitely the one for atmos freaks. Punchy attacks give way to swelling bodies (of sound, Smythe minor) which evolve through strings/brass/synth timbres and filter sweeps. The sounds start off doing one thing and end up doing another; hit the keys harder and you trigger another element.

There are some great pad sounds here although the majority are still melodic. Building a soundtrack? Need mood setters? You'll find them here. The second mod wheel acts as a pan control. The demo is a combination of melodic riffs and atmospheric backing.

*Platinum Collection (Popular LA, AI and Ultra-FM sounds)* sees the SY77 trying to play the D50 and M1 at their own game. I've got to say I was very impressed. There are breathy, moving sounds and more atmospheric (of a much more melodic nature than the *Alchemy Collection*) and combination voices of strings, brass, choirs and breathy sounds which migrate from one timbre to the other. There are lots of staple sounds here, too - pianos, strings and pianos/string combinations, guitars, solo and ensemble brass sounds, horns, orchestral pads, analogue stabs, Moog sounds and those irritating solo sounds Rick Wakeman seems so fond of. Lots of "after chimes" and some heavy filter sweeps here. The demo rocks on with brass stabs, vocal cues and guitar backing riffs.

*Manhattan Collection (Authentic Analogue*

*Textures and New AFM Sounds)* says it all, and you get a few bonuses. FM pianos with flanging and tone tweaking, classic Rhodes-type DX7 sounds, clavs and basses plus a few metallic bells and gongs.

The analogue section includes fat polysynth sounds, square wave solo sounds, Prophet-style brassy sounds, a range of filtered sounds and sounds with filter sweeps. There are organs (including a reasonable Hammond), timpani and strings, too, also several heavy, very slowly-evolving pads - nice atmospheric stuff. The last four slots contain drum sets. The demo is almost

funky and full of squishy analogue sounds. The Multi is called 'NuYawk!!NuYawk!!'.

If you can't afford all four cards, *Alchemy* is the one for atmospheric, *California* will add work-a-day sounds to your setup and while *Manhattan* is probably the least adventurous of the four, it contains the most analogue patches with lots of nice DX staples. But *Platinum* is my favourite all-rounder - it sums up the reasons for my buying an SY77 in the first place.

Impressive though these sounds may be, I'm sure the programmers have only scratched the surface of RCM synthesis and I do know that another set of sounds is on its way.

The *American Collection* is available from Yamaha or your local friendly music store at £30 per disk. Some suppliers have bought them from another distribution source and may be charging £49 for them. You've been warned.

Finally, in case you haven't heard, there is a disk of voices doing the rounds called the *European Collection*. It was compiled by various Yamaha divisions throughout Europe and it contains 320 sounds. But the best bit is that it's free. Take a formatted disk along to your local Yamaha music store and they'll give you a copy. There's little point in running through the voices as you're going to get this anyway. But just in case you're wondering - it could be sold for money. The sounds aren't in the same league as the *American Collection* but you'll certainly discover a few gems to make a trip to the dealer worthwhile. ■ **Ian Waugh**

**Price** £30 per disk including VAT

**More From** Executive Audio, 159 Park Road, Kingston Upon Thames, Surrey KT2 6DQ. Tel: 081-541 0180/5789.

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# MICROVERB III



PHOTOGRAPHY: JAMES CUMPOSTY

They said it couldn't be done - yet Alesis' Microverb III incorporates improvements over its predecessors while retaining its "budget" status.

Review by Nigel Lord.

**W**HEN YOU THINK about it, the design and selling of a new piece of hi-tech musical gear for the budget end of the market must cause manufacturers more headaches than a unit at the top of the same range. Both have to provide value for money - but this is usually much easier for the public to identify in budget equipment. Similarly, both need to offer some technological improvement over previous models (and over their nearest rivals) - but make your entry-level unit too good and you're left with a problem as to what to include on units higher up the ladder.

Nowhere are these dilemmas more acutely felt than in the reverb/effects processor market, which, in case you've been visiting a neighbouring planet for the last couple of years, has grown to saturation point, with units of incredible sophistication retailing for just a few hundred pounds. And with more and more models competing for whatever gaps are still left in the market, the pressure on manufacturers has grown in intensity and the need to come up with a best-selling design has taken on a new urgency.

Though they couldn't claim to have actually set the ball rolling - that accolade has to go to Yamaha for

the 1983 release of its ground-breaking R1000 design with four (count 'em), separate reverb programs - Alesis have probably been responsible for filling more "U"s of rack space with effects processing gear than any other company. I'm sure that when it came to designing and marketing the Mk III version of their entry-level reverb unit - the Microverb - no-one will have been more aware than they of the need to pitch it accurately. Too sophisticated, and it would cast an unfavourable light on the Midiverb and other units in the range; not sophisticated enough, and they risk owners of the earlier Microverbs deciding it isn't worth the cost of upgrading. Too expensive, and they get overtaken by their rivals; too cheap, and they don't make any money. It's enough to give you ulcers. . .

Some of you might be wondering why it's necessary to produce a Mk III version of the Microverb. After all, the Mk II offered 16 first-class stereo reverb effects at 15kHz bandwidth - and if you shopped around you could often pick one up for about £175. What more could anyone reasonably ask? As of now the answer is 256 stereo programs including delay, multitap and other effects, individual low- and high-frequency EQ, a standard 1U-high rack- ➤

➤ mount box and a price which will still leave you with change from two hundred small round bronze ones.

MIDI is still not an option, I'm afraid, and the Microverb remains resolutely non-programmable. However, its extensive range of reverb and delay effects have been chosen to offset this rather rigid format and make this a machine of potential interest to both first-time processor buyers and those looking to complement an existing unit.

Before getting to grips with the Microverb III's sonic capabilities, I should just mention a few of its physical attributes. Firstly, the box. Whoever it was at Alesis that made the decision to put the Microverb into a standard 19" cabinet should be warmly congratulated. One-third rack size cases (which were home to the first two Microverbs) were not only a pain to accommodate, but always seemed to carry the stigma of "non-professional" equipment with them. And although the Microverb III is eclipsed by most other rack-mounted effects units in terms of onboard facilities, its performance cannot be judged to be anything but professional.

Secondly, knobs. As owners of earlier models will be aware, the Microverb was one of the first pieces of equipment to feature a revolutionary new concept in parameter control - the knob. Carrying the torch in this exciting new field, the Microverb III comes equipped with no less than seven of them - for control of Input, Mix and Output, Low and High EQ, and for selecting the effects program itself. For those not familiar with the idea let me explain that this form of

control involves gripping a round plastic "knob" which protrudes from the front panel, and turning it either in a clockwise or anticlockwise direction.

The amazing thing is, including just a few of these controls eliminates the need for any sort of display: all the visual information you require is printed on the front panel. And it's so intuitive: need to tweak the high EQ a little? Just turn the knob marked High EQ. Fancy a longer reverb time? Just switch the rotary knob to the next position. Not only that but you can actually adjust more than one knob at a time, making it possible to listen to the effect of two parameters interacting with each other. Interestingly, I notice E-mu's Proformance 1 piano module (reviewed MT, November '90) used a similar system. Perhaps we're on the verge of a new era in technology. Anyway. . .

The rear panel socket complement, as you might expect on a non-MIDI instrument, is fairly basic. A pair of audio input jacks (the left doubling as a mono in), a pair of output jacks, a Defeat (bypass) jack for the connection of footswitch and a power socket (for a 9v AC adaptor) - and that's it.

## IN EFFECT

ONE OF THE great things about reviewing the original Microverbs was that with only 16 programs, it was quite feasible to run through each one and describe the quality of the effect. With 256 to wade through, however, I'm sure I'll be forgiven for not offering a blow-by-blow account of individual effects.

Basically, all the most popular reverb types are



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## MIDI SEQUENCES

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All songs in C-Lab, Steinberg and Standard MIDI File formats only.

catered for, and alongside Small, Medium and Large Rooms, we find settings for Medium and Large Halls as well as Chambers, Plates, Gated and Reverse effects. A total of 16 different effects for each reverb type are available, arranged, for the most part, in ascending order of reverberation time. In addition, there are settings for Short, Medium and Long Delay effects, for Medium and Long Regenerative Delay effects and for Multitap and other "FX" - again, with 16 different varieties of each arranged in ascending order of delay time.

For the most part, I found the effects comparable to those on units costing two and three times as much (though of course, on the Microverb, they are only available individually). The days of a reverb unit having a particular quality of sound are thankfully at an end. No longer is it possible to characterise an entire processor as being "ringy" or "woolly". There are still ringy and woolly reverb sounds around: the Microverb III has both of them, and in the right context they're very usable. But it also has a whole range of other reverb types to choose from, and to refer to them as anything other than stunning would be to admit to having become blasé about reverb effects in general.

It's reassuring to see Alesis prepared to take a few chances, too. Ordinarily on this kind of machine you could have expected to find only fairly safe effects designed to please everyone but with no real character. However, the sheer number of programs has meant that some rather interesting reverb and delay effects have also found their way in and really do make this a fascinating machine to work with.

## ROLE MODEL

LIKE MANY PEOPLE, I often find myself in need of a secondary reverb unit for use alongside my multi-effects processor which is frequently tied up providing one of those elaborate programs which demand all its processing power. In this respect, I found the Microverb III an excellent workhorse that provided an extensive range of sounds which worked well both with vocals and instruments.

To this extent, the absence of MIDI clearly represents no drawback at all. But what about systems in which the Microverb III would be called on to provide the sole source of effects? Well, obviously, life without MIDI-controlled program changes would be that much more difficult, but I don't think that the type of programs provided by the Microverb need to be changed mid-song very often. After all, when was the last time you heard a record which featured a change of reverb halfway through? Generally speaking, it's the more exotic multi-effects which require switching in and out, and this tends to obviate the need for MIDI on a unit like the Microverb III. Added to which, manually switching to a different reverb setting on the Microverb III doesn't generate any of the peculiar changeover effects which occur on some units. So, provided there is a suitable point at which to do so in the song, you could always switch in a different reverb or delay program by hand.

You might expect a budget reverb unit to be fairly simple in operation, but the kind of simplicity we're

talking about here is one which doesn't compromise overall performance and ultimately makes this such an attractive machine. Joking aside, to be confronted with a piece of equipment which features individual controls for each of its parameters is most welcome in this day and age. I genuinely thought knob twiddling had vanished for good.

That said, you do need to consult the manual fairly regularly when you're trying to remember the effect settings for each position of the switch on the right of the unit - this sort of information would be included in the LCD on more expensive models. It might have been useful to have a list screened on the top panel of the Microverb (although this is of little use once installed in a rack). Happily, you soon begin to remember the settings with a little use.

Though the inclusion of EQ controls on a reverb unit is by no means new, having two separate controls dedicated to the job does seem to open it up as a means of tailoring a particular effect to your needs. At more extreme settings, you can achieve some pretty dramatic results too. In fact, using the delay effects, I created a repeated signal so different from the original it sounded like another instrument altogether. This was particularly interesting when creating rhythmic effects in conjunction with a drum machine.

Like all non-programmable machines, using the delay settings involves adjusting the tempo of your music to suit the repeat time of the effect. And this can be a little restrictive - particularly when working with other musicians ("could we slow down by about 3bpm, chaps, my delay unit's out of sync?"). In practice I found the delay times to be very sensibly chosen and sufficiently closely spaced (remember you have 16 settings for each delay type) to ensure tempo changes are kept to a minimum.

The Microverb's tri-colour LED isn't exactly the last word in signal monitoring, but it does its job. On the review model, it appeared to warn of an overload situation long before there was any audible evidence of one occurring. Given the rather unpleasant nature of digital distortion, however, this is perhaps no bad thing.

## VERDICT

I'M SURE ALESIS would be the first to admit that the Microverb II was nothing more than an upgraded (and somewhat cheaper) version of the original Microverb. The Microverb III is, in all respects, the Microverb II's successor. More importantly, it's everything that a piece of budget audio equipment should be: competitively priced, with compromises made only in the facilities it offers, not in its audible performance. It does nothing my multi-effects processor can't do, yet after using it for less than a week, it carved out a niche for itself which was left open when I returned the unit to its box. Whether it represents your first foray into the world of effects processing or you're looking to use it alongside an already overworked reverb unit, the Microverb III will not disappoint. ■

**Price** £199 including VAT

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

**"To refer to the Microverb III's reverbs as anything other than stunning would be to admit to having become blasé about reverb effects in general."**

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**CASIO CZ1000**, worth £180; Roland SH101, worth £100, would like to swap for Casio HT3000. Mark, Tel: Harlow (0279) 420584.

**CASIO CZ3000**, £230. Brian, Tel: Northumberland (0670) 855123.

**CASIO CZ3000**, £250. Dean, Tel: (0202) 764438, days.

**CASIO CZ3000**, plus extra voices, £250; CZ230S, £100; Roland SH101, £100; MC202, £85; XRI Micon MIDI interface for Spectrum, with sequencing software, £50. Roger, Tel: 051-336 2467, eves.

**CASIO VZ1**, with manuals, and 2 ROM cards, £280; CSM10P piano module, £70; Boss DR220A drum machine, £60; Jen SX1000 analogue monosynth, £40. Mick, Tel: (0272) 720265, after 6pm.

**CHASE BIT 99**, synth of 1986, but I'm bugged if I can find someone to repair it! Hence £120. Tel: Walton-on-Thames (0932) 231617.

**E&MM SPECTRUM 2** VCO synth, Boss DR220A digital drum machine, £120 ono for both or swap for Roland TR626 drum machine. Jez, Tel: (0602) 790646, 6-7pm.

**ENSONIQ SQ80**, disks, many sounds, £700 ono; Kawai K1, £350 ono; Akai ASQ10 sequencer, brand new, £700 ono; Roland R5 drum machine, £300 ono, all boxed. Andy, Tel: Cardiff (0222) 620847.

**ENSONIQ SQ80**, 18 months old, manuals, boxed, excellent cond, home use only, £800 ono. John, Tel: 071-227 6190, days; 081-688 2600, eves.

**KAWAI K1**, boxed, £250. Ian, Tel: Sheffield (0742) 308439.

**KAWAI K1**, plus RAM, manuals, psu, boxed, £350, or swap for Casio VZ1. Alan, Tel: 051-677 8696.

**KAWAI K1** MkII, boxed, as new, £390; Alesis MMT8, £150. Gareth, Tel: 081-304 9728.

**KAWAI K1M** multitimbral synth module, £200 cash. Alistair, Tel: 071-372 0880.

**KAWAI K4**, 16-bit multitimbral synth, boxed, with manuals, excellent cond, £550. Tel: East Sussex (0424) 716528, eves.

**KAWAI K4**, £535; Atari 520STFM, plus Panasonic KXT1081, £220, must sell quickly. Tim, Tel: (07373) 812411.

**KORG DELTA** analogue polysynth, £150. Brian, Tel: 081-660 8020.

**KORG DW6000**, digital, MIDI, Korg SQD1 MIDI sequencer, £230 each; H&H K100 keyboard combo, 15" driver and tweeter, 6 inputs, £200. Neil Day, Tel: Stoke-on-Trent (0782) 404762, days; Stoke-on-Trent 416619, eves.

**KORG M1**, 6 months old, home use only, immac cond, £1050. Tel: (0937) 843362, after 6pm.

**KORG M1**, home studio use only, vgc, boxed, all manuals, just over 1yr old, new sounds, £875 ono. Tel: (0962) 733237.

**KORG M1R**, home use only, as new, inc packaging, 4 ROM cards, £730. Tel: (0322) 277684, eves.

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**KORG P3** MIDI piano sample module, Bosendorfer, Bechstein, chorus, card slot, split, velocity, £185 ono. Mark, Tel: Guildford (0483) 576680.

**KORG POLYSIX**, analogue synth, excellent cond, £250 ono. Chris, Tel: (06333) 64516.

**MOOG MINIMOOG**, good cond, £485; Moog Sonic Six, very rare, £450. Tel: (0726) 883265.

**PEAVEY DPM3** synth, built-in disk drive, 9-track sequencer, 16-voice

multitimbral, 3 months old, cost £1899, sell for £1549, can deliver. Tel: (0341) 280237.

**ROLAND ALPHA JUNO 1**, £210; Casio AZ1 master keyboard, £200. Tel: (0869) 249995.

**ROLAND D5**, multitimbral linear digital synth, immac cond, £340. Andy, Tel: (0582) 402923.

**ROLAND D5**, home use only, as new, all manuals etc, £410. James, Tel: (0425) 615767, after 5pm.

**ROLAND D10**, plus 4 ROM cards, home use only, £450 ono. Jeff, Tel: (0484) 607605.

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**ROLAND D50**, excellent cond, £650. Steve, Tel: (0909) 771581 or 771558, eves.

**ROLAND D50**, £500; Roland MT32, £150, both boxed, home use only, as new, inc Dr T's Atari editor. CJ Leppard, Tel: (0243) 572947.

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**ROLAND D70**, complete with case, £1200; Korg M1, complete with case, £750; Roland D110 module, new, boxed, £300; Oberheim OBSX, £200. Ian, Tel: (0543) 579130.

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**YAMAHA DX27**, vgc, boxed, plus manuals, £220; Boss DR550 drum machine, new, boxed, £130, or exchange both for vocoder, any make but must be in full working order. Andy, Tel: 061-998 0271.

**YAMAHA DX27** synth, inc flightcase and manuals, excellent cond, £250. John, Tel: (0604) 720595.

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**YAMAHA DX100** synth, plus memory, with psu and manuals, 192 voices etc, vgc, £160. Graham, Tel: (0206) 867863, eves.

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**YAMAHA FB01** synth expander, 240 voices, programmable via computer, boxed, as new, Orla DSE9, 99 voices programmable, vgc, boxed, as new, both flightcased, £225 ono, will split. Gavin, Tel: (0602) 732979.

**YAMAHA 802**, £620; 81Z plus Steinberg editor, £230; Akai VX90, £180; Evolution EVS1, £240, all perfect, A1, possible part-swap Roland D550. Tel: (0545) 560164.

**YAMAHA KX88** master keyboard, home studio use only, £950 ono. Tel: (0324) 612990.

**YAMAHA KX88** MIDI mother keyboard, excellent cond, fully weighted keys, £700 ono. Steve, Tel: (0865) 240 540.

**YAMAHA PF70** electronic piano, including stand, ideal master keyboard, home use only, must sell, £500 ono. Tel: 091-529 4788, anytime.

**YAMAHA SY22** synth, hardly used, perfect cond, 6 months guarantee remaining, £500. Tel: Woking (0483) 765089.

**YAMAHA SY22**, as new, boxed, £500; Roland TB303, with MIDI, £150. Tel: Sheffield 666197, eves.

**YAMAHA SY77**, plus software, excellent cond, 3 months old, £1450 ono, or p/x for Korg M1 of same cond. Tel: (0204) 652323.

**YAMAHA TX7** module, DX7 without a keyboard, vgc. Tom, Tel: (0706) 44410.

**YAMAHA TX802**, £600; Steinberg

editor, £80; Yamaha SPX90, £200; Fostex M20, 2-track, £650. Guy, Tel: 081-360 0412.

**YAMAHA TX816**, legendary studio module, (8x DX7), 64-way MIDI, very few made, excellent cond, £1800 ono. Clive, Tel: Southampton (0703) 293453.

**YAMAHA TX81Z**, FM multitimbral sound module, good cond, boxed, manual, £150, no offers. Tel: (0268) 784585

**YAMAHA TX81Z**, vgc, with extra voices, £165. Tel: 021-358 7612.

**YAMAHA V50**, £600; Yamaha RX11, £150; Roland MKS70, £600; Casio VZ1, £300. Chris, Tel: (0536) 744288.

## SAMPLING

**AKAI S612** sampler, with disk drive and loads of sounds, £200. Anthony, Tel: 081-740 1139.

**AKAI S700** sampler, vgc, £300. Tel: 061-483 8551, anytime.

**AKAI S900** Marion systems board, converts S900 to true 16-bit sampling, offers. Tel: 081-549 5571, days.

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**AKAI S1100** sampler, boxed, new, £2450. Tel: 071-266 4082.

**AKAI X7000** keyboard sampler, boxed, excellent cond, memory upgrade fitted, 28 disks, £450. Tel: (0592) 774966.

**CASIO FZ20M**, excellent cond, £850. Adam, Tel: 061-445 9247.

**CASIO RZ1** sampling drum machine, £100. Paul, Tel: Sussex (0903) 30534.

**E-MU PROTEUS**, 4 months old, £600. Dave, Tel: (0904) 635453.

**ENSONIQ EPS**, 2x memory expansion unit, upgrade forces sale, £100 ono. Tel: 081-549 5571, days.

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sampler/sequencer, with Apple IIe computer, 2 disk drives, keyboard, disks, extras, hard disk and/or manual, vgc, £375 ono; Synchronlab SMC1 SMPTE/MIDI sync box, £65 ono; Iconix sequencer program for Atari, vgc, £50; Steinberg Twelve, £20 ono. John Miller, Tel: Guildford (0483) 32802.

**MASTERBITS** Sampling Collection 700, (synths and drums), £18; Masterbits Climax Collection vocals CD, £30; Bob Clearmountain's Drum CD, £45, all absolutely brand new. Graham, Tel: 081-318 2429.

**ROLAND S10** sampler, home use only, mint cond, £300. Tel: (0703) 551582.

**ROLAND S10**, plus 30-disks, £400. Tel: (0501) 23825.

**ROLAND S550**, inc mouse and disks, £950. Tel: (0225) 311428.

**ROLAND S770** sampler, with 8Meg memory, 3 months old, £3800 ono. Tel: (0455) 611479.

**ROLAND W30**, large disk librarian, stand, cover, boxed, as new, £1250. Paul, Tel: (0742) 699975, after 6.30pm.

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**ALESIS MMT8**, mint cond, boxed, manual, £150. Peter, Tel: (0705) 596087.

**ALESIS MMT8**, boxed, manual, £160 ono. Paul, Tel: (0323) 892307.

**ALESIS MMT8** multitrack sequencer, very easy to use, £150. Tel: 081-878 4765.

**ALESIS MMT8**, as new, boxed, manuals, £125. Mark, Tel: 081-777 8169.

**KAWAI U80** sequencer, £380; Celebrity Ovation acoustic electric guitar, £240 or swap for interesting items. Marlow, Tel: (0420) 82317.

**KORG SQD1** 16-track sequencer, with disk drive, £180. Tel: Sheffield (0742) 683178 or 664813.

**ROLAND MC202**, Roland 707, 727, Yamaha QX21, EPS 2X memory. Fred, Tel: 031-556 3761 or Simon (0875) 22400.

**ROLAND MC500**, £350. Tel: 021-523 7727.

**ROLAND MSQ700** MIDI/DCB sequencer, eight tracks, MIDI and DIN sync, good runner, low mileage, £120 ono. Tel: 081-549 5571, days.

**ROLAND PR100** sequencer, MKS100 sampler, M1 sounds, Jupiter 6 plus flightcase, 2.2 C-Lab Notator, £750. Tel: (0908) 310590.

**YAMAHA QX5** sequencer, boxed, as new, £120 ono. John, Tel: 081-871 4191.

**YAMAHA QX5** MIDI sequencer, £130;

Yamaha MT100 4-track recorder, £200, both excellent cond. Kevin, Tel: 071-837 3534.

**YAMAHA QX7**, with manual, £50. Tel: Watford (0923) 673732, eves.

**YAMAHA QX21** sequencer, 12 months old, mint cond, boxed, manual, bargain at £70. Thomas, Tel: (0633) 422816.

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**ALESIS HR16** drum machine, £150; Alesis MMT8 sequencer, £125; Kawai K1M expander, £200; Casio CZ1 keyboard, £250; Yamaha REX50 digital fx unit, £170. Keith, Tel: 051-606 9920.

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**BOSS DR550**, boxed, as new, £145. Tel: Sussex (0273) 493659.

**BOSS DR550**, 16-bit drum machine, as new, unused, £120; Roland TR626 drum machine, home use only, £150. Tel: 021-236 4327.

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**FOSTEX A8**, 8-track recorder, excellent cond, £675; C9 plus Sony 701 digital processor, £425; Alesis MMT8 sequencer, £130. Mr Lynch, Tel: (0332) 776244.

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**TASCAM PORTA 01**, boxed, as new, hardly used, £190. Kevin, Tel: (0708) 747740.

**TASCAM 244**, home use only, £350. Tel: 081-656 0309.

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**XR01** MIDI sync to tape, £50; Cheetah trigger-MIDI, £100. Paul, Tel: Sussex (0903) 30534.

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**APRIL 1990** issue of MT, or photocopy of the Yamaha SY55 synth review. Dave, Tel: (0432) 761835.

**BOSS A802C** system controller. Tel: 091-253 2091.

**CASIO VZ1** ST software, RAM and ROM cards. Tel: (0724) 857970.

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**WANTED:** Korg MS20, cash waiting. Daniel, Tel: (0245) 325607, after 6pm.

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