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Music Technology

THE WORLD'S PREMIER HI-TECH MUSIC MAGAZINE

SEPTEMBER 1991

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Incognito

playing the field

ON TEST

Peavey 308s
Monitors

Forefront FT3
Patch Commander

Hybrid Arts
SMPTETrack Gold
Software

Voce Organ
Module

JL Cooper
Sync Link Mac
MIDI Interface

MIDI CLOCK & MTC

midi timing secrets



OBERHEIM DRUMMER
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World Radio History

WIN
gajits hit kit software

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Keyboard synths have had them for years – pitch and modulation wheels with which to add real expression to a performance.

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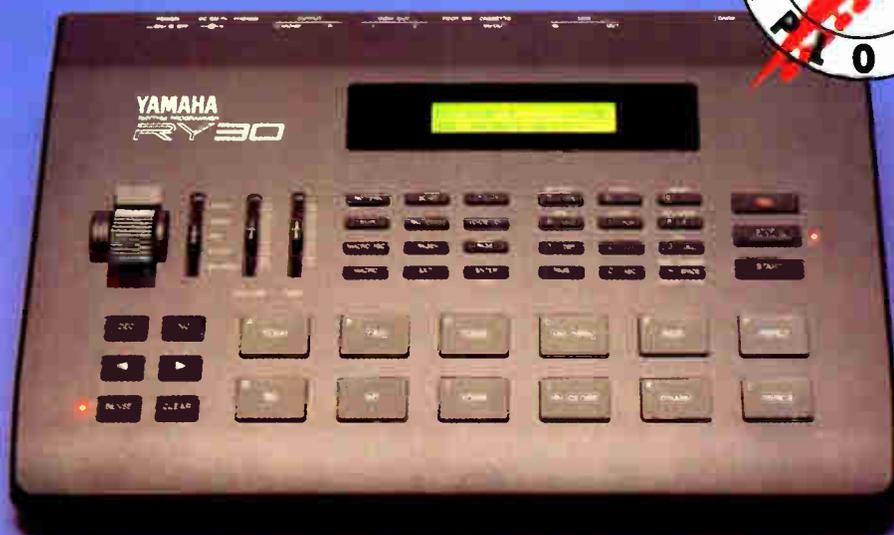
Although help is at hand if required, in the form of plug-in data cards including Signature Series voicings and patterns by leading artists.



RY30 Signature Series artists, Dave Weckl and Peter Erskine

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KORG WAVESTATION LOWEST PRICE IN THE UK

Lots of new Products this month • The New Kurzweil 2000 VAST synthesizer has an amazing spec as does the K1200 with its 88 keys. We are very impressed with the Yamaha TG77, QY10 & RY30 • Emu's Prousion is the latest addition to their range of sample replay Units which now include Proteus 1 & 2. If you have a Proteus 1 you must get it upgraded with a Protologic Board to give you twice the synth for half the price.

ROLAND JD800 New Synth £Low!!!



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SOFTWARE

OPCODE•STEINBERG•PASSPORT•MOTU•CODA•C-LAB•TSC



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- Opcode Vision
- Steinberg Cubase
- Passport Pro 4.5
- Performer
- Digital Performer
- Coda Finale
- Passport Encore



HARD DISK RECORDING

KORG•ROLAND•ENSONIQ•YAMAHA•KURZWEIL•WALDORF



DIGIDESIGN SOUND TOOLS & AKAI DD1000

Lots of new Products this month • Digidesign Sound Tools, Sample Cell, Optical Hard Disks, Macintosh front end for Akai DD1000, the new Yamaha DTR2 with 18bit D/A converters. Great package prices and support contracts. Practice "Safe Recording" with TSC.

STRUMMER/DRUMMER

These great new MIDI processing devices from Oberheim at £149 each cost less than a piece of software. The Strummer converts keyboard chords to guitar inversors - you select the strum rate and direction. The Drummer gives you over 10,000 possible rhythms which interact with your playing.

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 Miscellaneous Software Titles **£29.00**
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Contents

COMMENT

4

Where the printed word fails to deliver - how much can words tell you about sounds, and what can you do to bridge the gap between them? Tim Goodyer gets semantic.

NEWSDESK

6

If there was ever to be an International Jean-Michel Jarre Day, it would be *big* news. So would a really good book on DAT. And the launch of some very serious equipment leads. . .

COMMUNIQUE

11

We all make mistakes - Howard Hughes' Spruce Goose, for example, and Margaret Thatcher's Community Charge for another. I wonder if they got letters from Anna Katrami?

M-RAT SHOW

12

When MT sponsors an equipment show, you know it's got to be worth checking out. Here are some advance details on the hottest hi-tech show in Town.

COMPETITION

14

If rhythm programming is one of your pursuits, you can't fail to have latched onto our On the Beat series and you'll be interested in the review of Oberheim's Drummer. Now you can win Gajits' Hit Kit software.

READERS' ADS

74

The real estate market may have slumped, but there's no sign of the deluge of hi-tech Readers' Ads abating. It's the biggest in the business.

Appraisal

OBERHEIM DRUMMER

26

If your drum patterns sound uninspired it could be because you lack the subtle touch of the human drummer. Simon Trask looks at an electronic aid to drum programming.



JL COOPER SYNC LINK 40

The new line of cheap Apple Macs sees them finding more music applications; now the search is on for a cost-effective MIDI interface. Vic Lennard checks out a strong contender.

HYBRID ARTS SMPTRACK GOLD 50

Without UK distribution, Hybrid's Atari sequencers have almost been forgotten. But now they're back with a Gold update to shout about, as Vic Lennard finds out.

FOREFRONT TECHNOLOGY FT3 PATCH COMMANDER 62

This British "black box" has so many useful MIDI applications that many people will be buying two. Tim Goodyer asks "what the hell's a Patch Commander?".

VOCE ORGAN MODULE 68

Another contender for the recently-reinstated Hammond Drawbar crown comes in a single rack space. Gordon Reid organises his thoughts.

NIGHTMARES ON WAX 36

When you come across a hi-tech band who won't even use commercial synths for fear of being imitated, they must have something special to protect. Simon Trask pays a visit to Leeds to check out the mysterious Nightmares on Wax.

INCOGNITO 54

Ten years ago Incognito's first LP heralded a new British jazz funk movement; today their

second celebrates a world-wide dance movement. Tim Goodyer asks Bluey Maunick if the song remains the same.

Music

Studio

PEAVEY 308S MONITORS 64

Why choose between "flat" studio monitors and hi-fi speakers when you can have one pair for both jobs? Nigel Lord cranks up Peavey's 308s's.

Technology

ON THE BEAT 16

The drums, the drums, everywhere I go I hear drums. Nigel Lord presents another selection of rhythm killers for you to program into your drum machine or sequencer.

IMS REPORT 44

Every news bulletin tells us more about "the recession" - but how badly is it affecting the music biz? Ian Waugh reports from the front line at the International Music Show.

QUESTION TIME 72

MIDI Time Code and MIDI Clock - what's what and which should you use? Vic Lennard investigates alternative approaches to MIDI synchronisation code.

REC TEMPO



Midi

Hybrid Arts

PRINTING ERROR. . .

THERE'S SOMETHING FUNDAMENTALLY wrong with a magazine that deals with the issue of music. The problem is obvious: it's all those words sat silently on a page trying to tell you how your ears are going to react to sounds they might hear. (I wonder if anyone's thought of making a silent movie about the way things smell.) This problem of words and sounds isn't limited to Music Technology of course, it covers the entire music press from the weekly pop papers through classical music magazines to the hi-fi glossies.

Concentrating on hi-tech music, however, it's all very well reading about the sound generation system of a synth or the sampling rate of a sampler - it can be invaluable information when it comes to selecting an instrument best suited to your needs and your pocket - but it falls well short of allowing you to hear what the damn things sound like or feel what they're like to play. So what are your alternatives to reading? Well you could (and should) visit your local music shop once in a while - but you might run the risk of being "sold" something, rather than being advised about it. Is there anything else to help you out of this dilemma? As a matter of fact there is - there's the Music Recording and Technology show, for example.

While it's not the only musical instrument show you may care to visit (over 18,000 turned out for the recent International Music Show), the M-RAT show has been designed with the specific requirements of the MT reader very much in mind. The show actually began life a good few years back as the Hands On Show - a tactile extension of MT's sister mag *Home & Studio Recording*. But as recording technology and musical technology experienced a head-on collision, it became increasingly difficult to avoid having to deal with both. So why not cover the technology behind recording music *and* making it and allow you to become better acquainted with both? No reason, I'm sure you'll agree.

As a result, at the M-RAT show you'll find the major forces behind the British hi-tech music scene under one roof, eager to show you what you've been reading about and answer those problems which have been distracting you from your music lately. More than this, though, the show offers technical seminars and demonstrations of equipment intended to help you decide exactly what technology offers you, and how you should go about using it. As well as "structured" presentations, there will be a question-and-answer session towards the end of each day, giving you direct access to a panel of experts including some of the staff of both MT and *Home & Studio Recording*. To some regular visitors to the old Hands On Show, these sessions alone became worth the price of admission.

Taking a cue from some of the letters which have appeared in *Communique* over recent months, I should also point out that the show gives you the opportunity to make contact with other followers of the hi-tech faith - perhaps more so than at any other event on the face of the earth. After all, if you've all been brought together by a common interest in music and high technology, why not talk to each other about it?

I'm not going to fire dates and prices at you in this editorial, because I'm not trying to do the job of an advertisement (you'll see those elsewhere in the mag); instead I've attempted to address one of the problems inherent in the format of a written magazine. I recognise it as MT's editor and I'm sure you recognise it as the magazine's readership. This, then, is an opportunity we both have of overcoming the shortcomings of the printed word to the benefit of our music and the industry which makes it possible for us to make it - the hi-tech aspects, anyway. I know I shall be seeing a number of "name" musicians there (after all, it's their bread and butter), I hope I shall be seeing you too. **Tg**

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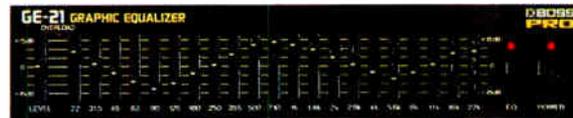
When your music starts out, it sounds something like ~~the~~ the way this looks. That's why, before you let even the least discriminating audience hear it, you might want to send it into a



BOSS SE-50 Stereo Effects Processor. THERE'S nothing like this on the market for the PRICE. It has 19 different built-in **EFFECTS**—including **Vocoder** and **Rotary**—eight of which you CAN use at **ONCE**. And you CAN process **TWO SEPARATE signals** INDEPENDENTLY. Which means your **SOUND** will *verge* on **PROFOUND** by the time it gets to your



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EPS:THE 4TH DIMENSION

Back in the May issue, we introduced you to the 4D Productions "Production Series" sample library for the Ensoniq EPS. To refresh your memory, 4D actually let you choose which samples you want on the disks you buy. Disks cost £4.50 each, and due to popular demand, 4D have extended their opening offer of £39 per box of 10. The company is also now selling blank formatted EPS disks for £30 per 50 unbranded and £35 for 50 Sony bulk, including p&p, which seems pretty reasonable. Watch out too for the second series of EPS samples which is now on the way.

More info from 4D Productions on (0392) 876675. **Dp**

INTERNATIONAL JARRE DAY

No it's not a wind-up - after letters appearing in *Communique* concerning the lack of attention currently being received by the intrepid Frenchman, an International Jean-Michel Jarre Day has been announced. The bad news (for those of you based on the British mainland) is that the event is to be held in Belgium on October 19th at the Bouwcentrum exhibition hall in Antwerp. The event will open at 11am and will include an exhibition of rare records, a display of slides and photographs of concerts and related events, a video hall screening (amongst other things) footage of JMJ's first Place de la Concorde *Bastille Day* concert (1979), a mini concert by Peter Stinissen and the opportunity to meet and talk to other fans.

Admission will be a measly two quid.

Better news (possibly) is that there is a JMJ fanzine called *Conductor of the Masses* currently available. The mag is an A5 format, quarterly glossy b&w affair (a good quality job), featuring news, reports of any JMJ-related happenings worldwide, letters, interviews with relevant people and so on. The July issue of *Conductor* is currently in print at a cost of (another measly) £2.

More about both the International Jean-Michel Jarre Day and *Conductor of the Masses* is available from the magazine's publishers at *Conductor of the Masses*, 296 Newton Road, Rushden, Northamptonshire NN10 0SY. Tel: (0933) 55273. Fax: (0933) 411108. **Tg**

BEATING CHEATING

OK, own up; which of you haven't got a clue about rhythm programming? Time to start thinking about the best way to fake a decent rhythm track. You could, of course, go for one of the rapidly proliferating easy composition programs currently available - or you could take advantage of the effort and expertise of pro musicians by purchasing Dr Beat, which is over 100 of their original drum patterns on ST disk in MIDI File format. And this is exactly what you get if you send £10 to Heavenly Music Ltd; according to the company, "you name the style, and we've got it". Full documentation is included with the disk, and for a tenner, it could well be worth a try. Call Heavenly Music on (0255) 434217 for your copy. **Dp**

Hot on the heels of the International Music Show and the 16-bit Computer Show, there are yet more shows coming up. While the two shows mentioned above are resolutely London events, those of you north of the English border should be pleased to know that the **Scottish Music Show '91** is taking place on September 21/22 at the SECC in Glasgow.

Offering a similar opportunity as the IMS to see the latest hi-(and low-)tech gear and an invaluable change to "get yer hands on", the SMS is an unmissable event for anyone too far away to visit the IMS or too smart to visit London. And more than being simply a "popular" music show, the SMS has been extended to cater for everyone from tomorrow's pop idols to those of a classical bent. Two fresh aspects of this year's show will be the emphasis on the educational market and the opening of the event to retailers. This means that you will now be able to buy what you try from some of Scotland's finest music stores.

This year's show threatens to completely overshadow previous years' events as, in addition to the

ON THE ROAD

involvement of Music Maker Exhibitions (part of the same group as MT), further sponsorship has come from the *Evening Times* newspaper who will be giving over editorial space to the show as well as running competitions and ticket offers. More sponsorship support has come from the mighty Coca Cola empire - a live music hall (Hall 1) will be hosting a wide range of demonstrations. Radio 1 will also be in attendance, broadcasting from the SECC entrance. Apart from coverage of the show being offered live by the station's DJs there will be yet more competitions and a series of "guest appearances".

Finally, coinciding with the Scottish Music Show there will be a concert performed by those legends of the 12-bar, Status Quo (in the 9000-seater Hall 4). It's not exactly hi-tech, but this charity concert - one of four *Rock Till You Drop* gigs the band will perform in the same day - is expected to ensure that even more punters are doing the rounds at the SMS. **Tg**

The Scottish Music Show '91 runs from Saturday 21st September 10am-6pm to Sunday 22nd September 10am-5pm. Admission to the Show is a bargain £3.50.

The show season continues with **The Music Recording & Technology Show** which will be taking place on Saturday 2nd and Sunday 3rd November at the Novotel International Centre in London.

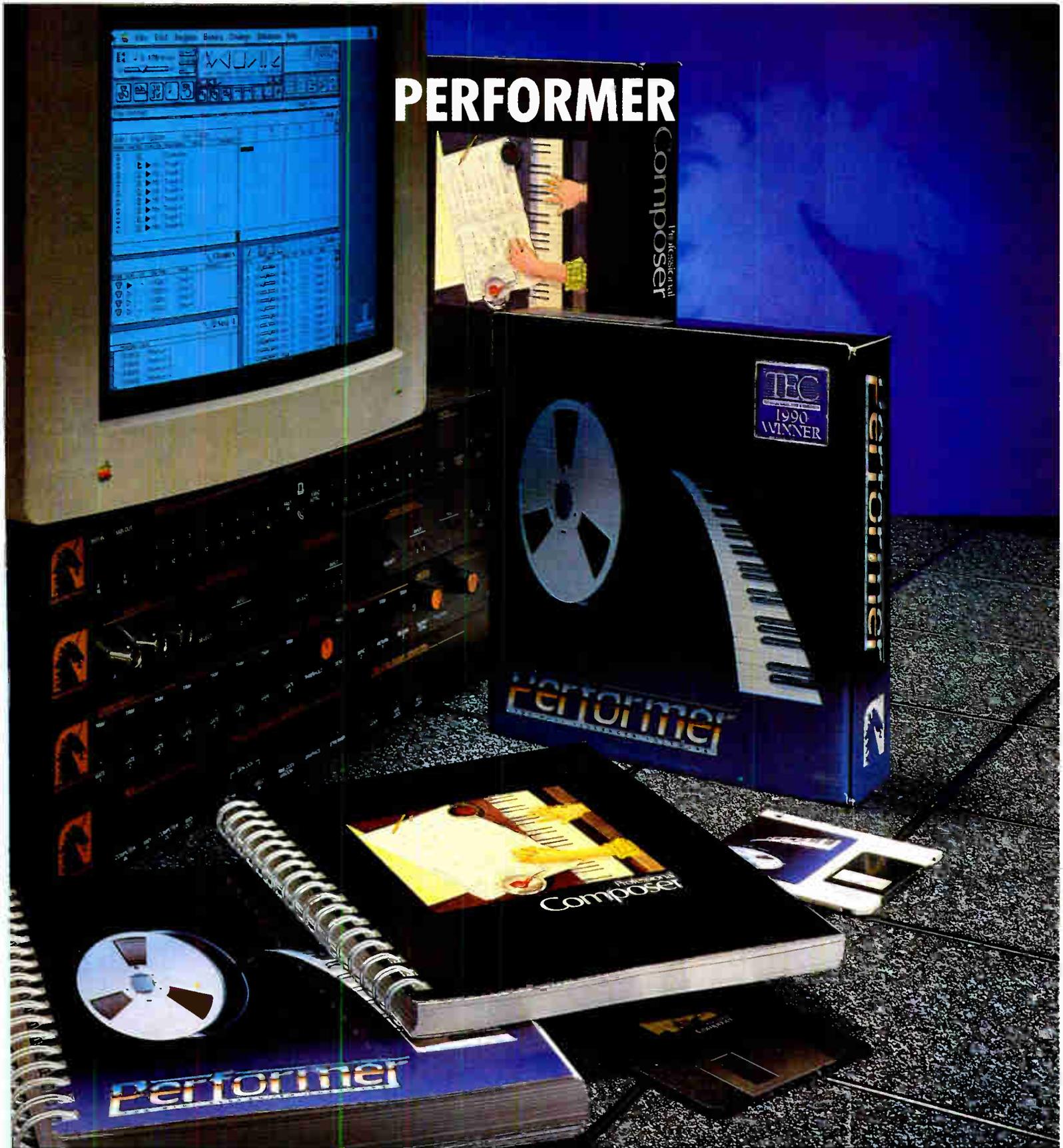
The M-RAT show - as it has affectionately been dubbed - is another Music Maker Exhibitions event, but one with particular significance to MT readers. As its title should suggest, the show is centred around the same issues that fuel MT every month. In fact, the M-RAT show is sponsored by Music Technology and sister magazine *Home & Studio Recording* so we're able to line up an exciting programme of demonstrations and seminars to accompany the more "static" aspects of the show. One of the most popular sessions of previous years' events is the open question sessions at the end of each day. In

these you have the opportunity to put your own questions to a panel of experts - worth the price of admission alone. Speaking of admission, the M-RAT Show is taking place over the same weekend and in the same premises as the incredibly popular London Guitarist Show sponsored by - you've guessed it - MT's sister mag *Guitarist*. Entrance is by a single ticket which will allow you to visit both shows, but the price of admission will be set to reflect the cost of one show only. You get the opportunity to visit the other show and its demonstration/seminars for free. The will also be price concessions for regular MT readers - watch this space.

While you've got your diaries open, you might like to make a note of the **Bristol Music Fair** too. Taking place on the 16th/17th November at the Bristol Exhibition Centre, the show has been expanded on previous years' shows and now has the support of local retailer ABC Music, GWR FM Radio and good ole Music Maker Exhibitions.

Details on all Music Maker Exhibitions events is available from Clive Morton on (0353) 665577. **Tg**

PERFORMER



Performer, is quite simply, the best Apple Mac MIDI sequencing package you can buy. It has a friendly, graphic interface which produces the ultimate, interactive working environment that won't hinder your creativity. Performer can handle an unrestricted number of tracks, songs and sequences. In fact all the limited functions you find a problem on other sequencers have been comprehensively solved, as Performer lets you decide what you need and has the capability to address 32 MIDI channels (expandable to 544 by the addition of Mark of the Unicorn MIDI Timepieces). It features all the real and step-time functions you could ever wish for. Powerful, easy-to-access editing features and even the ability to customise screens to your own requirements. Plus there's on-screen help whenever you need it, as well as music notation editing.

Performer extends a bird's eye view of all tracks, simultaneous display of all selected functions, and should you need to be able to print a full musical score to publication quality, then add Professional Composer – with all the functions you should ever need

including dot matrix, laser and typesetter outputs.

Performer is also supported by an impressive range of hardware: *MIDI Timepiece* expands the system to 128 MIDI channels and provides full SMPTE-to-tape synchronisation while *Video Timepiece* enables Performer to be locked to video systems running either linear or vertical time code (VITC). *MIDI Mixer 7s* is a software controlled mixer with seven stereo inputs channels, two-band EQ, and stereo FX sends offering MIDI controlled mix automation while the 3-in, 15-out *Video Distribution Amp* offers a simple solution to the video routing and signal splitting problems encountered in small A/V studios.

If you want to add digitally recorded sounds to your sequences, look no further than *Digital Performer* which works with the Digidesign Sound Tools Hard Disk Recording System, allowing digital audio to be manipulated alongside your MIDI sequence data.

Choose Mark of the Unicorn for technical excellence and a vigorous update policy, ensuring that you will have a great partner in music for years to come.



➤ Which aspect of your hi-tech setup do you pay the least attention? Which part of it do you take for granted, yet which can make or break your precious sounds, samples and songs? You probably think so little about it that I'll have to tell you - it's your cables, isn't it?

No matter how much money you spend on synths, drum machines, outboard, sequencers and so on, everything you do relies on signals (audio or MIDI) travelling down a piece of wire. And do you regard it as important? You don't. Fortunately for you (and me), Monster Cable do.

CREATING A MONSTER!

Having just about the best cables going for hi-fi, Monster are offering their expertise - in the form of a series of musicians' cables - to the musician. Now, it's no secret that there's a lot of bullshit surrounding hi-fi, but there's no denying that bad cable will give you poor-quality audio and corrupted MIDI datastreams. More than this, a cable designed to handle a specific type of audio signal will do the job far better than a piece of bell cable or even a reasonable general-purpose lead. So meet Monster Keyboard cables and

Monster Digilink MIDI cables (although there are also cables designed for guitar, bass, mics, speakers. . .). These are custom cables for the hi-tech elite. Monster cables manage to combine stylish appearance with build quality that will withstand everything short of a direct nuclear strike (lifetime guaranteed), so you can safely eliminate faulty leads from your working problems. And while some of Monster's own recent press information has been, shall we say, full of it, you can expect to actually

hear an improvement in the quality of your instruments.

Of course buying what's possibly the best cable on the market doesn't come cheap - a 6' Keyboard cable (with gold-plated plugs, naturally) retails at a cool £22 (inc VAT) while a 12' MIDI cable will cost £20. But then if you've laid out thousands on your gear, you have to consider whether you're getting the most out of it - if you ain't you've wasted your money. . .

More Monster information can be obtained from Harman Audio, Mill Street, Slough, Berks SL2 5DD. Tel: (0753) 76911. **Tg**

PC FREEBIE

Digital Music, the PC Music specialists, are pleased to announce that they are giving away a free copy of Band In a Box Professional, worth £69, with every copy of Cadenza bought - but you'll have to hurry, as it's a limited offer and subject to availability.

Band In a Box Professional is a new version of the popular software, and offers 75+ styles instead of the 24 of the previous version. It also supports Ad Lib and Soundblaster cards as well as all of the Music Quest range of PC MIDI Interface cards. Files created with Band in a Box Pro are fully compatible with Cadenza, which is a "professional" PC sequencer with

many features not normally found on PC sequencing packages. The program is a 64-track linear/pattern-based sequencer with graphic editing of notes, all MIDI controller data and control of faders. It supports a time base of 240ppqn (when used with the Music Quest MQX32M), as well as 32 MIDI channels.

Cadenza requires an IBM PC or compatible with 512K (though 640K and a mouse is recommended), an MPU401 or Music Quest MIDI card and a graphics adaptor. It's available with Band in a Box Pro for £199 inc. VAT only from Digital Music at 27 Leven Close, Chandlers Ford, Hants S05 3SH. Tel: (0703) 270405. **Dp**

DAT'S PROGRESS

Take a piece of technology and turn it into a cause - that's the name of the game here. While the arrival of DAT - or more correctly R-DAT - machines has caused a minor revolution in studio mastering and sample collecting, John Watkinson has chosen to view the DAT phenomenon as something to write about.

RDAT (Focal Press, £29.95) covers R-DAT and all the related technologies that have helped make it possible. Although the book promises to keep the technical jargon to a minimum, it's obviously not going to be too useful unless you've got a reasonable grounding in the relevant technology. But then a book on DAT that fought shy of the real

issues wouldn't be of much use - and *RDAT* is the sort of volume that turns out to be the definitive reference book for years to come. The topics covered in the book are many and range from an introduction to digital audio through head design and bitstreaming to subcodes. There are plenty of tables, diagrams and charts (as well as the odd page of maths) in the interest of clarity and comprehensive coverage.

If your interest in Digital Audio Tape extends beyond simply pressing Record or Play at the end of a recording session, *RDAT* is required reading. The title may be ordered from Reed Book Services Ltd, PO Box 5, Rushden NN10 9XY. **Tg**

WHAT'S NEW PUSSYK..AT?

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The K..AT is distributed in the UK by Q-Logic, PO Box 109, Dundee DD1 9DF, Scotland. Tel: (0796) 2001. Fax: (0796) 3806. **Tg**

ATLANTIC IN LONDON

New Hybrid Arts UK distributors Atlantic Audio have just opened new Central London facilities. Enquiries about Hybrid Arts software should be directed to Atlantic Audio, 2nd Floor, St Mark's Building, Chillingworth Road, London N7 8QJ. Tel: 071-607 9036. The new

premises also house demo facilities where the latest in Hybrid Arts software and hardware will be on show; interested parties are welcome to drop in - parking is easy and access for disabled visitors is no problem. We wish Atlantic all the best. **Dp**

One of the non-equipment launches that took place at this year's International Music Show was that of a new artist management company called Artist Connection.

On a recent visit to MTHQ, Artist Connection masterminds Russell Church and Michael Lawrence explained that the project represented a new approach to management brought about by the changing face of the music industry. With cutbacks in A&R staff making it even harder for new acts to gain

MEET THE MANAGEMENT

those precious few minutes of A&R attention, it's more important than ever that you give it your best shot. Artist Connection aim to expose their signings to over 300 record company A&R departments (this has already been agreed with the companies in question) in the form of a showcase video. But getting yourself on that video won't be easy. One of Artist Connection's functions will be to make sure that the quality of act

they're presenting to the record companies is high enough to warrant their attention. Where the new company score over going direct to the A&R (wo)man is that they intend to devote a worthwhile amount of time listening to your demo tapes.

Once you've been signed to AC, they promise you their full support - unlike many a record company. They also claim not to interfere with the artistic direction you have chosen to

take. They'll take you as you are, warts 'n' all.

At a time when it seems as if the best way to be a musician in the music biz is to be a businessperson too, Artist Connection could help look after the biz while you make the music - after all, if you don't succeed, they won't get their cut of your success. Now all you have to worry about is being good enough to get onto AC's books. If you think you've got what it takes, Artist Connection can be contacted on 071-437 6900. **Tg**

it's new

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Are those tears we see on the cheeks of the competitors?



it's clever

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the root letters

Being a consistent reader of your magazine and a music technology graduate myself, I felt I ought to write to you and complain about the poor, to say the least, quality of your MAIN article in July's issue.

In the article, entitled The Sound of Chaos, Steve Wright attempts to give a introduction to the theory of complex numbers. According to Mr Wright "2i stands for the square root of minus two, 3i the square root of minus 3. . . 3 + 7i means 3 plus the square root of minus seven". NO absolutely wrong.

The consistency of errors throughout this paragraph and the lack of any elementary checking of the text amazes me, for a magazine of high quality. I believe the quality of the issues will be better examined and improved in the future.

Sincerely

Miss Anna Katrami, B.Sc., M.Sc, M.Phil

University of York

PS $2i \rightarrow \sqrt{-4} \rightarrow \sqrt{4} \sqrt{-1} \rightarrow 2\sqrt{-1} \rightarrow 2i!$
 $3i \rightarrow \sqrt{-9} \rightarrow \sqrt{9} (-1) = \sqrt{9}\sqrt{-1}$
 $\rightarrow 3\sqrt{-1} \rightarrow 3i!$
 $3 + 7i \rightarrow 3 + \sqrt{-49} \rightarrow 3 + \sqrt{49}\sqrt{-1}$
 $= 3 + 7\sqrt{-1} = 3 + 7i!$

I have to concede that Steve made a mistake in his article and that I failed to spot it - no excuses. Sincere apologies to anyone who might have been misled by this error. But while you're not the only reader to write and point this out, you're by far the least graceful about it.

I'm assuming that maths is one of your strong points and, therefore, you feel personally offended by this error. Mistakes have an irritating habit of happening. And for a mathematically astute person there's the question of your use of exclamation marks in your "PS" - I believe I'm right in pointing out that an exclamation mark denotes the

factorial of a number. I'm sure you're not trying to prove that 2i actually equals 2i!, or that 3 + 7i equals 3 + 7i!. It's just a mistake in the presentation of your letter, isn't it? (I'd be intrigued to find out what the factorial of i actually is.)

Finally I'd question your perception of this article as being the "MAIN" feature in July's MT. I'd have thought it evident from the front cover layout that the two main features were the interview with Bomb the Bass and the review of the Roland JX1 synth. Perhaps you've let your interest in mathematics colour your judgement.

For my part, I've corrected the (considerable) grammatical errors in your original letter. I could have let you look silly in print, but that would have been petty - know what I mean? Tg

vox pop

To Chris Thompson of Edinburgh (see Communique, July '91), I am a massive Jean-Michel Jarre fan. I treat him like gold dust. I have all of his music and videos to date and I am also building some of his awesome keyboards. On this note, does anyone know of a speech synthesis program via a microphone?

Lastly, how can I get hold of a copy of the April edition of Music Technology and how much would it cost?

A Great JMJ Fan

Fay Rushby

Ryhall

Lincs

I'm pleased to hear that Jean-Michel plays such an important part in your life, Fay, but I'm not too sure what you mean by "building some of his awesome keyboards". I thought they'd been built already, or do you mean you're building replicas? In which case I'd suggest you buy up

an old VCS3, RMI Keyboard Computer and Fairlight Series III - it must be easier than scratch-building them. Or are you talking about some of the more off-the-wall items he's been seen sporting over the years - in which case you've got some serious research on your hands?

I'm not too sure, either, of what you mean by "a speech synthesis program". These exist for most popular personal computers (ST, BBC B. . .) but there is a particular item you should check out. It's a self-contained mic and speech synthesiser called the DynaMic and has been mentioned in the past in MT interviews with Coldcut (MT, August '90) and LFO (MT, August '91). Although it seems to have been designed as a child's toy, it appears to have serious musical applications.

Alternatively (and more musically) you might need to check out that elusive but fascinating phenomenon, the vocoder. Although much abused and under exploited, the vocoder remains one of the least recognised musical innovations of the last 20 years. You can either check out "classic" vocoders such as the Sennheiser model VSM201 or the Roland Vocoder Plus, or look into more modern developments like the Boss SE50 multi-fx unit or the Korg Wavestation A/D synth module. Alternatively, EMS continue to produce much sought-after vocoders (to order) from their Truro base camp.

Finally, MT back issues cost £2 (inc p&p) and are available from the "Back Issues Department" at the usual editorial address or phone number. Tg

islington loop

Please can you help me with a technical problem? My setup

produces a very loud background hum. I've heard of ground loops and mains interference, but I don't know what they are or how to get rid of them. My equipment includes a Roland D110, Casio HZ600, Ram Music Machine (Spectrum sampler), Studio Research 16:2 mixer, Atari 520 STE, ART Multiverb LT and NAD 6325 amplifier. Can you help?

Chris Tennant

Islington

London

Chris Tennant - sounds like the Pet Shop Boys after a gene splice. The lengths they'll go to for pop music. . .

It does sound like an earth (ground) loop that's causing your problem Chris, and if that's the case, it should be easy to cure. An earth loop occurs when you get a current flowing through the earth connections in your equipment, and this manifests itself as a low-frequency audio hum. The cause of the problem is almost certainly the fact that you've got more than one unit earthed through their mains plugs. If you bear in mind that the audio connections on your gear consist of audio paths and a screen, and that this screen is connected to the earth side of the circuitry, you'll realise that you've got two earth connections in this situation - one through the mains plug, the other via the signal leads. It's around this "loop" that the earth current flows, hence the term earth loop.

To cure the problem you need to ensure that each piece of equipment has just one earth connection. To do this you should disconnect all the mains earths except one (I'd suggest either the mixer or the amp). This should cure the loop, but you must make sure that all your remaining earth connections are secure, otherwise you have no safety earth to protect you and your gear. Tg



You've read the magazine, now come and see the show - and maybe even buy the T-shirt.

Sponsored by Music Technology and sister magazine

Home & Studio Recording, the Music

Recording and Technology Show is the only hi-tech music show worth seeing - and being seen at. It's your opportunity to get some hands-on experience of the gear you read about every month in MT, since many of the manufacturers and distributors you know from these pages will be providing working systems for MT and *H&SR* readers to play with. Think of it as Toys R Us for the musician. . . And the gear isn't all that'll be on show - the staff of both MT and *H&SR* will be present and correct, and more than happy to meet you and give any help we can; we'll also be inviting a selection of "name" musicians which you'll have read about in MT, so the M-RAT show will be the place to go on the weekend of November 2nd and 3rd if you're into star-spotting (and name dropping when you get home).

As well as all the above, we're also making what we think is a unique offer - admission to the M-RAT show will not only get you all the aforementioned attractions, it'll automatically qualify you for free entry into the

London Guitar Show, sponsored by sister mag *Guitarist*, and happening on a different floor of the same venue - which, incidentally, is the Novotel International Centre in London.

That's what we call value for money, especially since the ticket price is a *très* reasonable £5 per day.

And to demonstrate that we have, indeed, gone completely mad, we're also offering you the chance

of a further £1 off the admission price; a coupon which entitles you to this discount will be included in next month's issue of MT, and you'll be free to use it either on the door or if you prefer to pre-pay for your ticket in advance. So for a derisory four quid, you'll be able to browse around heaps of gear at your leisure, attend our famous seminar program (including the notoriously useful and often riotous live question-and-answer spot, manned by eminent industry boffins and MT's and *H&SR*'s editors - if they can be dragged away from the bar), and take part in the free draw for loot soon to be announced. When you've done all this - if you're still on your feet - you'll be able to get a rare glimpse into how the other half gigs by popping into the London Guitar Show - and no doubt there'll be more than a few spies from the widdly widdly camp in the more "intellectual" part of the building we've reserved for MT & *H&SR* readers. Who knows, you might even go home having made a few friends from the be-spandexed fraternity, and in the name of healthy musical cross-fertilisation, that can't be a bad thing.

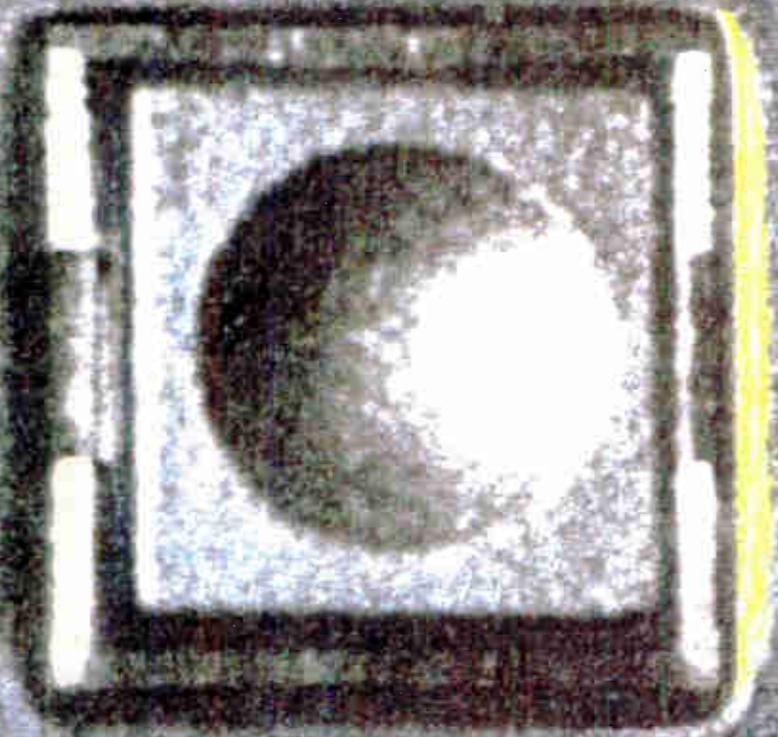
Be there or be a git. ■

Make a note in your diary: November 2nd & 3rd, London Novotel, Music Recording & Technology Show.

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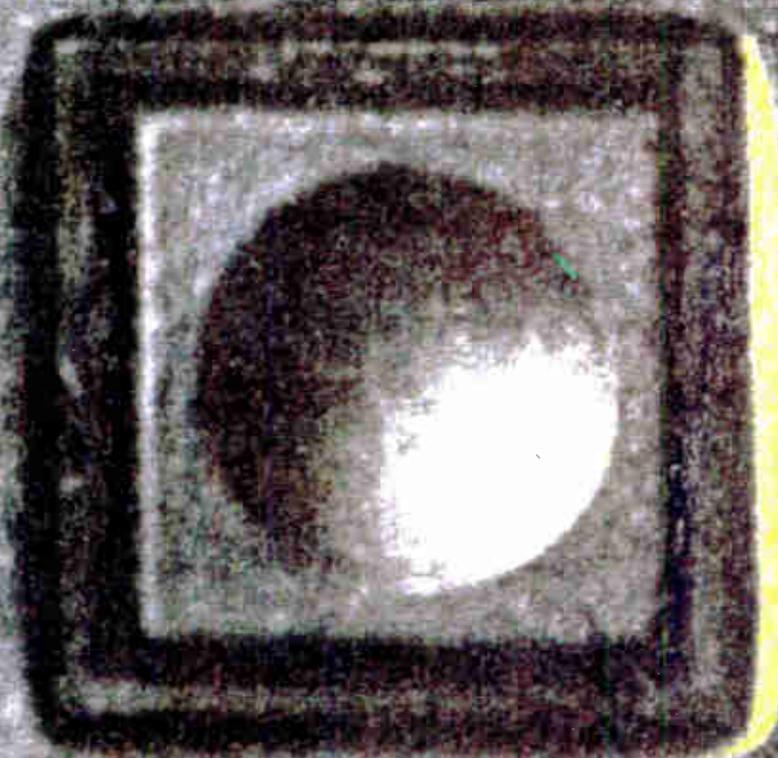
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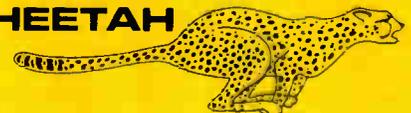
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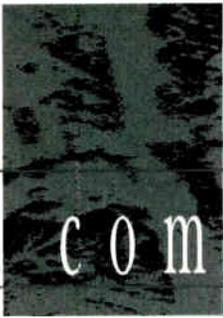
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competition

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“Er. . . is it halibut, Bob?”

“I don't think the adjudicator's going to let that one go. . . no, he's not. It is of course, Hit Kit from British company Gajits, manufacturers of that well-known SO, Sequencer One. Here's a few more interesting pointers for you. . . Hit Kit is a collection of music building blocks which you can use to help construct your own songs; style characteristics including ballad, blues, disco, house, latin, reggae and techno are offered, as well as “type” characteristics including bass, chords, drum, middle, filling and top. In fact, 82 drum patterns and 124 phrases are on offer, so when you're lacking inspiration, Hit Kit might get you through that musician's block. . . and I'm getting word here from the adjudicator that we've got no less than five copies of this program to give away as special prizes. It all hinges on the following questions; take your places for the Gold Run. . .”

Q1

What A was the computer for which Gajits Sequencer one first appeared?

- a. Amiga
- b. Atari
- c. Apple Mac

Q2

What F describes the manner in which you're presented with a copy of Hit Kit when you buy the Amiga version of Sequencer One?

- a. Fast
- b. Frequent
- c. Free

Q3

What M is the city where Gajits are based?

- a. Milan
- b. Montevideo
- c. Manchester

You're all in with a chance, but time is short; call in those important answers on MT's competition line - **(0898) 100768**. Answers must be in by *Friday, 20th September*. Should you need any assistance in answering the above questions, you should be ashamed - but a quick peek at MT's review of Sequencer One and Hit Kit in the August '91 issue will help somewhat. And before you ring off, we'd be interested to hear a short list of the hardware you're currently using - nothing too elaborate, but if it's you that's using the only remaining Davolisynth in the cosmos, we'd love to know. In the meantime, remember that the editor's decision is final and no correspondence will be entered into. Multiple entries are strictly forbidden and will be passed on to the producers of Broocie's *Takeover Bid* as likely contestants - you have been warned. . . ■

Thanks to Alan Ackers of Gajits for his kind donation of the prizes for this competition.

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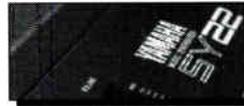
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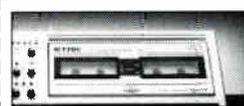
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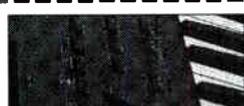
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ON THE

BEATBOX

Part 23

MORE ECLECTIC RHYTHMIC MACHINATIONS PROVIDE US WITH THIS MONTH'S FIX OF BEATBOX PROGRAMMING - A WARM WELCOME TO YOU OF THE BEATBOX GENERATION. TEXT BY NIGEL LORD



AS WITH THE last couple of articles, this month's grist to our (seemingly unstoppable) rhythmic mill comes unfettered by musical labels or classification, but could, nevertheless, be said to benefit from a single unifying theme. Each one of the seven patterns, though distinct in terms of structure, has a definite good-time feel to it which should ensure its popularity either as a dance groove or within an up-tempo

rhythm track for one of the less cerebral pop styles.

Within these 28 bars of programmed percussion, you'll find elements of many of the styles of music we've covered over the months, including house, rap (hip hop), jazz, go-go - and a sprinkling of Latin - all living side by side and contributing to the general air of *joie de vivre* which surrounds these rhythms (it must be the summer).

MUSIC TECHNOLOGY SEPTEMBER 1991



ILLUSTRATION: CLIVE GOODYER

As you'll see, there's some pretty heavy instrumentation in a number of the patterns, but this is purely in terms of quantity - there are no complex programming lines. Other instruments can (and should) be substituted where you regard them as being more appropriate to their setting; where possible, try substituting a number of similar voices (and tunings) before deciding which to choose. Contrary

to what you might think, the more instruments that are added to a rhythm track, the more important it becomes to ensure each one sounds exactly right. Sparse arrangements tend to be much more forgiving of individual voice characteristics.

Broadly speaking, in the patterns where two bass drums or two snares exist, try to select voices which are distinct from each other:

heavy ambient ones for the simpler parts and shorter, drier ones for the more complex - such as the second snare in Pattern 6, for example. Where multiple cymbal sounds coincide (ride, hi-hats, crashes), you'll need to get to work with the pitch control to preserve definition - and don't forget this extends to the cabasa wherever this instrument is included.

With the right choice of bass drum voices, Pattern 1 makes an excellent place to start. Surrendering none of its dancefloor appeal to the power generated by the two bottom-end instruments, it's also suited to a rock setting. As we all know, no self-respecting "heavy" would stoop to using a nancy-boy drum machine so I'll leave it to your (hopefully) fertile imagination to decide where to place a groove of such power and danceability.

With jazz presently being a popular influence on the dancefloor, Pattern 2 should receive a warm welcome. Its ability to veer between the two genres depends to a considerable degree on how "big" the bass and snare drum are made. It will tolerate heavy (even gated) voices, but this will be at the expense of the fluid feel you'd expect of a jazz rhythm.

The same is true of Pattern 3 but here we're moving away from jazz towards salsa and Latin - or perhaps I should say pseudo-Latin, as this pattern is unrelated to any recognised Latin rhythm. As is often the case, it's the instrumentation which provides the Latin tinge; remove the cabasa and congas and you're left with something decidedly "north of the border".

> If it's crossover (and a damn good time) you want, check out Pattern 4. It's inspiration is in the music of Screaming Target and it reflects their blend of rap, reggae and (virtual) jug-band rhythms which bury themselves in your skull and resist all attempts at removal. Of course, it's nothing more than a group of musicians with sound pop sensibilities applying a little lateral thought. But in the words of Vic Reeves, "what a refreshing change. . ."

Though not nearly so distinctive, Pattern 5 is worthy of your attention, particularly where you need the feel of a fast rhythm, but where tempo is restricted to the preferred 120bpm mark. The feeling of pace is achieved through the programming of four or more bass drum beats in each bar, and a fast ride bell line filling the spaces left by the other instruments. The bongo parts are optional and, when used, should be kept low in the mix. You might even try substituting congas.

In Pattern 2 we introduced jazz to the dancefloor; Pattern 6 takes it a stage further. There is an argument suggesting that where jazz meets dance, the result is go-go, but with that particular genre having (sadly) >

PATTERN: 1a		TEMPO: 105-125BPM			
BEAT:		1	2	3	4
Cisd HiHat		◆	◆	◆	◆
Open HiHat					
Crash Cymb					
Cowbell			◆		◆
Side Stick			◆		◆
Snare Drum			◆		◆
Low Tom					
Bass Drum 1	◆			◆	
Bass Drum 2			◆	◆	◆
TIME SIG: 4/4		BAR 1			

PATTERN: 1b		TEMPO: 105-125BPM			
BEAT:		1	2	3	4
Cisd HiHat		◆	◆	◆	◆
Open HiHat					◆
Crash Cymb					
Cowbell			◆		◆
Side Stick			◆		◆
Snare Drum			◆		◆
Low Tom					◆
Bass Drum 1	◆			◆	
Bass Drum 2			◆	◆	◆
TIME SIG: 4/4		BAR 2			

PATTERN: 1c		TEMPO: 105-125BPM			
BEAT:		1	2	3	4
Cisd HiHat		◆	◆	◆	◆
Open HiHat					
Crash Cymb					
Cowbell			◆		◆
Side Stick			◆		◆
Snare Drum			◆		◆
Low Tom					
Bass Drum 1	◆			◆	
Bass Drum 2			◆	◆	◆
TIME SIG: 4/4		BAR 3			

PATTERN: 1d		TEMPO: 105-125BPM			
BEAT:		1	2	3	4
Cisd HiHat		◆	◆	◆	◆
Open HiHat					◆
Crash Cymb					
Cowbell			◆		◆
Side Stick			◆		◆
Snare Drum			◆		◆
Low Tom					
Bass Drum 1	◆			◆	
Bass Drum 2		◆	◆	◆	◆
TIME SIG: 4/4		BAR 4			

PATTERN: 2a		TEMPO: 165-195BPM			
BEAT:		1	2	3	4
Cisd HiHat		◆	◆	◆	◆
Open HiHat					
Ride Cymb	◆		◆		◆
Ride Bell			◆		◆
Claves			◆		◆
Cowbell			◆		◆
Snare Drum			◆		◆
Bass Drum	◆		◆		◆
TIME SIG: 4/4T		BAR 1			

PATTERN: 2b		TEMPO: 165-195BPM			
BEAT:		1	2	3	4
Cisd HiHat		◆	◆	◆	◆
Open HiHat					
Ride Cymb	◆		◆		◆
Ride Bell			◆		◆
Claves			◆		◆
Cowbell			◆		◆
Snare Drum			◆		◆
Bass Drum	◆		◆		◆
TIME SIG: 4/4T		BAR 2			

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PATTERN: 2c		TEMPO: 165-195BPM			
BEAT:	1	2	3	4	
Clsd HiHat	◆	◆	◆	◆	◆
Open HiHat					
Ride Cymb	◆	◆	◆	◆	◆
Ride Bell		◆		◆	
Claves			◆		
Cowbell		◆	◆		
Snare Drum				◆	
Bass Drum	◆		◆		◆
TIME SIG: 4/4T	BAR 3				

PATTERN: 2d		TEMPO: 165-195BPM			
BEAT:	1	2	3	4	
Clsd HiHat	◆	◆	◆	◆	◆
Open HiHat		◆	◆		
Ride Cymb	◆	◆	◆	◆	◆
Ride Bell	◆				
Claves		◆		◆	
Cowbell	◆		◆	◆	◆
Snare Drum		◆	◆	◆	
Bass Drum		◆	◆		◆
TIME SIG: 4/4T	BAR 4				

PATTERN: 3a		TEMPO: 115-130BPM			
BEAT:	1	2	3	4	
Clsd HiHat	◆	◆	◆	◆	◆
Side Stick		◆		◆	
Cabasa		◆		◆	
Hi Conga		◆		◆	
Lo Conga	◆		◆		◆
Snare Drum		◆	◆		◆
Bass Drum	◆		◆		◆
TIME SIG: 4/4	BAR 1				

PATTERN: 3b		TEMPO: 115-130BPM			
BEAT:	1	2	3	4	
Clsd HiHat	◆	◆	◆	◆	◆
Side Stick		◆		◆	
Cabasa		◆		◆	
Hi Conga		◆		◆	
Lo Conga	◆		◆		◆
Snare Drum		◆	◆		◆
Bass Drum	◆		◆		◆
TIME SIG: 4/4	BAR 2				

slipped from public attention over the past couple of years, mentioning it by name isn't the encouragement to try the pattern it once might have been. But regular readers of this series, more than anyone, will know just how contagious triplet-based dance patterns can be.

Finally, this month, a rap pattern which, though destined for the dancefloor, has a poppy flavour to it which, sadly, puts it somewhere in MC Hammer's neighbourhood (the ghettos of Beverly Hills and Bel Air). Fortunately, it happens to be a pretty infectious groove which is just crying out for a complementary bass line. Anyway, if you're going to steal, steal from the rich. . . ■

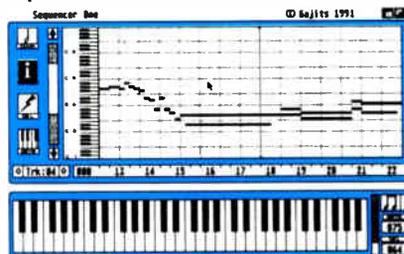
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- Mirror-image (left & right) pairs
- High-accuracy three-way system
- Independent variable control of mid and high frequency levels
- Impedance 8 ohms
- Acoustic foam blanket reduces baffle reflections

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PATTERN: 3c		TEMPO: 115-130BPM	
BEAT: 1		2	
Cisd HiHat	◆	◆	◆
Side Stick		◆	◆
Cabasa		◆	◆
Hi Conga		◆	◆
Lo Conga	◆		◆
Snare Drum		◆	◆
Bass Drum	◆		◆
TIME SIG: 4/4		BAR 3	

PATTERN: 3d		TEMPO: 115-130BPM	
BEAT: 1		2	
Cisd HiHat	◆	◆	◆
Side Stick		◆	◆
Cabasa		◆	◆
Hi Conga		◆	◆
Lo Conga	◆		◆
Snare Drum		◆	◆
Bass Drum	◆		◆
TIME SIG: 4/4		BAR 4	

PATTERN: 4a		TEMPO: 175-205BPM	
BEAT: 1		2	
Cisd HiHat	◆	◆	◆
Open HiHat		◆	◆
Ride Bell	◆		◆
Cabasa		◆	◆
Cowbell	◆		◆
Side Stick	◆		◆
Snare Drum		◆	◆
Hi Timbale	◆		◆
Lo Timbale		◆	◆
Bass Drum		◆	◆
TIME SIG: 4/4T		BAR 1	

PATTERN: 4b		TEMPO: 175-205BPM	
BEAT: 1		2	
Cisd HiHat	◆	◆	◆
Open HiHat		◆	◆
Ride Bell	◆		◆
Cabasa		◆	◆
Cowbell	◆		◆
Side Stick	◆		◆
Snare Drum		◆	◆
Hi Timbale	◆		◆
Lo Timbale		◆	◆
Bass Drum		◆	◆
TIME SIG: 4/4T		BAR 2	

PATTERN: 4c		TEMPO: 175-205BPM	
BEAT: 1		2	
Cisd HiHat	◆	◆	◆
Open HiHat		◆	◆
Ride Bell	◆		◆
Cabasa		◆	◆
Cowbell	◆		◆
Side Stick	◆		◆
Snare Drum		◆	◆
Hi Timbale	◆		◆
Lo Timbale		◆	◆
Bass Drum		◆	◆
TIME SIG: 4/4T		BAR 3	

PATTERN: 4d		TEMPO: 175-205BPM	
BEAT: 1		2	
Cisd HiHat	◆	◆	◆
Open HiHat		◆	◆
Ride Bell	◆		◆
Cabasa		◆	◆
Cowbell	◆		◆
Side Stick	◆		◆
Snare Drum		◆	◆
Hi Timbale	◆		◆
Lo Timbale		◆	◆
Bass Drum		◆	◆
TIME SIG: 4/4T		BAR 4	

PATTERN: 5a		TEMPO: 110-130BPM	
BEAT: 1		2	
Cisd HiHat	◆	◆	◆
Open HiHat		◆	◆
Ride Bell	◆		◆
Cabasa		◆	◆
Side Stick	◆		◆
Snare Drum		◆	◆
Hi Bongo	◆		◆
Lo Bongo		◆	◆
Bass Drum	◆		◆
TIME SIG: 4/4		BAR 1	

PATTERN: 5b		TEMPO: 110-130BPM	
BEAT: 1		2	
Cisd HiHat	◆	◆	◆
Open HiHat		◆	◆
Ride Bell	◆		◆
Cabasa		◆	◆
Side Stick	◆		◆
Snare Drum		◆	◆
Hi Bongo	◆		◆
Lo Bongo		◆	◆
Bass Drum	◆		◆
TIME SIG: 4/4		BAR 2	

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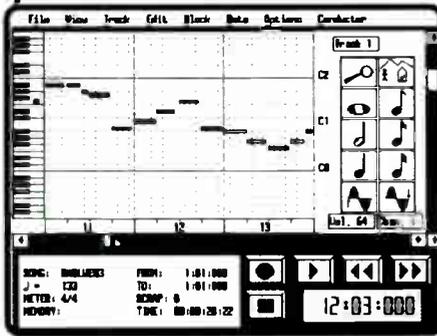
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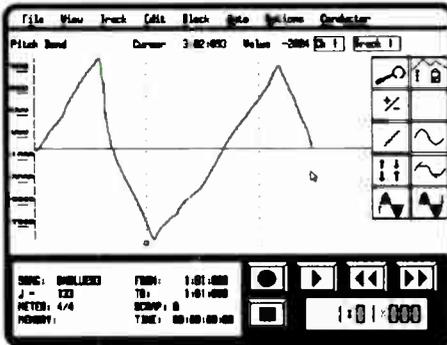
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BANK 4

BEAT: 1 2 3 4

PATTERN: 7d

TEMPO: 125-140BPM

TIME SIG: 4/4

BANK 3

BEAT: 1 2 3 4

PATTERN: 7c

TEMPO: 125-140BPM

TIME SIG: 4/4

BANK 2

BEAT: 1 2 3 4

PATTERN: 7b

TEMPO: 125-140BPM

TIME SIG: 4/4

BANK 1

BEAT: 1 2 3 4

PATTERN: 7a

TEMPO: 125-140BPM

TIME SIG: 4/4

BANK 4

BEAT: 1 2 3 4

PATTERN: 6d

TEMPO: 85-110BPM

TIME SIG: 4/4

BANK 3

BEAT: 1 2 3 4

PATTERN: 6c

TEMPO: 85-110BPM

TIME SIG: 4/4

BANK 2

BEAT: 1 2 3 4

PATTERN: 6b

TEMPO: 85-110BPM

TIME SIG: 4/4

BANK 1

BEAT: 1 2 3 4

PATTERN: 6a

TEMPO: 85-110BPM

TIME SIG: 4/4

BANK 4

BEAT: 1 2 3 4

PATTERN: 5d

TEMPO: 110-130 BPM

TIME SIG: 4/4

BANK 3

BEAT: 1 2 3 4

PATTERN: 5c

TEMPO: 110-130 BPM

DRUMMER



PHOTOGRAPHY: JON SHRIMPTON

Can a rhythm machine ever match the flexibility and spontaneity of a human drummer's playing? Oberheim's Drummer gives it a go. Review by Simon Trask.

THE THRUST OF technological developments during the past 10-15 years has been towards allowing us ever-greater control over the creation of our music. With programmable drum machines, MIDI sequencers and workstation synths and samplers at our disposal, we have all become used to the fact that we can create the drum parts, the percussion parts, the bass parts and any other instrumental parts that we feel our music needs - without being able to play any of the relevant instruments. We can all be multi-instrumentalists without having to be multi-instrumentalists. Any musician - keyboard player, guitarist, bassist, saxophonist, drummer - can use the technology to help them realise their own musical ideas. You don't even have to be a musician in the traditional sense in order to make

music, any more. In fact, if the technology of sequencers, drum machines, synths and samplers has accomplished anything profound, it's been the removal of lack of technique as a barrier to the realisation of musical ideas.

It's all a far cry from the days when, if you wanted to make music, you learned to play a musical instrument and joined a band (or maybe joined a band and learned to play a musical instrument), and when your musical role in the band was largely defined by the instrument you played. If you weren't the drummer, you left the rhythmic stuff to the guy who was - after all, he was the one who could actually *play* the drums (with any luck). Then along came the programmable drum machine, and suddenly the rhythmic stuff was no longer the sole preserve of drummers and percussionists - and we all know what a profound

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➤ impact *that* has had on music in the ensuing years.

Today, musicians from many walks of musical life use electronically-generated rhythms, but not everyone has either the desire or the ability to program their own drum parts. Drum machines which include preset patterns offer one alternative. Portable keyboards, with their ever more sophisticated and versatile auto-accompaniment sections, offer another. And now there's a third, in the form of Drummer, a new addition to Oberheim's Perf/x range of MIDI processors. Not so much a drum machine as a machine drummer, Drummer's purpose in life is to create drum tracks which sound as if (or, at least, more like) they're being played by a human drummer. What's more, it can "listen" via MIDI to a performance on another instrument and respond to the dynamics of that performance.

CASING THE JOINT

DRUMMER COMES IN the same compact, lightweight grey casing as its companions in the Perf/x range (Systemizer, Cyclone, Navigator and another new unit, Strummer). The upper half of the front panel is unused except for 12 ventilation slits; these unfortunately offer a direct access route to Drummer's circuit board for any liquids which might be spilt on the unit.

The lower half of the front panel is given over to a parameter list which is laid out in a 4 x 5 matrix format. To call up a parameter, you select its row and column - press the Mode button repeatedly to cycle around the rows until you reach the one you want, and press

one of five function buttons to select the required column. Pinpoint LEDs light to indicate the selected row and column, allowing you to see at a glance which parameter is selected. As a parameter access method it's both straightforward and fast, though being able to select rows directly using dedicated buttons would have made it even faster.

The value of the selected parameter is indicated in a two-character LED display in the lower-left corner of Drummer's front panel. It's not everyone's idea of a good display, perhaps,

now that we've got used to LCD windows, but at least it's bright and clear and for the most part conveys the parameter information in a readily understandable form. Additionally, two dots in the lowest segments of the display flash to give you a visual metronome and a visual indication of when Drummer is receiving MIDI data. The only other front-panel controls are the Start/Stop and data increment and decrement buttons.

Drummer's rear panel sports MIDI In and Out sockets, the power on/off switch (a rather delicate affair which protrudes about 0.25" from the casing and risks being snapped off if the unit is dropped

or otherwise badly handled), the input for the external power adaptor (supplied), and four footswitch input jack sockets whose functions I'll explain later.

OVERVIEW

THE MOST APPROPRIATE description for Drummer is probably "rhythm sequencer", as it contains preset rhythms but not the drum and percussion sounds to bring those rhythms to life. For sounds you must turn to a slaved MIDI sound source. A Drummer rhythm (or Pattern, as it's known in Drummerspeak) can contain up to 16 different drum and percussion parts, each of which can be assigned a note so that Drummer can trigger the relevant drum and percussion sounds via MIDI. Sets of MIDI note assignments are known, logically enough, as Kits. Drummer comes factory-programmed with 13 Kits designed for use with selected instruments (Kawai K4, Korg M1R, Roland R5 and Alesis SR16 for example), but you can replace these with your own settings at any time. In all you can program 16 Kits.

Drummer allows you to program globally a single MIDI transmit channel (1-16) and a single MIDI receive channel (1-16), the latter being the channel that Drummer "listens" to when it interacts with your playing. Additionally, MIDI information received on any channel is automatically routed through to Drummer's MIDI Out.

A Drummer Pattern is more accurately thought of as a rhythmic model from which Drummer constructs variations known as Rhythms. Essentially it does this by varying the bass drum, hi-hat and cymbal rhythms and the timing of notes. Drummer has 100 Patterns, and for each of these you can select one of 99 Rhythms or a random Rhythm; that's a lot of rhythms, but because variations from Rhythm to Rhythm can be very slight, the perceived variety is much less than the numbers alone might lead you to believe.

A Drummer Preset could be considered the "patch" level. Presets can be selected from Drummer's front panel and from a controlling instrument via MIDI using patch changes; any one of MIDI channels 1-16 can be globally specified as the receive channel for patch changes.

Drummer has 100 Presets, and to each one you can assign a Pattern, a Rhythm (Feel), a Kit, a time signature, a tempo (40-219bpm), a Follow (Interact) setting and an Other Percussion instrument. Changing the time signature of a Pattern is another way of working variety into Drummer's preset material. For instance, you can set a Pattern to play in straight 4/4 or in swing time (4/4 with swing 16ths); other possibilities are 2/2, 3/4, 6/8, 9/8 or 2/8.

All parameter settings you make are memorised by Drummer without needing to be Written into memory, and are retained through power-down. However, you can also transfer all data via MIDI as a SysEx dump (taking a modest seven seconds). This includes rhythm data that you can program ➤

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- into Drummer yourself - the first 13 Preset/Pattern locations can be used for adding your own parts to existing Patterns or for programming your own two-bar rhythms from scratch (you start by assigning the relevant Pattern or a special blank Pattern respectively to a Preset).

The original Pattern for a Preset can be recalled at any time; this has the effect of deleting whatever you've recorded into the Preset's Pattern location. Although the manual doesn't mention this, apparently by swapping the 8K RAM chip that Drummer comes fitted with for a 32K RAM chip, you can record into all 100 Patterns.

Drummer also allows you to create up to 16 Songs in memory, each of which can have up to 16 Parts. A Part consists of a Preset plus repeat and fill settings (of which more later). Drummer can be synchronised to the outside world via MIDI in both Preset and Song modes, and is able to act as either master or slave.

KITTING UP

TO PROGRAM A Kit, you press and hold down function button 4, press the Mode button, then release both buttons. The LED display then reads "bD", which tells you that you must program in the MIDI note which will trigger the bass drum. At this point you can play notes on your controlling keyboard until you find the note which triggers the sound you want; Drummer's LED display indicates the played MIDI note number. While you're creating a Kit, Drummer automatically rechannelises data received on the MIDI In channel to the MIDI Out channel, so that the notes you play are echoed through to your slaved sound source.

Once you've selected the bass drum you want, pressing function button 4 takes you on to the next note assignment, in this case for the snare drum. You then follow this procedure for the remaining 14 note assignments in the Kit, with the two-character LED telling you which instrument type you should be selecting; you can step through a Kit at any time without having to re-enter note assignments, so changing just one or two sounds in a Kit is easy.

The 16 instruments you need to assign appropriate MIDI notes to within a Kit are: bass drum, snare, open hi-hat, closed hi-hat, tom 1, tom 2, tom 3, crash cymbal, click (also used for the metronome), ride cymbal, tambourine, cowbell, shaker, snare enhancement (claps, noise burst. . .), bongo or conga, snare with open snares (such as timbale). These labels reflect the function of each instrument within a Pattern - the bass drum instrument is triggered by a part appropriate to the bass drum, the snare drum instrument is triggered by a part appropriate to the snare drum, and so on - but there's nothing to stop you substituting, say, low, mid and high congas for the toms, or using a

vocal sample for the snare enhancement.

If you assign Kit "=0" to a Preset, that Preset automatically uses whichever Kit you've assigned to Preset 0; this way, if Presets 1-99 are all set to "=0" (in fact, this is their factory default setting), all you have to do is select a different Kit for Preset 0 and you've changed the Kit assignment for every Preset. A neat idea if one Kit is all you need.

INTERACTION

FOUR FUNCTIONS COME under the banner of Follow (Interact): Auto-Start, Bass, Velocity and Fill. Each of these can be set on or off per Preset. Enabling Auto-Start allows you to Start Drummer playing by hitting any MIDI note. If Bass is enabled, any notes which you play on your controlling keyboard below middle C will trigger the sound you've assigned to the bass-drum instrument in the current Kit, so that, for instance, the bass drum part becomes locked into the rhythm of the bassline; Drummer drops out its own bass-drum part in deference to yours, with the exception that it plays a bass drum on the first beat of each bar to help mark time.

Velocity provides what is perhaps the most striking feature of Drummer, namely its ability to follow the dynamics of your playing. It does this by looking at the velocity values of incoming MIDI notes on the MIDI In channel and adjusting accordingly the velocity values of the MIDI notes which it transmits. But more than this, it drops certain instruments out of the Pattern as you decrease the forcefulness of your playing (the snare is always one of the first to go), and brings them in again when you increase it; it also changes the "density" of the instrumental parts that aren't dropped out in a way that's appropriate to the dynamic level of your playing.

Drummer responds fairly quickly to dynamic changes in your playing, so you can use fluctuations in velocity as a means of introducing further variety into Drummer's rhythms (dropping the snare drum out on selected beats).

The Velocity feature alone gives Drummer a unique level of performance responsiveness for a machine; I can see this aspect of Drummer making a lot of players very happy. Oberheim have included a globally-applied sensitivity parameter, with a choice of three velocity response curves (Lo, - or Hi), in order to help you tailor Drummer's velocity response to your playing style and the velocity output characteristics of your keyboard.

When Fill is enabled, Drummer monitors via MIDI whether or not you're playing, and if you're not it throws in fills to, well, fill up the gap. As soon as you start playing again, it stops playing fills. Drummer treats held notes as a gap, too. To my mind, Fill is a less flexible feature than Velocity, and I found myself using it less often - sometimes it's positively irritating.

The Other Percussion parameter, which also is programmable per Preset, can be set to off, closed hi-hat, click, ride cymbal, tambourine, shaker, ➤

“Drummer is able to bring a drummer-like flexibility and responsiveness to its rhythmic performances which sets it apart from the preset machines.”

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snare fill every bar, or snare fill every second bar. The inclusion or omission of this part can make quite a significant difference to the feel of a Pattern. Typically it's a busy part, and seems to be calculated to push the rhythm along and give it an extra lift. Whether or not it's dropped out by the Velocity function depends on the individual Pattern; sometimes it's the first part to go, other times it's one of the parts which remains active throughout.

PATTERNS & PRESETS

DRUMMER'S RHYTHMIC STYLES embrace pop, rock, reggae, swing and Latin. However, it doesn't take you long to realise that Drummer is primarily a rock drummer. There's Swing Rock with Variation and Fills, Rock/Reggae with Variation and Fills, Hard Rock, Joe Rock, Joe Rock Shuffle with Variation and Fills, Joe Swing Rock, Slow Rock, 16 Beat Rock, Swing Rock. . . The list goes on. There are also a few Latin rhythms such as salsa and bossa nova, but to my mind Drummer doesn't handle these very well. Nor is it all that hot when it comes to jazz drumming. You can select swing time and get a ride cymbal going, but there's a lot more to jazz drumming than that. Pursuing the analogy with a human drummer, I suppose you could say that Drummer's technique isn't really up to it.

Contemporary dance rhythms are thin on the ground, although you can get a few good things going with swing timing. But then such rhythms don't really have their roots in real drumming and the sort of hand/foot interaction that Drummer sets out to mimic. My guess is that dance musicians will get interested when they're able to get their hands on the in-depth programmable version of Drummer and start making it do things that no self-respecting real drummer would ever dream of doing - just like they did when programmable drum machines first came on the market. All that's needed is for Oberheim to actually produce such a machine.

By listing some otherwise hidden parameters - Jazziness, Swing, Percussion, Envelope, Fills, Backbeat and Downbeat - the Preset List towards the back of the manual (which lists the factory-default parameter settings for the 100 Presets) gives some insight into how Drummer is able to work the changes into its rhythms which make it sound less drum machine and more drummer. Jazziness, for instance, governs the amount of bass drum lead-ins, open hi-hats and random snare bounces that Drummer will throw in, while Swing governs the probability of 16th notes being thrown into 8th-note rhythms, and Percussion defines which instrument(s) will be used for added percussion parts within the Patterns.

Perhaps the most ingenious of the hidden features is Envelope, which can be used to specify at what points in Drummer's performances certain functions will be active. For instance, Preset 84 (Jazzy Rock with Variation and Fills) includes two Percussion parts, one of which has the tambourine assigned to it, the other the ride cymbal. Each of

these parts has an Envelope applied to it, with the result that the tambourine part comes in after 32 bars, plays for 32 bars, then drops out for the next 96 bars, and the ride cymbal part comes in after 64 bars, plays for 32 bars and then drops out for the next 96 bars. Envelopes are also used in the Presets to, for instance, limit Jazziness to the last two beats of every fourth bar.

I mentioned earlier that you can add your own parts to Drummer's rhythms, and also program your own rhythms from scratch. Once you've selected one of Presets 0-12 and assigned the relevant Pattern to it, you can go on to select a quantisation value (off, 16, Shuffle or SG - swing 16ths). Different quantisations can be mixed within a Pattern. Shuffle quantisation is a way of getting triplet 8ths from straight 8ths and straight 16ths, and can be very effective in combination with swing and straight quantisations - in some cases, most obviously the hi-hats, within a single instrument.

To record a Pattern, you first select Record in the parameter matrix, then press the Start/Stop button to instigate recording. Drummer loops around the two-bar Pattern in familiar drum-machine fashion, allowing you to both add and erase instrument parts on each pass. Successive presses of function button five toggle between record and rehearse modes - the latter allowing you to quickly try out a part before recording it.

Drummer records any MIDI notes you play into it, so you can add non-Kit sounds to existing Patterns and combine Kit and non-Kit sounds in your own Patterns. And if you can map pitched instrumental sounds onto the keyboard along with the drum and percussion sounds (remember, Drummer can only transmit on one MIDI channel) it's possible to incorporate basslines and chordal parts, for instance, into Drummer's patterns.

However, any parts that you play in yourself are fixed as recorded, as on a normal drum machine, which begs the question "Why treat Drummer as a programmable rhythm machine when its preset rhythms are where all the action is?". Well, being able to drop in a fixed rhythm of your own every now and then can be useful, as can being able to drop in a version of one of Drummer's rhythms which has some Latin percussion parts or maybe a bassline added.

FOOTSWITCHES

THE FOUR FOOTSWITCH inputs on Drummer's rear panel each have a global, fixed function. Footswitch one is used for Starting and Stopping Presets and Songs. Depressing footswitch two causes the entire rhythm to "drop out" for as long as the footswitch is held down. Drummer plays percussion fills on various instruments for as long as footswitch three is depressed - a good way of making a rhythm busier at any time you want and for as long as you want, though it can get a bit over the top. Finally, depressing footswitch four introduces standard - and in comparison with footswitch three more restrained - fill-ins; ➤

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For anyone who has not yet succeeded in ploughing their way through this incomprehensible jargon try sending for our MIDI faxpak - one of a range of six (PA, Portastudios, 8 track, Financial advice, and information on our recording school), all designed to help you through the recording maze. All the packs are free - just give us a call!

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In fact we are the largest pro audio dealers in Britain for Alesis, Korg, Drawmer, Casio, Fostex, Seck, Yamaha, TDA, Tascam, Studiomaster, Allen & Heath, C-Lab and a good many more! (Last year we sold nearly 700 new 8 & 16 track packages and around 300 s/h machines !!). It's always worth ringing us for a quote on new equipment and if you're still unconvinced, ask yourself why we became the biggest in such a short time (or better still ask the rest!)

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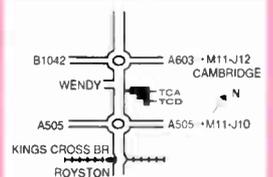
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- depending on when and for how long you depress the footswitch, these fills can last for one bar, for the last beat of a bar or for as many bars as you want, though they always end with a crash cymbal on the first beat of the next bar.

The bad news is that Drummer doesn't come supplied with any footswitches; the good news is that whenever you switch it on it can detect the polarity of any footswitch(es) plugged into it and adjust itself accordingly, so you can mix 'n' match any footswitches you already have.

SONGS

THE PARAMETERS IN the top row of Drummer's matrix layout allow you to select any one of its 16 Songs and assign a Preset to each of up to 16 Parts, together with a repeat number (1-99) and a fill setting. The repeat number actually represents the number of bars the Part will play for before the Song advances to the next Part. The fill parameter has a choice of eight settings: no fills, one fill in the last bar of the Part, or a fill every 4, 8, 12, 16, 24 or 32 bars.

Sixteen Parts per Song might not seem a lot. However, it's worth bearing in mind that you'd have to program many patterns and use up many song

steps on an ordinary drum machine to achieve the sort of rhythmic variety you can get within one of Drummer's Parts.

As long as you're not slaving Drummer from a MIDI clock source, you can take advantage of a neat feature which smoothly increases or decreases the tempo over the last bar in a Part where two consecutive Presets have different tempos. If you're using one Preset for the verse and another for the chorus, you can assign a slightly higher tempo to

the chorus Preset and Drummer will then effectively "lean into" the chorus instead of simply jumping from one tempo to another. There again, if you actually want to have an abrupt tempo change, you've got a problem.

VERDICT

THE SIMPLEST CONCLUSION to draw about Drummer is that it's a fine example of accessible technology: small, cheap, easy to comprehend and easy to use. The manual could do with being a bit more thorough - and in one or two instances a bit more accurate - in explaining some aspects of Drummer, but this isn't really a reflection on the unit itself. Oberheim have deliberately set out to make Drummer as uncomplicated as possible, the idea being that you have to do very little else but set it going and play along with it. As such it's well suited to the musician who wants the advantages of working with programmed rhythms without the

burden of having to program them. I can see Drummer finding a home equally with songwriters working on their own material and solo performers playing cover versions. Of course, if a fairly static preset rhythm backing is adequate, then there are preset drum machines which can do the job well - Roland's new CR80, for instance. It's also worth bearing in mind that preset machines typically have a more varied range of rhythms than does Drummer - if Latin American favourites are your thing, maybe Drummer isn't. Nor does Drummer have the convenience of Break, Fill and End buttons. And nor, of course, does it have onboard sounds - but then that gives you the freedom to slave whatever sounds you want to it.

However, Drummer is able to bring, to an extent, a drummer-like flexibility and responsiveness to its rhythmic performances which sets it apart from the preset machines and allows live creation of rhythm tracks which would take some effort to program. Most of all, the feature which sets Drummer apart from preset and programmable drum machines is its ability to respond to the dynamics of your playing.

Another way you could make use of Drummer is to record its output into a MIDI sequencer and then extract any sections you like in order to use them as patterns within your own rhythm tracks, perhaps after some editing to get them just how you want them.

I must admit I have mixed feelings about Drummer, though. It takes away the creative freedom of programmability and in its place offers a set of rules based on a set of preconceptions about what makes a good rhythm track. Under the guise of offering new freedoms it also manages to impose its own limitations. Playing along with Drummer is like playing with a human drummer who for the most part just does his own thing. It can introduce variety into its performances, but much of this has nothing to do with your playing. In the end, you're still playing along to it rather than together with it.

To put it bluntly, Drummer can be really irritating when it does something that doesn't really work musically with what you're playing - particularly as you can't tell it not to do it again. And on the subject of responsiveness, Drummer isn't able to extrapolate changes in tempo from your playing, so you're locked into its steady machine tempo.

Drummer falls far short of replacing the human drummer. But for all that, it still offers a hint of something that will excite some people and horrify others: the intelligent, creative machine performer. The impulses toward this are deep, both economically and psychologically, and in time it'll be an issue with such profound ethical, social and economic ramifications that it'll make the sampling issue look like a small disagreement between friends. Drummer is only the beginning. ■

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WAXING

LYRICAL PRIGAL



Nightmares On Wax melt down hip hop, house, techno, funk and soul grooves and pour them into a new mould. Interview by Simon Trask.

THIS IS THE SECOND TIME IN A MONTH I'VE BEEN TO LEEDS to conduct an MT interview, and I'm beginning to wonder if the magazine should open a northern office. Last time it was LFO, this time it's the turn of fellow WARP Records artists Nightmares on Wax to grace the magazine's pages. And so, as if by magic (actually, after a three-hour train journey), I'm in the company of George Evelyn, Kevin Harper and a modest collection of hi-tech musical gear which includes a Cheetah Master Series 5V controller keyboard, an Akai S950 sampler and an Atari Mega 1 computer running C-Lab's Creator sequencing software. The setting is the living room of Evelyn's

home in Leeds, and the gear gets used by Evelyn and Harper for pre-production work - for actual recording, they prefer to head down to Sheffield, and FON studios.

The duo's path to music-making via DJing during the past decade is a by-now familiar one. Having met and become good friends in Bradford during the breakdancing days of '84, they decided to take up DJing and landed a half-hour weekly spot at a new club, Downbeat, in Leeds. The half hour subsequently turned into half the night; they began putting together their own megamixes on tape, and in time they turned to making ➤

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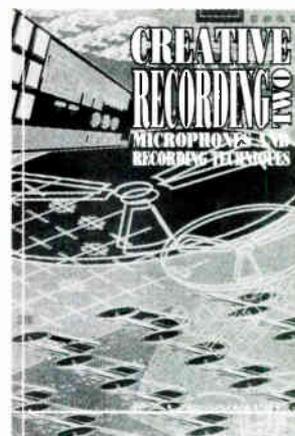
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Y their own music. Harper elaborates:

"It came to a situation with us buying records where I'd say to George 'I'm not happy with that, it would've been better if they'd done this or done that'. Obviously we wanted to hear what we wanted to hear, so we started making our own music."

Starting from humble beginnings with a Casio SK1 home keyboard and a Yamaha MR10 four-track, things began to look up when they bought an SH101 and put together a tough dance track called 'Dextrous'. Unable to find anyone to release their music, they set up their own record label, Poverty Records, in 1989 and pressed up 1000 copies of a three-track 12" which they then distributed around Leeds, Sheffield, London and Manchester - while one copy found its way to the desk of a certain Assistant Editor in Ely. 'Stating a Fact' by Nightmares On Wax on one side was a hip hop track, while 'Let It Roll' and 'Dextrous' by Nights On Wax were in a house/techno vein. It's this versatility which to this day characterises what Nightmares on Wax are all about.

The 12" was enough to bring them to the attention of the then nascent WARP Records, and a remixed version of 'Dextrous' subsequently became the second release on the Sheffield label. Last year saw the release of the powerful follow-up single, 'Aftermath', but it's 1991 which looks set to be Nightmares On Wax's year. With the release of the four-track *A Case of Funk* EP and CD Single on August 12th, and the group's debut album, *A Word of Science* on September 9th, Nightmares on Wax are at last getting the chance to show their real versatility. The EP/CD Single contains two tracks which will also be on the album, namely 'A Case of Funk' and 'Biofeedback', and two tracks which won't - the radically funky and tuff '21st Kong' and the aptly-named 'Strange'.

Nightmares on Wax like to confound people's expectations, and so it is that the album's opening track, 'Nights Interlude', is a mellow soulful track with a touch of jazziness to it which will surprise anyone who only knows 'Dextrous' and 'Aftermath' (both of which are included on the album). Similarly, the dreamy, down-tempo 'Playtime', with its shuffling rhythmic feel, is not exactly what fans of manic bass tracks will be expecting. 'Back into Time', with its slowed-down Steve Miller 'Fly Like an Eagle' sample, captures more of an old hip hop feel circa 1988, nicely laid back, while 'Coming Down' is the hardest, rawest, most unrelenting track on the album ('Coming Down Hard' might have been a more appropriate title), and 'Mega Donutz' and 'How Ya Doin'' are both wacky rap tracks.

If this seems like an impossibly diverse collection of tracks, think again. Nightmares On Wax have an all too rare ability - first glimpsed on record on the Poverty Records 12" - to fuse hip hop, house, techno and funk sensibilities. And after many years DJing hip hop, house and techno to a youthful dance music crowd, Evelyn and Harper aren't about to forget what it is that catches people, regardless of the style.

"We're not trying to make our music difficult to listen to, you can always catch that groove", says Evelyn. "As long as that groove comes in, you're there, and whatever else comes with it will come naturally. But also our ears aren't just aimed at the dancefloor, and we've tried to make an album that can be a listening album, too, so it can please everybody. After a manic night out, there's always something mellow you want to listen to when you get home."

If Evelyn and Harper don't like to be categorised - and they don't - it's perhaps because there are more musical dimensions to them than categorisation can cope with.

"We've noticed that in a lot of our interviews, and in people's outlook on us, we're either put in the bass category, the bleep category, the techno category or the clonk category", observes Evelyn. "But to us we're just

Nightmares On Wax. We don't try to put ourselves into any category, we just do what we feel. All that category business is out of the window, for us."

Harper: "When it comes to making tracks, we never know what we're going to do, we just do it, and whatever comes out is what comes out."

"We want people to realise that we're not following anybody", says Evelyn. "With every track we put out, we want to change something on the scene, even if it means people are going to be copying us. We want to inspire a lot of people and be remembered."

"Like all this bass business", elaborates Harper. "We've done it. We've proved ourselves with tracks like 'Dextrous' and 'Biofeedback', and now there's no point in us carrying on doing the same thing. There comes a point where you've got to move onto different things. Like now we want to get a hard funk feel in our music."

MOST OF THE TRACKS ON A WORD OF SCIENCE WERE recorded at FON studios, where Evelyn and Harper chose to work in the programming suite rather than the main studio.

"We find that in big studios the sound is too clean, and you just lose that feel as though it's come from the street", explains Evelyn. "In fact, it's not even from the street any more, it's made in a £100,000 studio or whatever.

You end up with so much quality that you just lose that street feel. We didn't want that to happen with us.

"Another problem with big studios is that there's certain effects and certain sounds that a lot of other groups would recognise. It's like 'Oh, you used that, that and that effect'. We want everything we make to be just ours."

Like their WARP labelmates LFO, Nightmares On Wax decided against releasing an album last year.

"If we'd wanted to, we could have had an album out then, but we knew it wouldn't have been

what we wanted", says Evelyn. "The worst thing you can get yourself into is being under pressure, and we didn't want that. Working in the studio should be enjoyable. I think that's why we feel happy about the album, because we know that we haven't had to rush anything."

With the pressure off, Evelyn and Harper were able to dictate the hours they worked in the studio, rather than have their working hours dictated to them by the harsh necessities of commercial deadlines. The result, according to Evelyn, was a working atmosphere conducive to creativity.

"We'd do two or three days in the studio one week, then a fortnight later we'd do two or three days more", he recalls. "When we got into the studio we were on an instant vibe, from the first piece of rhythm that was on that computer just going round and round, and we were thinking up ideas. If we'd been in the studio day in, day out it wouldn't have been like that, because we wouldn't have been feeling fresh. These bands that are given two or three weeks in the studio by their record company to record an album, I feel sorry for them."

"That's the good thing about WARP: there's no pressure. I reckon, if we were signed to anybody else, Nightmares On Wax wouldn't be at the stage it's at now. For a start, another label probably wouldn't have put out 'Aftermath', it would have been too hard for them."

"Put it this way, I don't even know what it's like to be signed to a label. It's just us and a few friends putting music out and having some fun. It's not like we're in it for a quick buck - we're not expecting to make loads of money off this album. We all know that we've got to build."

Conventional wisdom has it that the modern technology of sequencers,

"With every track we put out, we want to change something even if it means people are going to be copying us. We want to inspire a lot of people and be remembered."

drum machines and multitimbral synths and samplers tore apart the social fabric of the band and gave rise to the phenomenon of the "bedroom musician", working away in splendid isolation. In truth, technology hasn't quelled the social instinct in human beings, and if anything, because its use doesn't have to revolve around clearly defined instrumental roles, it can offer a less formal relationship. At the same time, it's natural that different musicians will gravitate toward different elements of the music. Harper explains how he and Evelyn work together in the studio: "The majority of the time, George is the percussion and hip hop side, I'm doing the basslines, and then the melodies are us combined. And that's Nightmares On Wax; that's how it works so well."

What, no arguments?

"No, we've never come across it", replies Harper. "Everything flows all the time."

"Once we get in the studio, the vibe's there", Evelyn elaborates, "and once we're on that vibe nothing goes wrong between us. Sometimes we'll just sit there looking at one another saying 'I can't believe it!'. If I was to go solo or if Kevin was to go solo, we wouldn't sound anything like Nightmares On Wax. We could each have the same idea, but when we come together it becomes something totally different, it's not what we were both on about anyway. That's what's good about it - every track is a surprise. We try to make tracks so that you've just got to be ready for whatever's going to come next - we'll get the track to build into whatever isn't expected."

The single most important piece of sound-generating gear for Nightmares On Wax is their Akai S950 sampler. Synths, on the other hand, don't get much of a look-in, and when the duo visit FON it's not so they can take advantage of the studio's collection of synths. The only use they'll put a synth to is as a MIDI controller for the sampler.

"We don't take any notice of the synths they've got", says Evelyn. "We're just not interested in using those sounds, because we know somebody else's hands have been on them. It's not that they haven't got good sounds, or that we couldn't get something good out of them, but somewhere along the line everybody'll end up using them."

Instead it's sampled sounds and, to a lesser extent, sampled breaks which come to the fore in the Nightmares' music. Evelyn and Harper take very seriously the creative potential of sampling.

"Sampling gets a lot of slagging now, but to us sampling is an art form, no matter what anybody says", insists Evelyn. "If you listen to hip hop today, their way of sampling is amazing, the way they disguise samples. That's what it's all about, being able to sample something, change it up, put it in your track and then play the original to somebody and have them not even be able to notice it. Sampling a break straight off is nothing, nowadays. Now that anybody can sample, it's all down to how you do it."

The pair are less than forthcoming about the "how" of their sample manipulations, but Evelyn does reveal that instead of using the Akai's utilitarian time-stretching routines to bring their sampled breaks into line, they prefer a more creative approach which involves "chopping up" samples into small segments which can then be manipulated independently before being "glued" back together again.

The same spirit of sonic adventurousness informs the duo's approach to sampling and manipulating individual sounds.

Evelyn: "We'll hear a sound and we'll sample it, but we won't just use it straight, we'll play about with it. We're creating our own sounds out of existing sounds, that's the easiest way I can say it. It's just that we've got this... I suppose it's pride. We make our own sounds for everything, even down to the hi-hats. People might call us fussy, but it matters to us, right down to the smallest detail. That's how original we want to be."

"Every little sound we both have to agree on, that's how it works", adds Harper.

Ironically, the very technology which allows Evelyn and Harper to be so meticulous about crafting their own sounds also makes it easy for other people to appropriate those sounds. The Nightmares are well aware that the capabilities of the digital sampler can, like the proverbial double-edged sword, cut both ways. Harper gets in a pre-emptive strike: "All those people who are

stuck for ideas, they're always waiting for something new to come along. Well, I'd like to say to all the fakers and imitators out there that the metallic sound on 'Biofeedback' is going to get sampled."

Evelyn, however, is far more sanguine about the prospect of their sounds being ripped off.

"To me it's a compliment if we make a track and somebody samples a sound off it and uses it, so it doesn't really bother me", he maintains.

LISTENING TO THE MUSIC ON A WORD OF SCIENCE, YOU

soon become aware that the Nightmares' music has little to do with the current easy-money commercial dance music that, unfortunately, too many people get to hear. As experienced DJs, Evelyn and Harper are in a good position to see what's wrong not only with the music but with the dance scene as a whole. It's not a pretty picture.

"The major problem is the people in the dance movement", Evelyn explains. "They won't accept anything until it's big, and that's the saddest thing about it. It was the same situation when I took a white label of our next single to a club, and the DJ played it for a minute and then went onto the next track. That's the typical shit you have to go through, because these people won't play anything until it's big. These are the people that make out they're down with it, but really they're just playing safe."

"I think the problem now is that we're losing club culture", opines Harper. "It's happening all over the country."

"Everybody wants to be a DJ and get themselves in the limelight", Evelyn adds, "but all they want to play is house music, and they don't realise that they can't play anything else. Too many people are getting brainwashed, they're not getting the chance to hear other music. There is good music out there, but people aren't getting the chance to hear it because all these YTS DJs are just pushing it aside for all this piano stuff. Unless there's a big scream in it, or a big piano intro, they're not interested."

That other music of the moment, Belgian techno, doesn't come too high in the Nightmares' estimation, either.

"I used to rate it about a year and a half ago, but it hasn't progressed", says Evelyn.

"All they're going for is mental sounds, a mental effect", adds Harper. "All those stabs... it's just annoying now."

"That's what all the rave stuff's doing", Evelyn continues. "It's just heavy-metal house. All the people who were into the music in the first place are getting pushed out because they don't feel that they're part of that scene any more. It's not that they don't understand it, it's because the music's shit."

Harper: "When we're DJing, George does the hip hop side and I do the house side. I refuse to play any of that rave shit, all that piano stuff, because then I'll just sound like everybody else, so what's the point?"

"There's too many promoters around, as well, and they're just killing the scene", adds Evelyn. "We're waiting for everything to go back to basics. I reckon the tables will turn, it has to happen. We're just going to carry on doing our own thing. Even if it came to the stage where nobody liked our stuff and our records stopped coming out, I know we'd still make music, because we'd still get a buzz from doing it."

The versatility, originality and vitality contained within the grooves of *A Word of Science* should ensure that, for Nightmares on Wax, obscurity remains nothing more than a bad dream. ■

EQUIPMENT LIST

INSTRUMENTS

Akai S950 Sampler
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SEQUENCING

Atari Mega1 Computer
C-Lab Creator Software

RECORDING

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If you're used to using an Atari as part of your MIDI setup, you've been spoiled by its onboard MIDI interface - but choosing an interface for a Mac has just become a lot easier. Text by Vic Lennard.

IT'S A SAD fact of life that unless you have an Atari ST or a Yamaha C1, you have to buy a MIDI interface for your computer. Owners of PCs, or compatible machines, require more than a simple interface due to the slow nature of their computer's serial port. In contrast, Apple Macintosh users don't have the same problems. The various Mac MIDI interfaces start at around £65 with Opcode's Translator and JL Cooper's MacNexus, each providing a single MIDI In and three MIDI Outs. As there are two serial ports on most Macs, one for modem and the other for printer, you can effectively drive two such units and have access to 32 independent MIDI channels with two-way MIDI merging on input for around £130.

The problem facing Mac users is how to generate SMPTE or FSK code for tape, and then convert it back to one of the MIDI synchronisation methods. This either requires an additional piece of hardware, or a combined MIDI interface/synchroniser. And while such units are available, they have usually been expensive.

JL Cooper are renowned for MIDI hardware devices such as Fadermaster and the PPS1 FSK-to-MIDI Clock converter. While they have had a device as described above available in Syncmaster, the RRP of £315 is rather steep. Consequently, the company's Sync-Link represents a low-cost alternative.

SYNC-LOOK

MEASURING JUST 21CM x 12cm x 4cm, Sync-Link is about a half-U rack size and can be racked by using the optional JL Cooper Rack Tray. Controls on the front panel are sparse: a three-way toggle for Tape Code mode, another for MIDI sync mode and a power push-button. There are also five LEDs: two each for the modem and printer ports

(showing in/out activity) and one to show tape code activity. The rear panel has two sets of MIDI connectors along with their associated serial port sockets, tape sync in/out and the socket for the external 9 volt psu - far more sensible than an internal one for a unit of this size, for reasons of heat and possible transformer interference.

The psu is included, as are two Mac serial cables which usually cost at least a fiver each. It's good to see a manufacturer being prepared to include all necessary cables.

By using both of the Mac's serial ports, Sync-Link gives you the opportunity to effectively use two different systems with it. Separate keyboard and MIDI modules can be connected or alternatively, two MIDI Ins and Outs from a MIDI patchbay can be used for signal distribution to an integrated system - I suspect most people will use Sync-Link this way. This leaves the awkward question of how to access the Mac ports when you're not using them for MIDI applications; after all, they're primarily for a modem and printer respectively. You could spend your time disconnecting and re-connecting the various leads, but you can get hold of an ingenious switch "box" which has a flying cable going to the Mac, two sockets and a single switch encased in grey plastic. All you do is mount it near the Mac and switch between the two devices by pressing the button. The fact that it has a flying lead reduces the number of cables you need by one - important when you consider that Mac serial cables aren't usually available from your local computer shop.

Sync-Link can transmit one of two tape sync codes - SMPTE or FSK. The decision on which to use will depend on whether the Mac sequencer you are using recognises MIDI Time Code or not (more soon). The right-hand toggle switch lets you choose whether FSK is used or not by selecting either the bottom position for FSK, or the middle

“Having looked around for a suitable Mac synchroniser/MIDI interface for a month or so, I can only wonder how JL Cooper can produce Sync-Link so cheaply.”

or upper for SMPTE. This selection has to be made before turning the unit on - alteration after this is not recognised.

SYNC - SMPTE

SMPTE MODE IS used if the sequencer can recognise either MIDI Time Code (MTC) or Direct Time Lock (DTL). The latter is a proprietary system used by Mark of the Unicorn's Performer, which now responds to MTC as well. The right-hand toggle is set accordingly and the sync in/out connections are made between Sync-Link and the multitrack recorder. The signal level to tape should be around -7dB, although higher levels can be used for reliability if the adjacent track is left blank as a buffer.

Tape striping starts from 0.0.0.0. and at 30fps as soon as you flick the right toggle to Stripe. What if you want a different start offset and frame rate? One of the short-cuts taken with Sync-Link is in the use of a Desk Accessory to configure the striping operation instead of providing the relevant switches and readouts on the front panel. The Start Time and Frame Rate can be set on-screen as can the relevant serial port and MTC/DTL. The current SMPTE time can be displayed - and continues even when the DA window isn't the active one - and can happily co-exist with any Mac sequencer as long as the box with MIDI Application Running is selected. This is fine if these are the settings you always use, but Stripe has to be selected on the front panel, and a click on the Download option on-screen stops Sync-Link from transmitting tape code. A further click on the Download option then sends the relevant info to Sync-Link and transmission starts. Simple and practically bullet-proof.

The manual explains the setup procedure for the sync pages of most of the Mac sequencers, including DTL for Performer, with the serial port invariably being set to 1MHz.

Once the tape is striped, flip the right toggle to Read and either MTC or DTL will be transmitted back to the Mac on the port set by the DA or to the modem port by default.

SYNC - FSK

THERE ARE ONE or two budget sequencers which cannot recognise MTC, such as Passport's Trax. For these, JLC have included the FSK-to-MIDI Clock conversion option which also includes Song Position Pointer. This allows a song on tape to be started from somewhere other than the beginning, and the sequencer to lock to it. This type of FSK is often referred to as "intelligent" FSK or FSK2. The left-hand toggle is set to FSK and the right-hand one is used as for SMPTE - Stripe or Read. When striping, the sequencer has to be playing the relevant song so that any tempo changes are recorded. This is, of course, one of the reasons why you only use FSK with a sequencer when you have to - if the sequencer can use MTC or DTL, then the SMPTE mode of Sync-Link should always be used.

Copying SMPTE timecode from one tape to another shouldn't be done by simply re-recording the track. The code should be regenerated. Sync-Link can do this. In fact, it does it all of the time - whenever it receives SMPTE at the sync in, it automatically transmits a regenerated version from the sync out. It also has the

ability to do basic Jam Syncing, which again occurs automatically. This is when the original time code has faults and the generator continues to transmit SMPTE even though the input code is corrupted. Sync-Link can handle up to six frames of corruption - if the drop-out is longer than this, the generator stops.

Additionally, the MTC or DTL conversion continues through a minor drop-out - again for up to six frames. Remember that six frames is between a quarter and a fifth of a second depending on the frame rate, and drop-out beyond that is certainly substantial. Tape damage or corruption through a mains spike should be handled OK.

Finally, Sync-Link can operate in Free Run mode - the upper position of the right-hand toggle. In this mode, SMPTE is output from the sync out and MTC or DTL are output from the modem (default) or printer port. This allows you to synchronise devices requiring SMPTE, MTC or DTL without needing a tape machine.

The only problem I encountered when using Free Run was in changing the code start time or frame rate. Using the DA in Stripe mode, this can be changed, but you have to be certain to close the DA before moving the toggle to Free Run mode otherwise the Mac locks up. If you are using Passport's Pro4, the serial leads have to be changed round and the printer port selected, because Pro4 will only recognise MTC from this port.

SYNC - USE

I TESTED SYNC-LINK with most Mac sequencers with complete success. The comments in the manual about usage with various programs is accurate and very necessary - you have to be aware of the slight quirks in the synchronisation of your sequencer; trial and error working is not recommended. JL Cooper have done their homework. One sequencer not mentioned within the manual is Steinberg's Cubase, but there are no problems here.

Having looked around for a synchroniser/MIDI interface for a month or so, I can only wonder how JL Cooper can produce Sync-Link so cheaply.

One point worth making here is that if your sequencer is using MTC and is jumping during playback, the odds are that the frame rate set for the sequencer and Sync-Link are different. It's a shame that European versions of Sync-Link can't be set to 25 frames by default, but it's easy enough to alter from the DA.

VERDICT

DID I SAY Sync-Link was cheap? Yes I did. With a RRP of only £150, it can hardly be described any other way. (Who says that everything for a Mac is expensive simply because of the name?) Sync-Link is practically the same price as a free-standing SMPTE-to-MIDI Clock converter and yet it offers two MIDI Ins and Outs, SMPTE and FSK, MTC, DTL and MIDI Clock along with free-running time-code generation, jam sync and SMPTE regeneration.

Needless to say, I bought one. Now at last I can get down to some sequencing on my Mac. ■

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AFTER VISITING EUROPE'S largest music fair, the Frankfurt Musik Messe (see report MT, May '91), it's very easy to be blasé about our own International Music Show (previously the British Music Fair). Not all the "famous names" attend and it's somewhat smaller - but it's still the premier UK music exhibition and it does offer UK residents hands-on access to the vast majority of current and soon-to-be-released musical equipment.

This year, the floor space was considerably reduced from that of last year's event although a head count revealed only a handful fewer exhibitors. Most of the big boys had opted for smaller stands and there were many minimum-size one-booth stands. It's debatable whether or not the

"International" tag succeeded in attracting any extra exhibitors or visitors. Visual evidence seemed to suggest it didn't.

For the seasoned music hack looking for news copy, the Frankfurt bash, coming only months earlier, tends to grab most of the new releases. This was certainly the case this year but there were a few gems waiting to be unearthed at the IMS.

We'll start with the hardware and a surprise exhibitor in the form of **E-mu Systems** who were exhibiting at the BMF, er IMS, for the first time in five years. Lots of top American brass, clean-cut boys in evidence, too.

E-mu were launching the Proteus MPS (Master Performance System) (£1199) - a Proteus with a keyboard attached. As most >

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ASK SAMUEL T COLERIDGE

Continuing our series in which famous poets answer your Hi Tec queries. This month, Sam Coleridge offers the benefit of his experience. Sam started in the biz with Bill and Dorothy Wordsworth at their Lakeland pad and did most of the programming on "Daffodils". The success of that poem enabled Sam to strike out on a solo career and he began working on his first big hit "The Rime of the Ancient Mariner" with Sheena Easton singing the part of the duck. (Later changed to an Albatross). Many more hits followed plus collaborations with his old mentors, the Wordsworths. A brief spell in prison for possession of 3 grams of Laudenum and wearing a Mega Death T-shirt left Sam a chastened man. He now forswears anything stronger than ammonia based floor cleaners and spends much of his free time lecturing young people on the dangers of Heavy Metal. (Say No! to distortion).

Dear Mr Coleridge,

I'm a white, middle class, Bank Manager with several credit cards and an Austin Montego. Which drum machine should I buy to give myself some street credibility?

Signed
Norman Morris
Sidcup.

Norman, you have a problem. Even a drum machine as deeply groovy as the Alesis SR16 would be hard pressed to make you anything like hip, so I would suggest the only way that you are ever going to raise your profile, streetwise, is to take the plunge and get yourself an Emu Proccussion or a Korg S3. Failing that you might consider major surgery.

Dear Sam,

My daughter is a constitutional Monarch, with her own MIDI set up. What budget expander could I give her to produce all those workaday sounds like piano, brass and strings etc.?

Yours
The Queen Mother

Well your Highness, you might consider Yamaha's TG55 or Roland's U220. They're both expandable with new waveform cards and will give you plenty of sparkling samples at a fraction of the price of a new Landau Coach. Have a look at the EMU Proteus if you like a warmer sound. For more orchestral sounds, check out the Proteus 2, the Yamaha TG77 and Roland's NV30.

Dear Mr Coleridge,

In "Christabel" half way through the 4th stanza in the seventh verse you very cleverly counterpoint the iambic pentameter of the line by the use of a sound of an exploding giraffe. How was this achieved?

Yours
A. L. Tennyson

Firstly, I sampled the mating call of a Giraffe at London Zoo on my portable Casio DAT recorder. Back at the studio, I cross faded this on my new Roland S750 sampler with the sound of a Reliant Robin undergoing a five thousand mile service and the illusion was complete.

Dear Samuel Coleridge,

My sister would like to know when she can have her D70 back.

Yours
W. Wordsworth
The Lake District.

Oh, er, sorry about that Bill. Apologies to Dorothy but tell her that now they are on special offer at The Keyboard Shop, I can get my own, I'll return yours as soon as poss.

P.S. Pity you didn't buy yours from The Keyboard Shop. Means you can't get free access to their humungous libraries of sounds for all your machines.

Dear Mr Coleridge,

Now I'm retired, I've decided to invest in a MIDI set-up at home. Where, in your unbiased opinion, is the best place to go?

Yours faithfully
Mrs M. Thatcher

Three months ago I would have said you could not do better than visit "The Sherpa Tensing Tea Rooms and Computer Music Emporium" in Rhyll, but as you may have heard the Proprietress, Mrs Ivy Gusset, is now touring with N.W.A. as lead singer. So I suppose you'll just have to go to the Keyboard Shop and just put up with their expert, professional service and laughably low prices.

Their macaroons aren't as tasty though.

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➤ companies produce both keyboard and expander versions of most of their synths, the only questions to ask are "why did it take E-mu so long to do it?" and "is it any good?". Ask E-mu the first question and watch for a review in MT soon.

The keyboard is velocity- and pressure-sensitive and ten Quickeys are used to instantly call up voice presets and keyboard zones. The samples are selected from the Emulator II sound library occupying 4Meg of ROM. They're based on those in the Proteus 1 with the addition of new piano samples, and there's also a wide range of digital effects.

Also on the E-mu stand was a 15-page photocopied document called Procussion Pro Tips, a collection of hints and tips for the Procussion module. This should be available through dealers or, in case of difficulty, direct from E-mu.

After opting out of last year's show, British flag-wavers **Cheetah** were back showing the MS800 (£199) wavetable synthesiser which has now been promised for August or September after considerable development delays. Also due at that time is the MD16RP (£399.95), a rack-mount version of the MD16 (see review MT, March '91) featuring 700 sounds and eight individual audio outs.

Cheetah's latest announcement is the Zeus 24, an analogue machine and Cheetah's first keyboard synth. The spec is impressive and includes 24 oscillators with 12 envelopes and 12 LFOs per voice. However, the model on show was little more than a mock-up and Cheetah, wisely, wouldn't be drawn on a release date. They are hoping it will achieve mega machine status, however, and "hope to keep it under £2000".

Speaking of mega machines, you could actually reach out and touch **Yamaha's** new top-of-the-range machine, the SY99. The prototype at Frankfurt was locked in a glass case but at the IMS you could hear what all the fuss was about. It's based on the SY77 but contains a new set of sampled waveforms and you can load new samples into it either from floppy disk or via the MIDI sample dump standard. It is already compatible with the TX16W sample library. It has a new range of digital effects and a ten-song sequencer.

It will be shipping by the time you read this, but interest in it at the show was so high that it may be in short supply for a while so you'll have time to save up - but you won't get much change from two-and-a-half grand.

If you already have one of Yamaha's SY instruments, check out a new range of books - *Exploring the SY22* (£9), *SY22*

Operations, Tweaking and Vector Synthesis Handbook (£20), *SY77 Soundmaking and Operations Level 1* (£20) and *The SY77 Cheater's Guide and Cookbook* (£20). They should be available from your local Yamaha dealer.

Korg's Wavestation A/D was on show at Frankfurt but it's only now due to start shipping. The price has been fixed a little lower, too, at £1450 including VAT. One of its major selling points is the Analogue-to-Digital inputs (hence its A/D tag) which allow it to process any acoustic sound source for use in a wave sequence. It also doubles as a vocoder (whatever happened to vocoders?) and very impressive the demo was, too.

After a year or two in the wilderness, **Kurzweil** (now distributed by Acrobat Music, sister company of The Piano Warehouse) seem determined to make an attack on the UK music market with the 88-note K1200 (£1899) synth, the 76-key version, the Pro 76 (£1786) and the Pro 1 (£1529), which is the expander.

These have 24-voice polyphony and 162 presets selected from 6Meg of waveform samples. The sparse front-panel controls are misleading and the Acrobat demo pieces, programmed on Notator, were seriously impressive.

K-Edit (£169), a voice editor, is also available in a cute satchel case. It runs on the Atari ST and requires 1Meg of RAM.

Roland were celebrating their tenth UK birthday by majoring on all the goodies they had on show at Frankfurt - so there's no need to go over old ground again other than to comment on the complete absence of the Sound Brush (although the Sound Canvas was there doing its stuff). These units, you may recall, follow Roland's GS MIDI spec which defines that certain sounds should always have the same program change numbers. It should ensure that a piece of music recorded using the GS standard can be played back on any other GS-compatible piece of equipment. Both Brush and Canvas, however, should be shipping soon.

Brand spanking new was the SCC1, the Sound Canvas Card, for the PC. So new was it, in fact, that it was only flown in the day before the Show and SCC1 is just a working name thought up on the spur of the moment. So they say. It's a half-size PC card with a Mac-type (ADB) five-pin connector into which plugs a flying lead terminating in MIDI sockets. It has a full 24-voice polyphony with dynamic voice assignment, 315 sounds and nine drum sets.

The MIDI interface is MPU401 compatible making the card a likely replacement for the LAPC1, an MT32 on a card, but which requires an extra (optional) MIDI interface. The SCC1 will cost about £375 but the

LAPC1 and its interface have been reduced in price so they should end up costing about the same.

On the subject of Roland's computer kit, I might as well add that a PC version of TenTrax is due soon for the SCC1 and v2 of TenTrax (see review last month) for the ST is on its way.

The MCM stand was awash with new gear and gizmos. The new **Waldorf** Microwave II has new operating software and new presets, additional sound banks and improved SysEx capabilities. It's also down in price to £899 (plus VAT). The Waveslave, however, seems to have undergone a price increase since Frankfurt to £749 (plus VAT). It doubles the capacity of the Microwave II and is controlled entirely from the master module.

The **Oberheim** OB-MX (£still TBA) is a MIDI-programmable analogue synth with lots of knobs and switches to twiddle - 97 in all. The audio path is entirely analogue and it can produce up to 12 stereo polyphonic voices. It should be in the shops by the time you read this.

Also worth checking out are the Drummer and the Strummer (£159 each plus VAT). The Drummer (see review elsewhere in this issue) "takes care of your drum programming for you". It can produce more than 10,000 patterns and has a built-in sequencer so you can design your own should you need more. It's compatible with any MIDI drum machine or module.

The Strummer converts keyboard chords to guitar voicings. Yep, you can read that again. As well as re-voicing the chords it can also strum them. Other features include MIDI delay, velocity switching, transposition (for harmonis-ation) and an arpeggiator.

We'll stay on the MCM stand to take a look at the **Zoom** 9030 (£449 plus VAT) which is billed as an Advanced Instrument Effects Processor. It fills only half a rack space and features 47 effects modules. It boasts proprietary effects which "other manufacturers leave out because they are too expensive". This includes a polyphonic intelligent pitch shifter which follows major or minor scales (this I wanna try).

Speaking of effects, there were lots of them scattered around the stands. **Yamaha's** FX900, EMP100 and FX500B were receiving their first British showing. The FX900 Simul-Effect Processor (£665) allows seven simultaneous programmable effects to be combined in series or parallel, all in stereo. The FX500B is a specialised unit based on the FX500, developed specifically for Bass Guitarists.

If you're after a budget FX unit for home recording, there's the EMP100 Multi-Effects Processor (£259) containing 100 presets ➤

and 50 programmable settings. It contains a tap tempo facility for quickly setting delay times. MIDI-compatible, too.

Small is beautiful according to **Vestax** who were showing a Mini Rack Effects System. There are six in the range - Distortion, Overdrive, Compressor, Chorus, Flanger, and Digital Delay - and feature mini toggle switches and minimal rotary controls. They're somewhat smaller than even a half-rack unit and fit into their own mini-rack stand (£14.32). Sit all six on top of each other in the correct order and watch the colour scheme melt from orange into red. Very eye-catching. All units cost £38.37 except the Delay which retails at £77.89. (All prices exclude VAT.)

Vestax, champions of the budget studio, were also showing the RMC88 (approximately £650 plus VAT), a rack-mount mixer designed for use with personal multitrackers, and the MR44 (£348 plus VAT) multitracker with mixer. The RMC88 allows up to eight-track recording and lets you route the input signal to Record or to a Sub Master which can then be routed back to any channel. This allows up to seven channels of input to be processed and then routed to one or more outs. It can also function as a traditional mixer. It's hoped shipping will start in September.

And if you don't have a multitracker yet,

the MR44 has a built-in four-channel mixer, dbx noise reduction, five-band stereo graphic equaliser, a MIDI sync jack, twin-speed transport controls and you can record on all four tracks simultaneously. All the Ins and Outs are on the front for easy repatching.

Speaking of recorders, you could be forgiven for thinking that there was a Casio DA7 on the **Tascam** stand. There wasn't - it was a DA20P. The main difference between the two are the XLR sockets on the DA20P and a slightly redesigned case. Oh, and the price: the DA20P should sell for around £499 excluding VAT and be in the shops in September.

If you aspire to higher things, note that Tascam's pro DA30 has been reduced in price from £1179 to £999 (plus VAT).

Finally, for a spot of dreaming, run your fingers over the M3700-24 (around £8500 plus VAT) and the M3700-32 (around £9500 plus VAT). These are two automated mixing consoles based on the M3500 series with VCA fader, channel mute and aux mute automation. They have onboard data storage and editing facilities, can generate time code and are software updatable. Drool.

Sound Technology were showing the three new **Ensoniq** keyboards which were unveiled at Frankfurt and the **Alesis** D4 - a drum module in a rack based on the HR16 and SR16 machines. The spec has been updated

since Frankfurt and it now features 500 sounds and 12 audio trigger-to-MIDI channels. It's still not complete, however, but is online for an August launch.

Guitarists could check out the Alesis Quadverb GT (that's quite enough from them) and everyone could check out the RA100 Reference Amp.

Of prime interest to recordists was the Alesis ADAT modular digital audio recording system. This was previewed at Frankfurt and it's still not quite finished. The projected delivery date is the fourth quarter of the year but it may be the back end of the quarter rather than the front end. And speaking of ends, there will be Mac and ST front ends for it, too.

Staying with Sound Tech, let's check out the latest music software. **C-Lab's** Creator/Notator v3.1 will be ready to ship in August. New features include enhanced score edit and printing options, support for the Fostex MTC1, a graphic arrange mode, the ability to display 32 tracks in a Pattern and new keyboard shortcuts. It also includes a printer driver for the Cannon BJ10 Bubblejet printer. The update will be £25 including VAT.

C-Lab's Polyframe Editor should now be available after a preview at Frankfurt last year. The program is complete but the delay is due, apparently, to delays in developing a >

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Gordon Giltrap is acclaimed as one of the finest acoustic guitarists this country has ever produced. This album is a personal selection of tracks, some previously unreleased, which over the years have proved to be firm favourites with guitar players.

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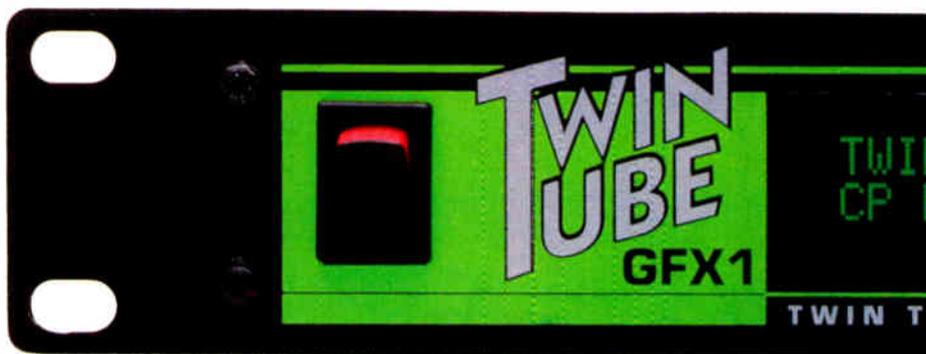
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DSP 16

Effects Processor

You get 16 different reverb and delay effects, including Large/medium/small Room, Gated, Reverse, Hall, Special FX and Ultimate Reverbs; up to 1.5 seconds Stereo Digital Delay, Ping Pong, Multi-tap, Slap Back, Doubling, Tempo, Sound-on-sound Layering, and Echo. Plus a 3-band EQ. And all this through 128 MIDI changeable presets. DigiTech's DSP 16. The perfect unit for studio or live applications.



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➤ dongle which will allow Polyframe to co-run with Notator. Bloody nuisance, dongles.

Digidesign's Pro Tools for the Mac is due for release in August. It was developed from the Sound Tools hard disk recording system. The system is modular, each module providing four tracks. A four-slot Mac, therefore, can be expanded to provide 16 tracks of digital recording.

The other major software news could be found on the MCM stand. Version 4.5 of **Passport's** Master Tracks Pro (£310 plus VAT) was announced. It includes three new methods of recording, support for Apple's MIDI Manager, on-screen faders and programmable device names. A preset palette includes many popular instruments and you can add to these or customise them.

Passport's Trax now runs under Windows 3 and can utilise extended memory. This, too, has programmable device names and on-screen faders. The price seems to have dropped, too, down to £59 plus VAT.

The IMS also offered visitors the chance to check out the new **Opcode** software. This includes Track Chart (£139 plus VAT), a studio management program.

One of the most significant steps forward in software management is Opcode's OMS (Opcode MIDI System) which gives access to up to 240 MIDI channels. It uses a system of devices rather than MIDI ports. You describe your setup to it, which is saved in a Studio Setup file. This is used by Opcode programs by automatically defining instruments in Vision, assigning the correct devices to patch banks in Galaxy and controlling routings via Studio V.

OMS isn't a stand-alone program, rather it's now included in all new versions of Opcode software. These include v1.3 of Vision (£349 plus VAT), the Galaxy Plus Editors (£259 plus VAT) and Studio V (£TBA). The Galaxy Editor is a universal librarian compatible with over 90 MIDI devices. Studio V is a 2U-high rack-mount Mac interface with SMPTE generator and 15 x 15 MIDI patchbay. It's based on Studio 3.

Apart from the Sound Technology and MCM stands, software and computers were rather thin on the ground, although the Mac and ST were evident in equal quantities.

It could even be said that the Mac dominated the proceedings. Gateway, the music technology education people, were demonstrating a couple of interactive CD music ROMS for the Mac - Beethoven's String Quartet No. 14 and Mozart's The Magic Flute. Not exactly MT fare, perhaps, but the interaction between program and user was superb. No reason why this technology could not tackle more modern music or aspects of technology. No doubt it will.

Almost hidden on the Gateway stand was the K..AT (that's how they spell it!), a keyboard remote for the ST. The hardware is supported by a Desk Accessory program and gives you remote control over up to 14 functions as alternatives to using the keyboard. K..AT is being handled by **Q-Logic** and costs £65 including VAT.

It was interesting to see **Mindscape** at the IMS. What was a dedicated games software house doing there? Promoting the Miracle Piano Teaching System, that's what. The package includes a piano-type keyboard and software for the PC, Amiga and, believe it or not, the Nintendo Gameboy!

You learn by playing a series of games, many arcade-like in structure. Some of the graphics are quite sophisticated. At an all-in price of £250 they could be onto a winner. It's due for release in September.

A new voice distribution company, Eye & I, were showing a range of voice cards, RAM packs and disks for most of the popular Ensoniq, Korg, Peavey, Kawai, Akai, Waldorf, Yamaha and Roland synths with prices ranging from £24.95 for SY/TG55 disks, up to £70 for Korg Wavestation performances in RAM. They're from a company called Voice Crystal and most of the sounds are endorsed by famous names.

As we edge away from the actual hardware, it's interesting to take a look at some of the other stands. Van Der Graph, for example, were selling computer-generated/assisted prints based on infrared images of performers and spectroscopy analysis of pieces of music. And very nice they looked, too, available in mini postcard form for 25p up to £20 for a framed print.

A chap looking more house than new age was distributing *SoundWaves*, a new age magazine published by NAMA - the New Age Music Association. Contents include personalities, reviews, new age music theory and other articles.

MT regular Vic Lennard used the IMS to expand his **UKMA** into the EMA - the European MIDI Association. Issue 0 (well, why not?) of a special MIDI Monitor was being given away free. Well worth obtaining a copy - if there are any left - if you want to see what UKMA and the EMA are all about.

Do you play sitting down? If you do and have difficulty finding a comfortable seat, whether you're a drummer, guitarist or keyboard player, John Henry Enterprises reckon they have a seat to fit your bum. They range in price from £85 (including VAT) up to £229 for the Nitro II Keyboard Throne. And very comfortable they are, although I didn't manage to do a three-hour soak test!

The BCK stand was sporting a new range of *System One* invisible stands which are

actually being distributed by Argents. They are wire-frame affairs and prices start from £89 (including VAT) for a two-tier option. Also in evidence here were the **Quasimidi** range of MIDI utilities and another pretender to the Hammond throne. Watch MT for news/reviews.

That man of a thousand MIDI boxes, **Philip Rees**, was showing a new MIDI controller - the G2. The novelty is, it's shaped like a guitar with a "strum plate" and "chord" buttons on the neck. It's aimed at first instrument buyers and anyone wanting to play guitar samples in a guitar style. It will cost around £400.

It's all very well working on your licks but if you want to get anywhere in the music business you need to do some promotion. **Btm** (Back to mono) studios were showing off their video demo facilities. They use a "live stage" set and guarantee a band up to an hour or an hour-and-a-half on stage while the 11-strong crew video and record the show resulting in a live mix demo tape on super VHS, all for £500.

It was quite a surprise to see an artist management company at the IMS, too. **Artist Connection** is actively looking for new acts and guarantee a hearing in all the major A&R departments. Too good to be true? In the first instance, you must complete a very simple questionnaire (about half-a-dozen questions), so phone Artist Connection 071-437 6900 for yours.

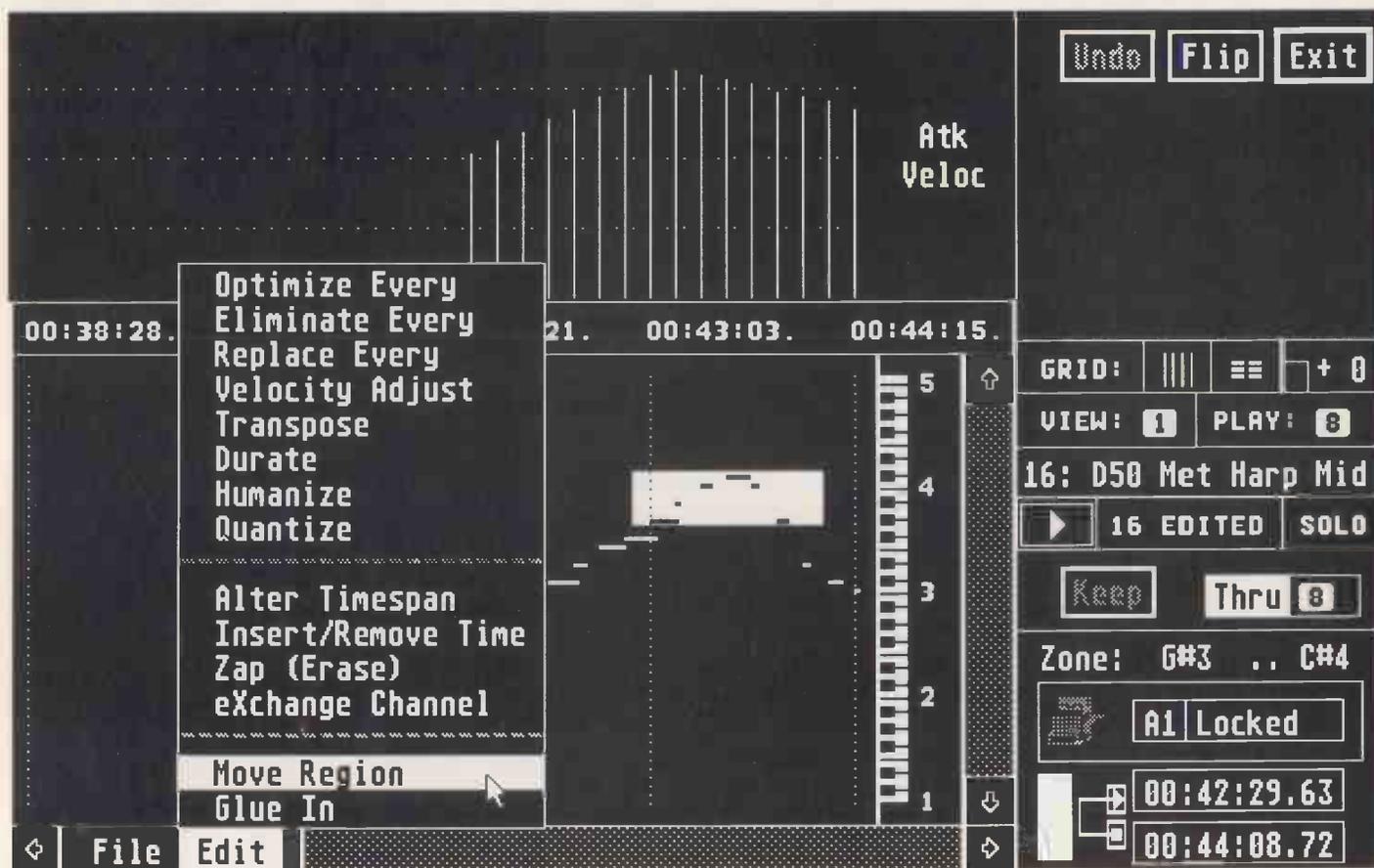
It's no good making it if you're not around to enjoy it. Come to that, it's no good struggling if you're not around to enjoy it, either. The Health & Safety Executive hosted an electrical safety press meeting which detailed some of the electrical hazards facing the musician, especially in unfamiliar halls and clubs. I'll bet there's more than one MT reader who has received an electrical shock on stage by touching a live mic stand, for example.

Enough of the preaching but we'd like all readers to be around to read our 20th anniversary issue so, phone the Health & Safety Executive on (0742) 752539 or 071-221 0870 and ask for a free (yep, it costs nowt) copy of the *Electrical Safety for Entertainers* booklet. It's very easy reading and it could save your life. You know it makes sense.

Finally, it was interesting to see a stand at the Show trying to flog space at next year's Frankfurt Musik Messe. It is no secret that we're in something of a depression - and while I'm sure most companies would like to attend, if business from the IMS is sufficiently poor, they could be giving Frankfurt a miss.

Still, God loves a trier. I'm off to book my flight. ■

SMPTRACK GOLD



Quiet for some time, but now on the offensive with a new British distributor are Hybrid Arts and SMPTRACK Gold: the next generation. Review by Vic Lennard.

SINCE THE SAD demise of Hybrid Arts (UK), little has been mentioned about Hybrid Arts in the press - partly due to the lack of any new software from the California-based parent company. Indeed, Hybrid's SMPTRACK Atari sequencing package seems to have taken on cult status because those who use it swear by it, while those who don't use it often haven't even heard of the company.

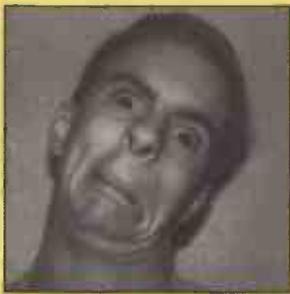
SMPTRACK and EditTrack Gold are the latest upgrades in the MIDITrack series of sequencers, which include the low-level EZ-Track Plus. They continue the Hybrid Arts policy of keeping the architecture of the sequencer as open as possible, while preserving the absolute integrity of timing which the programmer feels is of paramount importance.

For those of you who are unaware of the basic outline of SMPTRACK, it's a 60-track sequencer, although this number is pretty well meaningless as tracks can be merged without losing their individual identities. Each track can hold anything between one note and an entire song, and working in "sections"

allows you to operate the sequencer in a pattern-based manner, much as you would a drum machine. SMPTRACK has many dedicated functions not normally found on other sequencers, without the use of mathematical template-edit facilities - timestretch/compress, auto-quantise on record, split tracks by zone, disassemble into individual notes per track and so on.

The open architecture approach is achieved by always having SMPTRACK in record mode - everything received at the MIDI In is placed in a Keep buffer and can then be saved to a track or binned. Consequently, there's none of the "I wish I'd recorded that first take" syndrome.

The drawback that many find when working with SMPTRACK is that most of the editing is non-real time - you have to stop the sequencer to quantise, for example. This is due to the commitment of Hybrid Arts to getting the best possible timing characteristics. However, certain real-time edits are incorporated: transpose and delays by individual track.



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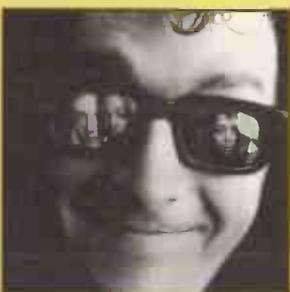
SY/TG55 Editor/Manager - £55
U20/220 Editor/Manager - £55
D10/20/5/110 Editor/Manager - £55
Proteus 1/2 Editor/Manager - £75
JX1 Interactive Editor/Manager - £49
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LXP1/5 Editor/Manager - £55
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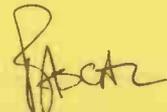
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ON SCREEN

“The changes to the graphic screen and real-time tempo recording would have been enough to justify this upgrade but there are other worthwhile additions to hand.”

THE ENTIRE MAIN page has been altered to allow practically all editing to be done without leaving this screen, something which was previously impossible. The visual display of notes with the vertical keyboards beneath the curve display for velocities, MIDI Controllers and pitchbend is the same. However, the right-hand side of the screen is where the changes have occurred, with the register and section part of the main screen now existing here as well. Consequently, you can change the start and stop points of sections if the track you're editing is within a chain (Pattern mode) or hear a track in the context of a particular section. This is important - a track can be used in many different sections, and the instruments playing against it are likely to be different. Real-time track delays and transposes can be changed from here and MIDI Thru can be turned on so that you can play a keyboard and experiment while listening to the playback of either the specific track being viewed (Solo) or all current tracks (Mix).

Previously, edits have only been possible to individual notes. This has now changed; all notes in the current track, within a specified zone or a user-defined assortment, can be selected. Many editing functions then work as on the main screen, but some are now special to the graphic screen. Glue In and Over work on regions and user-defined selections respectively.

For the former, it is imperative to use another new function on the main page first - that of locking the start and end points of the registers or sections that you intend to edit, otherwise selecting a zone on the graphic screen will change these points.

Once a group of notes is selected, functions from the pop-up menus are accessed.

NEW TEMPO

THE ABILITY TO record real-time tempo changes via the on-screen horizontal fader is another addition. The highest and lowest tempos can be set, as can the quantise value. The central info column shows the five tempo values corresponding to the marks on the fader. As SMPTETrack can handle tempo changes to decimal places, tricks like slightly increasing the tempo when approaching a chorus, or smooth ritardandos at the end of a song can now be programmed in a more natural manner than keying in a selection of numbers. For this, there is a new box above the real-time fader which either shows Rec Tempo or Rec MIDI.

Some of SMPTETrack's edit functions have been changed in the way that they are accessed. For instance, zooming out to the whole track used to be achieved by simply holding down the right-hand mouse button; now you have to do this while pressing the ST's Alternate key. Clicking quickly on the right button also toggles between the cursor and "brush" icons, the latter being used to draw notes on the screen, previously accomplished by clicking on a button on screen. The general feel of editing is slicker, with faster screen re-draws and more use of the mouse buttons. And you now have access to many of the

standard editing functions from the main screen.

To isolate a ZoneRegion, simply drag with the left mouse button for the horizontal range and then use the Zone line on-screen to clip the vertical region. You end up with a kind of rectangle, the notes within which you can then edit. Glue In makes the standard pointer change to a vertical line which you then place where you want the zone or group to be copied to, the original notes staying in their initial positions. Move Region is similar, except that notes are moved rather than copied, while Exchange Channel changes the MIDI channel for all events in the zone to another of your choice.

There are many occasions when the group of notes which need to be edited cannot be conveniently drawn within a box. So, you select notes individually - a NoteSet - which can then be edited as a group. Glue Over and Move Notes are the equivalents to Glue In and Move Region from ZoneRegion, while Transpose/Double lets you change the pitch of individual notes while allowing you to keep or erase the originals.

Hybrid have implemented one function which will please all users - an Undo buffer which lets you retrace one step of editing. You can also switch between tracks on the graphic screen to either see notes for another track applicable to the position of that currently being edited. As usual, no editing is permanent until you click on the Keep buffer which takes you to the main screen, lets you select a track, name it and then automatically takes you back to the graphic screen. You can even save to disk from this screen, depending on your selection

EDITING OPTIONS

THE FIRST DIFFERENCE that current users will notice when editing is the different prompt box, which appears each time you have to decide what is to be edited (track, region) or on which track MIDI data is to be saved. The new box gives more info than the previous one.

Group editing is now supported. You can "group" tracks and carry out the same edits on all of them. This includes multiple deletion of tracks, multiple insert/removal of time within a track, timespan altering, and multiple track imports from other songs.

There are many small additions to SMPTETrack editing - the quantise option now incorporates the ability to Move Note or Shift Attack (options previously in a separate menu) and multiple MIDI channels can be selected for transpose exemption (previously only one).

There's a notepad facility - up to 3KBytes of ASCII can be saved per track by using the free desktop accessory, Diary 2.0S, and individual notepads can be imported by the ASCII Load option.

Other advances include a Swing option in the quantise function. This operates by giving half a beat more time than the other half, and is set by selecting the split between the ticks in a beat. This is far more flexible - and easier to understand - than the methods used on most other sequencers.

There's access to time-based display, even when not using SMPTE. Instead of using beats, bars and ticks, the

Start, Stop, Punch In and Out registers can all show either hours, minutes, seconds and frames or minutes, seconds, frames and bits (80 per frame). This makes life much easier when working with audio-visual and lining MIDI cues according to the burnt-in SMPTE time on video.

Resolution has now been doubled to 192ppqn - you have the choice to use it or not. However, MIDI Files are only saved in 96ppqn format, giving an inherent inaccuracy when transferring tempo changes to 192ppqn sequencers. Also, Hybrid Arts have continued to use the syntactic form for saving SysEx within MIDI Files, a format within the Standard MIDI File spec but unsupported by any other sequencer package. A choice should have been offered.

Also implemented are MIDI Key Command Triggers, where the pressing of a keyboard key sends out a MIDI command - Note On, Continuous Controller. . . Nice idea, but only partly implemented because the MIDI command has to be received over MIDI, which rules out parameter changes. It also means that SMPTETrack cannot support the Fostex MIDI transport control unless the relevant SysEx strings are sent from another computer and effectively "recorded" into the Key Command strings.

Hybrid have also decided not to support MIDI Time Code. It's been mentioned before, but if MTC is a de facto standard on the Apple Mac, why won't most Atari sequencer programmers recognise it?

On the subject of problems, Hybrid have set themselves a headache by ensuring that all MIDI data is now transmitted under Running Status. This is a data

compression technique within the MIDI spec which gives rapid transmission of MIDI information. The trouble is that there are various early MIDI devices which do not correctly respond to this, giving stuck notes. Again, the option to turn Running Status off should have been offered.

VERDICT

SMPTETRACK GOLD HAS more than enough new features to be a must for current users. The changes to the graphic screen and real-time tempo recording would have been enough to justify this upgrade but there are other worthwhile additions to hand. SMPTETrack has a reputation for offering one of the tightest tape synchronisation characteristics of any sequencer, and thoroughly deserves this stature.

For new users, the choice is this: do you need to do your editing real time? If the answer is yes, then SMPTETrack is not for you. If not, you'll be hard pressed to beat SMPTETrack for features. ■

Prices SMPTETrack Gold, £396; Edit Track Gold, £150; MIDIPlexer (64 MIDI channels), £288; SMPTE Mate Plus (SMPTE generator), £320. There is a special offer available for a limited period on SMPTETrack Gold, MIDIPlexer and SMPTE Mate Plus for £895. All prices exclude VAT.

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BREAKING

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R

**Let the funk be with
you - and the jazz,
and the house, and
the Latin. . . This is
the message from
Incognito. Interview
by Tim Goodyer.**

WHEN PUNK CHALLENGED POPULAR music ideals in the late '70s, it was the accomplished "muso" who bore the brunt of its anger. Musicians who had dedicated years of their lives to the understanding of music and mastery of their instruments were suddenly the enemies of pop music. "Progressive" or "techno" rock bands who once seemed to represent pop's ultimate achievement, were not just old news, but bad news. Although short-lived itself, punk was to have an unmistakable effect on the music that followed: gone were the instrumental excesses of the '70s, and with them much of the instrumental expertise that was the muso's calling card. But as the "new wave" rolled in and power pop stamped its utilitarian footmark on the charts, another, less spectacular movement was enjoying its own success. It was a wave of British funk music, or Britfunk - and it was breaking without incurring the displeasure of the punk revolutionaries.

Bands such as Light of the World, Lynx, Freeze and Incognito were fusing jazz virtuosity with driving funk rhythms and getting away with it. And while punk seems unlikely to be about to enjoy a renaissance in '91, one of the Britfunk names is back selling records and filling concert halls as I write. Back in 1981 Incognito released an LP appropriately entitled *Jazz Funk*. Their follow-up has taken a decade to arrive, but it's here in the form of an album called *Inside Life*.

Looking more closely at the heyday of British Funk, one man's name seems to crop up more than any other: that of multi-instrumentalist Jean Paul "Bluey" Maunick. Not only was he the driving force behind Incognito but also took a large hand in forming Light of the World, Freeze and Lynx. In fact it was above a record shop run by the cousin of Lynx' Sketch that Maunick first extended invitations to musicians buying records to jam together. The first band to emerge from above the record shop were Light of the World.

"I did the first album with Light of the World and then we had an accident on the motorway", recalls the affable Maunick, seated with current Incognito keyboard player Gary Sanctuary in London's Swan Yard Studios, where he's in the middle of a remix. "I lost my best friend so I thought it was time for me to get out of music and check myself out. But music was firmly installed in my system by then. I was working in a factory in the West End and in the evening I'd go down

PHOTOGRAPHY: TIM GOODYER

> to the record shop and meet Johnny Rocca, and together we formed Freeze. Then again my mind began to wander off into this dance-based jazz thing I wanted to do - but not being a trained musician, I wanted to work with really good jazz musicians and my input would be as a producer and songwriter and also to bring the funk to it. And that's been my music ever since. . .”

Coincidentally, Rocca himself has recently reappeared on the scene with a project called MIDI Rain. His second single, 'Eyes', is due for imminent release on Vinyl Solution.

“I went on to form Dante with Stephen Dante - who had a hit with Jellybean”, continues Maunick. “Then I worked with Total Contrast, Maxi Priest, Marcus Miller,

**“People would be back into playing
and thinking and writing rather
than ‘I’m on the mic, I’m back on
the mic, I’ve got somebody
else’s beats, somebody else’s
tune but I’m on the mic’.”**

George Duke. . . Now I’m back with Incognito because the music climate is just right for it.”

Having started classical piano lessons aged nine, Sanctuary is no newcomer to music, but his involvement in popular music dates back to a chance meeting with three instrument demonstrators while working in a local music shop some five years ago. The chance meeting brought him from the relative obscurity of Tunbridge Wells to London and onto the session scene and into the employ of artists such as the Pet Shop Boys, Terence Trent D’arby and Womack and Womack via a stint in the National Youth Jazz Orchestra. While Sanctuary is technically a paid member of Incognito (he’s currently also working with Aztec Camera), the fact that Maunick has invited him to participate in this interview is an indication of the open-mindedness with which he approaches both music and technology.

Inside Life itself provides a fairly explicit guide to what Incognito are currently about - production values fit neatly into the current dance movement, songwriting styles encompass house, jazz, funk, and Latin, and the level of musicianship displayed by Sanctuary and the other musicians (there are presently 13 in the live line-up) is second to none. Yet suggest to Maunick that there’s more than a passing relationship between the success of Incognito’s current single, ‘Always There’ and the current dance movement, and you quickly get an insight into his musical perspectives.

“I hope it’s not just some kind of trend because trends always come in with a bang and go out fairly quickly”, he comments. “Hopefully we’re not trendy because we did an album ten years ago and now here we are again. And I haven’t stopped playing our music in between. It may be a trend to some people, but I hope

it won’t be seen as such by the majority.

“Sometimes the media take trends and ruin people’s lives with them. For instance, you say we’ve got a resurgence of jazz at the moment but only a year or so ago people were talking about a big resurgence of jazz with Courtney Pine. All those guys believed the hype and started putting on the jazz suits and seemed to think they were back in the Blue Note days. I’m not about that, man, we are today and I’ve got to deal with my life and I ain’t about to go back in time for no-one. I’ll listen to that, appreciate that, see what I can take from that and go on to make the music I want to make. But we had those cats up as ‘the future of British jazz’ and now they’re struggling to get gigs. I really don’t want Incognito to become a trend because I’m gonna be playing my kind of music when I’m 90 and you better be ready to listen to it, man.”

More than any other aspect of his music, Maunick believes its value is in the mixture of musical styles contained within it.

“It’s like the racial thing”, he elaborates, “you can say it’s getting better but to our childrens’ eyes the issue isn’t a problem. If they didn’t have grown ups around them, black and white would live quite happily. In the same way jazz and all these fusions are living quite happily. I’d rather not make an issue of it, I’d rather it was down to musical merit.”

“I think that there’s so much music now that has its roots in jazz”, adds Sanctuary. “I love jazz - I play a fair amount of it - but at the same time, most of the sessions I do don’t call for jazz at all. But my roots in jazz are going into those sessions all the same - so maybe the harmonic content or a solo is jazz-orientated.”

“Most of the time I’m at home I listen to Blue Nile, Joni Mitchell, Frank Zappa”, continues Maunick, “and I can see it all down the line. Joni Mitchell’s not jazz music but it’s got elements of jazz, the Blue Nile’s got elements of jazz but you wouldn’t call it a jazz record. In the music of Kate Bush I hear folk, I hear jazz, commercial synthesiser music. Peter Gabriel uses elements of soul and jazz. Sting. . .

“There will always be hardcore followings for music, but it’s getting so that you can’t really put the finger on a lot of music. Hip hop has done a lot for that. Because of the way we’ve been brought up we have to categorise things, but I’m finding it very hard to categorise a lot of music now. I’ll hear something and think ‘it’s great; what is it?’”

“I’m hoping that, in the future, all music will get a fair chance. I’m hoping that people will be on the lookout for talent and for good music. If everything was based on merit, I think the music scene would be so healthy - live, on radio and in terms of the musicians that would be around. Also, it would elevate our minds because people would be back into playing and thinking and writing rather than ‘I’m on the mic, I’m on the mic and I’m back on the mic. I’ve got somebody else’s beats, somebody else’s tune but *I’m* on the mic and it’s *me*’. Just like the old Vanilla Quiff - it’s music to crap to, you don’t really need it, y’know?”

Listening to Maunick talk, you learn quickly that his easy-going manner belies the importance he attaches to music. But music isn’t simply a passion with him, he treats it with the respect usually associated with more

➤ “important” issues than art. And it's not only the artistic aspects of making music that he's capable of intellectualising about. There's the small matter of technology - it's popularly regarded as either a means to an end or an all-consuming passion in its own right.

“I don't think we've done anything that other people haven't done”, he comments. “There's a lot of people using technology and using it well, not saying it's the be-all and end-all. Gary here is a tremendous keyboard player. On a couple of the solos he did while we were writing the songs we thought ‘why replace ‘em?’”. Sure they were done in the sequencer, they were done on the M1 piano, but it's what feels right. We could have gone back and said ‘let's mic up the grand’ but it's what you're looking for in music. Are you looking for the purest sound or are you looking for what feels good? If it feels good, what you doin' messin' with it?

“With technology you have to see the limitations - don't think you've really copied a piano break here because you haven't. What you've done is created something you like, that's all. A lot of guys using sequencing are really only using it to masturbate their egos, y'know? There's so much stuff that's released now that's all sequenced when they really should have got real people in to play some of it - or at least got someone who knows how to play it to sequence it properly. It's a joke - some of the timing errors and things that you hear. I'd rather think of it in terms of the help it's given me - it's allowed me to write songs and work out production ideas. But it's nice to see technology in the hands of somebody like Gary.”

Checking out the credits on the sleeve of *Inside Life* it's evident that, while Sanctuary's Minimoog work on ‘Metropolis’, for example, demonstrates his considerable playing talent, Maunick's own musical talents shouldn't be underestimated. ‘Sketches in the Dark’ sees him taking responsibility for all the keyboard, guitar, drum, percussion and programming work and enlisting help only for brass work and additional percussion.

“I'm a bit of a jack of all trades, master of farts really”, he says. “I never set out to be a virtuoso player of any instrument. From the moment I first picked up the guitar, I wanted to write a song with it. I didn't want to baffle you with it, it was just a means to an end. I see all the instruments I play in that way. I'm not a keyboard player but I'm not going to say to you ‘you don't have to be, these days’, that's a load of bollocks. It's good that you have guys that specialise in playing well, but where playing has helped me is in getting my ideas out.

“The good thing about a band like this is the musical interplay. A lot of music these days doesn't allow people to interact with each other. You've got a guy with a sequencer - sure we've used sequencing on this album - and he's done the writing so it's all like looking through a very narrow lens. Now, you've got to allow people to come in and change the shit. This is where people are scared. They're afraid that people are going to come in and put personalities on what they've created. Musical interplay has to have personality. We say ‘you're goin' to come in and do the brass arrangements? Great!’ And I've got to sit back and let that magical thing come through. Obviously as a producer my job is to steer it in a way that feels comfortable, but most of the time,

because you've chosen the personalities, you don't have to say nothin'. Because you've chosen the characters, you know you're goin' to enjoy it. It's a meeting of heads; it's a conversation, an interesting conversation. That's what the music is. If you've got one guy going yap, yap, yap, everybody's going to get bored.”

TRACING THE RECORDING OF *INSIDE LIFE*

you first have to appreciate that the project was never meant to be a big-budget, high-profile project like too many dance acts at the moment. Instrumental in the release of the album was jazz DJ Gilles Peterson and his Talkin Loud label.

“When I did the first Incognito album in 1981, Gilles was a pirate radio DJ at the front of getting dance music played”, recalls Maunick. “Obviously he has an affinity for the people he's worked with in the past. He didn't want to step into A&R and sign everything that was thrown at him or because it was someone else's idea of a commercial success, he wanted to work with things he understood and because he understood them he'd be able to sell them. That's exactly what's happened to the Young Disciples, Omar and ourselves. Although we've had our differences and our clashes, we've found solutions to all the problems, which is something you can't often do with a record company. They don't see your music the way you see it. At the same time I realise that the record company is a business - if you don't want to be a part of a business you can stay at home and make music and sell it on street corners. But I'm really relishing the opportunity of getting people to hear the music. That's what it's all about: you make music for yourself, but like any artist that paints a picture you want people to see it.

“There's also the money side. Half the people that have been with me on and off for the last ten years have been doing it for the love of music. If they come to one of my sessions the bottom line is that it's musically enjoyable. But that has to change - you're not making music in the tradition where you have to suffer for your art, there's a balance that can be achieved where you're earning and playing. Since the success of the single I've been trying to raise the guys' earnings at the gigs and pay them more for rehearsals and look after them a little bit better.”

So Maunick found himself with a second album deal ten years after the first - and a small budget to work on. The first demos were put down on his own Fostex E16 (now upgraded to a G16) and on the BBC-based UMI sequencing system. Then Sanctuary came in, bringing with him his Atari/Notator sequencer.

“There was just enough equipment to get a basic idea down”, comments Maunick. “He'd do stuff on the C-Lab, I'd do stuff on UMI. But it's just what you know.

“Then we went off to Belgium to record. We got some really decent studio time there at a price that, if it had been in London, we wouldn't have been able to afford it. It was 48-track digital, Neve desk with flying faders and the nicest atmosphere of any studio I've been in. It really had style. We flew the horn section over and we did some percussion with a Belgian percussionist called Chris Joris. Gary did a lot of live playing.”

Live playing was something Maunick was eager to make a part of *Inside Life*, to the extent that a couple of ➤

➤ the tracks were recorded almost completely live back at Swan Yard.

"We did 'Always There' here", Maunick elaborates. "We used the people we thought were right for the project, some of my old mates like Peter Hinds from Light of the World. We just tried to get a nice chemistry happening in a short space of time. I think if you crammed it all together, the whole album was written, recorded and mixed in a month and a half. Hopefully that energy comes over on the record."

Given Maunick's pride in the playing talents of the band, why did he feel the need to involve sequencing or sampling?

"We used the sequencer as a notepad at first", explains Sanctuary, "for rhythm, bass, pads or whatever. From there we decided whether or not it felt better with a real bass or a real piano but, essentially, the computer was there as a notepad."

"The stuff we kept from the sequencer was stuff like quirky synth lines that had a rigidity to them that you wouldn't get playing them live", continues Maunick. "Other stuff we kept would be like a piano solo that we'd put down but not quantised and Gary'd have played it thinking he'd do the 'proper' solo later. He'd have put something down just to fill the space but in doing so he will have done it without any red lights. He was just lettin' go and that's what a solo should be. It's part of the life of the album; it's that moment in that room, that fifth beer or five o'clock in the morning 'should we be doin' this or should we go home?'."

"In the future sequencing is something that's just going to be part of music and it's going to become transparent. People won't be listening for what you've sequenced and what you haven't. It's just like the music thing we were talking about - it's all about getting the job done, the musician getting through ideas. Let's look beyond the fingers, let's look beyond all the physicalities and let's get into the tonal thing. At the end of the day, there are so many people that don't play who are going to enjoy that music. We should approach our instruments so that they become transparent. Sure, we're going to be into having a new piece of equipment for a while, but then let's see what we can get out of it, what inspiration it can bring and what effect it can have musically. I'd like to think the sequencer is going to help music out rather than bring about its downfall."

And sampling?

"There are lots of sampled sounds on the album", Maunick admits. "Again, I don't wanna take somebody's record and abuse it or abuse my position as a producer to lift vocals from the multitracks I have available to me. Those things don't interest me. What does interest me are the possibilities that you sometimes get from the fusion of music you've created and a whole section of things that have been created by somebody else. The only time I use a sample is if there's something there that's really interesting."

"The only conscious thing I've done is to use the 'Funky Drummer' loop. I slowed it right down so it's been completely taken out of context. It's so slow you can hear the surface noise on the record. But it works for me - the sound of the horn really reminds me of the city and 'Funky Drummer' is the beat of the city in the '90s. The two together give a really *Metropolis*-type feel

and I called one of the tracks 'Metropolis'. It gave me the concept for the album, actually: the *Inside Life*, *Metropolis*, living in the city, that kind of vibe. It came from the use of that sample.

"Another way we use sampling is tonally - in the same way as you might use a synth to get a particular sort of sound for a solo we'd maybe take an attack section of a flute and use it with a synth sound. You're not gonna get a flute solo, but it's gonna have its own identity."

One of the most appealing aspects of the sound of *Inside Life* is the mixture of acoustic instruments and technology - but not necessarily the latest technology. Alongside the Minimoog and new Akai samplers the sleeve notes read like a history of keyboard technology - there's the Minimoog we've already mentioned, then there's the Clavinet, the Rhodes and CS80 we haven't. . .

"Reading your magazine has cost me a lot of money", taunts Maunick. "You guys should stop that kind of behaviour. At least you could review one piece of gear each year and give us a chance to keep our gear for a while."

"Seriously, I try to pick up bits of gear as I go. The new Rhodes, for example, is good because it sounds like the old Rhodes but it's got its own spirit and it stays in tune. I love the sound of the CS80 but it's a bugger - you can't carry it around."

"I'm glad people are beginning to make all the old analogue sounds happen again. I mean, I use my Matrix 1000 *so* much, and I use my Juno 106 more than any other keyboard. It hasn't got velocity sensitivity or anything, but it gets used like crazy because the sounds are so good."

"I think I played a Minimoog when I was 12 or 13", recalls Sanctuary, "and then I used Bluey's for the album. And to discover the characteristics and the

"It's a meeting of heads; it's a conversation, an interesting conversation, that's what the music is - if you've got one guy going yap, yap, yap, everybody's going to get bored."

touches you could get was absolutely mind-blowing. There's no velocity, no aftertouch, but it makes up for that. It was a pain in the arse too because if you moved the pitch wheel, you couldn't get it back in tune, you had to start again, but that didn't stop us."

"I'm not a technical man", continues Maunick, "but, tonally, these instruments are so strong. If you take acoustic instruments - you cut two pieces of wood from a tree and they're different, but you build a microchip and it's identical to the next microchip. You build a piano and it's that piece of wood with those strings across it and there's the weight of the keys. . . With electronic stuff, especially modern electronic stuff, it's replicas each time. You're not going to have those ➤



nuances, so you've got to electronically create them. I'm not here to knock modern stuff - if it sounds right, use it."

"It couldn't be better, could it?" asks Sanctuary. "You've got all the old stuff out there, you've got all the new stuff - you've just got to use it."

"What could be better is getting rid of the greedy people who put a Prophet 5 in a rack and charge a grand more for it", responds Maunick. "I wish Sequential could bring back the Prophet 5 and shut these people up. The people who put these old instruments out first should be the first to see the benefits. That's the unfortunate thing about the major manufacturers: they're so caught up in it all that sometimes you get 'we built this thing and it's a piece of shite, but we're goin' to sell it anyway'. They've spent so much money developing it and putting it in peoples' faces that they've got to sell it. You don't always have to go forward to achieve, sometimes they should take a little step back and make a few revisions and they'd find they'd achieved a lot more. If somebody's got to learn all these new things all the time it's gonna mash up their head."

"Manufacturers have to realise that everybody's mentality isn't the same. I like all those knobs and switches now but that's changed over the years. When I was young I wouldn't eat that stuff that Popeye eats - what is it, spinach? Now you can't keep me away from it, it even looks good to me! And it's the same with musical instruments, you know? I used to love the Strat but I used to hate the Gibson 335. Now I look at that 335 and I think 'man, what a shape!'. Sometimes I think that if it had hair, I'd love it."

Maunick's endless enthusiasm for his music and the gear that helps him make it almost leaves you believing this threat. But as we listen to the remix he's working on after the interview is over, it's one of his earlier comments that ring most true - I wonder who will be doing the Incognito interview on his 90th birthday? ■

EQUIPMENT LIST

KEYBOARDS

Akai S1000 Sampler (8Meg & hard drive)
Akai S950 Sampler
Akai S900 Sampler
E-mu Proteus Expander
E-mu Proteus 2 Expander
E-mu Proformance Piano Module
Evolution EVS1 Synth Expander
Korg M1R Module
Korg M3R Module
Moog Minimoog Monosynth
Oberheim Matrix 1000 Synth Expander (x 2)
Roland D50 Polysynth
Roland Juno 106 Polysynth
Roland Rhodes Piano
Roland R8 Drum Machine
Yamaha CS80 Polysynth
Yamaha TX802

RECORDING

Allen & Heath Sabre Desk (expanded)
Fostex G16 Multitrack

PATCH COMMANDER

For a black box no larger than your hand, Forefront Technology's Patch Commander has a surprising range of applications. But what the hell is it?

Review by
Tim Goodyer.



IT'S NOT A lot to look at, I'll grant you, but then how *should* a Patch Commander look? I suppose the first thing to establish is exactly what a Patch Commander is. According to Forefront Technology, it's "a compact, hand-held, battery-powered unit intended for use as a general-purpose MIDI controller." Well, it's certainly in keeping with the external features of the FT3 Patch Commander Plus: a hand-sized black box with a ten-digit (plus asterisk and hash keys) keypad and red LED on the front panel; MIDI In and Out, mini jack socket and on/off switch on the rear. The next thing to ascertain is what a Patch Commander should do. . .

The obvious purpose of such a unit would be to allow you to change patches via MIDI from a hand-held remote controller. This the FT3 appears to be ideally suited to as it takes the form of a hand-sized black box with a ten-digit (plus asterisk and hash keys) keypad and red LED on its front panel, and MIDI In and Out, mini jack socket and on/off switch on the rear. But remote patch changing is only one of the FT3s nine operating modes. In addition to Patch Commander mode (Mode 0), the FT3 has System Filters (Mode 1), Channel Filters (Mode 2), Pre-defined Messages (Mode 3), a Beats per Minute Generator (Mode 4), a Cable Check (Mode 5), Input Activity Check (Mode 6), Channel Activity Check (Mode 7) and Panic! mode (Mode 8). One final function is available from

in a long series of key presses. Perhaps a Patch Commander should have an LCD to help you navigate your way around its features.

IN COMMAND

BEGINNING WITH PATCH Commander mode, the FT3 allows you to transmit a patch number (0-128) on any or all of MIDI's 16 channels. Channel selection is achieved by pressing the asterisk key followed by the required channel number (channel 00 acting as Omni mode). This use of the non-numerical keys on the keypad is typical of the FT3's operation. Patch Commander mode also has eight memories which will store not only a patch change number but also the MIDI channel on which it was transmitted - useful. These memories are accessed by pressing the asterisk key and a memory number (keys 2-9) following the selection of a channel and patch number. To recall the required memory you simply press the key representing the required patch; as the FT3 requires that you enter patch numbers in three-digit form (to select patch 64 press 064), keys two to nine do not require the non-numerical keys to qualify their use.

Changing mode is achieved by pressing both the non-numerical keys followed by the required mode number. So by pressing the asterisk and hash simultaneously followed by the number one, we can enter mode one: System Filters. To use both the system and channel filters, the FT3 has to be connected in the MIDI chain so that it can process the information passing through it. The unit's MIDI Out, therefore, is actually operating as a MIDI Thru in this context.

Once in System Filters mode, pressing the hash key followed by zero sets all the FT3's eight filters on. Alternatively, they can be toggled on and off using keys 1 to 8. Specifically the filters are as follows; Clock Start/Stop/Continue, Active Sensing, System Reset, Tune Request, Timecode (MTC), Song Select, Song Position and SysEx. Running status information can also be removed from the datastream using key 9.

As System Filters mode enables you to remove system information from a MIDI signal, Channel Filters mode allows you to remove channel-specific information. Again there's a global enable/disable control in key 0, but keys 1 to 7 specifically filter Note On/Off, Channel Aftertouch, Poly Aftertouch, Program Change, Pitchbend, Control Change and All Notes Off.

Moving on to Mode 4, we find one of the FT3's particular talents. From this mode it's possible to transmit a variety of useful messages: All Notes Off, Start, Stop, Continue, Portamento On/Off, Modulation

Mode Select mode, and that is a Cancel, which returns you to the last Mode should you make a mistake or become lost

On/Off, Omni Mode On/Off, Poly Mode/Mono Mode, Local Control On/Off and Reset Controllers. Meanwhile, Mode 4 is a MIDI clock generator. In this mode, the FT3 will generate MIDI clock at any tempo (in whole bpm increments) between 39 and 255 beats per minute. Once the tempo is set, MIDI Start and Stop commands can be sent using the asterisk.

There are three different cable checking routines to be found in the FT3s Cable Check mode: Single Cable Check, MIDI Chain Check and MIDI System Check. A cable (or system) is connected to both the unit's sockets and MIDI Note On/Off messages are sent through it on each MIDI channel in turn. If the cable is good, then the red LED stays lit constantly. A flashing LED indicates corrupted information and therefore a fault in one of the leads or connections. The system check differs in that the FT3 times the delay between transmission and receipt of the messages (if the delay is short no note is heard from any connected instrument). Leaving the return connection (MIDI In) unmade allows the unit to sound the note (middle C) for a period of time followed by a one-second pause before moving to the next channel.

Input Activity (Mode 6) and Channel Activity (Mode 7) perform in a similar manner to the system and channel filters - the first is not channel specific, the second is. In each case, the FT3 provides a visual indication of MIDI activity through its LED.

The final mode of operation of the Patch Commander is Panic!. Simply - but very usefully - this mode sends out a MIDI Note off message for every note on every channel in turn. The whole process takes about four seconds, and in certain circumstances they will be four seconds well spent.

IN THE FIELD

LOOKING AT THE Patch Commander simply as a device for transmitting patch changes to your gear, it performs flawlessly. Specific applications will probably be as varied as the number of people who buy one, but I could see it being particularly useful in a live situation where you may need to make quick changes to gear that's out of reach - the programmable channel and patch combinations would be invaluable in this context.

Another function that's well suited to live performance is the program increment facility. The rear panel jack (which you thought I'd forgotten, right?) is for connection of a footswitch. The footswitch can be used to increment the currently selected patch, and will wrap around to patch 1 from patch 128. While the required footswitch doesn't come supplied with the FT3, an adaptor cable allowing you to connect a footswitch with a standard quarter-inch jack does. Good move, Forefront.

Moving out of Patch Commander mode and into bpm Generator mode, I connected the FT3 to an Atari running C-Lab's Creator. Putting Creator into MIDI sync mode (where it syncs to incoming MIDI clock), it was happy to be driven by the Patch Commander across the full range of its specified tempo range. Checking the bpm that Creator thought it was running at, however, suggested that its interpretation of 120bpm (say) was slightly faster than the FT3s. The discrepancy was so

slight that it was impossible to make a judgement on which was more accurate. It's not likely to have any practical consequences, I just thought I'd mention it. . .

What's most surprising about the Patch Commander is the range of uses to which it can be put - lead testing, filtering, generating MIDI clock. . . It's quite possible that you'll buy a Patch Commander to do one job and find it doing something completely different in the future. Look at it as being the antithesis of built-in obsolescence.

Because of its flexibility it's difficult to start suggesting likely uses for the FT3. Obviously, the fact that it will function as a MIDI filter is going to ensure that it will get used to filter MIDI information. But what conclusions can we draw from its ability to generate MIDI clock? Clearly its uses are many and varied, and it's down to you to decide whether or not it fits into your scheme of things MIDI. One thing that shouldn't deter you is the cost.

The Patch Commander is pretty easy to use. It needs saying because, without dedicated buttons for the functions, it could have been a nightmare. That's not to say that it wouldn't be *easier* to use if it did have dedicated buttons or an LCD screen, but both of these would have added to the cost of what's obviously intended to be a very cost-effective unit. As it is, I found that after ten minutes or so I was using most of its functions without referring to the manual or the key reference sheet which is thoughtfully provided. I'd call that a tribute to the design.

On the subject of the manual, while the paperwork that came with the review unit was of the stapled, photocopied variety, it was logically presented and readily understandable.

VERDICT

IT HAS TO BE said: regardless of the thought and ingenuity that has evidently gone into the functions of the Patch Commander Plus, its aesthetics have been sadly neglected. It's no reflection on the unit's performance, but it looks more like a prehistoric TV remote than *the* MIDI accessory to be seen with in 1991.

That the FT3 has been carefully and thoughtfully designed, however, is indisputable. Quite apart from the wealth of functions it offers, the provision of the footswitch for patch incrementing came about from a suggestion made by one user. Forefront aim to be helpful in this respect - not only are they happy to listen to your suggestions, but they also run a "customisation" service to modify any of their devices to suit your particular needs.

Sometimes it's easy to identify exactly who is likely to benefit from buying a particular piece of gear, but in the case of the Patch Commander it's almost impossible. That's not to say that it won't appeal to a lot of people - quite the opposite. The range of potential uses is huge and the cost is low. It's not often you can say that about a piece of kit. ■

Price £39.95 plus £2 p&p

More from Forefront Technology, 2 Rebecca Gardens, Silver End, Witham, Essex CM8 3SR. Tel: (0376) 83920.

“It's quite possible that you'll buy a Patch Commander to do one job and find it doing something completely different in the future.”

308S



PHOTOGRAPHY: JAMES CUMPSTY

While studio monitors strive to achieve a flat frequency response, hi-fi speakers continue to put their own interpretation on how music should sound. Peavey's 308S monitors attempt to cover both bases. Review by Nigel Lord.

HAS IT EVER occurred to you that you'll probably never know exactly what your keyboards or drum machine sound like? After deciding that you can't do with anything less than a 16-bit sampler, have you thought that you're unlikely to ever hear the full potential of the machine? (Unless you get the chance to take it into the control room of one of the country's state-of-the-art recording studios.)

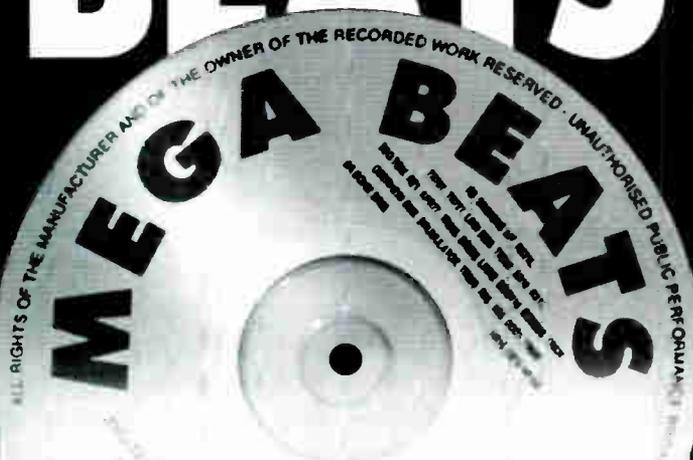
I refer, of course, to the fact that the quality of an instrument's sound is ultimately determined by the monitoring system. This is not, admittedly, something which crosses most people's minds when shelling out for the latest and best technology has to offer. But far from being some mildly irritating idiosyncrasy of playing hi-tech instruments, it puts electric/electronic musicians at a real disadvantage alongside their acoustic counterparts.

Without access to a "reference" system, you have no yardstick with which to measure the performance of the individual components that serve to turn the electrical signals present at the output jacks of your keyboard(s) into acoustic signals arriving at your ears. When you consider that these components act as a filter for many hundreds, if not thousands of pounds worth of gear, the importance of making an informed decision about what to use becomes rather more critical.

Possibly the most intractable problem is that of colouration in speaker systems. Limited frequency response, can, to a considerable extent, be compensated for in the imagination. It's not usually difficult to mentally extend the response of one of the smaller nearfield monitor systems, provided the frequency range covered is accurate and well-detailed. Indeed, this has been the thinking behind a number of the better designs which have emerged over the past few years. Suppress the frequencies which are limited by cabinet size, and you're free to concentrate on the rest of the audio spectrum. And of course, smaller cabinets also have the advantage of more closely resembling domestic hi-fi speakers.

When it comes to colouration, however, things start to get more problematic. The main difficulty arises from the fact that keyboard players - as all users of all hi-tech equipment - don't integrate their sound systems into the equipment chain in the way that, for example guitarists do. The amp and speaker chosen by a guitarist forms a fundamental part of his overall sound and has to be given as

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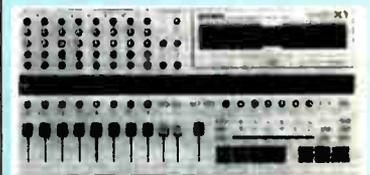
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much consideration as the guitar itself. Take a guitarist into the studio - and his amp and speaker has to go with him.

This is one of the ways in which colouration (often, extreme colouration) is used positively. Clearly, it's not a solution for those manipulating sound through the synthesis, sampling and recording tape. For us the system should provide an

mixing desks and, of course, their DPM3 keyboard (reviewed last month) - all well away from what has been their best-known area of operation: guitar, PA and back-line equipment.

So it is with their monitor speakers - the PRMs, or Phased Reference Monitors - represented here by the 308S model, in which they present a three-way design with switchable Equalised or Reference



accurate, well-balanced sound capable of reproducing the highest trill of a digital synth to the lowest rumble of a bassline - often simultaneously. Not only that but it should be capable of performing at high SPLs (sound pressure levels) and without adding its own character to the music.

Realistically, few of us have access to systems which even come close to this ideal. Instead, we use monitors which though flawed, are flawed in a predictable way and have the advantage of being a known quantity amongst others in the music industry. Hence the popularity of Yamaha's NS10s and the JBL Control series. Purely in numerical terms, these must be amongst the most popular speakers ever produced outside the hi-fi market - and that's no mean achievement given the proliferation of nearfield designs over recent years.

Given the inflated size of the market, and the depressed state of the economy, you may ask if we actually need any more monitors to choose from. But as you'll know if you're familiar with the hi-tech side of the music business, Peavey aren't the kind of company to let things like this bother them. Over the past couple of years they have flown in the face of a recession-torn industry and released a wealth of new equipment including effects processors,

response modes. That's right, a three-way nearfield design which can be adjusted for different acoustic environments. Clearly, Peavey have a trick or two up their sleeves when it comes to monitor design, and these they fully intend to use to get a hold on this crowded market.

IN THE FIELD

AS YOU MIGHT imagine, with three drivers to house, the 308Ss are pretty large. Although the tag "nearfield" doesn't dictate a limit on size, it's fair to say these speakers fall outside most people's idea of the space nearfield monitors should occupy. With a recommended positioning of only five feet from the listener, however, they're unequivocally nearfield in operation, and should be directly compared with those other nearfield units.

The 308S is a ported enclosure, approximately 12" high x 17.5" long and 11.5" deep, weighing in at a hefty 26lbs. Removing the clip-on front grilles reveals an 8" low-frequency and a 5" mid-range driver, together with a 1" soft-dome tweeter. Surrounding the mid- and high-frequency units is a foam blanket recessed into the front baffle, claimed

to provide more accurate imaging and transparency. We shall see. The switch for selecting Reference or Equalised operation is conveniently positioned near the bottom of the front panel. Around the back we have a pair of (recessed) connection terminals of the "press down and push in" variety which obviate the need for plugs.

Surprisingly for such substantial speakers, power handling is only quoted as 40 watts RMS, and with a (nominal) impedance of four ohms it would seem prudent to keep a watchful eye on amplifier levels. However, as any acoustic engineer will tell you, speaker power ratings can be extremely ambiguous and certainly give you no indication of how loud the damn things sound. Better by far to look at the sensitivity rating - which is quoted as a rather more encouraging 88dB (1W/1m).

Listening tests were carried out in a medium-sized room with panelled walls and little in the way of soft furnishings. I suppose it would be what most people would identify as a traditional study, except that it's crammed with equipment and shelves which help break up a lot of the reflections that would ordinarily be created by the hard walls. Nevertheless, it is fairly live, and in some ways an unpredictable acoustic environment. It's certainly one that benefits from the use of nearfield monitors.

VERDICT

RATHER THAN SIT down and carry out specific listening tests, I decided to replace my existing monitors with the 308S and use them for a few weeks to see what arose. I've never been convinced that listening to a pair of speakers and then forcing yourself to arrive at a conclusion is the correct way to make an appraisal. Far better to forget that they're there and wait to see what impressions present themselves.

Seldom, in time I used the 308Ss, was I struck by any lasting impression of their character. Even after some three weeks use, I could think of no single adjective (or combination of adjectives) to describe them. I was getting worried. A review to write, and nothing to say. Then the folly of the situation began to dawn on me; it's a trap that reviewers often fall into - having to say something which doesn't have to be said.

The fact is that like all better speaker designs (no matter what their size), the 308Ss impart little or none of their own character to the music, and in that sense are virtually transparent in operation. You're left with the smooth, effortless clarity and depth of a speaker well on top of its job.

How about the more nuts and bolts questions like how low, how high and how loud? Well, unlike reviewers of hi-fi speakers, I was armed with the kind of equipment which makes it easy to determine low- and high-frequency performance - the synthesiser. And after some exhaustive sessions running through patch after patch, I concluded that there was effectively no limit to the audibly useful information which the 308Ss could reproduce. This would seem to bear out the quoted response in the manual which

puts them only 3dBs down at 45Hz and 18kHz, and certainly, at the lower end, makes them the finest pair of nearfield monitors I've ever heard.

As regards how loud they are, well, positioned at the recommended distance from my ears, it soon became apparent that my ears would reach a state of distress long before the 308Ss showed any sign of doing so. Though these speakers are perhaps a little under-powered on paper, this is not a problem in any way in practice.

What of the intriguing Reference/Equalized switch? Well, it seems to me that in providing us with a choice of responses, Peavey have attempted to offer us both the speakers we ought to use (Reference) and those we would like to use (Equalised). And to a certain extent, how successful they have been in fulfilling this criteria is overshadowed by the question of whether they should have attempted to do this in the first place. There is an argument to suggest that deliberately "engineering" the frequency response of a pair of speakers in this way is not something that should be encouraged. And having sold off a considerable amount of equipment in the last few months in order to cut down the number of variables I'm confronted with each time I sit down to write or record, I'm not sure I welcome the prospect of being presented with yet another. On a number of occasions I found myself wondering what a particular song would sound like with the 308s switched to their other position - knowing I wouldn't have given it a second thought had my eye not just come to rest on one of the switches.

On balance, however, you have to welcome any move which engenders a greater awareness amongst musicians (and certain recording engineers) of the loudspeaker's role within the audio chain. And anyway, it has to be said that the difference between the two settings isn't that extreme - we're only talking about a slight lift in the region between approximately 300Hz and 4kHz (when switched to Equalised). Peavey refer to it as "voiced" response, and though rather vague on paper, this does make sense when you hear it in use.

Up against better-known nearfield monitors, I don't think Peavey have anything to worry about. Though those extra few inches of cabinet space might pose a problem for anyone working in a limited space, the resultant sound more than justifies the decision to opt for a bigger enclosure. With the 308Ss I see no reason for adding a sub-woofer of any kind. This is a full-range monitor in its own right.

I couldn't, as a reviewer, say to anybody, go out and buy a pair of speakers without first listening to them. But neither could I possibly end this review by issuing one of those statements along the lines of 'if you're in the market for a pair of monitors, it might be worth checking these out'. The PRM308Ss positively demand your attention and I can guarantee they will hold it. ■

Price £242.66 each including VAT.

More from Peavey Electronics (UK) Ltd, Hatton House, Hunters Road, Corby, Northants NN17 1JE. Tel: (0536) 205520. Fax: (0536) 69029.

"Unlike reviewers of hi-fi speakers, I was armed with the kind of equipment which makes it easy to determine low- and high-frequency performance - the synthesiser."

DMI64 MKII



PHOTOGRAPHY: JAMES CUMPSTY

**In spite of advances
in digital
technology, the
sound of the
tonewheel
Hammond organ
remains unmatched
- the latest
pretender to its
crown is Voce's
DMI64. Review by
Gordon Reid.**

IF THE PIANO is the most flexible keyboard instrument yet invented, the organ must surely come a close second. Even today, across a wide variety of musical styles, an old Hammond tonewheel or Vox Continental can often be found lurking somewhere in the mix. Many attempts have been made to copy the genuine organ sound - most notably in the '70s by companies such as Korg, Roland and Crumar - some of whose instruments are still highly sought after.

Where original Vox organs are relatively light and compact, and can be found at modest secondhand prices, however, Hammonds are invariably large and weighty - consequently, you're more likely to want a Hammond impersonation than the real thing. To date, most desirable of the "mock" Hammonds are the Korg CX3 and (in particular) BX3 which, in most players' views, came closest to the sound of the original. Although the BX3 is no half-ton, un-split monstrosity requiring four roadies and a reinforced stage, it's no lightweight either. And the BX3 is not only big, it's also rare, so if you want that genuine "C3 played through a Leslie 122" sound, you have to play a Hammond C3 through a Leslie 122. Unfortunately, amateur bands can rarely afford the road-crew or the transportation costs of lugging a real Hammond around and, unlike the piano (which can now be replaced for most purposes) there's no

substitute for the real organ thang. Until now. . .

The Voce DMI64 Mark II (catchy name) is a 1U-high, rackmounting digital synthesiser designed specifically for emulating organ sounds. Finished in a distinctive silky grey, it sports a mere four push button controls, a four-character LCD window, an LED, an on/off switch and, on the back panel, two audio outputs, MIDI In, Out and Thru, and a socket for the external power supply. Regardless of its visual simplicity (or perhaps, because of it), the DMI is one of the most attractive rackmount devices I've seen in a long while. Internal construction is also excellent with every component except the operating system ROM mounted directly onto the single circuit board. The ROM is socketed, implying the possibility of future upgrades. A lithium battery provides the voltage for the internal memories and is expected to last for four years, but if it's removed from its clip or otherwise disconnected the DMI reverts to the factory presets.

Three other items come with the DMI: an external nine-volt transformer, an IBM-format floppy disk containing the DMI editor/librarian, and a manual. Maybe because the DMI is so simple to understand and operate, the unthinkable has happened - I'm not going to slate the manual. It is brief but comprehensive and, although a little "techy" in places, should present few problems. Two appendices contain a listing of the factory presets, >

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“Polyphony is a stunning 64 voices, so those brought up on Emerson-style wrist-and-forearm block chords won't be disappointed.”

➤ plus an explanation of the synth's MIDI SysEx dump format. Not bad.

Using the Voce as a preset box couldn't be simpler. Plug in the power, plug in the MIDI, plug in the audio, and plug in the talent. The single LED glows green to show that the power is switched on, and flickers red when MIDI data is received. (If you're using a controller with active sensing, the LED goes greenredgreenred.) The LCD shows the patch number allocated to the basic MIDI channel, and this can be changed using the Up/Down Preset/Parameter buttons. Patch changes can also be received from the controller keyboard. There are six audio assignment modes available. These are: channel 1 only, channel 2 only, mono (channels 1 & 2 identically), stereo (which can be used with the onboard effects to give a more spacious sound), split, and multitimbral. Polyphony is a stunning 64 notes, so those of you brought up on Emerson-style wrist-and-forearm block chords won't be disappointed. The Split function allows you to select two patches (one to play above, the other below, a user-defined split point), and thus imitates dual manuals from a single master keyboard. The DMI can then be forced (using 16 MIDI channels) into playing 32 different patches simultaneously - all at different volumes and at different pitches if required. This enables the Voce to imitate the most complex organs - right down to the registration and coupling of each manual.

THE GOOD

THE VOICING ON the Voce simulates the drawbars on a traditional organ. Each waveform is described in terms of footages from 16' up to 1', and by drawbar extensions. Thus waveform 01 ('Church Ham') is shown as 848848448 - a neat and obvious notation if you're *au-fait* with the real thing. There are 64 waveforms in the DMI and these can be freely assigned within the 100 programmable patches (which Voce confusingly call presets). Presets 00-07, then, are Hammond samples. The thinner, more cutting tones of a Vox are represented in numbers 08-15. Frf (Farfisas?) appear in 16-23. Then, following a strange selection of somewhat unorgan-like tones, there are a further selection of Hammonds in 33-56. Despite digital oscillators, the tones are warm, if a little clinical, with just a touch of movement even when all the effects are set to zero. The output rate of the waveforms is 48kHz, the waveforms are 512-point, 22-bit samples (only 10.4 milliseconds long but very high resolution), and the noise floor is -70dB, so in theory the voice quality should be equal to that of, say, an Akai S1000.

The Voce also offers 64 percussion waveforms. These vary from simple clicks, through monotonous, to complex multiple-footage waveforms. Checking closely, you'll find that the percussion waveforms are identical to the voices - it's just that they decay rather than sustain indefinitely. Three parameters control the percussion: waveform, volume, and the duration of the decay. Two different percussion patches (notionally called on and off) can be allocated per patch, offering two different percussion sounds for a single voice.

THE BAD

UNFORTUNATELY, EDIT MODE on the DMI is the ultimate nightmare creation of *the programmer*. The range of parameters available is extensive - waveforms, effects, MIDI control and mapping, pitch, volume, channel splits and assignments, SysEx, and multitimbral assignments - but these are all selected using just the two parameter Up/Down buttons, following which the value is modified using just the two value Up/Down buttons. Hence, only four buttons - it's compact, but positively tedious. When compared to a fistful of drawbars, the Voce is a dog to edit. Worse, there's no edit buffer, so any changes made to the patches are destructive - they're stored directly in patch memory.

The Leslie speaker creates its unique sound by passing the output of two stationary speakers through revolving rotors. The bass (anything below 800Hz) plays downwards into a single rotating horn, while the treble plays upwards into what looks like two rotating horns (although one of these is a dummy, provided to stop the whole assembly from shaking itself to bits). Each rotor assembly has two rotation speeds - slow for chorus effects, and fast for tremolo. The result is a sound that combines the Doppler effect (sinusoidal pitch shift) with phase shifting, timbral modulation, and amplitude modulation. This makes the Leslie extremely difficult to emulate. Electronic effects usually employ a modulated chorus to give movement to the (essentially) tame organ sound, but this doesn't come close to the sound of a Leslie. Voce have used a chorused pitch modulation for their effect, taking account of the Doppler effect caused by the rotors' rotation, but have largely overlooked the other consequences of the rotors. (Don Leslie was recently quoted saying "Everybody describes the Leslie effect as the Doppler effect, but they don't really understand what it's doing".) The DMI effect has four parameters - acceleration and deceleration rate (0-100), and fastest and slowest velocities (0-20), but applies only one rotation rate to the whole frequency spectrum. A real Leslie uses two rotation speeds simultaneously - one for the treble, and one for the bass - and these are rarely (if ever) the same. Consequently, the Voce rotating speaker simulation is disappointing.

Vibrato and chorusing are also important consequences of a Leslie's rotation, and players often use pedals to recreate them on non-Leslie'd organs. This makes them integral components of the classic organ sound. The DMI offers both chorus and vibrato with five parameters for each: initial amount and speed when "off"; amount and speed when the effect is "on"; and four depths of effect (0-3). Twenty-one speeds are available (0-20) but there is no acceleration or deceleration. The instantaneous transition between speeds can be disconcerting, but is no more of a problem than using an external effect unit. The pitch-shifting LFO is roughly sinusoidal at low speeds giving a smooth chorus or vibrato, but at higher speeds (15+) it begins to sound like a square LFO modulating the oscillator pitch. Mixed with external effects such as delay and reverb this is not

much of a problem, but in isolation it's not very pleasant at all.

For yer actual Hammond impersonation you gotta have grit, bite and guts. Distortion occurs throughout the sound generation of an organ - dirty tonewheels, ageing amps, overdriven Leslies and, of course, dozens of valves adding their characteristic buzz to the sound - so no organ synthesiser should be without an onboard overdrive. The DMI has one, but it is another source of disappointment. A single distortion circuit is provided, but this can only be switched on or off. Worse, it's applied to the entire audio output whether the DMI is being played for a single patch, or in 32-patch multitimbral mode. It's not even as if it's a good overdrive. It has the fizzy, annoying character that guitarists spend hundreds of pounds avoiding. I switched the distortion off and played the Voce through a Roland GS6. The GS adds warmth where the onboard effect adds fizz, and at high volumes and pitches the GS tries to scream like a genuine Hammond. In contrast, the Voce distortion grates like a rusty moped.

AND THE . . .

THE 5.25" IBM-FORMAT diskette supplied with the DMI contains a public domain editor/librarian. Since very few UK musicians have a DOS-based PC with MIDI, this disk is useless to most of us. Still, a few phone calls to Voce and Syco later, and the promise of Atari software (which should be available by the time that you read this) was extracted. The fully-featured patch librarian contains a library of the factory presets, and the editor has an edit buffer, a MIDI "global" page, plus a waveform editor with "virtual drawbars". A what with a what? Remember patch numbers 56-63? Well, these are the user-definable waveforms, which can be modified slowly and clumsily from the front panel of the DMI, or clearly, simply, and effectively using the editor. Drawbars are drawn on the screen, and these can be extended or pushed in using the mouse. Fourier analysis then converts the drawbar settings to waveforms, and these can be stored on disk and/or dumped to the DMI for inclusion in patches. This is additive synthesis, similar to (if more limited than) the system implemented on the Kawai K5, and almost identical to using algorithm 32 on a DX1 or DX5.

Editor/librarians usually cost serious money, but in 1990 Evolution Synthesis broke the mould by including an Atari editor free with the EVS1 module. Full marks go to Voce for following the same course. It's painful spending £500 on a budget expander only to find out that you've got to shell out another £100 to make it usable. Currently, Syco understand that the PC and Atari versions of the DMI Editor will remain free of charge, although you may have to dig deep for the Mac version expected later this year. I guess you can't have everything.

Extending the ideas behind the user-defined waveforms and the editor, I found that SysEx caters for patch and waveform dumps, and sample dump request will grab a waveform from any suitable external device. As an added bonus, the DMI will grab

any 256-word MIDI SDS (sample dump standard) sample if a few simple conditions are met. Samples can be from 8- to 24-bits long, and can be looped forwards, backwards, or alternating. OK, so 256 words aren't very many, but if you've got an SDS sampler it must be worth editing a few waveforms and loading them into the DMI. This should enable you to create sounds that are not available via the DMI's own waveform generation.

. . . VERDICT

A REAL ORGAN, whether it's got pipes or tonewheels, is the sum of two major elements. The first is the basic sound which, unlike most synthesisers, is a combination of many simple waveforms and pitches built up into more complex sounds. The resulting voicing can range from delightful delicacy to gut-wrenching power. The second element is the chorus, vibrato, phase and timbral modulation which modifies the basic sound.

So now for the good news: the Voce generates high-quality imitative waveforms and combines them in authentic ways into convincing organ voices. Now the bad: the Voce caters for a wide range of organ effects but each is, in isolation, disappointing. Unfortunately, DMI effects (with the exception of the distortion) can only be accessed one at time, so there is no facility to make the basic sound more interesting by combining them. Matters would be dramatically improved by providing another two LFOs, thus enabling each effect to be operated separately. Using simultaneous external effects creates a lovely warm and swirling sound - which sounds, funnily enough, not unlike a genuine organ. Replace the onboard Leslie effect with the wonderful Dynacord CLS222, the chorus and vibrato with a Quadraverb, and the distortion with a Roland GS6, and the DMI sounds excellent. Still, there never was a sound that couldn't be improved by over £1200 worth of effects units, so it's not really a fair comparison.

On the positive side, the range of facilities offered by the DMI and its attendant software make this a unique synthesiser with many well thought-out facilities. There are drawbacks - notably the operating system and the lack of real-time controls - but much of this can be forgiven. The MIDI musician has, if you'll excuse the language, never had a decent organ at his (her?) disposal, and has had to sacrifice valuable synthesiser polyphony to obtain even a rough imitation of the real thing. The Voce changes all that. So it doesn't sound like a B3 (or even a BX3) screaming through Deep Purple's PA, but it doesn't sound like a Bontempi either. On balance, for less than £500, and with the long-anticipated Roland VK1000 weighing in at a bank-breaking £1800, the Voce has to be the successor to the much loved, but now defunct Korg CX3. On this basis, it comes cautiously recommended. ■

Price £445 plus VAT.

More from TSC, 9 Hatton Street, London NW8 8PR.
Tel: 071-258 3454; Syco Systems, Kimberley Road, London NW6 7SF. Tel: 071-625 6070.

“Despite digital oscillators the tones are warm, if a little clinical, with a touch of movement even when all the effects are set to zero.”

Question Time

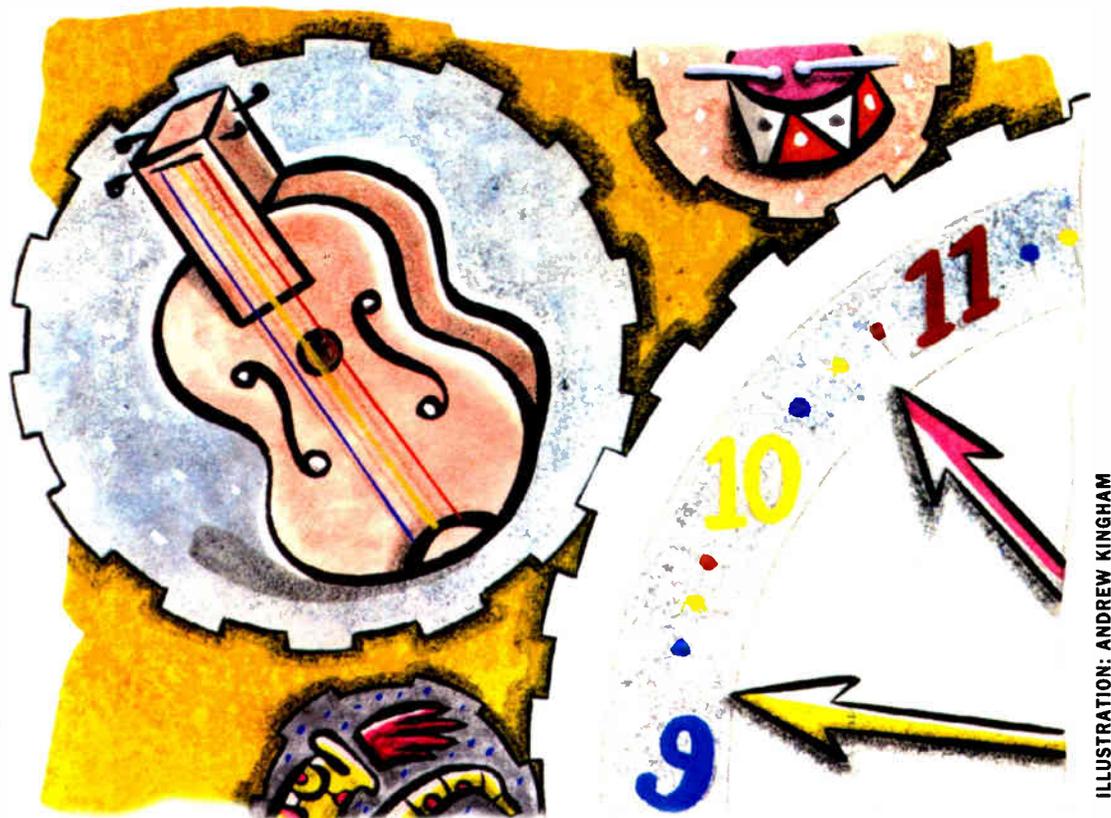


ILLUSTRATION: ANDREW KINGHAM

LIKE GREAT BRITISH COMEDY, THE SECRET OF SYNCHRONISATION IS TIMING - SO JUST HOW ACCURATE ARE MIDI CLOCK AND MIDI TIME CODE? TEXT BY VIC LENNARD.

SYNCHRONISING YOUR MULTITRACK recorder to a sequencer or drum machine is a delicate affair. On one hand the possibilities opened up by running tape alongside a sequence are endless; on the other there's the danger of hearing your latest song going down the tubes as the sync between tape and computer slowly moves in and out of "focus".

While you can often get away with some movement in synchronisation due to the degree of laxity within the timing of MIDI (courtesy of its serial nature and the response time of many MIDI devices), once you can hear a lack of tightness you know you've got trouble. So, given the option, which of the two main sync systems for MIDI will give you the best results: MIDI Clock or MIDI Time Code?

CLOCK ON

MIDI CLOCK IS a MIDI message (\$F8) sent from a master MIDI device. It acts as a digital pulse locking the timing of slave units to the master. Before MIDI arrived, the rate of the (analogue) pulse used for a similar purpose

was variable. For example, Roland and Sequential devices used 24 pulses per quarter note (24ppqn) while Linn used 48ppqn and Oberheim used 96ppqn. MIDI Clock is transmitted at 24ppqn and the fact that it is related to the timing of a quarter note is important - it means that the flow of MIDI Clocks is related to the tempo of a piece of music. The higher the tempo, the faster the flow and vice versa. For example, a master device set to a tempo of 120bpm will send out a MIDI Clock every 20.8 milliseconds:

$$\begin{aligned} 120\text{bpm} &= 2 \text{ beats per second} \\ &= 500\text{ms per beat} \\ &= 500/24\text{ms per MIDI Clock} \\ &= 20.8\text{ms} \end{aligned}$$

If the receiving device had to rely solely on this pulse, there would be serious timing problems due to the loss of integrity of its own internal resolution. A MIDI Note On takes a little less than 1ms to transmit (0.96ms) yet here we are with a clock pulse approaching 21ms requiring the internal timer to wait this long to move to its next step, and so be able to transmit the stored events since the last clock was received. Most of today's sequencers use an internal clock of at least 96ppqn, even the small hardware ones, while sequencers such as Mark of the Unicorn's Performer use 480ppqn. What most sequencers do is to interpolate internally-generated ticks within the MIDI Clocks being received. To keep a sequencer resolution of 96ppqn would entail placing three ticks

between each received MIDI Clock.

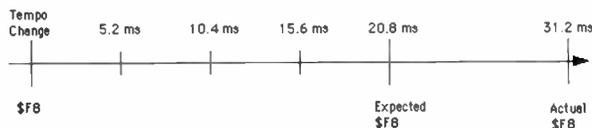
What does a resolution of 96ppqn mean in practice? Working from the above calculations, 96ppqn will result in internal ticks approximately 5.2ms apart. Each tick cycle allows the sequencer's micro-processor to handle the various MIDI events which have built up since the previous tick. In terms of MIDI, this would mean transmitting about 16 bytes, the content of which will depend on certain considerations; is the sequencer operating in Running Status where the Status byte for a MIDI event is dropped if it is the same as the previous one? Do the MIDI events have two bytes (Program Change, Channel Aftertouch) or three bytes (Notes, Controllers)?

What if you're using pitchbend, for instance? Taking the example of a Roland synth which uses nine-bit pitch wheel resolution, this gives a total of 2^9 positions = 512. Each position is responsible for the transmission of three bytes, giving a total of 1,536 bytes when the wheel is moved from the centre to the top and back. If a sequencer can only transmit 16 bytes per tick cycle, this is going to take 96 ticks (or 24 MIDI Clocks) to transmit; $96 \times 5.2\text{ms} = 499\text{ms}$ or approximately half a second. Don't worry, Danno, this is a "worst-case scenario". Using Running Status cuts the number of bytes from 1,536 to: $3 + (511 \times 2) = 1025$ bytes. Additionally, it should be realised that rapid movement of the pitchbend wheel will not result in all 512 positions being scanned.

In the meantime, what happens to MIDI

note information? Some sequencers prioritise MIDI note data, in which case the Note On messages will be given a higher priority than pitchbend. From the point of view of MIDI Clock, Note On information is one of the System Real Time messages which can be sent at any time and can also be sent during other messages, for instance System Exclusive. If this were not the case, it would be impossible to synchronise a MIDI system with any reasonable degree of accuracy. Sequencers are supposed to give System Real Time messages (which also include MIDI Start, Continue and Stop, active sensing and system reset) the highest possible priority.

What happens when a tempo change occurs? Let's look again at an example of a song starting off at 120bpm and slowing to 80bpm for an instrumental break. The original tempo gives MIDI Clocks 20.8ms apart. Assuming our slave sequencer has a resolution of 96ppqn, this 20.8ms gap for each MIDI Clock is divided into four internal ticks, each of about 5.2ms. Of course, the sequencer doesn't know when the next MIDI Clock is going to arrive, so when the tempo change takes place and the MIDI Clock gap changes to 31.2ms for the tempo of 80bpm, what happens? The three interpolated ticks occur and when the next MIDI Clock doesn't appear after 20.8ms, there's an uncharted gap. The sequencer interpolates more ticks at 5.2ms intervals until the next MIDI Clock appears - but the tempo change has already taken place and so the sequencer appears to drag behind the beat. Effectively, the sequencer doesn't react to the tempo change for 31.2ms. If a smooth change of tempo is taking place, the overall effect will be of the sequencer lagging behind, and this may be audible depending on factors such as the tempo changes involved, the number of notes being played and the nature of their envelope (percussive sounds are more likely to give noticeable delays). Yes, we are dealing with small values of time, but most software writers make a big deal out of the high resolution of their sequencers - which gives improvements in terms of similar small values of time.



There are various other anomalies concerning MIDI Clock. The master has to send a MIDI Start command followed by MIDI Clocks when Play is pressed, but how long a gap is left between the Start and the first MIDI Clock? The MIDI Specification states that at least 1ms should be left, but we have to consider how long the slave takes to prepare

for that first MIDI Clock? If it misses it, the entire song will be offset by one clock. A similar problem arises when a slave receives a Song Position Pointer (a count of how many 16th notes have elapsed since the beginning of the song) and then can't respond before the first MIDI Clock following this. Remember, unlike SMPTE, which uses unique messages to identify each point on tape, each MIDI Clock looks like any other.

These problems (and others) shouldn't occur, however, and are down to manufacturers' implementation of the MIDI spec. But the fact that they can exist at all is purely down to the nature of MIDI Clock.

CODING UP

MIDI TIME CODE was added to the MIDI spec in 1986 to allow for accurate reference to SMPTE (or LTC - Longitudinal Time Code), the standard for tape time code. Because it encodes the actual SMPTE time into eight, Quarter-Frame messages it is an absolute measure of time as opposed to MIDI Clock and Song Position Pointer which are relative measures, dependent on tempo. For audio-visual work in particular, tempo is often not a factor - cues occur at specific time points - and so a non-tempo based system is essential.

Quarter Frame messages are used both as the "pulse" for the system, and to allow the actual SMPTE time to be encoded and then decoded by the sequencer. Each of these messages is two bytes long, consisting of a Status byte (\$F1) followed by a Data byte. So, at least two frames are needed whenever the system starts to identify the precise time. Working at 25 frames per second, this would take 80ms - far too long. For this situation, a Full message is used, which transfers the complete time in a ten-byte message.

What problems are there with MTC? Firstly, as it takes two frames to decode the time, the slave unit needs to keep a permanent internal offset of two frames. Secondly, the time isn't actually transferred until the second byte of the Quarter Frame message has been received. This effectively leaves the receiving

device at least 0.64ms behind. This can be dealt with by either sending the messages early or by compensating within the slave. As the slave is working in hours, minutes, seconds, frames and bits, a calculation is required as to how many bits to back up. The problem here is that this depends on the frame rate; the fact that SMPTE to MTC

converters may not necessarily read the SMPTE code bit by bit (80 bits = 1 frame) but by frame edge, SMPTE byte or other method doesn't help. While these elements have to be dealt with, they rarely involve unknown timing factors such as those which occur with MIDI Clock.

The only problem with MTC which cannot be solved is that as a Quarter Frame message incorporates a Data byte, the message cannot be inserted into other MIDI messages. Consequently, if a manufacturer is running background SysEx messages to update certain aspects of a MIDI device, MTC cannot be used. One possible answer is for manufacturers to break down SysEx messages into smaller packets.

Q & A

ARE THERE ANY situations where the use of MIDI Clock is preferable to MTC? How about the timing of the "pulse" - MIDI Clock or Quarter-Frame message? For instance, at 25 frames per second, a Quarter-Frame message occurs each 10ms. What tempo would you need to get MIDI Clocks to be that frequent?

"x" beats per minute = "x"/60 beats per second

$$\begin{aligned}
 &= 60/"x" \text{ seconds per beat} \\
 &= 60,000/"x" \text{ ms per beat} \\
 &60,000/24"x" \text{ ms per MIDI Clock} \\
 &= 2,500/"x" \text{ ms per MIDI Clock}
 \end{aligned}$$

If a MIDI Clock has to occur each 10ms, the tempo must be greater than 250bpm, a situation which rarely (if ever) occurs. More to the point, the slave knows precisely when the next Quarter Frame message is going to appear, thus making internal clock interpolation a far more accurate process.

Is MIDI Clock simpler to work with? In short, it isn't; if you're using FSK instead of SMPTE as the tape sync code, you cannot change the tempo or length of a song once the timecode has been recorded. With SMPTE, the usual procedure is to "stripe" the entire reel of tape in one pass. If a SMPTE-to-MIDI Clock converter is being used, tempo changes have to be keyed into the converter. With a SMPTE-to-MTC converter, the tempo track on the sequencer handles tempo changes. This has to be the easiest and most flexible way to work.

Given the choice, MTC has to be selected over MIDI Clock - indeed, it's the standard for practically all current Apple Mac sequencers. The question is, out of all of the sequencers available on the Atari ST, why are Steinberg and Passport the only software companies who have implemented MTC? ■



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CLAVINOVA CLP550, excellent cond, can deliver, £999. Karen, Tel: (0869) 242011.

EMS AKS, serviced and upgraded by EMS, £550 or offers. Tel: (0670) 855123.

E-MU PROFORMANCE plus EVS1, £450. Tel: 071-709 0960.

E-MU PROTEUS 1, excellent cond, boxed, guaranteed, £449. Tel: (0493) 669109.

ENSONIQ ESQ1, £450. Sean, Tel: Canterbury (0227) 722369.

ENSONIQ ESQ1, latest software, extra sounds, £450 ono. Jerry, Tel: (0442) 234747.

ENSONIQ SQ1, personal music studio, mint cond, still boxed, £950 ono. Tel: 021-702 2137.

ENSONIQ VFX-SDII workstation, as new, boxed, with carry case and extra sounds, £1200; Tascam Porta 02, £400. Tel: (0909) 566695.

EVOLUTION EVS1 and Casio FZ1 sequencer, £215 for both. James, Tel: (0603) 625485.

EVOLUTION EVS1 synth module, brand new, £175. Chris Challoner, Tel: Worthing (0903) 504930.

HOME STUDIO CLEAROUT: Korg DS8, with 400-sound RAM card, £350; Alesis MMT8 sequencer, £130; Alesis Microverb, £90; 3 Akai EX85P parametric equalisers, £30 each; Yamaha MT2X, £350; Philip Rees 5x5 MIDI switch, £50. Rick, Tel: Selby (0757) 210239, 9am-5pm.

HOME STUDIO CLEAROUT: Roland Juno 2, £150; Yamaha TX802 synth, with manual, £500; R8 drum machine, with several cards, £450; Steinberg Pro24 sequencer program, v3, with manual, £60. Narinder Singh, Tel: 021-356 1344, eves.

HOME STUDIO CLEAROUT: Casio CZ101, £120; SK5, £60; CZ230S, £120; CT480, £140; Yamaha DX9, £240; CS01, £40; Korg MS10, £75; Roland TR606, separate outputs, £90; Realistic 6:2 mixer, £75. All ono. Simon, Tel: (0279)

410818.

KAWAI K1, Alesis MMT8, RAM cards, plus cables, £350, no offers or part exchange with D20 or Ensoniq ESQ1. Henry, Tel: (0395) 42620.

KAWAI K1 MkII, will swap for Roland S10 or Emulator. Glenn Robertson, Tel: (0772) 792400.

KAWAI K1, DR550 drum machine, Korg SQ8 8-track sequencer, I'll also throw-in a keyboard stand and little mixer, £550. Andrew, Tel: (0248) 70616.

KAWAI K1R, immac cond, boxed, £200. Paul, Tel: (0483) 67882.

KAWAI K3M, rackmounting analogue synth, excellent cond, on-board chorus, £250 ono; Yamaha DX100 synth, £130 ono; Roland PC100 mother keyboard, £30 ono. Chris, Tel: 061-881 3902, after 6pm.

KAWAI K4, £435; Microverb II, £65; Fostex X15, £100. Tel: (0462) 451142.

KAWAI K4R expander, boxed, as new, £300; Boss RRV10 digital reverb and delay, £70; Boss RPS10 digital pitch shifter and delay, £70; Icon C6 6-channel mixer, with EQ, £80. Tel: 081-954 5275.

KORG 700 analogue synth, excellent cond, £130. Tel: Tilbury (0375) 856572.

KORG C3500 digital piano, exc piano sound, wicked action, good as new, £1000 ono. Tel: 081-346 4760.

KORG DS8 synth, multitimbral, nice keyboard, with velocity and aftertouch, £325 ono. Dave, Tel: (0689) 893208, days.

KORG DW8000, vgc, home use only, boxed, £350. Nigel, Tel: Hull (0482) 48261.

KORG M1 workstation, still boxed, hardly used, includes manuals, ROM cards and 100 extra sounds, ROM card, £950. Sean, Tel: (0634)

389250.

KORG M1R, DS8, Yamaha RX5 and QX5, plus A-frame, with mixer and cab, £1400. Steve, Tel: (0279) 430466.

KORG M1R, plus 1U rack box and 3 RAM cards, £800. James, Tel: 021-378 1859.

KORG M1R, ace nick, boxed, with manuals, home use only, £750 ono. Steve, Tel: (0782) 660969.

KORG MS10, with manual, £80 ono. Simon, Tel: (0926) 423822.

KORG POLY800, poly MIDI synth, £150 ono; Jen SX1000, mono analogue synth, £50 ono. Vince, Tel: (0474) 533875.

KORG T3, home use only, boxed, with manuals, quick-lok stand, £1200. Graham, Tel: (0753) 40000 X3349, work or (0753) 28973, home.

KORG WAVESTATION, 2 RAM cards, immac cond, forced sale. Tel: Telford (0952) 812034, anytime.

KORG WS1, plus 3-tier stand, £975. Tel: 071-480 5705.

MOOG MINIMOOG, good cond, £485. Tel: (0726) 883265.

MOOG SOURCE, Moog monosynth, needs attention, £150. Paul, Tel: (0483) 67882.

ROLAND D5, multitimbral, linear, touch sensitive synth, home use only, £275. Tel: (0903) 724237.

ROLAND D5, 5 months old, home use only, as new, £370 ono; Roland SH101, plus hand grip and strap, immac cond, £120 ono; Roland KS30 2-tier keyboard stand, £30. The lot for £490. Nigel, Tel: (0602) 259512, eves.

ROLAND D10, as new cond, never gigged, £400; 2 Laney Linebacker 65 amps, as new cond, never gigged, £300. £650 the three. Tel: (0260) 280131.

ROLAND D10, vgc, plus 1 RAM card, £420 ono. Adrian, Tel: Sheffield (0742) 746190.

ROLAND D10, £525; Roland Octapad, stand, £375; Kawai K1m, £265; Seck 12:8:2 desk, £775; Akai S700 sampler, £375; Alesis HR16, £225; Alesis Midiverb, £185; Yamaha SPX50D multi-fx, £320; Roland U110 sample playback, £325; Washburn Strat guitar, £255; Peavey cabinets, pair, £240; Yamaha RV100 reverb, £145; C-Lab Notator and Export, £300; Atari mono monitor, £70; 3-tier A-stand, £65, all home use only, manuals and accessories. Tel: (0527) 546232, anytime.

ROLAND D110, LA rackmount synth, with studio outs, plus Cheetah MK5V MIDI keyboard, both vgc, swaps or cash offers, swaps analogue if possible, if reasonable offers I'll throw in a brand new luxury flightcase. Tel: 051-677 8696.

ROLAND D110 and Evolution EVS synthesis, both boxed, manuals, immac cond, £520 ono. Tel: (0787) 78106.

ROLAND D110, 8-part multitimbral synth, with percussion, £325 ono. Tel: (0324) 612990.

ROLAND D20, plus 1 RAM card (which is D10 plus 9-part sequencer), £680. Martin, Tel: (0353) 666756, days and Tuesday evens.

ROLAND D20, with extra sounds, semi-flightcase, £775 ono. Mark, Tel: 081-878 2659.

ROLAND D20, multitimbral synth, never been used, bought at Xmas for £1100, now for sale at £780. Tel: 061-832 6209, days or (0625) 574215, evens.

ROLAND D50, good home wanted, £525. Dave, Tel: (0582) 451535.

ROLAND D50, excellent cond, home use only, boxed, with manuals, £500. Phil, Tel: Sunderland 091-548 6124.

ROLAND D50, mint cond, 2 cards, manuals, £590; Roland R8 flagship drum machine, boxed, manuals, mint cond, £475; DEP3 19" reverb unit, MIDI, stereo, 100 presets, programmable, boxed, manuals, £220; Kawai K1R 19" sound module, 2 cards, boxed, manuals, £250; Fostex 160, 4-track tape recorder, hi-speed dubbing, built-in mixer, 1 hrs use, £295, all home use, can deliver. Tel: (0642) 484359.

ROLAND D50, home use only, boxed, including 2 ROM cards, £559. Graham, Tel: (0962) 882109.

ROLAND D50, sound card,

manuals, boxed, perfect cond, fantastic sounds, absolute bargain at £550 ono. Tel: (0602) 400334.

ROLAND HP7100 piano, fine cond, £700 ono. Tel: Woking area (0486) 76594.

ROLAND JUNO 6 polysynth, home use, £175 ono. Chris, Tel: (0235) 555393.

ROLAND JUNO 106, £300. Paul, Tel: 071-490 5591, days; 071-706 4321, evens and weekends.

ROLAND JUPITER 6, Yamaha YS100, Boss DR550, stand, manuals, for sale or swap for Apple Macintosh. Andrew, Tel: (0686) 622789.

ROLAND JUPITER 6, MIDI, excellent cond, full flightcase, £450. Ian, Tel: (0883) 714940.

ROLAND JUPITER 8, £450. Brad, Tel: (0602) 873896.

ROLAND JX8P, plus PG800 programmer, excellent cond, home use only, £475 ono. Ed, Tel: 071-435 5611.

ROLAND MKS80 Super Jupiter and programmer, £1950; Roland MPG80 programmer, £1000, both immac cond. Tel: 071-485 7324.

ROLAND MT32, multitimbral sound module, 128 great sounds, good drum section, with psu, leads and manual, £200. Tel: (0803) 616291.

ROLAND MT32, with Atari editor, £200. Robert, Tel: (0253) 401473.

ROLAND SH09, does anybody want this dusty, monophonic, analogue dinosaur? No reasonable offer refused. Mike, Tel: 061-301 1998, after 7pm.

ROLAND SH101, £90; Korg M500SP, £25; Roland SBC350, rackmount vocoder, plus Shure SM10 headset mic, £375 ono; Simmons Claptrap, £25. Buyer collects. Dave, Tel: Chichester (0243) 532467, after 6pm.

ROLAND SH101, around £80. Colin, Tel: Torquay (0803) 311678.

ROLAND SH101, Korg monopoly, all reasonable offers. Gary, Tel: (0277) 218217, after 6pm.

ROLAND SH101 synth, £80; Roland PG800 programmer for JX10, £90; Beam-Team editor for Atari ST and Roland JX8P, £50; Genpatch generic librarian software for the ST, £50; Pro24, v3, with dongle, £50; Omnichord, model 2, £45. Paul, Tel: 041-423 5485.

ROLAND SH101, complete with mod grip, vgc, £120; SH09, classic monophonic synth, £100, both great for '90s bass dance sounds. Kevin, Tel: (0494) 465566.

ROLAND TB303 bassline, excellent

cond, manuals, £180; MC202, excellent cond, manuals, £100. Tel: 081-947 4864.

ROLAND U220, 4 months old, immac cond, boxed, 2 ROM cards, £450; Kawai PH50 MIDI keyboard, 200 K1 sounds, 16-note polyphony, 4-part multitimbral plus rhythm part, built-in speakers, £140. Mick, Tel: (0272) 720265, evens only.

SEQUENTIAL PROPHET 5, needs attention, £150. Paul, Tel: (0483) 67882.

SEQUENTIAL PROPHET VS keyboard, vgc, never giggered, home use only, with very rare software update, boxed, with manuals, £1400. A Prentice, Tel: 031-440 1797.

YAMAHA CS15 dual-oscillator monosynth, superb cond, home use only, £120 ono. Chris, Tel: (0273) 208114.

YAMAHA DX7, ROMs, RAMs, plus stand, £450; QX5, £130; Fostex X15, MN15 plus power supply, £170; Roland TR505, £80; Carlsbro bass, £30. Tel: 081-802 7238, after 6pm.

YAMAHA DX7II, FD/D, good cond, plus cartridge, £625; Yamaha PSR60, rhythm etc, £180. Tel: (0533) 517165.

YAMAHA DX7S, with spare voice cartridge, £450 or part exchange for multitimbral synth. Michael Clarke, Tel: Leeds (0532) 649567.

YAMAHA DX7S, £500 ono. Tel: (0942) 321133.

YAMAHA DX27, vgc, psu, breath controller, 800 data cassette sounds, manuals, £250. Pete, Tel: 061-428 3022.

YAMAHA DX100, £100; Sequential Pro1, £80. Tel: Rayleigh (0268) 773795.

YAMAHA EMT10, AWM MIDI sound expander, £150. Paul, Tel: (0483) 67882.

YAMAHA PSS790 MIDI keyboard, with 8-track recording on-board, £175. Tel: 021-744 4870.

YAMAHA SY55, 16-part multitimbral synth and sequencer, brand new, £600 ono. Dave, Tel: (0539) 722487.

YAMAHA SY77, with stand and sound card, 6 months old, home use only, sensible offers please. Paul, Tel: (0422) 377039.

YAMAHA SY77, plus 2 waveform and data card sets, worth £100 each, nearly 400 additional sounds, all immac cond, home use only, £1500 ono; Alesis SR16 drum machine, still boxed, as new, £250. Tel: (09274) 26784, after 4pm.

YAMAHA TG55 sound module, with 3 sound cards, £380; Yamaha FB01 sound module, £100; Cheetah Master Series 5V mother keyboard, £165. Simon Dingley, Tel: 021-360 8421, after 5pm and weekends.

YAMAHA TG77 tone generator, approx 4 months old, still under guarantee. Chris, Tel: Holloway 071-607 2241.

YAMAHA TX7, £150; Dr T's KCS Level 2, Atari original, £75 ono; Roland MC202, £65 ono; Great British Spring reverb, stereo excellence, £35; Roland TR707, £120 ono. Tel: (0424) 218711.

YAMAHA TX802 synth, £600. Narinder, Tel: 021-356 1344, evens.

YAMAHA TX816, 128-note polyphony, £1250; Korg M1, flightcase, £850. Paul Owens, Tel: 051-727 3143.

YAMAHA TX81Z, multitimbral synth module, with Atari editor, vgc, £150. Lee, Tel: 091-416 5631.

YAMAHA TX81Z, excellent cond, £135. Richard, Tel: Halifax (0422) 370577.

YAMAHA YS100, excellent cond, good sounds, 2 yrs old, would like to exchange for any electric piano, anything considered, can deliver. Tel: 091-430 1179, anytime.

SAMPLING

AKAI S612, plus disks, £300 ono. Tel: (0924) 386527.

AKAI S700, £400. Alan, Tel: (0592) 267312.

AKAI S900, £800 ono. Mark, Tel: (0785) 823455.

AKAI S1000HD sampler, 2Meg, SCSI interface, v2.1 software, £1999. Nick, Tel: (0705) 375163.

AKAI X7000 sampling keyboard, mint cond, £450. John Sales, Tel: (0633) 614169.

AKAI X7000 sampler, plus 50 disks, £500; Korg DW8000 keyboard, £325; Roland TR808 drum machine, £250; Roland MSQ700 sequencer, £125; C-Lab Creator software, £150. Tel: Nottingham (0602) 784677, answerphone.

AKAI X7000, plus disks, reasonable offers. Gary, Tel: (0277) 218217, after 6pm.

AKAI X7000, vgc, £400 or part exchange M1. Steve, Tel: (0733) 241516.

AKAI X7000, excellent cond, £400; Roland JX3P, £200; Roland TR505, separate outputs, £100. Andrew, Tel: (0242) 514737.

CASIO FZ1 sampling keyboard, with

disks, hard case, £625 ono. Bill, Tel: 061-928 5946.

CLEARMOUNTAIN drum sample CD, £45; 4 Prosonus string CDs, £30 each; many others available. Rod, Tel: 071-229 7557.

EMAX SE sampling keyboard, with flightcase, large library, £875, no offers. Paul, Tel: Leeds (0532) 400612.

ENSONIQ EPS, 16-bit sampler, with 4x memory expander, 23 secs at 44kHz, with 150-sound disk library, 700-sound drum sample CD, spare disks, box and manual, £1500. Kevin, Tel: Cheshire (0270) 872558.

ENSONIQ EPS, excellent cond, over 100 disks, £775. Chris Challoner, Tel: Worthing (0903) 504930.

ENSONIQ EPS, 4x memory expansion board, £250; with SCSI module, £300. Terry, Tel: 071-703 7133.

ENSONIQ EPS16+, true 16-bit sampling, built-in 24-bit effects processor, immac cond, £1400 ono. Matthew, Tel: (0446) 744165.

ENSONIQ EPS16+ digital sampling workstation, with built-in effects, good library, only 2 months old, £1399. Robin Price, Tel: (0699) 8537.

ENSONIQ MIRAGE, with library, £400; Roland D10, £400; Alesis HR16 drum machine, £150. Gary, Tel: 051-327 2296.

ENSONIQ MIRAGE sampler keyboard, plenty of disks and soft case, £450. Paul, Tel: (0222) 384455.

KORG DSS1, monster synth sampler, boxed, with manual, disks, ST editing software and Universal Sound Designer, £800 or swap for Wavestation. Paul, Tel: (0772) 39124.

ROLAND S10 sampling keyboard, £400. Greg Watts, Tel: (0203) 675747.

ROLAND S10, 30 disks, £250. Tel: (0501) 23825.

ROLAND W30, mint cond, 40 good disks, boxed, with manuals, possible delivery, £975. Paul, Tel: (0977) 511156, 3pm-9pm.

ROLAND W30, vgc, library, boxed, manual, must sell, £900. Freddie Thompson, Tel: Basildon (0268) 281649.

YAMAHA TX16W sampler, with 3Meg memory and Yamaha sound library, £900 ono. Norman, Tel: 091-284 8115, after 6pm.

YAMAHA TX16W, 3Meg, stereo sampler, v2 software, including manual and 25 disks, also

Steinberg Avalon v1 generic sample editor, £950 the lot. Tel: (0376) 44284.

SEQUENCERS

ALESIS MMT8, home use only, vgc, with gig bag and adaptor, £150 ono. Chris, Tel: 061-881 3902, after 6pm.

CHEETAH MQ8 performance sequencer, 8 tracks, 256 sequences capacity, built-in effects, 9 months home use only, £150. Mark, Tel: (0656) 650820.

KORG SQD8, 8-track MIDI recorder, with disk drive, immac cond, £150. Paul, Tel: (0483) 67882.

ROLAND MC202, SH09 monosynth, TR606 drums, perfect trio, £230 ono. Chris, Tel: (0235) 555393.

ROLAND MC300, with Super-MRC software, mint cond, £325 ono. Mark, Tel: 081-878 2659.

ROLAND MSQ700, MIDI and din sync, can run all essential gear, manual, buyer arranges delivery, £140 ono. Alex, Tel: (0865) 272349, days only.

ROLAND TB303 bassline dance sequencer, excellent cond, manuals, £120. Pete, Tel: 061-428 3022.

YAMAHA QX3, 16-track MIDI sequencer, massive memory and extensive editing, £450 ono. Tel: (0324) 612990.

YAMAHA QX5, can store 40 tracks, great editing features, excellent cond, boxed, £140 ono. Adrian, Tel: 081-549 5794.

YAMAHA QX7, as new, boxed, £95. Tel: 081-997 0833.

YAMAHA QX7 sequencer, excellent cond, £50. Tel: Bath (0225) 723513.

DRUMS

ALESIS HR16B, boxed, with manual, as new, only £170 ono. Tel: (0602) 400334.

ALESIS SR16, brand new, with box, manuals, £250. Kevin, Tel: (0270) 872558.

BOSS DR550 drum machine, mint cond, manual and adaptor, £150. Chris, Tel: 061-881 3902, after 6pm.

BOSS DR550, boxed, as new, £125. James, Tel: (0786) 78655.

E-MU SYSTEMS DRUMULATOR, as new, £130 ono. Tel: (0536) 746473.

KAWAI R50 drum machine, good cond, boxed, manual and extra sound chip, £140 ono. Tel: (0843) 32357.

KAWAI R50 drum machine, £150; Casio silver digital horn, £55. Mike, Tel: 071-278 5266.

ROLAND OCTAPAD MIDI drum controller, £100. Tel: 081-690 7106.

ROLAND R5 human rhythm composer, 1 month old, excellent cond, boxed, with manuals. Tel: Manchester 061-449 8837.

ROLAND R8, boxed, manual, as new, with £210 worth of RAMs and ROMs, £475. Tel: 081-947 4864.

ROLAND R8 and Yamaha SPX90, £550 ono. Tel: 071-709 0960.

ROLAND R8M, 2 sound cards, power drums USA and dry kit, swap for jazz drums and contemporary percussion card or sell £45 the pair. Andy, Tel: (0332) 841163.

ROLAND TR505 drum machine, £100. Michael Clarke, Tel: Leeds (0532) 649567.

ROLAND TR505, reasonable offers. Gary, Tel: (0277) 218217, after 6pm.

ROLAND TR606 Drumatix, £60; MPC sync-track, £20. Wanted: Roland TR505. Adrian, Tel: 061-860 4397.

ROLAND TR606, classic drums, £55 or swap for any MIDI drum machine, Cyclone arpeggiator, Korg M1 PCM card or what-have-you! Paul, Tel: (0772) 39124.

ROLAND TR707, home use only, boxed, with manuals, £75. Phil, Tel: Sunderland 091-548 6124.

ROLAND TR727, latin percussion, boxed, with manuals, excellent cond, £140. Andrew, Tel: 091-384 2213 X26, days only.

ROLAND TR727, brand new cond, with manual and power supply, £100. Pete, Tel: 071-729 7446, after 5.30pm.

ROLAND TR808 drum machine, with full MIDI retrofit, £350 ono; Roland S10 sampler keyboard, with flightcase, disks and manual, vgc, £375 ono; past issues of Music Technology and Home & Studio Recording, 50p each. Paul, Tel: (0342) 323094.

ROLAND TR808, manual, good cond, £250. Andy, Tel: (0273) 474711.

SIMMONS COMBO, mint cond, £350; Simmons MTX9 expander, mint cond, £100. John Sales, Tel: (0633) 614169.

YAMAHA QY10, 8-track drum machine sample player, brand new, unused, including Yamaha psu, will post, £220 ono. Tel: (0244) 815117.

YAMAHA RX8 drum machine,

excellent cond, £130. Mark, Tel: (0622) 755839.

YAMAHA RX11, £150. Tel: (0484) 681523.

YAMAHA RX11, £125 ono. Vince, Tel: (0474) 533875.

YAMAHA RX11, with manual, plus memory expander, individual outputs, £140. Simon, Tel: (0926) 423822.

YAMAHA RX17, 26 latin and drum samples, excellent cond, boxed, £90 ono. Adrian, Tel: 081-549 5794.

COMPUTING

AMIGA A500, expanded to 1Meg, mono monitor, MIDI interface, Mastersound sampler plus software, Music-X sequencing software, plus £300 worth of other software and books, £480 ono or swap for Ensoniq ESQ1. Mick, Tel: (0272) 720265, eves only.

ATARI MEGAFILE 60, hard disk drive for Atari ST, mint cond, never been used, £375 ono. Adrian, Tel: Sheffield (0742) 746190.

ATARI SMM804, 9-pin dot matrix printer, excellent cond, including leads, £60. Gareth, Tel: Bridgend (0656) 660973.

ATARI 520STE, upgraded to 1Meg, SM124 hi-res mono monitor, Atari Megafile 60 hard disk drive, PC286 emulator card, £750 ono. Chris, Tel: (0237) 477748.

ATARI 1040STF, SM124 monitor, all boxed, and more music software than you could imagine, etc, etc! £380. Tel: (0392) 876675.

ATARI 1040 computer, £280; Atari 520, £220. Tel: (0924) 823024.

ATARI 1040ST computer, plus monitor, with C-Lab Creator v3 and Unitor SMPTE sync, all hardly used, £800. Marcus, Tel: 071-794 8542.

ATARI 1040STE, SM124 hi-res monitor, business and games software, disks etc, 5 months old, under warranty, as new, cost £700, accept £450; Steinberg Cubeat, 5 months old, £150. Nigel, Tel: (0602) 259512, eves.

ATARI 1040STFM, SM124 hi-res monitor, Steinberg Pro24 v3 and Twelve sequencers, assembler etc, as new, £490 ono. Paul, Tel: (0609) 770090.

DIGITAL MUSIC VIRTUOSO sequence program, cost £300, will sell for £100. Narinder, Tel: 021-356 1344, eves.

HYBRID ARTS' EDIT-TRACK I, 60-track sequencer, with graphic editing, for Atari ST, £40. Len, Tel:

Faringdon (0367) 240732.
IBM MIDI CARD, with Prism software, excellent graphics package, 6 months old, used twice, will suit any XT/ATPC, £175; Simmons drum pads, stand, £150; Yamaha QX21, boxed, £100. Simon, Tel: (0442) 876601, days or 864069, eves.

MAGNETIC MUSIC TEXTURE, 24-track sequencer for IBM PC, boxed, with manual, £150. Nick, Tel: (0622) 692568, eves only.

STEINBERG CUBASE, v2, with manual, £50; Clavinet D6 keyboard, (Galliano etc), £280; Electrovoice Sentry 100A studio monitors, £380; Prophet VS keyboard, £980. Tel: 071-733 0204.

STEINBERG CUBASE, v2, plus Timelock sync, £375. Tel: 071-480 5705.

STEINBERG CUBASE, v2.0, manual, £60. Simon, Tel: 081-348 3527, after 7pm.

STEINBERG FZ1 SOUNDWORKS, never used, boxed, with full manuals, immac cond, £150. A Prentice, Tel: 031-440 1797.

STEINBERG PRO12 sequencer, £25 ono; Dr T's MIDI Recording Studio, £20; JSH spring reverb, £55 ono. Mark, Tel: 021-429 3736.

STEINBERG PRO24, hardly used, £75. Alan, Tel: (0375) 676817.

ZX SPECTRUM, 128K, plus RAM music machine, sequencer, sampler and many games, £80 ono. Vince, Tel: (0474) 533875.

YAMAHA CX5, large keyboard, SFG05, Bit2 plus data recorder, games, composer, FM and DX7 cartridges, perfect cond, boxed, plus manuals, £120 ono. Martin, Tel: (0353) 666756, days and Tuesday eves.

YAMAHA CX5M, with SFG05, YK20, SD05 and software, £200 ono. Brad, Tel: (0602) 873896.

YAMAHA CX5MII, large keyboard, voicing, composer, MIDI recorder, graphics programs, music pad, data recorder, extras, boxed, with manuals, £235. Tel: (0925) 723301.

RECORDING

AKAI MG1212, 12-track recorder and 12-channel mixer, fantastic studio-quality recording system, almost unused, boxed, with manuals, cost nearly £5000, will sell for £2900 ono. Paul, Tel: 071-724 1531.

ALESIS MICROVERB II, £80; Casio SZ1 sequencer, £30; JSH analogue

echo, £30, all as new. Doug, Tel: (0222) 223707.

ALESIS QUADRAVERB effects unit, perfect cond, £240. Ken, Tel: (0926) 316690.

AMSTRAD SYSTEM 100, 4-track recorder, twin cassettes, 6-channel mixer, radio, record deck, speakers, plus manuals, £150 ono. Martin, Tel: (0353) 666756, days and Tuesday eves.

FOSTEX 160, 4-track recorder, Dolby C recording, as new, hardly used, boxed, instructions, everything, want a quick sale, hence £200. Tony, Tel: Southend (0702) 713738.

FOSTEX 280 multitracker, £470; Alesis Midiverb III, £160; Boss DR550, £140; Boss BX16, £270; Roland D5, £320; Yamaha CX5II, plus many accessories, £120; Boss DD2 delay pedal, £50; 32-way patchbay, £25, all as new. Steve Sellick, Tel: 051-228 0988, days or 051-427 0622, eves.

FOSTEX 812 mixer, 12:8:2 mixing desk, 3 months old, £650 ono. Tel: (0324) 612990.

FOSTEX 2016, 16-channel mixer, hardly used, mint cond, boxed, £170 ono. Tel: (0602) 400334.

FOSTEX A8, 8-track reel-to-reel, Promar 8-track mixer, £550 ono. Tel: (0744) 885614, after 6pm.

FOSTEX A8, 8-track, excellent cond, plus remote, £600; Atari 1040STFM, guaranteed, plus all music software, £650; Moog Rogue, £125. Mick, Tel: (0332) 776244.

FOSTEX E8, 8-track recorder, mint cond, minimal use, £1200; Sony DTC1000ES DAT recorder, rackmount and HHB sample rate switch, £850. Rod, Tel: 071-229 7557.

FOSTEX E16, excellent cond, home use only, well maintained, £2000 or swap for M80/R8 and cash adjustment. Tel: (0255) 434217.

FOSTEX M80, 8-track recorder, £750. Graham, Tel: 071-631 5345.

FOSTEX R8 multitracker, brand new, still boxed, £1200 ono. Tel: 071-388 3859.

FOSTEX X26, 4-track, boxed, manuals, as new, £200. Tel: (0296) 87518.

MM 6:2 mixer, £30 ono. Vince, Tel: (0474) 533875.

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SANSUI WSX1, 6-track recorder, 8-channel mixer, vgc, with MDR7 remote control sync controller, £600. Freddie Thompson, Tel: Basildon (0268) 281649.

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TASCAM M216 mixer, 16:4:2, great EQ, suitable for 8-track, 4-track or MIDI, broadcast quality, £550 ono. John, Tel: 081-995 2147.

TASCAM PORTA 01, excellent cond, £270 ono or swap for an Amiga/Atari setup; Boss DR550 drum machine, £150; Hohner fretless bass, £120. Paul, Tel: (0565) 634609.

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MAGAZINES: Electronics & Music Maker, from issue 1 up to June '84, various Music Technology, Home & Studio Recording issue 1 and 1986 complete. Philip, Tel: 081-667 1957.

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ad index

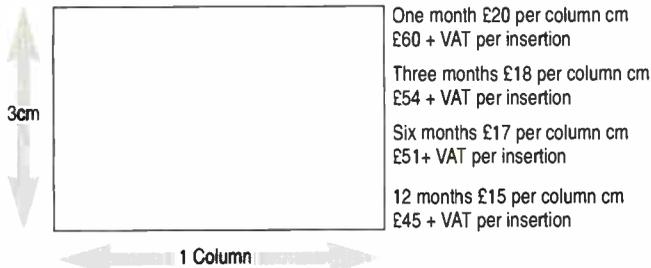
ABC Music.....	15
AMG.....	51
Atlantic Audio.....	35
Audio Quest.....	27
Axe Music.....	31
Brixton Exchange Mart...10	
Cheetah	13
Digital Music.....	23
Eddie Moors Music.....	65
Future Music.....	57
Gajits	20
Intrinsic Tech	53
Keyboard Shop.....	45
Korg UK	OBC
MCM	9
Midi Tech.....	53
Music Connections.....	37
Music Corporation	41
Newtronic	27
Patchworks	65
Peavey UK	21
Roland U.K.	5
Soho Soundhouse	43
Sound Control.....	19
Sound Technology	7, 24
Thatched Cottage Audio .33	
The Synthesiser Company	1
Time & Space	61
Warner Bros.....	61
Yamaha Pulse	59
Yamaha UK.....I.B.C., I.F.C	

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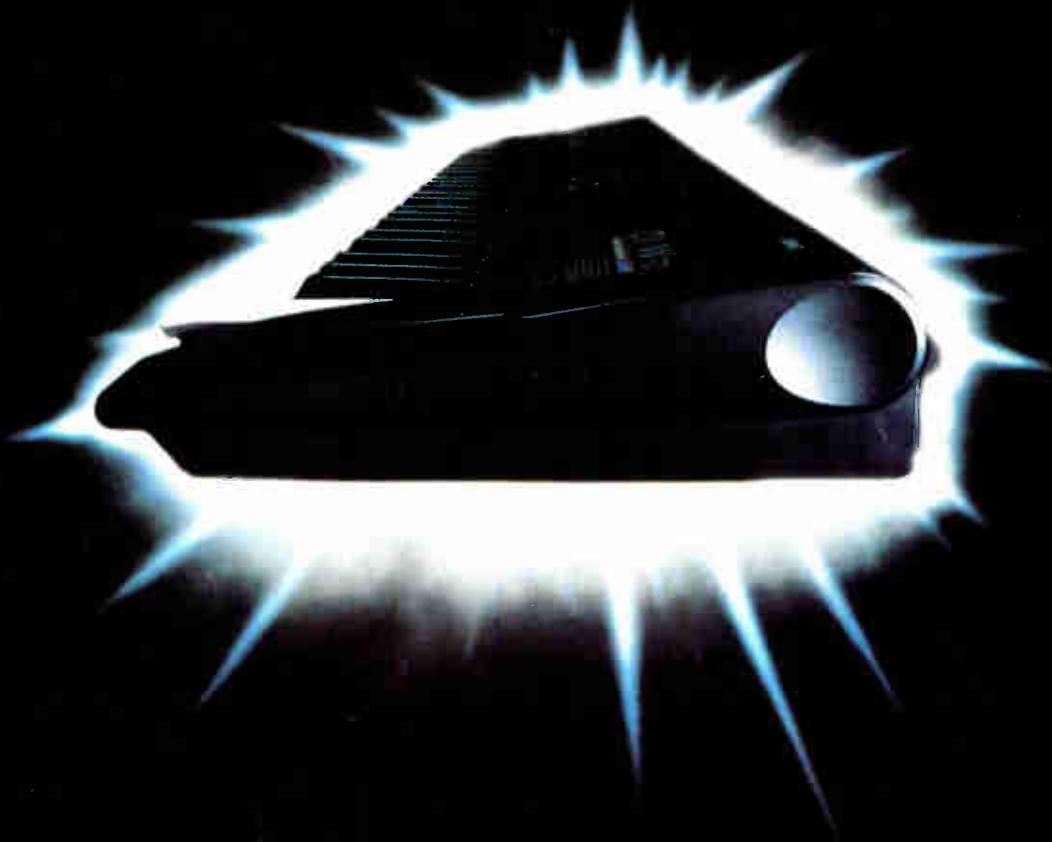
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