MT
THE MUSIC TECHNOLOGY MAGAZINE
Issue 84
Oct 1993
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ATARI TEENAGE RIOT
THE LISTENING POOL
INDIE LABELS – THE DANCE BOOM AND AFTER
A-Z OF ANALOGUE – PART 3
Peavey XR 1200D mixer
Passport Producer – multimedia for the Mac
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Music for stadiums
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IN the first place

Anyone, like myself, currently in the market for a new computer, will no doubt have marvelled at the power and sophistication of the latest machines, and then cursed the bewildering variety and virtually assured obsolescence which lays only a few months ahead. It's a problem which bedevils purchasers of all hi-tech equipment, but none more so than computer buyers.

Matters aren't helped by the determinedly partisan approach taken by devotees of the four main computer platforms, each believing theirs to be the only sane choice one could reasonably make. Mac users have always believed in the superiority of their machines as creative tools - and there's some justification for this. By contrast, PC owners often speak of the ubiquity of the range and their low cost in comparison to other machines (the Mac).

Most Atari Falcon owners made the transition from the ST, and point to the inclusion of MIDI sockets on both machines as evidence of Atari's commitment to the musician. Meanwhile, owners of recent Amigas are keen to play up the multimedia capabilities of their machines and drop the word 'multitasking' into the conversation at every opportunity.

After some deliberation, my view of the four formats is, predictably, rather different. To my mind Apple are still guilty of overcharging for their machines, and are now also to be taken to task for introducing too many models into the range. PC manufacturers are not to be forgiven for treating all non-business users with apparent disregard. Atari, frankly, couldn't be trusted as far as they could be corporately thrown and certainly do not deserve the loyalty they receive from users. And Commodore need to spend much more of their time and budget overcoming the 'games' reputation which they were once happy to cultivate.

So which have I decided upon? Well, with the shadow of RISC technology looming large at the moment – and all that implies in terms of speed and power – it'll have to be a machine offering the requisite upgrade path. I also need reliability, as I'll be using the machine as part of my job. And I'm also thinking seriously about a direct-to-disk recording system, and... oh hell, I don't know... perhaps I'll buy a new car instead.

Nigel Lord

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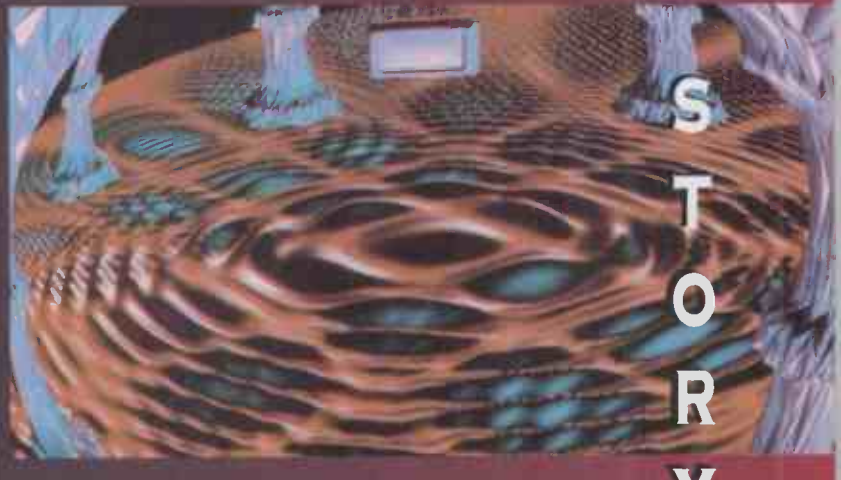

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Volume Ten - Megabass REMIX! Sample CD

Our latest release from leading mixers Megabass, specially designed for professional remixing, megamixing, and DJs in addition to anyone making dance music. Megabass have remixed Madonna, C&C Music Factory, 49ers, Altern 8, The Shamen, Black Box, 2 Unlimited, and many more in addition to their own hits and exclusive mixes for Radio 1, Kiss FM, Capital and the Mastermix DJ service. ■ *"...If you're looking for insta loop gratification, stop here...this CD is faultless...It's another dance workstation, but fresher than most, and offers a generous helping of relevant dance/pop/rave crossover ingredients...I enjoyed it immensely, and so will you."* - SOS, April 93. ■ *"...perfect for the most vicious dance track...there are enough useable samples included on this CD to fit into any kind of track...9/10."* - Future Music, April 93. ■ *"...it takes something special to stand out...Remix! is something special...inherent versatility which makes Remix! an essential studio accessory...just too funky to ignore...a rhythm track programmers dream...for sample addicts the world over, it's much, much more than a quick fix."* - H&SR, April 93. It features Impossible to get ■ Bangs & Whooshes ■ Rave & Techno Samples ■ Massive collection of Vocal Hooks ■ MC Samples & Shouts ■ in-demand [illegible] and rave breakbeat loops to funky and weird loops ■ Plus loads more.

Volume 7 - Neil Conti's Funky Drums from Hell

Prefab Sprout's Neil Conti has provided the groove for such diverse artists as David Bowie, Annie Lennox, Primal Scream, and Thomas Dolby. The combination of funky drummer, top engineer, Daniel Lazerus, and Metropolis' mega-bucks studio has resulted in the most funky, stylised, classy loops ever recorded. ■ *"...the playing is immaculate...a controlled looseness in the playing...the snare drum sounds like a snare drum should...Definitely the best live drumming CD."* - SOS, Feb 93. ■ *"...this compilation represents the coming together of everything that has been learnt about drumming in the last thirty years - taut performances, impeccable recordings, skilful tuning and above all, the value of the groove...I can recommend this CD wholeheartedly...If these funky drums are from hell, the Devil still seems to have all the best music.."* - MT, Mar 93. ■ drums breaks with real attitude sure to become classics ■ specially extracted single hits to customise breaks plus a selection of much sought after hi-hat patterns.

Volume 5 - Pete Gleadall's Samplography

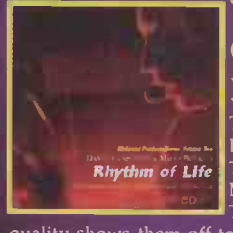
Few artists have influenced the path of modern pop music more than George Michael and the Pet Shop Boys. Whenever those guys go into the studio they take Pete with them. Why? Because he knows what it takes to make a hit single and has a sound library built specifically for that purpose. This CD features 1400 of his best samples, 'everything you need except loops'. ■ [illegible] simply sounds of 'Samplography are fantastic...leanest and meanest designed to slot straight into a mix...Their genesis was in the studio itself, and it shows' - H&SR [illegible]2. ■ 'Samplography tells the story of 1980s/90s pop music as seen through the ears of Pete Gleadall...this series is one of the cleanest I've heard. [illegible] 1/2 - SOS. ■ The CD features great synth basses, pads and leads from MKS80's, various Moogs, Prophet V's, etc. but on top of this there are loads of really choice drums and percussion loops, a phenomenal collection of really kicking guitar samples, amazing string sections, hits, gospel choirs, brass, FXs, Sub-basses, and more! There's even a 15 Meg S1000/1100 data section.

Volume 6 - Norman Cook: Skip to my Loops

Aside from being Beats International's main mover, Norman is one of the UK's most successful remixers - James Brown, Fine Young Cannibals, and Double Trouble, to name but a few, have all had the treatment. A massive selection of tempo-grouped, totally devastating drum and percussion loops project this CD into totally uncharted territory. Loops range from 84 BPM to obscenely fast and are complemented by a sensational collection of vocal ad libs, FX, Basses, Drum & Perc. Hits, Guitar, Reggae, Flute, and Synth samples plus loads more. ■ Over 70 minutes of samples ■ Certainly the classiest dance sample CD - by miles.

Volume 8 - JJ Jeczalik's Art of Sampling

The Art of Noise virtually invented sampling, this CD gives you access to the sounds that inspired a generation of samplists and placed JJ at the cutting edge of innovative sampling. JJ was also part of the Trevor Horn production team that delivered such masterpieces as ABC's Lexicon of Love and Frankie Goes To Hollywood's Relax and Two Tribes. All the best sounds from JJ's Fairlight [illegible]es are on this CD - over a decade's worth of PROVEN HIT MATERIAL ■ *"For a collection of odd noises and use-able instruments, this CD is ideal...a refreshing change. 8/10."* - Future Music, April 93. ■ *"Nice to see serious samplists being catered for...seriously classic...classic...well atmospheric...Quirky...Slice Of Sampling History."* - SOS, March 93.



Volume 2 - Danny Cummings' & Miles Bould's- Rhythm of Life

There's no better percussion CD on the market than this. Danny and Miles have worked with the likes of Tina Turner, PSBs, Dire Straits, The Beloved, George Michael, and Julia Fordham plus countless others. They're two of the best there are and this CD's production quality shows them off to their best effect. Don't be fooled, this CD is ideal for almost any music, pop, dance, ambient, new age, it'll add a air of class to anything it touches. You can't be serious and not have this one. ■ *"...as good as the best in the Synclavier library...inspirational...It's sonic credentials are impeccable...A connoisseur's product."* - SOS, July 92 ■ *"The production is superb: the recordings of the different instruments are outstanding and stereo panning is employed extensively...a very classy CD...for those who need access to a library of specialist percussion sounds."* - Future Music, Nov 92. ■ Around 55 minutes of percussion grooves ■ Unparalleled performance and recording quality ■ RSS Samples plus Mixes ■ PLUS an extremely comprehensive collection of single hits and Much More!

Volume 4 - Coldcut's Kleptomania!

Coldcut can always be found at the cutting edge of dance music. They launched the careers of International Stars Lisa Stansfield and Yazz. This CD has been widely acknowledged as being one of the most original and inspirational of it's genre. Get this CD and get ahead of the crowd. ■ *"Coldcut's samples are raw, [illegible] and pack into the terraces...the quality of the music content is very high...quite brilliant, and definately going into my S770...this CD represents the other 'must have' for any serious dance enthusiast."* - SOS, May 92 ■ The finest selection of ultra-rare loops ever compiled - over 400 unbelievable loops! ■ Male & Female Spoken & Sung Vocals ■ Coldcut's Exclusive - Hed & HPN Samples ■ Superb range of mega scratches! ■ Media snatches, FX, Robot Vox ■ Full selection of drum [illegible]ere samples ■ Hits, Stops, Breaks, Synth & Bass samples ■ BEYOND DESCRIPTION HIGHLY USABLE! ■ Over 1165 Samples, Over 73 minutes

Volume One - Pascal Gabriel's Dance Samples

The first. And still one of the best. If you haven't got it yet, where have you been? His work with Bomb The Bass, S-Express, EMF, Inspiral Carpets, and many more has established Pascal as one of the UK's most respected Dance Producers/Remixers. ■ *"...putting together a list of the top people involved in dance music, you couldn't leave out Pascal Gabriel...extremely varied and usable...no matter what kind of electronic music you produce you can actually imagine using just about all the [illegible]"* - Future Music, Nov 92. ■ *"...house gold dust...breaks new ground..."* - MT, Dec '91. ■ *"...off-beat, quite distinctive, and highly usable. Better still you almost certainly won't have heard them before...useful and memorable...a revelation...uniformly excellent...the best for many a hit."* - SOS, Jan. '91.

Volume Three - David Ruffy's Drum Samples

Unlike most drum sample CDs on the market this one sounds contemporary. It also features a great collection of specially recorded loops. Sinead O'Connor, Mica Paris, Alison Moyet, Yazz, Neneh Cherry, and many more have chosen Dave to give them the groove, now it can you. ■ *"Recording quality is very spacious and clean...one of the best sounding bundles of rhythms you're likely to hear...should be snapped [illegible]rhythm-hungry sample owners straight away. 8/10"* - Future Music, Nov 92 ■ *"Recording quality is good...patterns employed cover a wide range [illegible]...He more or less has a beat for all seasons, including emulations of many commonly used breaks, and the [illegible] copyright problems."* - SOS, May 92. Over 263 hits and 140 loops. 70:53 minutes. Snares, Kicks, Hats, Toms, and Cymbals, Performance Velocities - 4 octave! Miking Variations, Modern Usable Drum Sounds, RSS Samples, PLUS over 140 brand new hot drums loops - too good to sell! Live & Sequenced Loops! and Much More!

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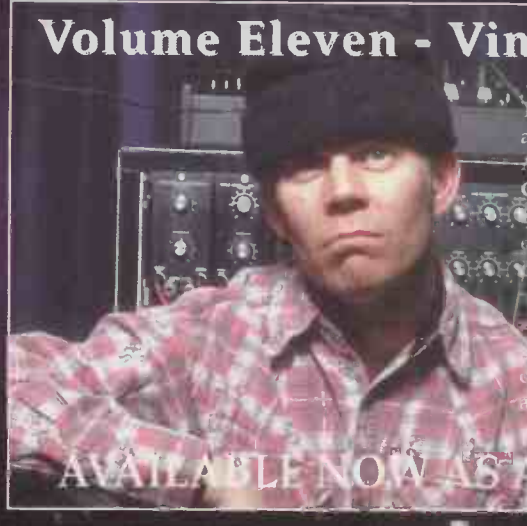
Volume Eleven - Vince Clarke, Lucky Bastard



This collection features new sounds created especially for Vince using the mountain of classic analogue synths in his Amsterdam Studio. A founder member of Depeche Mode, Yazoo, The Assembly, and now Erasure who better to produce the ULTIMATE ANALOGUE SAMPLE CD? Synths featured include Roland System 100, System 700, ARP 2600, Moogs, SCI Pro One, Korg Poly Fusion, VCS3, Serge, Obie, Xpander, and more. It features hundreds of constantly evolving synth sequences so you can either grab chunks or extract single sounds for the ultimate in user-defined, creative sampling. There's a selection of multisamples along with many samples from Erasure's last 'Phantasmagorical' World Tour. Perhaps one of the most unique features of this CD are the drum loops Vince has created using only synthetic analogue sounds, all the loops are broken down for ultimate flexibility so you can easily create your own drum loops using these unique sounds. Just about every record he's ever done has been a hit, and this is no exception! Demand is bound to be huge, so avoid disappointment and place your order now and get this CD before everyone else has it!

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Volume Twelve - Keith Le Blanc's Kickin' Lunatic Beats

This volume sets new standards for drum sample CDs. Although Keith is widely acknowledged as virtually inventing Hip Hop, his work, and this CD, covers a far wider scope. After starting his career as in-house drummer with **Sugarhill** records, working on such classics as **Grandmaster Flash & Melle Mel's 'The Message'**, Keith has gone on to lay down the beat for **James Brown, REM, The Rolling Stones, Annie Lennox, Seal, 808 State, Malcolm McClaren, Bomb The Bass, ABC** and many more. He has also moved into writing, production and remixing, working with such artists as **Charles & Eddie, Malcolm X, Living Color, The Cure, NIN**, and many more! He also found time create the unique sound of **Tackhead** with **Doug Wimbush** and **Adrian Sherwood**. The superb performances featured on this CD were recorded at **Orinoco** and Steve Lipson's new personal studio, **The Aquarium** so, as you can imagine, the recording quality is absolutely state-of-the-art. Aside from tons of choice grooves (all bpm-ed as always), we've included a comprehensive set of matching single hits so you can create your own. Not that there's much chance of you doing that for a while, because after you hear these Kickin' Lunatic Beats you're going to be using them for years to come. Killer Drummer, Killer Studios, and Killer Production. This CD kicks like a mule!

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'Lite' up the show with MIDI

If you're into the idea of adding a MIDI-controlled automated lightshow to your musical show, BCK Products can now supply you with an eminently affordable MIDI-to-light controller.

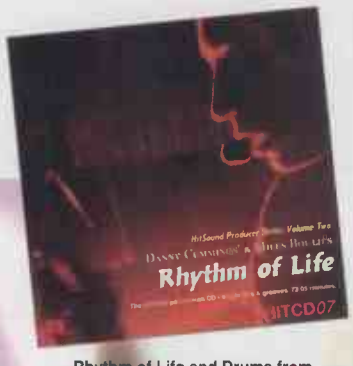
The LiteShow is a compact integrated controller which can convert MIDI data into signals for controlling 8 x 300-watt lamp outputs. Working on the same principle as MIDI drum parts, the unit responds to individual note numbers, eg. note number 60 controls lamp 1, note number 61 controls lamp 2 etc. Lamp brightness is governed by note velocity, with 64 steps of intensity to ensure smooth fades.

The LiteShow also contains 80 preset lamp 'scenes', including dynamic chases and fades, which can be called up using MIDI patch change numbers. Clearly, the possibilities for use with MIDI sequences and programmable auto-accompaniments are many and varied.

The LiteShow doesn't require further light mixers or fader units; all you have to do is plug a MIDI cable from your sequencer's MIDI Out to the LiteShow's MIDI In, connect up to eight 300-watt bulbs to the industry-standard multi-pole outputs, and away you go.

Oh yes, the price: just £199.99 including VAT.

More from: BCK Products, 136 Hornchurch Road, Hornchurch, Essex RM11 1DP, Tel: 0708 448799, Fax: 0708 446765.



Rhythm of Life and Drums from Hell, now on CD-ROM

Producer CDs to CD-ROM

AMG have just announced a set of CD-ROMs based on their popular Producer Series of sample CDs. The first batch includes Danny Cummings' & Miles Bould's Rhythm Of Life and Neil Conti's Funky Drums From Hell. They are available for the Roland S-700 series now and will be out for the Akai sampler series within a few months. Prices vary from £149 to £225, and there are also bundle options available.

More from: AMG, PO Box 67, Farnham, Surrey, GU9 8YR, Tel: 0252 717333 Fax: 0252 737044

Spawny get

Amid the customary fanfares, the winner of August's Wavestation SR competition was drawn from a pile of thousands. Lucky bast... er, winner Ian Colvin from Stanmore, Middlesex will receive a Korg Wavestation worth stacks – all for the price of a stamp.
The answers to the competition were:

1. The wavestation is 1U high
2. The Korg M1 shares its name with a famous motorway (well, the M1 bit anyway)
3. The X3 is Korg's newest workstation.

Easy huh? If you think all this is a hoax, look out for pics of Ian being presented his new toy in the next issue.

Roland's price reduction

Roland DJ70: cheaper stock from Italy

It's not all gloomy news on the economic front. The pound is apparently doing quite well against the lira, and this has led to all Italian-manufactured Roland products being reduced in price by up to 25%. Products affected are the DJ70 sampling workstation (now down to £1595 from £1839), the E-series of home keyboards, the A30, the ST50R and ST100DR guitar combos and the PC200GS keyboard.

More from: Roland, Rye Close, Ancells Business Park, Fleet, Hampshire, GU13 BUY, Tel: 0252 816181 Fax: 0252 812692.

A case in point

Fed up with lugging equipment around in cases that are heavier than the equipment? Or is your gear outgrowing your racks? CP, with their lightweight expandable case, could have the answer to your prayers. Just launched is a low-cost 19" rack case for lighting engineers, musicians and DJs. The EMS Modular Rack Case grows upwards in unit size, by the simple addition of side panels. The Cases come in 3, 6, 9, 12 and 15 unit heights. The 3U rack comes assembled; the larger racks come flat-packed for DIY construction. Modular panel kits (in multiples of 3U) can be added when needed to accommodate additional 19" equipment. Butterfly catches and sprung handles are already fixed, and bolt-on wheelboards, corner bumpers, stacking feet and a small mounting kit for mixers can also be added. Described as lightweight and sturdy by its manufacturer, the EMS retails for £93.50 (inc VAT) for the 3U and £117.00 (inc VAT) for the 6U.

More from: CP, Worton Hall Industrial Estate, Worton Road, Isleworth, Middlesex, TW7 6ER, Tel: 081 568 1881, Fax: 081 568 1141.

The tidy alternative

The Counterpoint Music Workstation for all those non-rackable parts

If your studio looks like a bomb has hit it – speakers lying around on the floor, modules stuck on rickety shelves and computer monitors balanced precariously on thick books – you may be interested in a new high-tech furniture product from Strata and Counterpoint.

The Computer Music Workstation has been designed especially for the music industry and education. It has a 4-way mains splitter attached, and braked castors, so that the whole system can easily be moved by removing just one plug. It also has a cable management tray under the rear work surface to keep the workstation tidy.

More from: Strata, Airfield Industrial Estate, Warboys, Huntingdon, Cambs, PE17 2SH, Tel: 0487 823482 Fax: 0487 823746.

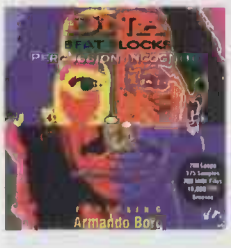
Educating teacher

Yet more music technology courses for teachers. Are they really that far behind?

Counterpoint have just released details of this year's courses in computer music. They have been running the courses for more than three years, and last year ran more than 20 for around 125 teachers. Autumn Term Courses are running at Gatwick, Swindon, Cambridge and Exeter, and include training in Notator and Cubase.

More from: Counterpoint, Sea Court, Jefferies Lane, Goring-by-sea, West Sussex, BN12 4PS, Tel: 0903 505781 Fax: 0903 700882.

More for less from Time+Space



The two latest from Time+Space

As well as releasing two more sample CDs this month, Time+Space are also reducing the prices on two existing ones.

Killer Horns, the first of the new releases, was put together by Best Service in Germany and features bandleader and studio professional Albie Donnelly. The CD includes many riffs, licks, stabs, falls and swells and includes a variety of sax, trombone and trumpet sounds. The CD costs £49.95 and there's also a CD-ROM version at £139.

The second release is Percussion Incognito by DNA featuring Armando Borg. A wide variety of percussion and tempos are covered, and for a limited period the CD will come with a floppy disk containing the MIDI files that make up the loops on the CD. It costs £54.95.

The price reductions apply to the X-Static Goldmine and XL-1 double CDs. Both have been reduced to a highly attractive £49.95 each.

More from: Time+Space, PO Box 306, Berkhamsted, Herts, HP4 3EP, Tel: 0442 870681, Fax: 0442 877266.

Doctor T revives distribution

Following the collapse of Zone Distribution, Doctor T's Music Software have appointed Key Audio Systems as UK distributor for their professional and amateur music software and hardware for the Atari, Mac, PC, Amiga and Falcon platforms. Avalon Music Developments have also been called in to coordinate the technical support for the Omega II MIDI Composition System.

Omega II combines drum machine style recording, graphic note and song editing, MIDI mixing, MIDI machine control and music notation and printing in one package. Other features include 48 tracks with 126 Sequence segments/patterns, real-time graphic editing and a multi-program environment. The package now runs on the Atari Falcon 030, ST, Mega and STe.

All present users of Doctor T products are being encouraged to contact AMD to confirm their name is entered in the UK database.

More from: AMG: Tel/Fax 081 699 7004; Key Audio Systems: Tel: 0245 344001, Fax: 0245 344002

Chronologie Quiz winners - *MT* 82

David Langley, Orpington; Kendal May, Faversham; Jon Corlett, Birmingham; Ruth Rowlinson, Tooting; Andrew Beckett, Middlesbrough; Mrs C. Harrison, Nottingham; Robert Dyer, Oxford; Tomas Mulcahy, Cork; John Moore, Upminster; Mr S. Robertson, Dundee; Mr R.D. Chmura, Isle Of Wight; Jonathan Ewing, Basildon; Georgina Molloy, Nottingham; Simon Arnold, North Ascot; Ben Howes, Godalming; S. Graystock, Wakefield; Joy Spence, Oldham; Eric Staverley, Brighton; Paul Thinkwell, Truro; Mr S. Scott, Glasgow. **Answer: La Defense**

No audio cards required

OSC, the collective of music and post-production profesionals based in San Francisco, have released Deck II software which provides four tracks of CD-quality direct-to-disk recording and visual waveform editing on the Apple Mac Quadra 840AV and Centris 660AV.

Since its introduction in 1990, Deck has been used extensively for music recording, multimedia, video and broadcast production.

More from: OSC, Tel: 010 1 415 252 0460, Fax: 010 1 415 252 0580.

Good evening in Tower Hamlets

Tower Hamlets Community Education in East London is just about to start a Music Technology course aimed at 14-25 year olds. The course is based around Cubase, the S950 sampler, a Roland D10 and other keyboards, a Spirit Folio mixer, Technics turntables, outboard gear including Aphex, and mastering on DAT. So far, the course is planned for one evening in the week with the possibility of more depending on uptake. The course costs £21 per half-term (£3.15 for unwaged).

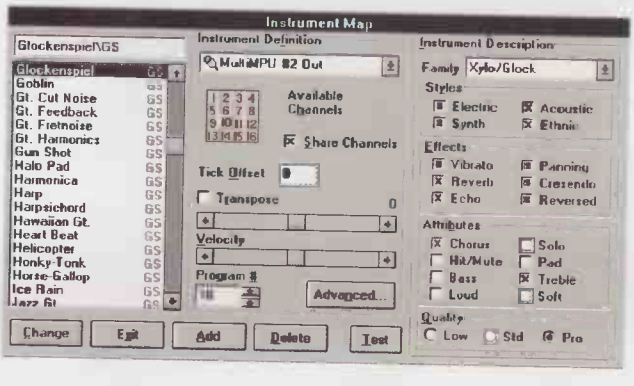
More from: Rikki Blue, The Woodseer Music Project, The Academy, 25-33 Woodseer Street, London, E1 5HA, Tel: 081 888 6896.

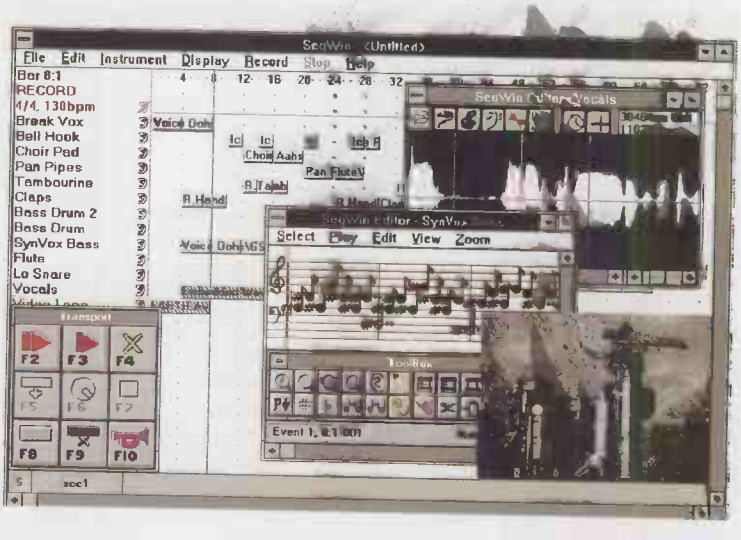
SeqWin direct

Lowrie Woolf Associates (LWA) are now distributing their SeqWin sequencer directly. The sequencer runs on a PC under Windows 3.1. Version 2 (of the sequencer) is now available along with SeqWin MultiMedia. With the latter, it's possible to loop, trim and clone multimedia sequences as well as record vocals in real-time while the SeqWin plays the multimedia part. LWA are asking existing users to contact them to make sure they get the latest support and upgrade information.

More from: LWA, Spirella Building, Letchworth, Herts, SG6 4ET, Tel: 0462 484707, Fax: 0923 265020.

SeqWin up and running





'Ello, 'ello...

Yamaha have just launched Hello Music, a dedicated music hardware and software package aimed specifically at the computer user.

They have been producing dedicated PC-compatible sound cards for some years now, and the Hello Music package features the CBX-T3 GM tone generator (which incorporates a built-in MIDI port), plus software including Cubase Lite, Steinberg Musicbox, 20 MIDI songs and a tutorial disk. The CBX-T3 module features an AWM tone generation system which includes 192 instrumental voices and 10 drum and percussion kits.

Hello to Hello Music from Yamaha

Hello Music retails for £399.

More from: Yamaha-Kemble, Sherbourne Drive, Tilbrook, Milton Keynes, MK7 8BL, Tel: 0908 366700, Fax: 0908 368872.

Finale support

Users of the Coda FINALE music processing program for the MAC and PC now have a support service available to them from a company called New Notations.

Subscribers to the FINALE support system can get support in several ways: a telephone support line, instant analysis and response to faxed queries; and tutorial/workshop sessions which cover specific areas in greater detail.

A year's subscription costs £175, with a concession price of £116 for Certified Academic Version users.

More from: Andrew Aird or Stephen Ferre at New Notations, Tel: 081 871 5193, Fax: 081 877 3494

MACKIE FANATICAL ENGINEERING PART 1

THE ONLY MIXERS WITH ENOUGH GUTS TO STRIP IN PUBLIC. We specialize in mixing boards so that we can be maniacally meticulous about details others overlook. Some details help make the CR-1604 and MicroSeries 1202 unusually rugged and reliable. Others contribute to our mixers' excellent sound quality. And some, like our unique gain architecture and mix amp topology aren't really details at all, but rather represent a fundamentally better way to mix music.

TRIM matches any signal from instrument levels to –10dBm to semi-pro to +4dBu pro gear.

7 SENDS via 4 knobs with plenty of gain above unity for special effects and center detent at unity gain, and 4 STEREO AUX RETURNS with super-high headroom, low noise and enough gain to work with all levels.

STEREO IN-PLACE SOLO maintains stereo perspective for all soloed channels & returns.

STUDIO GRADE MIC PREAMPS. Only the CR-1604 and MS-1202 incorporate discrete, large-emitter-geometry transistor preamplifiers instead of just simple ICs. That's why only our mic preamps deliver –129dBm E.I.N., 0.005% THD, yet can handle +14dBu max inputs. You get all the punch & delicacy of expensive studio mixing desks.

LARGE INTERNAL POWER SUPPLY provides power for +48V phantom mike power, 12V BNC lamp socket, and bi-polar power for main circuitry, hi-output headphone amp and sophisticated enhancements such as the XLR10 mic preamp expander. Our supply not only eliminates inconvenient "wall warts & line lumps" but gets rid of their hum-inducing magnetic fields, too. They're typically driven into non-linearity (15 kilo Gauss or more) causing stray 25-35µV magnetic fields that are easily picked up by shielded audio cables. Our oversized, instrumentation-grade transformer loafs at 10 kilo Gauss, reducing stray fields to under 1µV for quiet operation.

GNARLY CIRCUIT BOARDS. Unlike brittle phenolic, the CR-1604 and MS-1202's horizontally-mounted, double-sided, through-hole-plated fiberglass boards and rigid, multi-point suspension prevent damage from external impact.

MIX AMPS WITH TWICE THE HEADROOM. Signals from all inputs simultaneously converge here. Conventional mix amps can overload and distort when you start pouring on the channels. Our gain structure solves the problem for audibly better sound. Cram every input of the CR-1604 or MS-1202 with hot signals and they still have more headroom than other mixers running half the inputs.

ULTRA-DENSE CIRCUIT TOPOLOGY. Unlike budget mixers which cut corners with passive circuitry, we added input and output buffers so the CR-1604 and MS-1202 are compatible with a much wider range of devices.

MUSICALLY USEFUL EQ. We're amazed at how many users tell us that our 80Hz, 2.5kHz and 12.5kHz turnover points and EQ circuit design not only sound sweet but in some cases have replaced outboard equalization.

BUS 3&4 ASSIGN extends the CR-1604's usefulness without increasing overall size.

UNITY PLUS special-taper faders with 0dB gain at center detent minimize noise, maximize headroom, provide 20dB more gain above unity to reduce constant trim re-adjustment as input levels change (and the MS-1202's rotary channel and master controls work the same way).

CR-1604 MULTI-CONFIGURATION. Only fanatics would devise a way to use the same mixer in four different physical configurations: as a rack-mount mixer with jacks to back that takes up only 7 rack spaces, a tabletop mixer with jacks out, or a tabletop/rack-mount mixer with jacks on the same plane as the controls (by adding our RotoPod bracket). Conversion between configurations takes just a few minutes and a screwdriver (other drinks are optional).

BETTER-THAN-DIGITAL. Both the CR-1604 and MicroSeries 1202 deliver –90dB S/N ratios with 108dB dynamic range (versus digital with –90dB S/N and 90dB dynamic range) and have, in fact, been used to record and mix down major label compact disc releases! A prime example of the fanatical engineering that goes into our mixers (and the fanatical confidence professionals have in them). No wonder we differ so vastly from mixers that merely masquerade as Mackies.

Silky smooth SEALED ROTARY POTENTIOMETERS prevent contamination from dust, smoke, liquids and are CO-MOLDED without use of easily shattered phenolic mechanical parts (a major reliability problem in many conventional mixers). Plus, our exclusive energy-absorbing knob design transfers vertical impact away from pots and main board, greatly reducing possible damage.

COLD ROLLED STEEL CASES

THE SAME FANATICISM IN A SMALLER PACKAGE. Our 12x2 MicroSeries 1202 includes the same phantom powered mic preamps, superb specs, internal power supply and rugged construction in an ultra-compact mixer at a great price. A perfect "starter mixer" for MIDI suites, video sound mixing or small group stage work, the MS-1202 is also a serious addition to any audio professional's tool kit. It's perfect for submixes into larger boards, as an impedance matcher or as an extremely high quality microphone pre-amplifier. The MS-1202 includes 4 phantom-powered mic inputs with the same circuitry as the CR-1604, 4 bal./unbal. mono inputs, 4 stereo inputs, 2 aux sends/ch., 2 effects returns, channel patching, 2-band EQ, headphone monitor w/level control & three-way, 12-LED peak meter display to monitor stereo output, mic input levels & line input levels – yet takes up just 1/10th of a square meter of studio space!

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Expanding SAE

The School of Audio Engineering is continuing its expansion with the purchase of three new Sony multitrack tape recorders and 10 SoundTools II digital hard disk studios. Their courses aim to train graduates in all aspects of sound engineering, "not just how to operate a recording studio". With this in mind, they take students to 'locations' and involve them with musicals such as the John Lennon tribute *Glass Onion*. Their operation is not just limited to their London base – if you're thinking of emigrating, they have colleges in Hamburg, Paris, Melbourne and Kuala Lumpur.

More from: The SAE, 071 809 2653.

HHB secures more DATs

DCC and Minidisc may well be the latest fashion for domestic players, but DAT is still hanging in there in professional circles. The search for suitably specified professional DAT machines is getting tougher, but fear not: London-based HHB Communications is taking delivery of a supply of Aiwa XD-S1100 DAT recorders. The S1100 features a reinforced double construction chassis with increased anti-vibration insulation, a 3-motor drive mechanism, full digital I/O, 1-bit digital audio converters and wireless remote control.

More from: HHB, 73-75 Scrubs Lane, London, NW10 6QU, Tel: 081 960 2144, Fax: 081 960 1160.

In stock: the S1100 from Aiwa

A successful decade at the IMW

Dance musicians on course

The Islington Music Workshop has set up a starter course for all dance music fans – from ragga to rap, from techno to bhangra. The course covers computer sequencing, sampling and an introduction to MIDI and programming. It costs £29.38 (unwaged), £64.63 (waged) and £47 (Islington residents).

More from: IMW, 44 Peartree St, London, EC1V 3SB, Tel: 071 608 0231.

Ministry of Soundvision

Soundvision Professional Sound & Lighting will be presenting a product demonstration at the Ministry Of Sound club, Gaunt St, London SE1 on the 17th October. There will be in excess of 20 sound and lighting companies attending.

Soundvision see it as "a unique opportunity for the mobile disc jockey to meet the leading name manufacturers and national distributors of the top of the market – all under one roof and to demo 'hands-on' style at the same time".

There will be special appearances from DJs Carl Cox, Jumping Jack Frost, Paul (Trouble) Anderson from Kiss FM and Justin Berkmann, resident DJ of the Ministry.

For more information on the event call: 071 281 8121.

Smoke and mirrors

Clubtech company Batmink Ltd launched a number of new lighting and smoke products at the recent PLASA Show. The Lampo low-smoke machine is the first smoke generator to produce a low-level sea of smoke without the need for dry ice and a heavy refrigeration plant. Working on the principle of combining two fluids, the Lampo can cover an area of 150 metres in 30 seconds. Patents have been obtained for the fluids, and the machine has passed all necessary EC regulations on safety. If low-level smoke is what you want, the Lampo will cost you £1111 plus VAT.

Other new products include the Lamp Columbus projector featuring eight colours, eight interchangeables gobos, variable strobing and blackout (£985 plus VAT for the Halogen 650-watt version, £1260 plus VAT for the MSR400 version) and the Griven Smile, which features an 800-watt Roundlux lamp reflected on five flat mirrors to produce five static cones of light and five moving cones which are animated to the beat of the music (£866 plus VAT).

For more information contact: Batmink Ltd at Glastonbury Warehouse, Silver Street, Glastonbury, Somerset BA6 8BT, Tel: 0458 833186/835451

Batmink: with stars in their eyes

LONDON MUSIC SHOW

Hear ye! Hear ye!

It's another MT Demo Forum...

This year's London Music Show at Wembley Conference Centre will be the biggest so far, with more exhibitors, performances and guest appearances than ever before. *MT*'s presence will be underlined by a special MIDI Village, showcasing the very latest in high-tech musical products and offering you the chance to get those hands on. And with live appearances from the country's top techno acts there promises to be a great atmosphere and much to savour. The show takes place on Saturday 27th and Sunday 28th November.

Once again, *MT*'s Demo Forum will be happening on each day of the show, with a celebrity panel from the world of high-tech music assessing your best efforts on tape. So the time to get those tapes in is **NOW**. Five will be selected for each day, and those responsible will be invited to the show as our guests. Send them to: Demo Forum (LMS), MT, Alexander House, Forehill, Ely, Cambs CB7 4AF.

The Otari Digital Audio Recorder

New DAT from Otari

Following the successful DTR-90 DAT recorder, Otari have produced the DTR-7 Digital Audio Recorder, available from Stirling Audio Systems Ltd. Aimed primarily at the professional market, the DTR-7's features include XLR connectors, selectable 48/44.1/32 kHz sampling frequencies, wireless remote control, and EIAJ/DAT format to assure compatibility with other machines. It is 19" rackmountable and has a 3U rackmount adaptor.

The DTR-7 is described as ideal for studio sub-master use and costs £1299.

More from: Stirling Audio, Kimberley Rd, London, NW6 7SF Tel: 071 624 6000, Fax: 071 372 6370.

A well packed MaxPak

Version 2.0 of Arbiter Pro's MaxPak is now available with five pieces of MIDI software, including the SeqMax windows sequencer, the LibMax librarian, TapeMax, MixMax and JukeMax for gigs and karaoke. No MadMax, though...

Arbiter believe the new version will assume the flagship status previously held by Cadenza for Windows.

More from: Arbiter, Wilberforce Rd, London, NW9 6AX, Tel: 081 202 1199, Fax: 081 202 7076.

Seeding the future

If you want to experience what all this multimedia/desktop video/virtual reality/cyberwotsit stuff is like in the flesh, so to speak, be sure to get along to Bagley's Studio in York Way, London N1 (an old industrial site round the back of King's Cross station) on Friday 8th and Saturday 9th October. If you do, you'll be in on the launch of a regular monthly 'cyber-club' called Cyberseed.

Billed as "Britain's first cyber-festival", Cyberseed aims to draw together state-of-the-art virtual reality systems, computer graphics, film SFX, cyber art, electronic gaming systems, comix, cyber groups, robots and cyber fashion. According to organiser Brian Davis, you can expect "a mind-blasting fusion of street art and computer artists drawn from ex-Mutoid Waste Company, Hex, Trip Media, Zap Factor and others, plus video scratch artists, electrifying performance and the leading edge of TV, commercials and animation production plus a visionary mix of ambient trance and hard-dance, cyberdelic bliss". Phew.

Banks of monitors and projectors and a video wall will present computer graphics and experimental film, plus real-time animation, VR, CD-i, video effects and manga movies. Hex and other video artists will be in effect to provide live video mixing. Also promised are desktop VR systems, VR immersion systems with the latest virtual reality games, and interactive furniture and sound sculptures. Sound systems and live music are also on the menu, with cyberpunk group Antibody playing each night accompanied by "giant robots thrashing throughout the club" (!). And if you want to take some of this experience away with you, specialist stalls will be displaying the latest in cyberpunk fashion, brain machines and cyber tapes, toys and videos.

Cyberseed, it seems, has it all – even William Gibson will be putting in an appearance – and on the second day you can expect to have a close encounter with some cybersex!

Now for some cyber fax: times are 8pm-6am on both Friday and Saturday, and the admission charge is £15 per night. Daytime exhibition workshops are also planned. You must be aged 18-plus, and the dress code is "Go Cyber"!

More from: Brian Davis, Tel/Fax 081 444 9600.

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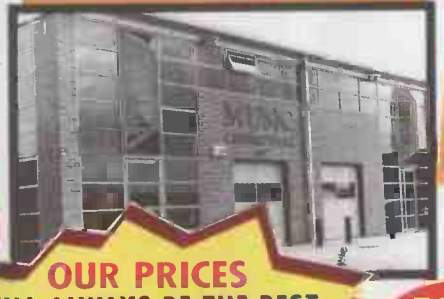

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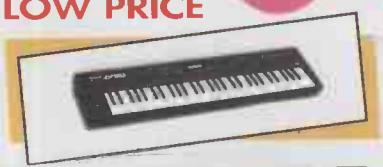

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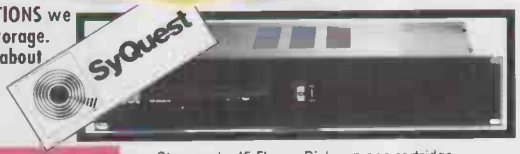

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Teenage

ATR stands for Atari Teenage Riot, and Alec Empire, Carl Crack and Hanin Elias are a multi-ethnic slice from the new generation of post-ravers. Based in Berlin, they also regularly come face to face with the neo-Nazi element threatening to co-opt techno music for its own ends. Combining punk aggression, hip-hop radicalism and a refreshing attitude to technology which takes it entirely for granted, ATR are providing a blueprint for future pop and having a damned good time to boot. While Hanin sings and Carl DJs, Alec Empire provides the sampled and sequenced musical framework for their frenetic polemic. Here, he tells Phil Ward about the band and its aims, and why it was time to immortalise a certain computer...

On the Atari

"Yes, we do almost everything on the Atari as a sequencer, but then everybody does, I think. That's only one side of it. It's a bit difficult to explain, but for us it's a kind of symbol. There are techno acts, like The Prodigy, who are named after synthesisers, and to us the Atari was a stronger symbol, a symbol of Japan, of Tokyo, of computer games and everything. There are tracks which we do without the Atari, just using the 909 and 303 in sync and arranging live, but when we started it was the most important thing for the music. There are different techniques for creating a track, and we know them all, so it depends on the track which is the easiest way to get there.

"The first rule is that we have to develop the tracks very quickly. Speed is very important when we are working out the ideas. Sometimes the Atari can be too slow! If you just have the machines sync'd up and you're arranging while listening, you have to think everything through much more. It's like improvising; you do things you perhaps wouldn't do on the Atari. In a way, it's more like remixing. But some things you can't do 'by hand'. So it depends on the track."

On dirty machines

"The Casio FZ1 – which in Germany is called the Hohner HS1 – was one of the cheapest samplers you could get, and it has that scratchy, cheap sound which I actually prefer now to the Akai. We only use the Akai to record vocals, or if we don't have enough memory, but normally the Casio is exactly the sound we want. If you sample something short, like a bass drum, it kind of 'breathes' – it gives this little squeaking sound which I like. And the low notes are really scratchy and bad, which is what the band's philosophy is all about: trying to get dirty sounds out of the machines."

Magenta Cyan Black
ATR Oct 93 AR (22.10.93 11:33am)

Kicks

On choosing gear

"When we first started we only had three instruments: the Casio, the 909 and the Juno 106. That's all we used to record our first demo, which got us the record deal. I've had to buy back a lot of the equipment I sold in the late '80s! After acid, everyone was using the 303 over and over again, and I got so bored with it I sold mine. Only about half a year ago I decided it would be good to have one anyway. So I told my friend I wanted it back...

"It's difficult to use these machines because everyone uses them so often, while on the other hand you want to use the best sounds. On the single 'Atari Teenage Riot', we use sounds which are very general, but we try to use them in a different style. Sometimes it's quite funny to use a sound which absolutely everyone knows, and to use it really obviously! It's the same with normal instruments, where you can use a particular guitar sound or something which everyone associates with a record, and make a parody of it."

On electronic music for the '90s

"I made some EPs for the Force Inc. Musicworks label in Frankfurt, which was a very progressive scene, where we would spend at least an hour just finding one new sound, so it's a good change for me to be in ATR. It's not ATR's function to look for new sounds – that's an old-fashioned, '80s way of looking at electronic music. In the '90s, there are a lot of people claiming new sounds but they're not really that much different.

"Our philosophy is to write the lyrics first, and then express those feelings through the music – like film music, where you have to underline everything in the music. 'Atari Teenage Riot', for example, has the often-used sounds of European techno, from Joey Beltram or whatever, mixed with guitar samples, to suggest a modern teenage riot. Every sound has to underline the sense of the lyric. People should get more ideas down first, and then use the machines to amplify those ideas. The emphasis on new sounds comes from Kraftwerk in the '80s, but perhaps we should get back to something more like Kraftwerk in the '70s, where the search for sounds was to illustrate an idea.

"That's my problem with trance, or ambient: take a choir sound, add a 909 beat, and the track is ready. I've done some stuff like that on Force Inc. too, more like early Detroit trance stuff. But I'm more interested in communicating ideas now."

On 'personality'

"A lot of people were surprised when we decided to form a 'band', because coming from the hardcore rave scene the philosophy always was to do 'projects', and not to show any personality. We sometimes have problems with organisers at raves, because when we appear on stage, the idea is to *see* us as personalities. We want to provide a little more of a performance. The industrial/EBM approach of hiding behind the machines is very old-fashioned. Sometimes people criticise us for 'acting', but if you accept the music you must accept the personalities as well. It looks all right, I think.

"It's important for there to be somebody to identify with, if you've got something to say. It's not so much an issue at raves, where the important thing is just to dance, but I've seen bands like LFO, and even Kraftwerk, and I've stood there feeling bored. A gig or a concert is more than just making music. Our music is very aggressive, and we want to get that across to the audience. I don't think you can make the kind of music we are making and just stand still!"

On anarchy

"We're using technology to f**k up the system. For us, all this musical history is just something we've read about. We can't really understand The Rolling Stones! It's all just sounds that we can sample. That's the kind of anarchy that's happening now: you can sample a 10-second loop and put it out on a white label, and the big system of the record industry can't get you – it's not quick enough. OK, it's a bit different for ATR now that we're signed to a major label, but that's the culture we came from. The original 'riot' was to create anything we wanted, including illegal stuff as well.

"Technology is the quickest way to get our ideas across, but also there are just more sounds available to you. I played in a punk band, and after a couple of years I just got so bored with the sounds. OK, you can create new sounds on the guitar using effects, but it's still basically a guitar. That's why samplers are so important. You can take the whole vibe from another record, or a film soundtrack. If you use short samples, and use them, for example, an octave down for your melody, I think that has a special mystery. You get something of the original vibe, and create a feeling that never really existed before, at least not in that form. In a way, you're changing history.

"As the instruments become cheaper, in sampling, in graphics and whatever, we will be able to see who has the best ideas: not just who has the most money." ●

Photos: James Cumpsty

Riotous assembly – Alec's home studio

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Roland Juno 106	Roland TB303
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Korg M3R	Alesis Midiverb III

On record

Alec Empire:
Tripmen EP (with T'N'I)
Yobot EP
SuEcide (Part 1) EP
SuEcide (Part 2) EP
Destroy Deutschland EP
Das Duell EP (with Biochip C)
Limited Edition EP
'Totenposse Rides Out'single (on Structure, Cologne)
Star Trax EP (as LX Empire)
'Unequal Chord' white label (as LX Empire)
'Theme From Tekknology – Yobots Round My Neck' single (on DSB)

Hanin:
Parfum EP

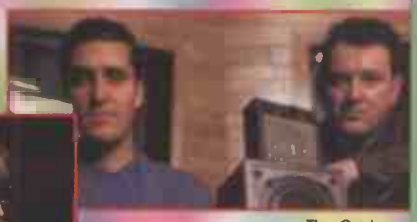
ATR:

Atari Teenage Riot	EP	(Vertigo) 1993
Midi Junkies	single	(Vertigo) 1993
Atari Teenage Riot	album	(Vertigo) 1993

The MT Ambient Quiz

(Slight Return)

Don't look now, but *MT* is giving away 10 copies of Virgin's new double compilation *A Brief History Of Ambient Volume 1*, which will take you on a journey through many of the key instrumental recordings of the last 20 years on Virgin and its associated labels. All you have to do is answer our sense-adjustingly ambient questions below in a 100% correct manner, post the coupon to us no later than **21ST OCTOBER '93** and abide by the Golden Rules. Can you hear something?



The Grid

Edgar Froese

William Orbit

1. Which ambient label did Alex Paterson work for in the days before The Orb?

.....

2. Name the 1981 album from David Byrne and Brian Eno which first juxtaposed dance beats and 'found sounds'.

.....

3. Of which German synthesiser band was Christopher Franke a member in the '70s?

.....

4. Who recorded 'A Rainbow In Curved Air'?

.....

5. William Orbit's current album is called...?

.....

Name .....

Address.....

.....

.....Postcode.....

Daytime phone no .....

Now post coupon to: **Ambient Quiz 2, MT, Alexander House, Forehill, Ely, Cambridgeshire CB7 4AF.**

TRACK LISTING

disc 1

1 Flowered Knife Shadows .....Harold Budd
2 Thru Metamorphic Rock .....Tangerine Dream
3 Evening Star .....Robert Fripp & Brian Eno
4 Mountain Goat .....Amorphous Androgynous
5 Sea Of Vapours .....Nusrat Fateh Ali Khan
6 The Force Of Vulcan .....Hawkwind
7 Requiem .....Killing Joke (Youth remix)
8 An Ending .....Brian Eno
9 Marnia's Tent .....Richard Horowitz
10 Rapido de Noir .....Irmin Schmidt & Bruno Spoerri
11 Kazoo .....Ashra
12 Their Memories .....Harold Budd & Brian Eno
13 Leave Your Body.....The Grid
14 Electric Becomes Eclectic .....Christopher Franke

disc 2

1 Phaedra.....Tangerine Dream
2 Delta Rain Dream .....Brian Eno & Jon Hassel
3 The Monkey King.....William Orbit
4 Castle In The Clouds .....Gong
5 Life Form .....Hawkwind
6 The Dance #2 .....Laraaji
7 Sacred Stones.....Sheila Chandra
8 Earth Floor .....Earth Floor
9 Lauft...Heist Das Es Lauft Oder Es Kommt Bald...Lauft .....Faust
10 Gift Of Fire .....Jon Hassel
11 The End Of Words.....Material
12 Panorphelia.....Edgar Froese
13 Voices.....Roger Eno
14 Traum Mal Wieder.....Holger Czukay
15 Home .....David Sylvian

Congratulations to the following readers for correctly answering our squelchy questions in *MT* issue 82. Copies of *The Positiva Ambient Collection* are on their way to you.

Ray Trancing, Falmouth. Alan Martin, Troon.
David I. Lewis, Sheffield. Peter Hanes, Teddington.
Stephen G. Bond, Newton-le-Willows

Answers: 1 Richard James. 2 *Sleeper*. 3 Mixmaster Morris. 4 John Cage. 5 (courtesy of our winners) "Astradelicious"; "Euphoric"; "Plenescence"; "Wimbledonlanesque"; "Blissful".

The golden rules
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Only one entry per household is allowed
No correspondence or telephone enquiries will be entered into. The Editor's decision is final.

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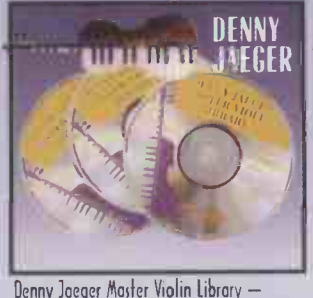

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State Of Independence

In At The Beginning

As they prepare to release their first single, new label Riff Raff Records explain their gameplan to Simon Trask.

When Steve Smith was made redundant after six years working for British Aerospace, he decided it was time to realise his dream of running his own record label. Steve is no stranger to the machinations of the music business, having had a charting single on Living Beat Records and a couple of tracks included on a dance compilation album, *Freedom To Party II - Ultimate Rave*, which sold in excess of 80,000 copies in the UK. He also had a thousand 12" white labels pressed up a couple of years ago, and then trekked round the specialist dance shops "to find out what it was like trying to sell a thousand records". In the event he sold around 600 over the counter, and subsequently another 200 through a distributor.

"We just went into record stores saying 'Do you want to buy this record?'," he recalls. "They'd put it on, listen to it and say 'Yeah, we'll have 10, 20 of those.' They paid upfront, cash over the counter, as well. I think the most we sold in one go was 25. We were getting about £2.30 for each single, whereas going through a distributor it was about £1.75. You're not going to make masses of money on a thousand singles, but if you can buy a bit of gear for your studio it's worth it."

Today, Steve looks back on his early encounters with the music biz as a valuable learning experience.

"I think you have to go through an apprenticeship, really," he says. "See how it all works, and then either knock it on the head because you don't like how it works or pursue it further."

Having chosen the latter route, Steve has spent the past six months doing all the groundwork of establishing his own record label, Riff Raff Records, with girlfriend and business partner Helen Maher - setting up a promotions mailing list, advertising for demo tapes to be submitted, getting the record company logo designed, registering the publishing company, sorting out a solicitor and an accountant, putting together a business plan and, of course, paying the bank a visit. Steve also attended some government-funded business courses to learn the basics of running a company.

"They're open to anyone," he says. "You just find your nearest office, phone them up and go along. I think a lot of people don't realise these courses are available. You learn about book-keeping, business management, invoicing, notifying the income tax people, registering for VAT, marketing... everything you need to know to set yourself up in business. If you're going to run a label you have to have the business side sorted out, otherwise it's not going to work. People think 'We'll just press up these records and we'll sell 'em and make loads of money.', but it's not like that. You have to sort out a business plan.

"Our plan got a good reaction, the banks were really into it, so we had no

Few would disagree that a thriving independent scene is essential to the health of the music industry. Buoyed up with enthusiasm, belief and commitment, and unencumbered by the bureaucracy of the majors, independent record companies are a fertile breeding ground for new talent in its many and

problems getting money from them. But there was a lot of work involved to get that. Especially with a record company, it took a lot of explaining – it's not like you're setting up a plumbing service! You do your cashflow, and how many sales are you going to base it on? We based ours on a minimum of 3,800 record sales; obviously we'd like to sell 80,000, but you've got to start from a realistic figure."

The single which Steve and Helen hope will get Riff Raff off to a flying start is a pop dance cover of the Steve Miller track 'Abracadabra', featuring veteran session singer Angie Giles on vocals. A track with strong crossover potential, it was recorded and produced by Steve and session player/programmer Martin Lister under the name Dreams 2 Reality.

With the exception of the vocals, which were laid down at Westar Studios in Southall, 'Abracadabra' was recorded and mixed entirely in Martin's home studio, allowing the recording costs to be kept to a minimum. The pair have completed several mixes of the track, all of which are set to appear on the single along with another, self-penned, track, 'Let's Do It'.

With the recordings in the can, Steve was preparing to do the rounds of the distributors when *MT* spoke to him.

"I'll be going to five or six, the major ones," he says. "I've spoken before to Pinnacle, Revolver, APT, Sony... Sony are actually distributing a lot of independent dance stuff, now. We want to get our records into the main chain stores as well as the specialist dance stores, so we want to use one of the major independent distributors."

The plan in the first instance is to press up a thousand copies of the single. "It'll go out on promotion for two-to-three weeks before the full release date," Steve explains. "We're looking to get it into the pre-release charts in *Record Mirror*, *DJ* and *Mixmag* and get a bit of a buzz on it. We'll set aside 200, 250 of the initial pressing to mail out to press, TV, and club DJs. Then from the reaction to it we'll judge how many further copies to press up."

But what if the single takes off? There's obviously a limit to how many copies a small label just starting out can afford to get pressed up (Steve reckons they can go up to five or six thousand initially). One option is to go for a manufacturing and distribution deal with the distributor, which means that the distributor takes on all the manufacturing costs upfront — but the label sees less return on sales further down the line.

Another practical issue which Steve and Helen are aware of from previous experience is the amount of time it can take to get paid. "Some of the distributors, although they say they'll pay you after 30 days, sometimes you're actually waiting quite a long time," Steve observes. "If you're starting a label and you're having to wait for your money, it can be a major cashflow problem. That's something we've got to watch out for. Obviously there's a risk involved in all this, but then if there wasn't any risk we'd all be millionaires!"

With millionaire status still some way off, Steve and Helen have their sights set modestly but, perhaps, realistically.

"In the first year the aim is for Helen to come on board and work full-time for the company, and for us to get a little rented office space instead of working from home," says Steve. "Then for the future, maybe in the next three years, the plan is to build a studio and get Martin more closely involved."

In these economically challenged times, starting up a record label might not seem like the wisest of moves. For Steve, however, the time feels right.

"This just feels like the natural thing to do," he says. "I don't want to work for anyone else again, I just want to do my own thing. We aren't under any illusions that this is going to be a get-rich-quick scheme, 'cos it ain't, but we're going to be doing something that we enjoy."

'Abracadabra' by Dreams 2 Reality is set for release in mid October

FON's Fallout

Sheffield independent FON Records played a key role in propelling UK dance music into the charts during the late '80s with Krush and Funky Worm and then self-destructed. Former FON partner Dave Taylor tells Simon Trask where they went wrong.

No record label sets out to fail. Like many others before and after it, the label which Dave Taylor refers to as "this little half-baked amateur-hour operation in Sheffield" formed out of a desire to release records by unsigned bands who they felt deserved the exposure.

"It was all on the basis of 'Great track, let's put it out'," Dave recalls. "We had a facility to make records, we got a bit of a distribution deal together and off we went. Pure enthusiasm, stacks of naivety, and no real concept of what may or may not happen."

FON's early releases ranged from indie guitar to industrial funk to "Eastern ambient dancey" in style. "Probably a classic way not to start a label!" Dave laughs. "We didn't really have an identity at all, we were just doing what we wanted to do. It was all quite fun, and we decided it was worth carrying on with even though we realised 'Well, this isn't really making us any money, and it's probably actually losing a bit of money' "

Debuts

varied forms - from house to hip hop, grunge to garage, acid to ambient. Launching a new series in celebration of the independent record label, *MT* takes a look at young hopefuls Riff Raff Records and traces the downfall of pioneering independent dance label FON Records.

But then, after about nine months they had their first taste of success with Age Of Chance, the group which pioneered the indie guitar/dance collision with their cover of the Prince song 'Kiss'.

"It was just one of those happy things," Dave recalls. "They had a good media-worthwhile idea and it worked. 'Kiss' was the biggest-selling indie single of '86 and '87, and you still hear it out in indie clubs. So that really brought attention to the label."

Unfortunately, it also showed them how bitter-sweet the taste of success can become, when a major came along and poached the band from them.

"We were in that classic situation of 'Well, look, they can offer us this, that and the other, what can you offer us?' We were defenceless. So they went, and that was a bit angst-ridden to say the least. Thankfully, not long after that these two guys from Nottingham walked in and gave me this tape."

Dave Taylor founded and still co-owns the Warp record shop in Sheffield. He is also Managing Director of the respected FON recording studios in Sheffield.

The record which resulted from this encounter, Krush's 'House Arrest', took FON from indie chart success into the big league of the national charts almost overnight. 'House Arrest' came along in the wake of M/A/R/R/S' sample dance hit 'Pump up the Volume', and, all of a sudden, FON found themselves in the middle of a full-blown dance music invasion of the national charts. Recalls Dave:

"Literally within a month of 'House Arrest' going in the charts you saw Bomb The Bass, S'Express, Coldcut with 'Doctor In The House' and what they did with Yazz, and all of a sudden it was 'Hey, what's going on here?!'"

Further Top 40 chart placings came FON's way with Funky Worm's 'Hustle (to the Music)'. However, along with with this newfound success came changes in attitudes and priorities.

"You start thinking about follow-ups and worrying about losing the momentum that you've created with the first track," Dave explains. "The band are thinking 'Oh my God, this one's got to sell as many copies as the last one or it's a failure', the producers are under pressure to make sure it's a bigger hit than the first one, the record label's starting to think 'Oh my God, we've got to make sure we don't miss out here'... The scale, the parameters you're aiming at, suddenly change. Whereas one minute you're happy with 3000 copies and getting into the dance charts, the next minute it's 'Well, we need pre-sales to get it into the Top 40 first week, that means we need radio play before, which means it needs to be serviced before, therefore we probably need to have the video made upfront so that maybe *The Chart Show* will show it.' So you end up getting caught into quite serious strategising and marketing campaigns that you probably didn't think one minute about before. And that's when you start spending money.

"On top of that, everyone starts accusing you of ripping them off, and all these new bands who'd been saying to us 'Look, we just want a chance to make a record' are going 'We want £25,000 before we do this, we want to see video commitment, we want to see tour support.' Everyone looks at you differently, and you have to react differently to how people are approaching you."

Of course, all this could be seen as the growing pains rather than the death pangs of a still young label. But there were other problems which combined to set the seal on FON's fate. For a start, there was Krush's failure to release a follow-up to 'House Arrest'.

"Krush were a classic case of huge potential that got imploded straight away with bickering, politics, money, change of attitudes," says Dave. "It didn't work as well as it should have. I think if they had got together some follow-ups they could have sold a fair number of albums, and they could have been the first British pop/dance act."

Yet not all the blame could be laid at Krush's door. FON had licensed 'House Arrest' to Phonogram as soon as its mainstream potential had become apparent, fearing that their own resources wouldn't be enough to see it into the national charts. Yet when it came to putting out a follow-up, Phonogram kept vetoing the tracks Krush gave them, and crucial time was lost.

"January, February of '88, Krush were riding the charts in Britain and all round Europe, and doing very well in the club charts in America," Dave recalls. "The next thing we knew it was May, June and we hadn't agreed on a follow-up, and in the meantime Yazz had appeared, Coldcut were having hits, S'Express, Bomb The Bass... and Krush were beginning to look like a one-hit wonder –which is exactly what they became."

Dave also identifies FON's inability to turn singles success into album success as a crucial failure.

"If we'd been able to do that then we could have survived," he maintains. "That is why I think labels like Mute, 4AD and Creation have been able to continue, because they've had at least one or two bands from very early on who've been selling albums, and they've had the sustained cashflow turnover of that to keep them going. We were dealing with situations where we had one great piece of music and people didn't think about follow-ups till we were already in the charts. There was no long-term strategy really worked out, which was a total mistake from our point of view."

Dave also feels that FON got "too caught up with the attitude 'We've got to have hit singles' and with trying to turn what was basically a studio project into an act", and as a result lost sight of the underground. While they were releasing the third Funky Worm single, 'You And Me', Warp Records were starting out with singles by The Forgemasters and Sweet Exorcist which epitomised the underground scene in Leeds and Sheffield at the time. For Dave, the contrast "about summed it up: we were out of sync."

'You Plus Me' got to number 41 in the national charts – which by this time made it a failure in the label's eyes. In fact, it turned out to be the last record they released.

"I think if that record had been a Top 40 hit FON might have carried on, but basically that was the nail in the coffin," Dave says. "By then there was just so much bad vibes going on. All the expectations and hopes were getting shattered."

By this time the label were also losing money, which of course brought further pressures to bear. In the end, FON simply "imploded."

"There was a lot of stress," Dave recalls. "A lot of personal friendships suffered and broke down, and everybody just ended up thinking 'Oh my God, this is a nightmare, there's no fun in it any more.' Krush hadn't been able to release a follow-up, Funky Worm were falling to pieces, and FON was in major internal argument – all because there had been this mass of expectations, and supposedly massive amounts of money being generated. Most of the money we'd made ended up in the hands of lawyers. Watch out for lawyers. Well, watch out for yourselves first. Be really clear about what you're trying to do."

So, knowing what he knows now, would Dave want to get involved in a record label again?

"I think if I was five, ten years younger then definitely," he replies. "But it does take a hell of a lot of time and effort, it's not a 9 to 5 job. If you think it's going to work like that then you're in for a nasty surprise."

Hard fax

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(all figures estimates excluding VAT)

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Umbrella
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(Umbrella is an association for Independent record labels with independent distribution; they also provide advice for anyone thinking of starting up their own label)

USEFUL REFERENCE BOOKS

Music Week Directory
Kemps International Music Book
(Both are updated annually — *Kemps* is currently in its 25th edition. If you just want to browse and jot down a few names and addresses, try the reference section of your local library, as neither book is particularly cheap to buy)

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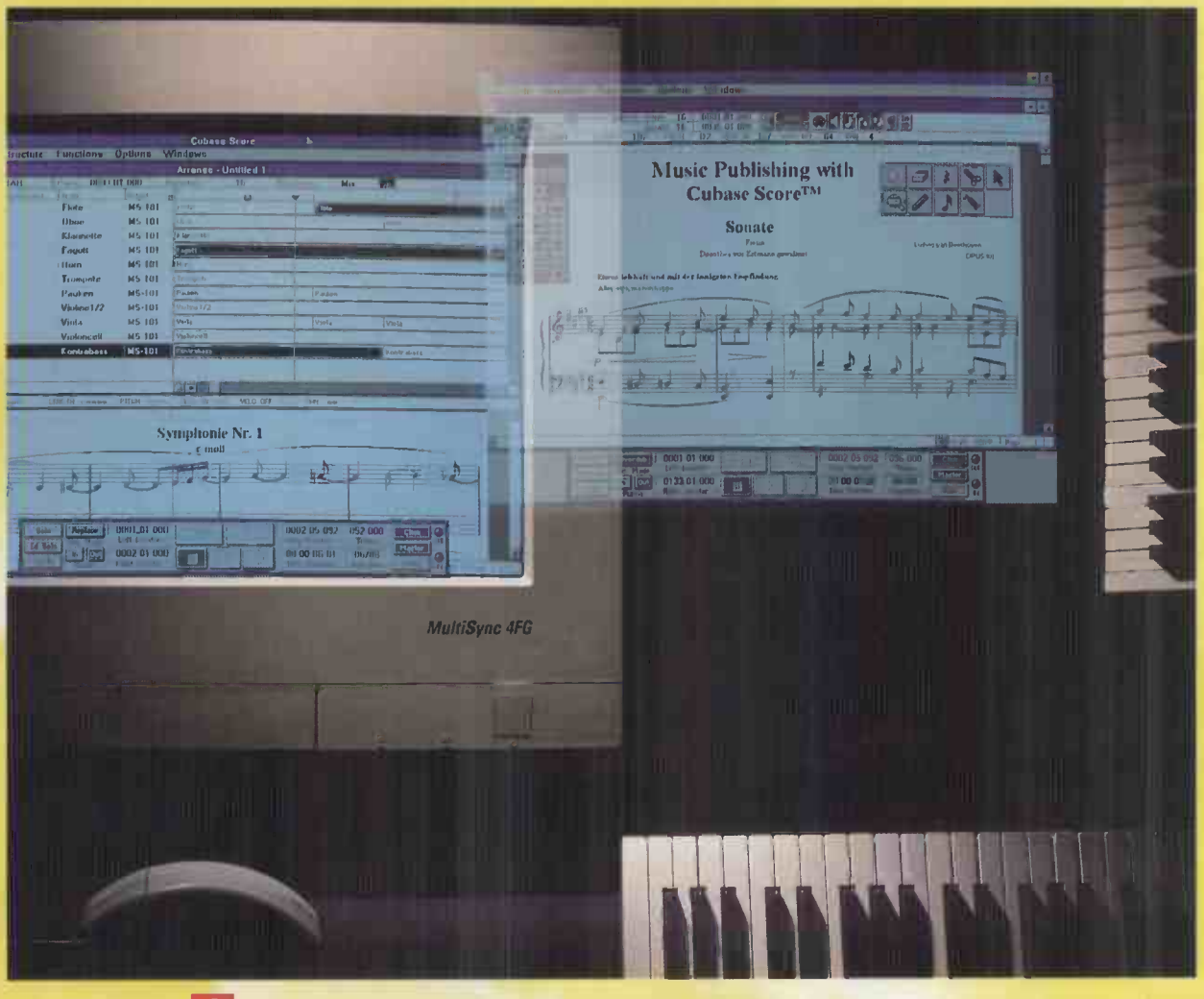

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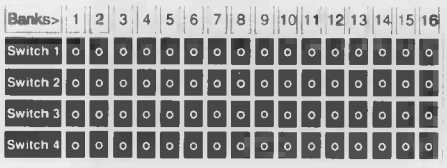
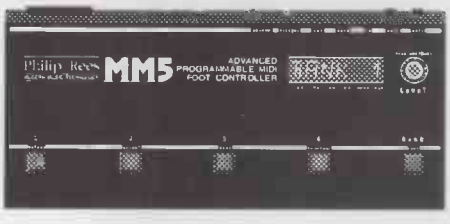


There are sixteen nameable Banks of four velocity-sensitive Switches. You can read the bank names, programming menus and other indications on the large, six-character alphanumeric LED display.



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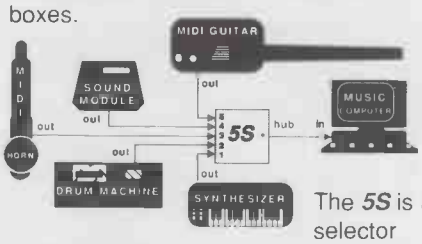

The ***5S*** is a selector for £29.95. The larger ***9S***, which is similar with nine positions plus 'off', is yours for £39.95. The popular little ***2S*** offers two ways plus an 'off' position for just £14.95.

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You can't combine MIDI data-streams by joining wires together, so you may need a merge unit - we make the best! The ***2M*** merges two sources, and is even better value than ever at £69.95! The ***3M*** merges three for a very reasonable £99.

These units both have **built-in mains power supplies**. They can handle all types of MIDI data, including Time Code and System Exclusive messages of any length. In both units, MIDI clock conflicts are prevented by an intelligent interlock system. Many automatic features enhance performance and convenience.

The ***2M*** has thru ports for each input plus two copies of the merged output. It sums pitch-bend values received from opposite inputs.

The ***3M*** provides thrus for two of its inputs plus a port for the merged output. The ***3M*** has an interlock system for pitchbend.

MIDI Patchbay System

The ***5X5 MIDI Switch*** is a convenient and economical MIDI routing device that will help you explore new routing configurations and liberate the potential of your MIDI gear. The fabulous ***5X5*** lets you connect each of up-to-five MIDI slave devices to any of up-to-five masters. It has a built-in mains supply in its 1U half rack width case and is only £99.

Fantastic MIDI Line Driver

The ***MLD*** system overcomes the fifteen metre limit of standard MIDI hardware. ***MLD*** converts the MIDI signal to a differential (balanced) format, so that it can traverse up to one kilometre.

MLD is only £89.95 and consists of a pair of compact units. Each one is just 109mm x 54mm x 42mm.

The mains-powered transmitter unit includes *'Cleanstream* waveform restitution.

The receiver unit is powered via the line, and features a noise filter.

MIDI to CV Converter

Via ***MCV***, your MIDI system can control your irreplaceable old analogue synths, with their great sounds and lovable knobs.

The high-performance ***MCV*** renders the full MIDI note range with delightful speed and accurate pitch. It also responds to pitchbend and velocity, and you can set it to receive on any MIDI channel.

Two sets of **1V/oct** CV and gate outputs carry the same monophonic line and you can independently tune and configure them. You make all adjustments conveniently on the front panel. The friendly ergonom ics and unbeatable performance of ***MCV*** mean it is great value at £189.95.

The case is 1U high and half rack width and the mains power supply is built-in.

All these fine MIDI accessories are designed and made in England by *Philip Rees*. Prices are manufacturer's suggested selling prices, including 17.5% VAT, valid at the time of going to press.

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A TO Z OF ANALOGUE

part 3

MT's exclusive guide to every analogue synth made. Included are keyboards, expanders/sound modules and the better known electronic pianos and organs. Not included are drum machines, standalone sequencers and effects units, vocoders and those guitar/wind synths which aren't regularly used as expanders in their own right.

Readers are invited to submit details of little-known instruments which may be of use in compiling the series and also to point out any mistakes and/or omissions if these occur. All contributions will be fully credited.

Special thanks to: Les Bradley, David Etheridge and Martin Smith for Chamberlin info, Andy Horrell of EMIS, RN Mooring of John Hornby Skewes, Mushroom, and Bob Williams – for help and information in compiling these entries.

Compiled by Peter Forrest

Key facts

Dates: These refer to the approximate year of manufacture. New instruments were often on sale for quite some time after production ceased and precise chronological information is difficult to come by (all help gratefully received!). Where any doubt occurs you will see a question mark.

Prices: The original price quoted is that which you would have paid in the shops; the target price is what you could expect to pay now for a fully-working example in reasonable condition.

Users: If the exact model of synthesiser used is unclear, users are included under the maker's name.

Stars: A maximum of five stars (except for truly remarkable instruments) is given in these categories:

Interface – how easy it is to connect up to other synths or sequencers. MIDI, obviously, scores highly, so to does the ability to MIDI up using an external unit or internal interface. CV/gate at 1 volt/octave scores higher than a volt/Hertz implementation – which in turn scores higher than having no interface at all!
Sounds – simply how good the thing sounds. Obviously subjective, this is an area open to potential disagreement. Who's to decide whether a Moog 3C sounds better than a Prophet 5..?
Controls – how comprehensive, versatile and useable the controls are. A good set of dedicated knobs and switches obviously counts high, and so do touch-sensitivity, foot-pedal options and the feel of the keyboard.
Memories – 100 or more memories (and MIDI) will tend to get five stars. Anything less will get proportionately fewer.
VFM – Value for money. Again, an area of subjective opinion. Many feel that programmable MIDI polyphonics with VCOs represent the best value, but you might not!
Character – that indefinable 'something' that makes a synth desirable. Wood panels, knobs and uniqueness score highly.
Collectability – people collect strange things, but this category takes into consideration rarity and general interest/desirability rather than bizarre obsession.
Ease of use – intuitive, unfussy and easy-to-adjust controls count high. So too does the lack of complicated hidden menus, button-pushing and parameter access

Where no stars are awarded, it means that either certain features are not included at all (eg, no interface connections) or the category is not applicable (eg, value for money in respect of a synth only released as a prototype).

C

Chadacre

● 6300 SYSTEM – A little-known range of modular synths.

Chamberlin

Designed and originally hand-produced in very small quantities by a Californian, Harry Chamberlin c.1958/9 – early '70s, Chamberlin keyboards were used as the basis for the design of the much better known Mellotron.

Two instruments were brought over to London (without Chamberlin's approval) by intrepid entrepreneur Bill Fransen, looking for finance and improved production ideas. (Fransen had originally been cleaning windows when he saw the instruments in Harry Chamberlin's garage.) Fransen asked the Bradley Brothers to produce 70 matched tape heads, and ended up helping in their manufacture.

Chamberlin eventually received $30,000 for the rights to produce the Mellotron, and did once visit the factory.

● RHYTHMATE M1/M2 – Tape replay dual and single 35-note keyboards.
Original price: c.$750.
Target price: $1200 – $5000
Users include: Kenny Ascher (Dr John: *Hollywood Be Thy Name*), Eno and David Bowie (*Low* album; mis-spelt on the sleeve), Mitchell Froom (Elvis Costello: *Spike*), Patrick Leonard, Mike Pinder.

- Predecessor of the Mellotron; the Mark I Mellotron was virtually a copy of it (faults and all) and other Mellotrons used most of the Chamberlin's basic ideas.
- Tapes of rhythm sections and fills assigned to left-hand keyboard (in the key of the note you pressed), ordinary notes for melody/chords assigned to right.
- Each tape had six sections which could be fast-forwarded or rewound to, but the punched-hole system for stopping the tape in the right place was prone to failure.
- Spring reverb (possibly Hammond) built in.
- The absence of a proper internal chassis meant that machines disliked being moved. They were also noisy and unreliable – more so perhaps than the Mellotrons (except, perhaps, the Mark I).
- Three versions were produced: the first closely resembled the Mellotron Mark II, with its two 35-note keyboards; the second was like the Mellotron 400, and there was a third (very rare) version with three keyboards.
- Originally used three tracks on each tape, each playable individually, or in combination (A and B or B and C).
- Later stereo version introduced with four pairs of stereo tracks on quarter-inch tape.

Interface:	VFM: ★
Sounds: ★★★★	Character: ★★★★★
Controls: ★	Collectability: ★★★★★★
Memories: ★★★	Ease of use: ★

Chase

For the most part, the Chase range comprised re-badged Bit synths. There was, however, a further non-Bit addition.

● **CBP2** – 13-note bass pedal board (C-C). c.1983.
Original price: £299
•Included controls for filter envelope and resonance, waveform, sustain on/off and length.

Cheetah

Although this British firm ceased production of musical instruments in early '93, two ex-employees of the company – under the name Soundscape – are committed to releasing a mark II version of the MS6.

● **MS6** – 6-voice, 6-part multitimbral, 12-DCO, 1U rackmount expander. 1988 – 1992.
Original price: £300
Target price: £150
Users include: The Christians, Julian Colbeck, DNA, Tony Levin, Rhythmatic, Sheep on Drugs, Ultraviolet, Rick Wakeman.
MT review: Nov '88.
•Very good value, reasonably solid construction, masses of facilities.
•320 ROM, 96 RAM memories, 64 performances.
•24dB Curtis filter, LFO, VCA, two envelopes, and two DCOs per voice – comprehensive.
•Sensitive to velocity and channel aftertouch.
•Most parameters can be accessed from front panel – but weird and wonderful routings aren't as accessible as on, say, a Matrix 1000.
•No knobs or sliders.
•Configurable as one 6-voice, six monophonic, or anything in between. The lack of dynamic voice allocation, however, means that you're stuck with what you've programmed – even if one part is silent when another needs the extra voice.
•Expandable: will send out notes on MIDI overflow – but not controller information. Whoops!
•MS6-II to featuring stereo outs, aux inputs for processing other sounds, and onboard digital FX.

Interface: ★★★★★	VFM: ★★★★★
Sounds: ★★★★	Character: ★
Controls: ★	Collectability: ★★
Memories: ★★★★★	Ease of use: ★★

● **ZEUS 24** – 61-note weighted MIDI keyboard. 24-note polyphonic, 12-part multitimbral c.1992. A prototype machine – only a few (probably four) were ever built – the Zeus ultimately contributed to Cheetah's downfall.
Predicted price: £2000
•200 patches, 200 combinations, channel aftertouch and velocity sensitivity.
•Internal processors couldn't cope with amount of work required once demands on polyphony grew. Speed of functions would deteriorate.
•Disappointing lack of controls – just four knobs, four sliders.
•Internal reverb included; plus eight separate outs.
•A heroic failure, it was to have been available in any colour you liked, as long as it was red.

Chroma Fender/CBS

● **POLARIS** – 61-note, 6-voice, 12-VCO, velocity-sensitive splittable MIDI keyboard with 132 memories and 12 sequencer memories. 1984 – c.1986.
Original price: £1700 (but sold for much less – and only $1495 in US)
Target price: £250 – £400
Users include: Herbie Hancock, Peter Vetesse
E&MM review: Nov '84
•Strongish sounds, thanks to 12 VCOs, 12 VCFs, 12 VCAs, six five-stage (ADSDR) envelopes, six 3-stage (ADR) envelopes, and six LFOs.
•Oscillator sync and ring mod available.
•Simple onboard sequencer, limited capacity, but with sync in and out connections.
•Polyphonic portamento.
•Splits at any point – though only 3/3 voice allocation available.
•MIDI In, Out, Thru, and Triad interface for Rhodes Chroma, Apple computer, etc.
•20 sliders for that all-important real-time adjustment lunge (better than big brother Rhodes Chroma in this respect).
•Unimpressive (vaguely sub-Oberheim) performance levers.
•Originally produced in 'ARP' orange, then blue on production models, there was some doubt over quality control.
•Pretty rare compared with its contemporaries like Juno 6 and Polysix.
•A manual is still available from Fender Product Services, 1130 Columbia Street, Brea, CA 92621, USA.

Interface: ★★★★★	VFM: ★★★
Sounds: ★★★★	Character: ★★★★
Controls: ★ ★★	Collectability: ★★★
Memories: ★★★★★	Ease of use: ★★★

Clef

● **MICROSYNTH** – 30-note, 2-VCO, 1-VCF monosynth with noise generator. 1982 – c.1985.
Original price: £199
Target price: £25 – £60
•Also available in kit form at £129.
•No separate LFO – like Minimoog, you have to use one of the VCOs for modulation. (This aside, it has very little in common with the Minimoog.)
•Two sub-oscillators to beef up sound.
•Noise generator – not often found on very cheap synths.
•Thumbwheel for modulation.

Interface:	VFM: ★
Sounds: ★	Character:
Controls: ★★	Collectability:
Memories:	Ease of use: ★

Crumar

This prolific Italian company founded by MARio CRUcianelli put out new designs and re-vamped old ones with incredible frequency – particularly during period 1975 – 1983. Showed a bias towards multi-instrument or imitative instruments – string synths, organs, etc. Klaus Schulze was an early user.

Nearly all products designed for road use – either with built-in flightcase (of sorts), or carrying case. No Crumar analogue products were equipped with MIDI – synthesiser name changed to BIT for their first MIDI products.

● **BRASSMAN** – 49-note brass synthesiser c.1975. Voices included trombone, French horn, trumpet, and sax, with a muted trombone and two muted trumpet variations.
Original price: £346
Target price: c.£50
Users include: The Enid
•Good amount of control: glide, 'rag', timbre and vibrato delay and depth, attack, decay, filter emphasis, 8' and 16' volume, master volume, vibrato speed and depth.

Interface:	VFM: ★
Sounds: ★	Character: ★
Controls: ★★	Collectability: ★
Memories:	Ease of use: ★★

● **COMPAC** – 61-note electronic piano c.1966 – c.1978. Limited, very early electronic piano without touch sensitivity.
Original price: £225
Target price: £50
Users include: The Beatles, Billy Preston, Edgar Winter.
•Two voices – piano and clavichord.
•Vibrato speed and depth variable.
•Used on *Sergeant Pepper* – notably the classic clavichord arpeggios on intro to 'Lucy in the Sky with Diamonds' and perhaps worth looking out for for this reason alone.

Interface:	VFM: ★
Sounds: ★	Character: ★
Controls: ★	Collectability: ★★
Memories:	Ease of use: ★★

● **COMPOSER** – 49-note string/brass/poly-mono synth with breath control. 1982 – 1985.
Original price: £799
Target price: £100 – £200
Users include: Massive Attack
MT review: Apr '84
•Monosynth featured seven presets, ADSR and usual VCF controls, plus breath control (all shared with poly section), touch sensitivity and pitchbend. Assignable to lowest or highest note played on keyboard. Decent results from modifying presets or setting up own 'free' sound.
•Organ featured four presets, two percussion types with volume and decay controls, Leslie imitator with slow and fast settings. Average.
•Polysynth featured three presets plus controls shared with mono section; two oscillators transposable by up to an octave each, detunable; modulation wheel.
•Strings were not very pleasant, except as background for other sounds.
•Single keyboard trigger can spoil promising layers of sound.
•Breath controller comprised a longish bit of black tubing with simple mouthpiece. You look silly, it needs practice, but, like the Yamaha CS01, it can sound great.
•Clear design, good build quality.
•Four separate outs and main out, plus mixer.

Interface: ★	VFM: ★★
Sounds: ★★	Character: ★★
Controls: ★★	Collectability: ★★
Memories: ★	Ease of use: ★★★★

● **DS1** – 44-note, 2-DCO monosynth. 1978 – c.1980.
Original price: Unknown
Target price: £120 – £160

•Basically a capable, well-specified 2-oscillator, 2-LFO monosynth.
•Two ADSRs, independently switchable oscillators (4' – 32'), both with sawtooth, square and triangle waves, and DCO 1 with pulse-width control set manually or modulated by either LFO.
•Excellent LFO control and modulation routing, including, on one of the LFOs, sample and hold and staircase waveform.
•Switchable white/pink noise generator.
•One of the very first synths to have DCOs – and thus more reliable tuning, but a less interesting sound.
•External audio in – routed straight to VCF/VCA.
•Some controls not effective over their entire length.
•Gate in and out, (but no CV), headphone socket.
•Quirky but generally pleasing design.

Interface: ★	VFM: ★★
Sounds: ★★	Character: ★★
Controls: ★★★	Collectability: ★★
Memories:	Ease of use: ★★

● **DS2** – 44-note, 2-DCO monosynth with string synth section. 1978 – c.1980.
Original price: £645
Target price: £160 – £220
Users include: Mel Wesson (TV Smith's Explorers)
•Effectively a DS1 with simple polyphonic background section.
•Polysynth has high and low-pass filters, and can use either of LFOs.
•Footswitch used to bring poly section in and out.
•Separate mono and poly outs.

Interface: ★	VFM: ★
Sounds: ★★	Character: ★★
Controls: ★★★★	Collectability: ★★
Memories:	Ease of use: ★★

● **HAVEN TRAVELLER** – Combo organ
Users include: Annie Lennox/The Tourists

● **MULTIMAN** – 61-note string/brass/piano synth (Multiman S re-design – 1977). 1975 – c.1981. (Known as 'Orchestrator' in USA.)
Original price: £499
Target price: £60 – £100
Users include: Stereo MC's
•Brass: filter attack, decay, emphasis and amount controllable.
•Strings: vibrato switchable, violin and cello sounds splittable either side of keyboard split.
•Neither piano nor clavichord presets are particularly realistic, but clavichord is better.
•Separate bass control on bottom octave or optional pedalboard (£49).
•Separate output for piano/clav. Socket for sustain pedal.

Interface:	VFM:
Sounds: ★	Character: ★
Controls: ★	Collectability:
Memories: ★	Ease of use: ★

● **MULTIMAN S3** – 61-note string/brass/piano synthesiser. 1981 – c.1983.
Original price: £649
Target price: £70 – £100
•Totally re-designed and re-jigged front panel.
•Other changes from original Multiman/Multiman S include extra controls on strings – crescendo and timbre; improved modulation; detune; an organ preset; and separate out for bass as well.

Interface:	VFM:
Sounds: ★	Character: ★
Controls: ★	Collectability:
Memories: ★	Ease of use: ★

● **ORGANIZER** – 61-note synthesised organ (Organizer B re-design – 1977.) c.1974 – c.1980.
Original price: £429
Target price: £60 – £80
Users include: Madness
•(Slightly flimsy) drawbars to left of keyboard.
•Percussion attack and level controls.
•One and a half octave bass sounds, tabs that light up.

Interface:	VFM: ★
Sounds: ★	Character: ★
Controls: ★★★	Collectability:
Memories:	Ease of use: ★★

● **ORGANIZER T1** – 61-note organ synthesiser. 1981 – 1983.
Original price: £575
Target price: £100 – £120
Users include: Barry Andrews (XTC, Shriekback), George Duke, Annie Lennox.
•Nine main drawbars and Two percussion drawbars in centre of control panel.
•Three preset footage registrations and 'full on'. Fourth button selects drawbar control.
•Good control of percussion at a wide range of different footages.
•Leslie simulation, including slow-down/speed-up. Two key-click options.
•Synth bass section on bottom two octaves – mixed or split.
•Two basic presets plus filter cutoff and resonance controls.
•Pitchbend lever (like pinball flipper), vibrato and tremelo.
•Good range of Vox/Farfisa and straight Hammond sounds – but to get anywhere near the classic 'gutsy' Hammond sound requires outboard overdrive/gentle fuzz – and possibly a valve amp.
•A reasonable and cheap alternative to the Korg CX3, if you add the overdrive.

Interface:	VFM: ★★
Sounds: ★★	Character:
Controls: ★★★	Collectability: ★
Memories: ★	Ease of use: ★★

● **ORGANIZER T2** – 2 x 61-note organ synthesiser. 1981 – 1983.
Original price: Unknown
Target price: £150 – £250
Users include: Mike Barson (Madness), George Duke, Dean Klavett (Lene Lovich).
•Upper manual identical to T1; lower manual presets different.
•Bass pedals (18-note) available.
•A reasonable alternative to Korg BX3, if you add the overdrive.

Interface:	VFM: ★★
Sounds: ★★★	Character: ★
Controls: ★★★	Collectability: ★
Memories: ★	Ease of use: ★★★

● **PERFORMER** – 49-note string/brass synthesiser. c.1978 – 1983.
Original price: £379
Target price: £60 – £150
Users include: Mats Oberg, Nick Rhodes.
•Meaty brass sounds – so much so they work well as monophonic bass lines.
•Brass section features variable attack, decay, filter cut-off and resonance controls.
•Classic 8' and 16' string synth sounds – buzzy, phased and chorussed.
•String section features attack and decay controls plus 3-band EQ – effective in making them sound more realistic.
•Only single filter, so envelope only works when there isn't a note already held down.
•LFO modulation of pitch or filter, with variable rate and depth.
•Much sought after in USA.

Interface:	VFM: ★
Sounds: ★★	Character: ★
Controls: ★	Collectability: ★(★★ in USA)
Memories:	Ease of use: ★★★

● **PERFORMER 2** – 49-note string/brass/organ synthesiser. c.1983.
Original price: c.£499
Target price: £60 – £100
Users include: Thomas Dolby
•Re-designed front panel, much smarter.
•One tone control slider and (not very impressive) organ preset instead of 3-band EQ on strings – a shame.
•Detuning available on brass and organ.

Interface:	VFM: ★
Sounds: ★	Character: ★
Controls: ★	Collectability: ★
Memories:	Ease of use: ★★★

● **POLYTRON** – Fully polyphonic synthesiser. c.1980. Never went into production.
Projected price: £900 – £1000

to be continued

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Keyboard Player — John Bates

"The standard of programming has to be heard to be believed."

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Keyboard Review — Simon Trask

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"The stunning aspect is the way that the instrument uses all of its capabilities in a co-ordinated manner, the exact opposite to the way in which pro gear works. The KN2000 works with you to produce a performance whereas most workstations need to be forced into it!"

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Making Music — Julian Colbeck

"This thing is incredible."

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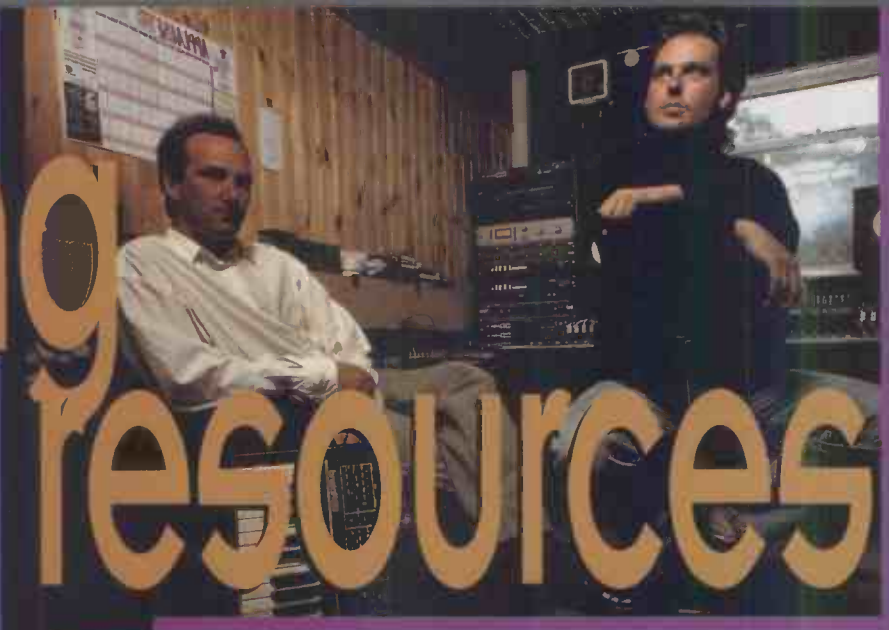
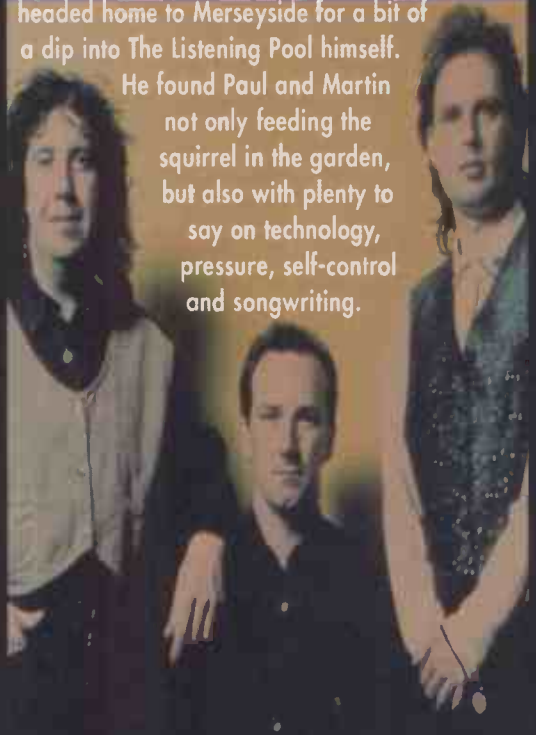


After a decade of producing quintessential UK synth-pop together, the trio of Paul Humphreys, Martin Cooper and Mal Holmes decided to quit OMD and leave Andy McCluskey to it. They also decided to start from independent scratch, forming Telegraph Records, a band called The Listening Pool, and utilising an opulent home studio chez Paul in the continuing search for the perfect song. The first album is almost in the can, and the single 'Oil For The Lamps Of China' was released on July 12th, so Phil Ward headed home to Merseyside for a bit of a dip into The Listening Pool himself. He found Paul and Martin not only feeding the squirrel in the garden, but also with plenty to say on technology, pressure, self-control and songwriting.



Photos: James Cumpsty

On leaving OMD

Paul: "One of the reasons why we left OMD was because we were doing far too much live work, and it was really detracting from the songwriting. Songwriting became secondary to getting out on the road, and getting product out as fast as possible. So the product was suffering, and we never want to be in that position again. We're not going to do any 9-month tours, and all the crap that goes with it.

"We just weren't developing. You get maybe one month a year to write a whole batch of songs, and that's no way to develop your songwriting. In the latter stages of OMD, we just weren't happy with the records. No time was allocated in the schedules for writing. We never even had the time to experiment; it was just pressure, pressure, product, product. There was no exploration, for that one idea in 20 that works. Since then it's been a process of self-discovery, and discovery of a lot more music."

On balancing technology and people

Paul: "We're still technologically based, although we do use a lot of acoustic instruments as well. It's finding the right balance, really..."

Martin: "The drums are all loops, but mostly from Mal. We do long takes from the real kit, and then edit them down."

Paul: "We like to capture actual performances, and load them into StudioVision. It's then a matter of using the technology to sort out the best possible arrangements. Like with the vocals, we'll do a demo here, with the proper vocal takes, then take that into Parr Street Studios [formerly Amazon] in Liverpool and rebuild the track around the lead vocals. It's an odd way round, starting with a finished vocal and time code, but it works. We also sample the vocals and fly them around, too, if needs be."

Martin: "We have the facility to record direct-to-disk here, with StudioVision, but the Tascam 16-track is so good we do all the vocals on that. For the backing tracks, we commit really late to tape, because we can have all the sequenced stuff running live. There are MIDI delay problems, but you can compensate for those on tape."

Paul: "But there are a lot of 'real' elements on the album. We use the technology in the way it's all put together, processing live stuff and flying it around, and even making new parts out of the played parts – editing them so much that you've actually created a new part, that the musician didn't play, but which still *sounds* played. That's the beauty of the technology available now. We want to keep a band feel, if we can, but still retain overall control.

"It gives it life, and it even brings the technology to life, because against a played segment, an entirely sequenced part suddenly comes alive too. We sequence everything for the demo, then consider which sounds would be most suitable for each part, and if something requires a guitar sound, we'll get a guitarist in to play it."

Martin: "That's the convenience factor, being able to approximate all the sounds here, programming the keyboards to do guitar-ish parts and drum parts. And when we've sorted out the song, we can get people in to play."

Paul: "At that stage we can also capture performances in which the player is just doing what he feels like, giving us even more material that we can sift through and sample at will."

Martin: "We get the players – and backing singers – to do what we've got in mind, and then ask them to just mess around and do what comes naturally. It doesn't alter the song, but it brings it to life by altering important little details, things you would never have thought of."

Paul: "It's important to get other people's input, after the intended session. You can become so close to a song that you're blinkered, and suddenly you can get a fresh perspective."

On songwriting

Paul: "We see ourselves as songwriters, and as such you always want the best tools to help you achieve what you want, and technology is the way to go. It's just so incredibly useful: for example, being able to bring home a 12-inch mix and edit it ourselves, in our own time. Total flexibility.

"But you have to be tough on yourself, not to lose sight of what you're aiming at. There are times when you've just got to switch everything off and put a song to bed, till you can come up with the ideas."

Martin: "There's often a point when it's just not working as a whole, but you can keep sections, like a verse, and it'll pop up later, maybe in another song."

Paul: "All our songs start from a basic chord progression, often written on the piano. We never set out to write a song on a particular day; ideas are brought into the studio, and everybody can respond or not once there's a starting point. OMD always worked that way. But because of the limitations of the technology, it sounded like we were really experimental! Ironically, we're using more technology now, but it doesn't *sound* like it.

"We grew up with Bowie, Eno and Kraftwerk, and it was a completely different sound, but Kraftwerk especially were still writing songs – great songs, like 'Radioactivity' and 'The Model'. You could do an acoustic version of that and it would still work."

On the role of sampling

Martin: "Samples work best when they are obviously samples, not when they emulate real instruments. If you want a real trumpet or piano, you may as well use one."

Paul: "We've got a track called 'Say Your Last Goodbye', which has got Harry Dean Stanton's voice on it, but it's so obviously a sample, and not him sitting in the studio, that it gives it an atmosphere. There's something about it that works within the track."

On Mal Holmes: the drummer and technology

Paul: "He's a great drummer, but he got into technology in a big way when he discovered that you can sequence things that are in your head that are beyond conventional playing, and then go away and learn them, with a constant reference point."

Martin: "That's why it's such a great learning tool: you can analyse what's going on with different instruments, and you have the instant gratification of getting involved."

On Telegraph Records and going indie

Paul: "There was a few years' delay because of legal issues, which meant we couldn't do anything, but that was probably a blessing in disguise, because we could really concentrate on songwriting at last! We hadn't had so much time to write since before OMD started, so it helped us to develop. We flirted with a few labels, but ultimately we wanted to be in control of absolutely every part of what we're doing. Having our own label always appealed to us; we really enjoyed the time we were on Factory Records – a small setup, but small setups can keep control if you use the distribution network properly and get the right licensing deals.

"It would also be nice to develop the label, because there are loads of artists that we hear with great songs who can't get deals. There's some brilliant stuff out there that's not getting signed. Ultimately, it's not just The Listening Pool that's our main goal. We love music, and we may put out other things, including what we do under other names, which you don't have the flexibility to do on a major label. We said we were going to do an instrumental album ages ago... and now's our chance!" ●

The equipment pool

Synths

- Roland D50 (used as the master keyboard)
- Roland Jupiter 8

Paul: "Most of the keys on 'Oil' are this played manually. We still use a lot of analogue sounds, and record onto tape so we can use lots of sounds from the same synth. Usually this one!"

- Roland SH09

Martin: "It's only mono, but you create a unique sound every time you use it. Then you can just sample it for storage."

- Roland Super Jupiter
- Roland P330 piano module

Paul: "Closer to a real piano than a sample, even though it's analogue... once you've tweaked the factory sounds, that is."

- Obierack

Paul: "This an old Oberheim in a 2-module rack, each 2-note polyphonic thanks to the two oscillators. Seriously hard to program, but great sounds."

- Oberheim Matrix 1000

Paul: "All presets, but there are a thousand of them, and every time we need to we just scan through here and always find something that sits well in the track."

- Akai EWI 2000 wind synth

Paul: "Mart plays this: it's an incredibly hard technique, because your fingers hover over the notes but don't actually touch".

Martin: "But having the breath control over vibrato is marvellous. It's so much more than just a MIDI controller: you can play the D50, but feed the output back into it, and all the filters change, giving you a real analogue richness. If you blow harder, it sounds brighter, not like just triggering a sample."

- Korg M1R
- Midimoog
- Yamaha TX802 expander
- Yamaha RX5
- Yamaha FB01 (x2)
- Yamaha MJC8 MIDI patchbay

Paul: "Great for switching between two sequencers when you've got both Macs running..."

- Microwave

Paul: "The presets aren't that great, but once you get your head round it it's very flexible. It's another of those multifunction things, with five buttons that do 300,000 things. We're waiting for a Mac editor for it..."

- Prophet 5 (x2)
- Rhodes Chroma

(plus two ex-OMD Mellotrons which have gone missing. If anyone knows where they are, do tell)

Sampling

- Emulator IIHD

Paul: "Great for adding noise and shit. We used to have three of these on stage, in the days before the Akais...")

Akai S1000, 44Mb removable cartridge (used also as a backup drive for the Mac)

Computing/sequencing:

- Apple Mac IIx
- Sound Designer
- Sound Accelerator card
- Opcode MIDI system
- StudioVision
- SoundTools
- Mastertracks Pro 5

Paul: "Quite often we'll have StudioVision running on the IIx, with digital audio, and Mastertracks running on another Mac – the one from the office! – doing the MIDI sequencing. It's all sync'd up from the tape, with the tape running the IIx, and the IIx running the other Mac. StudioVision gives you digital audio and MIDI sequencing in the same package, of course, which is great. But Mastertracks is just so simple, while it does everything you want a sequencer to do."

Recording

- Tascam MSR-16 half-inch 16-track
- Studer A-80 1-inch 8-track
- Studiomaster Series 2 console
- Sony DTC1000ES DAT

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The sampling world is exploding. Just as computers revolutionised the business world and continue to do so; musicians, producers, engineers and DJs now realize the incredible power samplers can provide in the musical work environment.

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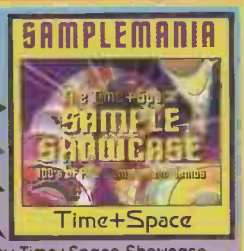

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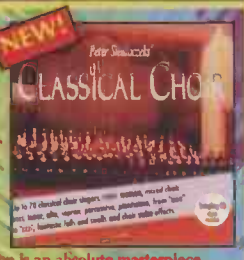

Out now! This vocal sample collection is an absolute masterpiece which crosses all musical dimensions. On audio CD and on CD-ROM for Akai S3000/1100/1000 and Ensoniq EPS samplers, only from Time+Space. Featuring a philharmonic choir with worldwide credits. Up to 70 singers. Awesome vocal power. A brilliant recording in an outstanding concert hall. Male, female and mixed choirs, in third steps (3 semitones). Bass, tenor, alto and soprano voices.

Nothing has been left out in order to guarantee a very wide range of application: ensembles, clusters, sustained notes, syllables, words, aaah, smooth, percussive, or pianissimo - the variety is enormous. Not only important vowels, but even consonants like "ZZZ", "RRR", "SSS" (the ones which it is possible to sing!).

There's no doubt about it - this is top-class workmanship suitable for all users of modern sampling technology. At last, a true sampled choir - and you don't have to pay a top orchestra session fees to get it!

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Imagine you were able to break down classic loops and breakbeats, and then refine them to the exact needs of your track. With GROOVE CONSTRUCTION you can! "Well organised, superbly documented... helps preserve individuality... loops with which you can mess around and leave something of your own identity." (Music Technology) This CD/MIDI-file package covers all the current dancefloor grooves: 1: TECHNO / EURO. 2: RAVE / HARDCORE. 3: HOUSE / GARAGE. 4: HIP HOP / RAP. 5: STREETSOUL. 6: 70's FUNK. 7: NEW JACK SWING / U.S. DANCE. Each set has 20 classic groove/loops and the 25 best samples for that style. You get the loops, the individual sounds, & the MIDI sequence (rhythm pattern data) on floppy disk as a standard MIDI file for any Atari or Mac-based sequencer. It's all straight-foward, logical, yet so powerful. No sound appears in more than one percussion set, and where possible, the position of each percussion instrument on the keyboard conforms to MIDI General Standard.

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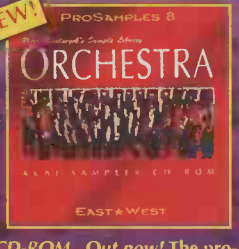
Peter Siedlaczek's ORCHESTRA CD-ROM

£199.00

NEW!



Peter Siedlaczek's Orchestra CD-ROM. Out now! The professional's version of the well known audio CD. Now available on CD-ROM for Akai S3000/1100/1000 samplers, *only from Time+Space*. The world's best sampled orchestra library - and it's already been professionally sampled, edited, looped, and mapped out on the keyboard, ready for you to load into your sampler and play!!! The orchestra was recorded ff and pp in a large concert hall with the entire orchestra playing together; and then ff & pp with only the strings sections playing.

At last you will now have an entire orchestra at your fingertips, plus the string sections are perfect for those lush string pads & lines. Also, another 11 categories are provided to enable you to make your music sound as authentic as possible. The ambience of the hall adds an aural dimension & realism that is hard to achieve with other orchestra sample libraries.

Great care was taken with the looping of these samples on the CD-ROM version, to ensure a smooth natural sustain. The sound quality is stupendous. The orchestra & string samples are mapped over six octaves and sampled every 3 semitones, and all of the sounds have been sampled 3 different ways: (a) 44.1k stereo; (b) 32k stereo; (c) 44.1k summed mono. This was necessary in order to provide many different combinations within the many programmed performance banks on the CD-ROM, and to manage memory easily and with great flexibility.

Mastering the programmed touch sensitivity allows you to re-create a realistic orchestra. Most of the presets switch from separate soft & loud samples seamlessly depending on how hard you hit the keys - as if you were conducting the orchestra yourself!

Over a year of programming & recording went into the making of this product. The absolute best. Why buy the audio CD version? Only £199.00 *inclusive*.

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"A hard fist-full of deadly loops & hard-edged percussion to give your tracks attitude" (Future Music, UK)

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CD: £49.95 including midifile disk (ATARI or MAC). CD-ROM: £199 (AKAI or SampleCell). NEW! Limited Edition (100 Megs) Akai CD3000 version of the CD-ROM just released - only £139.00

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Our longest awaited product ever! This will undoubtedly be one of the most influential sound libraries of 1994. It's a DOUBLE CD, not one, and every single loop has a corresponding MIDI-file on the accompanying floppy disk. The quality of both audio and programming is out of this world. This product is aimed straight at the top end of the pro market - and like its predecessor, it will make a big splash.

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000's of unique Hammond B3 organ grooves, riffs, licks & FX. arbara Dennerlein's organ technique is legendary! A star attrac- on at major Jazz Festivals worldwide, she's also known for many lbums of high international repute. This sample-CD is well in line ith that legend. We are talking world-beating B3 jazz & funk!! - r rhythm, feel, drive & groove cannot be mistaken. Special fea- res: House & techno inspirations; a dozen chromatically sam- ed Hammond B3 sounds with & without Leslie FX; 23Mb data ck-up section for Akai S1000 incl. keyboard mapping. Also mes with a floppy disk containing 15 minutes of completed rangements (Blues/Jazz/Funk). Whether it's high quality multi- mpled B3 organs or great techno-style organ loops you want, is CD has to be checked out! Only £49.95 incl. MIDI-file disk.

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Clyde Stubblefield - The Funky Drummer on James Brown's biggest hits!

A new technology to marry MIDI to Audio! : DNA Groove Templates. Each loop has an accompanying set of DNA Groove Quantize Templates for popular sequencers - they lock events in the MIDI world to THE PRECISE FEEL of Clyde's playing in the real world. No more moving of individual notes clock by clock to get them in the groove. (specify ATARI, MAC, or IBM PC format).

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Albie Donnelly's KILLER HORNS

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T NOW on both audio CD (70 minutes, £49.95) AND on CD-ROM (Only 39.00). This brass sample collection, put together by Best Service in ermany, is sure to become a standard studio item for R&B, funk d Soul production. And incredibly, the CD-ROM version is a *ixed Mode*" CD-ROM - it is a *combined version* of an audio CD 5 min) *and* CD-ROM (170 Meg), and is available NOW in *3 for- ats* - Akai, Emu EIII, and Ensoniq EPS. Albie Donnelly, from verpool, bandleader of "Supercharge", and studio professional, has lled out all the stops for this project. All material is original, and cludes hundreds of Riffs, licks, Shots, Stabs, Falls & Swells. Also mplete sections, and a wide variety of tones. The definitive horn mple CD for Dance-orientated production. Alto-, Tenor-, & ritone-Sax, Trombone, & Trumpet. Albie invited many of the world's st horn players to participate in this CD! OVER 1300 SAMPLES.

BRASS AT IT'S BEST!

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HYPERSPACE AKAI CD-ROM

Contains the best of the sounds from the popular "Bizarre Planet", "Science Fiction", and "Sound Collection" audio CDs (Best Service, Germany), plus 50% new material including construction sets, freshly-recorded orchestra stabs, etc. Over 500 Mb for only £199 Fantastic material for those needing general sound effects and atmospherics for film and soundtrack productions, or multimedia.

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DNA BEAT BLOCKS featuring ARMANDO BORG Percussion Incognito

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This third & final package in the Beat Blocks series will be immensely successful since it fills a big gap in the average producer's sample repertoire. Key features are - Incredible musical versatility, very large percussion selection, masterful playing, over 500 percussion loops, with tempos ranging from 50 to 170 bpm!!

Armando Borg is a master percussionist of the highest order. With his knack for subtlety & invention, this is by far the best collection of percussion grooves ever assembled. Armando plays stylish impossible-to-program patterns with Agogos, Bongos, Cabasa, Congas, Clave, Cowbells, Guiros, Maracas, Pandieros, Rain Sticks, Shaker, Shakerays, Tambourine, Timbale, Triangle, Woodblocks, + other misc. instruments. Patterns offer a wide variety of styles & tempos, & offer a much greater degree of versatility than drum grooves. For example, often the same pattern can be used in House, Reggae, Soca, Techno, Calypso, Latin, Jazz, Soul Ballad, Rap or Fusion.....this is a CD for everyone.

The floppy disk

contains DNA Groove Templates (i.e. quantise templates for use with Steinberg Cubase, so you can match the timing of your own programmed midi parts to the feel of Borg's live playing in the percussion loops) and MIDI-files (standard files of every loop for you to load into ANY sequencer, which provide a very accurate programmed representation of Armando Borg's natural playing). Not available separately from CD. (please specify ATARI, MAC, or IBM PC format).

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Time+Space

THE LEADING EDGE OF SAMPLING TECHNOLOGY

the HEX guide to multimedia

Matt Black of Hex offers advice for the aspiring video artist - and a glimpse into the brave new world of street-level computer graphics, video and live club visuals. Simon Trask turns on and tunes in...

Amigapunk

"To my mind, probably the best value computer for video and graphics at the moment is the Amiga 1200. You've got a pretty powerful graphics engine there, and a colour palette that's good enough for photo-realism. Also, unlike the Mac and the PC, the Amiga can animate at quite high speeds, even with a large number of colours, because it's been much better designed for video. A lot of the hottest demo crews have been using the Amiga 500, and now the Amiga 1200; to my mind, the Amiga is a good punk platform to get going on."

Setting up

"The simplest setup you could have would be a computer with a genlock plus a video source to genlock to. You plug both the computer and the video into the genlock and it overlays the computer signal onto the video signal, so you can do stuff like titling and wipes. The

Amiga's easy to genlock; a genlock unit will cost you about a hundred quid.

"If you get a video mixer as well, you can take the output of the genlock and combine it with a third source – another VCR, for example. The mixer output can go to your telly or to a VCR; obviously it helps to have a few VCRs! You can use some camcorders as video recorders by switching their video outputs to video inputs – that's something worth remembering. And if you've got a camcorder you can go round, film some clouds, film some water, some urban decay, some stuff down at the rave, and you've got your own live material. Then you can come back, play that through the genlock and combine it with animations from the Amiga."

Video mixing

"One toy I'm quite fond of is the Panasonic AVE-5 video mixer, which is something a DJ/producer is going to be able to relate to. Once you've got a mixer and a couple of video sources, you can start laying down live video scratch mixes. Basically, the AVE-5 lets you mix two sources together, and it has a crossfader so that you can scratch between them.

"You can get an AVE-5 for about 600 quid new, or about 300 quid second-hand. We've also got a cheaper Panasonic mixer, the MX10, and there are various other ones. If you're going to buy something like that, make sure it's a proper video mixer, not one which just lets you cut from one source to the other, which is what some of the cheaper units you see advertised will do." ➤

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(Fans of Japanese anime take note: an NTSC-capable video machine will let you play the many American-released anime tapes not available in PAL format – ST)

The dub connection

"A video machine which has an audio dub facility is very useful. We used to record stuff off the TV and then dub a different soundtrack onto it. The best one we ever did was the chase scene at the end of *French Connection II*; we dubbed this music from a Defunkt album all over it! You watch it and it's quite cathartic, because the music catches you up in it so much.

"Of course, you can also mix yourself down a video from your different sources, then record a soundtrack on top of it; you won't be able to synchronise the music and visuals perfectly, but at least you can put together a finished product."

Live visuals

"Rob and I have done one-offs at the Hammersmith Palais, the Camden Palace and the Limelight, and I've taken a live setup along to clubs like Knowledge and Telepathic Fish before now. Sometimes I might only take a video player and a selection of our mix tapes, but other times I'll also take the Fairlight CVI, the Chromascope, a CD-i unit, a couple of video switcher boxes and the Panasonic AVE-5 video mixer.

"Like most video mixers, the AVE-5 can only mix two inputs, so when I have more than two sources I use a composite video switcher box to control which source is routed into one of the mixer channels. I also have a small Casio portable TV rigged up to the RF outputs of all the different sources via an RF switcher box, which you can get from Tandy for about 10 quid, and I use that as a cue monitor so that I can check, for instance, where the videotape is without having to bring it up in the main mix. It's analogous to headphone monitoring for cueing up records.

"When you're doing live visuals you can get by with a couple of large tellies stacked on top of one another, but really you need a projector. We have the cheapest one you can get, which is an Epson LCD projector we got for 800 quid second-hand – most projectors are about three grand. The quality's average, but you get this huge picture, 12 foot high by 14 foot wide. The nice thing about it is it's very compact, and it takes no time at all to set up; I've taped it to the ceiling with masking tape at clubs before now.

"The only problem is it's not really meant to be used for hours on end, and the lamp can burn out; then you have to wait for it to cool down before you can replace it." ●

Image manipulation on the Apple Macintosh

Video mixing with the Panasonic AVE-5

Hex video stack (top to bottom): Mitsubishi video, CEL Chromascope, Fairlight CVI, Panasonic AVE-5

The Hex audio collection

Apple Powerbook 145 computer running Opcode Vision sequencing software
Casio RZ1 sampling drum machine
Cheetah MS6 analogue synth module
Roland JV880 synth module
Roland MT32 synth expander
Roland TR727 drum machine
Yamaha PSS780 keyboard

Coldcut's Music Studio

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Akai S1000 sampler (8Mb RAM, SyQuest 44Mb removable hard disk)
Atari 1040ST computer running C-Lab Creator sequencing software
Casio portable DAT machine
Korg MS10 monosynth
Numark PPD club mixer
Oberheim Matrix 1000 synth module
Quad amp
Sony DAT1000 DAT machine
Soundbase custom monitors
Technics SL1200 deck (x2)
Roland JD800 synth
Roland JX3P synth
Roland MC202 monosynth
Roland MKS50 synth module
Roland MPU101 MIDI-to-CV converter
Roland R8 drum machine
Roland TR808 drum machine
Roland TR909 drum machine
Waldorf Microwave synth module
Yamaha SPX90 multi-effects processor
and "loads of wahs, fuzz, phasers etc."

The Hex video collection

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Mac II 68020/16 (8Mb RAM, 100Mb hard disk, Nuvista Classic board)
Mac IIci 68030/25 (20Mb RAM, 200+800Mb hard disks, Yarc board)
Microtek 24-bit scanner
AudioMedia II sampling card
TrueVision VidI/O box
44Mb Syquest removable hard disks

SOFTWARE
Adobe Photoshop
MacroMedia Director+Accelerator
Macromedia Lifeforms
Macromedia Swivel3D
Pixar MacRenderMan

COMMODORE AMIGA

HARDWARE
Amiga 2000 030/16Mhz (5Mb RAM, 100Mb hard disk)
Amiga 4000 040/25Mhz (6Mb RAM, 100Mb hard disk)
Amiga 1500 040/28Mhz (37Mb RAM, 105Mb hard disk)
CDTV 68000 (1Mb RAM)
Rendale 8802 genlock
VidiAmiga frame-grabber
MacroSystem VLab colour frame-grabbber
Personal single frame controller

SOFTWARE
Real3D
SculptAnimate4D
VistaPro
Imagine2
Turbosilver
Morph Plus
ArtDeptPro
DeluxePaint4
Global Chaos (CDTV)
Top Banana

ACORN ARCHIMEDES

HARDWARE
Archimedes 400 ARM3 (2Mb RAM, SyQuest hard disk)

SOFTWARE
custom-developed

OTHER MACHINES

CEL Electronics Chromascope
Epson VP-100PS LCD video projector
Fairlight Computer Video Instrument
Ferguson Videostar VHS VCR
Mitsubishi HS-B52 PAL/NTSC VHS VCR
Panasonic Digital WJ-MX10 production mixer
Panasonic WJ-AVE5 Digital AV mixer

Touching Bass

Part 9 of our series enters rapid-fire mode with a selection of fast 'n' furious 16th-note fusion basslines – shooting straight from the hip... Text and examples by Simon Trask.

First things first: apologies for any confusion, frustration or trauma inadvertently caused by the omission last month of Examples 2(c), (d) and (e) – you'll find them reproduced below. The culprit, rest assured, has not gone unpunished!

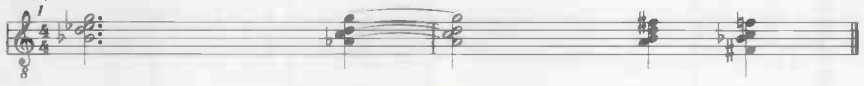
This month's examples grew out of Example 1 from Part 8. You may recall me mentioning that you could get a fusion groove by bumping up the tempo from the indicated 86bpm. Well, this month I've set a tempo of 120bpm, extended last month's drum part over four bars, provided a suitably angular, off-the-wall chordal accompaniment part, and pursued the fast 16th-note style characteristic of fusion bass playing. And I do mean *playing*.

I've tried to approach this month's examples more from the perspective of a bass guitarist than a keyboard player, keeping in mind the sort of figurations which fall naturally under a bass player's fingers. Fast repeated notes, for instance, are easier to play on a bass guitar than on a keyboard. Ascending and descending fifth and octave sequences (as, for instance, in Example 2) are also well suited to bass guitar playing – the intervals fall naturally under the fingers of the left hand, and the sequences only require that the left hand shift up or down the fretboard a fret at a time.

The flourish of notes in bar 4 of Example 6(a) introduces another element in the well-equipped bass guitarist's armoury of techniques, namely the run – a gesture of performance bravado which might seem alien to the world of programmed rather than played basslines. Finally, this month's examples adhere to the strictures of bass guitar playing in the simplest way possible: they don't go lower than the lowest note in standard bass tuning ie. the E below the (octave lower) bass clef.

As I mentioned earlier, these examples are all based on 16th-note playing. Stylistically they use syncopations and/or streams of 16th notes, with the emphasis being ➤

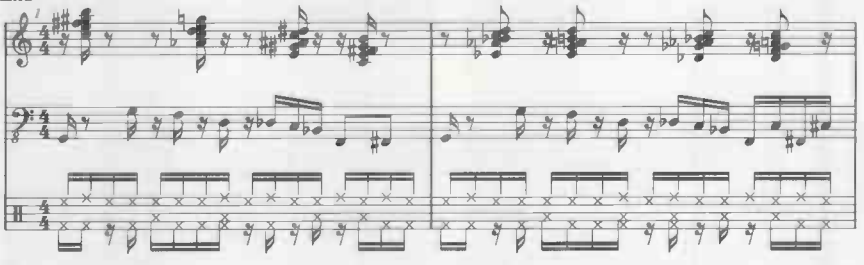
Ex2(c)

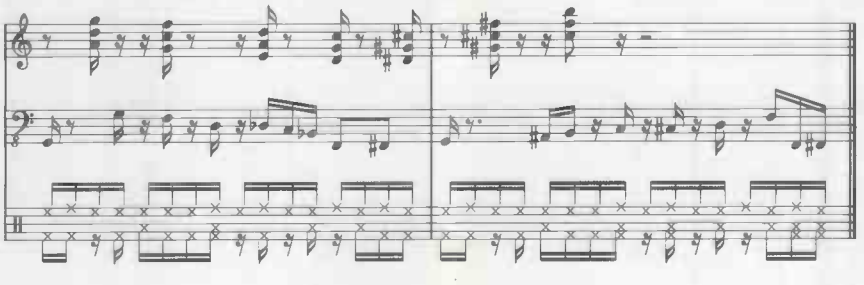


Ex2(d)

Ex2(e)

Ex1





➤ on creating a strong sense of forward motion. You might also notice a certain lack of restraint – this is not a style known for its economy! The same combination of 'busyness' and syncopation is evident in the drums, where busy closed hi-hat and kick drum parts are mixed with snare and open hi-hat syncopations. The chordal part, too, makes much use of syncopation to achieve its rhythmic 'angularity', while harmonically speaking its chordal stabs are intended more as colouring than as a literal statement of a harmony or harmonic progression – like a painter flinging paint onto a canvas to achieve an abstract effect rather than a figurative depiction.

All the basslines outline a G tonality, though some push the harmonic boundaries more than others. In Examples 2 and 4 it's unclear whether the tonality is major (B natural and F#) or minor (Bb and F natural); this uncertainty is aided by the use of chromatic fifths in each example (bar 4 of Example 2, beats 3 and 4 of each bar in Example 4). 'Chromatic' means 'outside the key' – or, more literally, a 'colouring' of the key through the use of notes which are not part of it. As you can see, the chromatic sequences progress in semitone steps rather than in the order of intervals defined by any particular key.

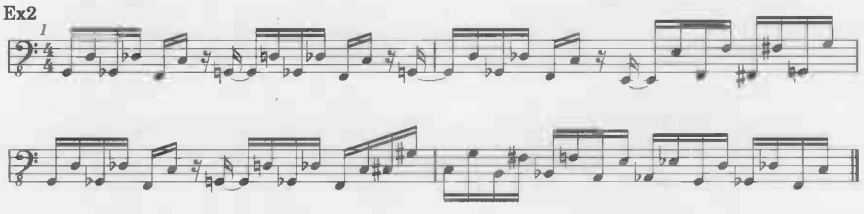
The bassline in **Example 1** makes forceful use of falling16th-note syncopations in the first half of each bar; beat 3 then tumbles downwards, while beat 4 clambers back up to the root note. Bar 2 introduces a slight variation, in the form of 16th-note fifths on beat 4. This is the sort of subtle change which a bass player might throw in naturally; it doesn't disturb the shape or feel of the riff, yet it helps to make the unfolding bassline flow onward.

Like the preceding bars, bar 4 uses syncopation. However, its rising note sequence 'answers' the falling sequences of those bars; consequently, it turns the bassline into a 4-bar phrase rather than a repeating 1-bar riff. **Example 2**, **Example 5** and **Example 6(a)** follow the same pattern of smaller difference in bar 2 and bigger difference in bar 4.

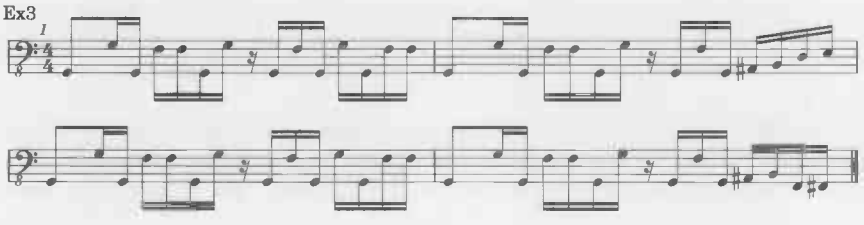
In **Example 3**, meanwhile, beat 4 of bar 4 answers the same beat in bar 2. Example 3 can be seen as an almost unbroken stream of 16th notes. However, it can also be thought of as two interlocking rhythmic lines, one consisting of the low G and the other of the high F and G; try playing each line separately and you'll see what I mean.

In **Example 6(b)**, which builds on the ideas in 6(a), bar 2 with its falling syncopated line answers bar 1, while the syncopated run in bar 4 caps the 4-bar phrase. Of this month's examples, this one and Example 5 have the most variation in them, yet they also have enough similarity and consistency to hang together as unified phrases. If you're trying to develop basslines which are more than just a simple repeated riff, it can be useful to think in these terms. Try to isolate the characteristic elements stated at the outset – the pitch sequence, the rhythm, and any pitch or rhythmic motifs – and then play around with them. Of course, ideally you want to be able to come up with effective basslines intuitively, but a conscious exploration of the underlying elements will help you to develop that intuition. ●

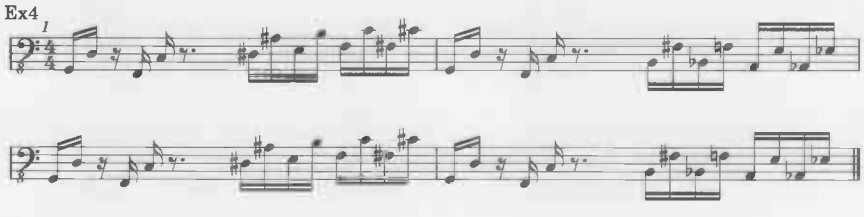
Ex2



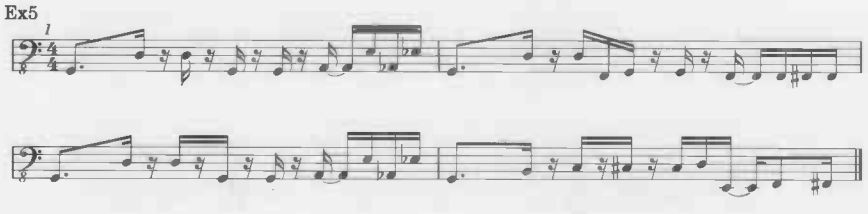
Ex3



Ex4

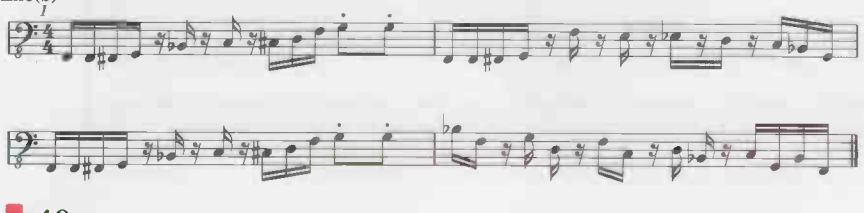


Ex5



Ex6(a)

Ex6(b)



General MIDI/GS Format compatibility

This month's musical examples were created using sounds from a Roland JV30 synth, which is a GS Format instrument. Consequently, if you own a GS instrument you can recreate them using the same sounds. Specifically, these are: patch 86 (Solo Vox) for the chordal stabs, patch 34 (Fingered Bass) for the bassline, and the Standard Kit for the drum part. Reading from top to bottom of the drums stave, the rhythm sounds you should use are: open hi-hat, closed hi-hat, snare drum 2 and kick drum 2.

If possible, you should alter the filter-cutoff setting of the Fingered Bass sound to -39; this gives the sound a taut, hard quality well suited to the fast, clean articulation needed for this month's examples. In bass guitar terms, this sort of sound would be got by playing towards the bridge of the instrument.

Owners of General MIDI instruments can use the patch numbers and drum sounds indicated above, though of course these won't provide literally the same sounds.

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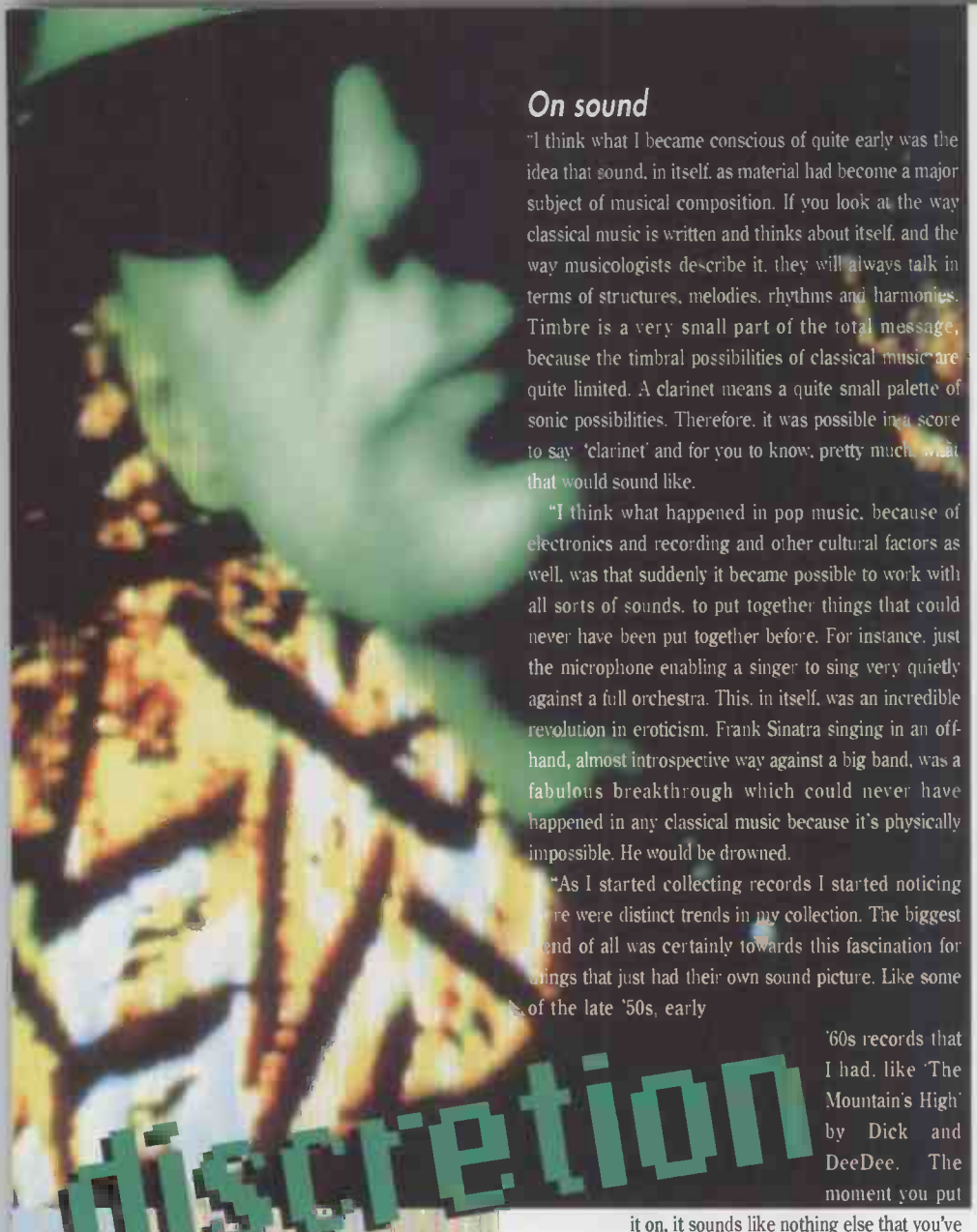

discretion

Back in the days before acid house, Brian Eno was the last musician anybody would associate with dance music. Now, the influence of his innovations in ambient music and video can be found in acts as diverse as U2, Slowdive, The Grid, The Orb and Moby. With two retrospective CD boxed sets due for release – one compiling his songs, the other collecting his ambient works and collaborations – Brian Eno speaks about the problems and potentials of music technology. Interview by **David Toop.**

On sound

"I think what I became conscious of quite early was the idea that sound, in itself, as material had become a major subject of musical composition. If you look at the way classical music is written and thinks about itself, and the way musicologists describe it, they will always talk in terms of structures, melodies, rhythms and harmonies. Timbre is a very small part of the total message, because the timbral possibilities of classical music are quite limited. A clarinet means a quite small palette of sonic possibilities. Therefore, it was possible in a score to say 'clarinet' and for you to know, pretty much, what that would sound like.

"I think what happened in pop music, because of electronics and recording and other cultural factors as well, was that suddenly it became possible to work with all sorts of sounds, to put together things that could never have been put together before. For instance, just the microphone enabling a singer to sing very quietly against a full orchestra. This, in itself, was an incredible revolution in eroticism. Frank Sinatra singing in an off-hand, almost introspective way against a big band, was a fabulous breakthrough which could never have happened in any classical music because it's physically impossible. He would be drowned.

"As I started collecting records I started noticing [re] were distinct trends in my collection. The biggest [tre]nd of all was certainly towards this fascination for [thi]ngs that just had their own sound picture. Like some [of] the late '50s, early '60s records that I had, like 'The Mountain's High' by Dick and DeeDee. The moment you put it on, it sounds like nothing else that you've ever heard. Within the first second of that song, you're in the place. It's sonically so distinctive. Then, 'Be My Baby' by The Ronettes, where you had this enormous, huge sonic picture with the thinnest voice you've ever heard. The voice is like a little bee inside there. I got more and more interested in that kind of thing – and then psychedelic music was an explosion of that kind of material."

On formats

"It occurred to me, there are so many different formats for releasing things. You can make a CD that's album length. You can make it double album length and still call it a CD which doesn't have the stigma of the double album. It's just a lot of music. Or, you can do CD5s which are 20 minutes. I've done one in America which is 70 minutes long. It's basically one song, in lots of forms. You can do singles, you can do club 12-inches, public 12-inches. There's suddenly this whole proliferation of formats and the effect on me was, Wow! I don't have to think I'm writing a novel every time I do a record.

"That really got frightening after a while. If you've got some kind of reputation, there's so much attention on anything you do, especially if you haven't brought anything out for a while. Of course, when it was vinyl, you assumed that people were going to listen all the way through. People really don't get up and take the needle off and skip tracks. Or if they do, it's a very annoying process that they resent. Making a vinyl album is a completely different idea and mind-set. You tend to think, I've got to make a coherent listening experience. If something's going to be annoying, or possibly won't have the longevity of the other pieces, I won't leave it on, because it's going to turn out to ruin the record after a while. It made record making less and less fun for me, because it meant that one tended to censor, more and more, the things that were nuttier and less well-formed in favour of the things that were more acceptable.

"With these new formats now, and especially with the CD player itself, and the knowledge that people can put something on and say, 'I don't like that,' and they're onto the next track – this is fantastic. What you offer to people instead of an album is a whole bunch of music, which they then curate. They find their own set of favourites."

On remix culture

"I suddenly discovered myself to be a kind of postmodernist, in the sense that I was noticing myself becoming more and more interested by the whole remixing scene and the idea of proliferating variety from one set of sources. Again, not going for the definite, single version of something – the 'perfect' mix. That just drove me nuts over the last few years, especially with computer mixing, which gives you the illusion you can get to that.

"The whole thing about computer mixing is actually gloss. But the thing about remixing is exactly the opposite. It uses computer technology but in a different way. It says, hey, what you can do with all these computers is be spontaneous. You can do wild things. If they're completely weird, you can correct them. If you've forgotten to include the four most important instruments, you still have the chance of fixing it. What happened, I think, in the last few years, people started using the technology (as always does happen in pop music), not for what it was intended, which was to do an old thing better, but for what wasn't intended. This was to do something new. It offered you a new way of working."

On ambient

"What's now happening over the top of the techno lock, is getting more and more fluid and cloudy. Also, it's getting mixed louder. The balance in the mix is changing, so that your attention is being drawn more and more towards the floating aspects of the sound, rather than the stepping, pulsing aspects of it. I suppose this is what they call ambient house.

"I obviously have an interest in what gets called ambient and I am very conscious of the processes of recording studios. It's all transparent to me. I can hear how it's all done. I've never heard much of the Aphex Twin type of ambient music. Whenever I do hear things, I don't particularly recognise it as being what I would call ambient. It might be that my definition is too narrow. In my experience, whenever I don't like anything,

there's a very good chance that six months later I'll go, 'Oh yes, I see' and change my mind about it.

"I certainly don't have any proprietary rights over the term 'ambient'. What I would like it to describe is interesting music, at least. I don't want it to be a description that suddenly just attaches itself to something I knew, and had heard before, and tries to glorify something that I thought was commonplace noodling. The definition I still stick to myself is the one on the inside cover of *Music For Airports*, which unfortunately never got reprinted when Virgin re-pressed that record. It was headlined 'Ambient Music'. That was the first time that the phrase had ever been used, as far as I know. Then I tried to give a description of what I saw as a new musical area and a new way of listening to music." [see below]

On computers

"I don't use any programs. Do you know why it is? More than anything else, it's a physical reason. I've got SoundTools in my computer there, which I use as an editing system, but I get so fed up after working on it for a few hours. The only part of my body that's engaged is my mouse finger and my eyes. My body just starts to feel so . . ooh, I just want to hit something or bounce around on the floor. It might sound like a hippyish thing to say, but I keep thinking to myself, this is not the physical condition that I want to be in when I'm working. If my body is feeling this frustrated and under-used, there's something wrong.

"Even at a mixing console, I feel much more engaged. There's reaching, and you can stand up and do it. There's an aspect of performance to it. But the complete lack of any feeling of performance with any form of computers is very frustrating. I think that's one of the things that shows in the music. You don't get bold, strange strokes. You don't get whatever the computer equivalent is of somebody going 'CHAANG!'.

"My experience of computer mixing, which I've had more experience of than other forms of computer work, is that it creates a cautious, perfectionistic way of working. I've banned computers in the studio, actually. I won't have them around. It isn't because I'm anti-computer. It's because nobody understands them well enough. Either the programs aren't well enough designed or they're just so difficult that nobody is yet intuitive with them. It's happened to me so often that I'd be in the studio and there's a computer there running some sequencer aspects. You look round and the brow is knotted. Someone's saying, 'I think if we just put the SMPTE in there. Wait a minute, I've got to ID channel four..." and you know the session is blown. Because now the guitar player's gone off to make a phone call, the drummer's gone to the lavatory, the singer's started reading some magazine article. The whole attention of the thing has gone. For me, the most important thing in the studio is to retain attention – to keep everyone there. That's what I do. That's my main job as a producer. To try to keep everybody there for as long as I can. If they're not there then get out of the room. I don't mind, but I don't want stray attention everywhere.

"Computers have so often punctured the balloon that I just won't have them in unless I'm convinced that the person using it is totally intuitive and has as little problem using it as the guitar player does with his guitar. I just can't stand that other mode you flip into: 'Maybe if we can just shift that 1/92nd of a beat...' It's hopeless. You can sit at home and do that on your own. Come in with the results. Wonderful. But to spend everybody else's time doing that is just selfish."

On authorship

"If you went through, say, Moby's remixes of 'Fractal Zoom', you'd have to say, that's nearly all Moby on those things. I wrote a review two years ago for *Art Forum* of a book about Hypertext (*Writing Space: The Computer, Hypertext, and the History of Writing* by Jay David Bolter, published Lawrence Eribaum Associates). I think that's such a new idea really. I now have my Hypertext disk here and I've added to it, so I've started to actually do a Moby on this book. It's still mostly the original author, but there's a percentage of the book that I have now, which is my own contribution.

"Now if I copied that and gave it to you, you would read it, you'd probably add some other things in. This idea of a book or piece of music, instead of being the vision of just one person which is put out into the world and then sits there for the rest of time, instead of being that it becomes a hub around which a community of activity takes place. The originator might even disappear entirely from that. I think that's a terribly exciting and modern idea.

"What has been happening in music for quite a long time is an unformalised, unarticulated version of what is now going to happen in writing. In terms of music, we've been living in a world of fluid, vague barriers; of the possibility of things crossing with one another; of the possibility of things losing their authorship and not having fixed centres. Narrative development was the bit that went first, where music started to become more and more a space for exploration, rather than a story being told.

"Writing was actually a very fossilised form. The people who tried to break that form – Borges, Beckett, Burroughs, Joyce – in a way, experienced several brilliant failures in their attempt to get around this problem of the linearity of writing. Painting, as well, aspired to music, because music was the condition that they would like to have moved their art towards. Now, perhaps, because of Hypertext we can imagine a writing which gets in sync with the way music is now. But of course, what's going to happen in the meantime is that music is going to go somewhere else. I don't know where. Where next for music?

"Warners in America have an advanced research department where they're always looking into what sort of futures there might be. I sent them my review about the Hypertext book and said this is going to be the future for CDs. So instead of presenting a line of music, you present a space and somehow, there are ways of navigating through that. It's very hard to imagine how it would be done but it's a fabulous idea."

On fakes

"I think this is a tragic story, in a way. When I worked with Bowie on the three records we did together (*Low*, *Heroes*, *Lodger*) we had Fripp in, playing solos.

Sleeve notes from Music For Airports

Ambient Music

The concept of music designed specifically as a background feature in the environment was pioneered by Muzak Inc. In the '50s, and has since come to be known generically by the term muzak. The connotations that this term carries are those particularly associated with the kind of material that Muzak Inc. produces – familiar tunes arranged and orchestrated in a lightweight and derivative manner. Understandably, this has led most discerning listeners (and most composers) to dismiss entirely the concept of environmental music as an idea worthy of attention.

Over the past three years, I have become interested in the use of music as ambience, and have come to believe that it is possible to produce material that can be used thus without being in any way compromised. To create a distinction between my own experiments in this area and the product of the various purveyors of canned music, I have begun using the term Ambient Music.

An ambience is defined as an atmosphere, or a surrounding influence: a tint. My intention is to produce original pieces ostensibly (but not exclusively) for particular times and situations with a view to building up a small but versatile catalogue of environmental music suited to a wide variety of moods and atmospheres.

Whereas the extant canned music companies proceed from the basis of regularising environments by blanketing their acoustic and atmospheric idiosyncrasies, Ambient Music is intended to enhance these. Whereas conventional background music is produced by stripping away all sense of doubt and uncertainty (and thus all genuine interest) from the music, Ambient Music retains these qualities. And whereas their intention is to 'brighten' the environment by adding stimulus to it (thus supposedly alleviating the tedium of routine tasks and levelling out the natural ups and downs of the body rhythms), Ambient Music is intended to induce calm and a space to think.

Ambient Music must be able to accommodate many levels of listening attention without enforcing one in particular: it must be as ignorable as it is interesting.

Brian Eno, September 1978

On one song, I concocted a solo from him. He had three solos on three tracks and I was switching in between them, so you got these impossible jumps of three octaves or something, all over the guitar. A couple of years later, it came time for David to go on tour, and he had Adrian Belew playing guitar – a phenomenal guitar player. Poor Adrian, he learned to play them. It was astonishing that he could actually do it, but when he told me, I thought, 'You poor guy, why didn't I tell you before?'"

On uncertainty

"It's a great time, I think. I don't think music has been so unsure of itself, or so fluid in its identity for 25 years really. This is a bit like how it felt, as I recall, in the late '60s, when there were all sorts of things going on and they all sounded very different from one another. Just remember Country Joe & The Fish and The Velvet Underground – they were both around at the same time. Janis Joplin, Jimi Hendrix – these things didn't represent, to me, variations of the same kind of music. They represented different musics that in some areas overlapped. It was later on that convergences were forged out of them. That always does happen, I suppose, as you find the most marketable elements, the consensus of marketable elements. Now, those things have separated out again."

On jazz and techno

"Something that has been interesting me a lot at the moment, is the strange way in which jazz has been co-opted into a lot of music now. It's the aspect of jazz which I like best. The aspect of jazz which I enjoy is where it's courting the edges of breakdown. Where the structure is teetering on the edge of falling apart and then, suddenly, it triumphantly comes together again. It seems to me that jazz is the best metaphor for the whole of the music and the culture scene at the moment.

"Techno music is very locked. I don't like it. The whole history of the sequencer is really a way of locking everything together, and you screwed it tighter and tighter. That was exciting for a little while, because it had this futuristic, robotic quality, but it very quickly got very tiring to me. I started finding that what I liked more and more about jazz and what's called world music, is that it's not very tightly locked. There's always a lot of shift. There might well be a beat. No problem about that, but there are also several interpretations of it at the same time, so you get a kind of furriness to the identity of the thing. Jazz ties in well with various aspects of new thinking – chaos theory and so on."

On sound processing

"Until music-organising technologies and text-organising technologies become much simpler, I don't expect very good results from either of them. What I expect is that they both confirm an older way of thinking. In theory, they open up new ways, but they require that you practice an older way of thinking. That older way of thinking is very manual based.

"To give you an example of something that isn't like that – I don't know if you know this machine – the Eventide H-3000, it's called. It's a processing tool, basically, but it's a very, very versatile one. But it's not Japanese, so it's built for Americans with short attention spans who want results quick. It's a fabulous machine. It's so well designed. You switch it on. You select a program, which is very easy to do. You can just turn a wheel and you can go through them all. The program offers you, on the few controls that are there, the parameters that you're most likely to want to change.

"Then it offers you another level of parameters you're less likely to want to change but can if you want. Then it offers you yet a third level of the architecture of the whole system. You can interfere with that, as well. The important thing about it is that you can use this machine intuitively from five minutes after you've unpacked it. You're enjoying it, having fun with it. It so quickly becomes part of what you're doing. It never wastes time in the studio. In fact, it always creates so much excitement in the studio. I have one, and I carry it around with me now whenever I work with people. I think that machine is a real model of how design could be in the future: hierarch icalising the levels at which you can intervene.

"What's happening in music, though, is that there's always the struggle between increasing options and making something usable, and they really are almost opposed in effect. For people who design things, it's very easy to add new options. It's very difficult to think of better ways to access them. That's where all the failure of design has been – in the actual interface. These machines have to correspond with someone like me, who didn't grow up playing video games." ●

On record

Albums

Roxy Music EG, 1972 (with Roxy Music)
Here Come The Warm Jets EG, 1973
For Your Pleasure EG, 1973 (with Roxy Music)
No Pussyfooting EG, 1973 (with Robert Fripp)
Taking Tiger Mountain (By Strategy) EG, 1974
June 1st 1974 Island, 1974 (with Kevin Ayers, John Cale and Nico)
Another Green World EG, 1975
Discreet Music Obscure, 1975
Evening Star Editions EG, 1975 (with Robert Fripp)
Music For Films (limited edition of 500) EG, 1976
801 Live EG, 1976 (with 801)
Before & After Science EG, 1977
Cluster & Eno Sky, 1977 (with Cluster)
Music For Films Editions EG, 1978
Ambient 1: Music For Airports Editions EG, 1978
After The Heat Sky, 1978 (with Mobi Moebius and Hans-Joachim Rodelius)
Fourth World Vol. 1: Possible Musics Editions EG, 1980 (with Jon Hassell)
My Life In The Bush Of Ghosts EG, 1981 (with David Byrne)
Ambient 4: On Land Editions EG, 1982
Apollo – Atmospheres And Soundtracks EG, 1983 (with Daniel Lanois and Roger Eno)
Working Backwards 1983-73 (10-album boxed set) EG, 1983
Music For Films Vol. 2 (available in boxed set only) Editions EG, 1983
The Pearl Editions EG, 1984 (with Harold Budd and Daniel Lanois)
Thursday Afternoon EG, 1985
More Blank Than Frank (compilation) EG, 1986
Desert Island Selection (compilation) EG, 1986
Music For Films III Land, 1988 (with Daniel Lanois, Harold Budd, Michael Brook, Percy Jones, Laraaji, Mahlin and Theremin)
Wrong Way Up Land, 1990 (with John Cale)
Nerve Net Opal, 1992
The Shutov Assembly Opal, 1992
Neroli (Thinking Music Part IV) All Saints, 1993
Brian Eno I (CD boxed set) Virgin, autumn 1993
Brian Eno II (CD boxed set) Virgin, autumn 1993

Singles

'Virginia Plain' EG, 1972 (with Roxy Music)
'Do The Strand' EG, 1973 (with Roxy Music)
'Seven Deadly Finns' EG, 1974
'The Lion Sleeps Tonight (Wimoweh)' EG, 1975
'King's Lead Hat' EG, 1977 (with Snatch)
'The Jezebel Spirit' EG, 1981 (with David Byrne)
Rarities (EP available with boxed set only) Editions EG, 1983
'Glint (East Of Woodbridge)' (flexi-disc for *Art Forum* summer issue) 1986
'Fractal Zoom' Opal, 1992
'Ali Click' Opal, 1992

Notable production jobs

Portsmouth Sinfonia Plays The Popular Classics Portsmouth Sinfonia, Transatlantic, 1973
Hallelujah Portsmouth Sinfonia, Transatlantic, 1974
Fear John Cale, Island, 1974
The Sinking Of The Titanic Gavin Bryars, Obscure, 1975
Ensemble Pieces Christopher Hobbs, John Adams & Gavin Bryars, Obscure, 1975
New & Rediscovered Musical Instruments David Toop & Max Eastley, Obscure, 1975
Lucky Lief & The Longships Robert Calvert, UA, 1975
Voices & Instruments Jan Steele & John Cage, Obscure, 1976
Decay Music Michael Nyman, Obscure, 1976
Music From The Penguin Café Penguin Café Orchestra, Obscure, 1976
Ultravox Ultravox, Island, 1977
Low David Bowie, RCA, 1977
Heroes David Bowie, RCA, 1977
More Songs About Buildings And Food Talking Heads, Sire, 1978
Q: Are We Not Men? A: We Are Devo Devo, Virgin, 1978
No New York Contortions, Teenage Jesus & The Jerks, Mars and DNA, Antilles, 1978
Machine Music John White & Gavin Bryars, Obscure, 1978
Irma – An Opera Tom Phillips, Gavin Bryars & Fred Orton, Obscure, 1978
The Pavilion Of Dreams Harold Budd, Obscure, 1978
Fear Of Music Talking Heads, Sire, 1979
Lodger David Bowie, RCA, 1979
Remain In Light Talking Heads, Sire, 1980
Ambient 3: Day Of Radiance Laraaji, Editions EG, 1980
The Pace Setters Edikanfo, Editions EG, 1981
Fourth World Vol. 2: Dream Theory In Malaya Jon Hassell, Editions EG, 1981
The Unforgettable Fire U2, Island, 1984
Hybrid Michael Brook, Editions EG, 1985
Voices Roger Eno, Editions EG, 1985
Africana Theresa de Sio, Polydor, 1985
The Falling (two tracks) Carmel, London, 1986
Power Spot Jon Hassell, ECM, 1986
The Joshua Tree U2, Island, 1987
Zvuki Mu Zvuki Mu, Land, 1989
Words For The Dying John Cale, Land, 1989
Exile Geoffrey Oryema, Real World, 1990
Achtung Baby U2, Island, 1991
Zooropa U2, Island, 1993
Laid, James, Fontana, 1993

CD-ROM EXPLAINED

WHAT IS CD-ROM?
CD-ROM is a storage technology for large amounts of information, which can be accessed from a PC via a CD-ROM drive. CD-ROM technology uses Compact Discs (CDs) as its information storage medium. These disks can store high resolution colour images, millions of words, full audio sound tracks and much, much more.

THE CD-ROM ADVANTAGE
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Philips 462M	£349	350	175	✓	✓	32k	-	✓
Toshiba 3401B	£499	200	375	✓	✓	64k	✓	✓
NEC Multispin 84	£409	280	300	✓	✓	256k	✓	✓
Panasonic CR562B	£334	320	300	✓	✓	64k	✓	✓
Philips 215	£329	360	175	✓	✓	64k	✓	✓
Sony CDU 31A	£395	550	150	✓	✓	64k	-	✓

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Animal Magic

Towards the end of 1991, Brian Eno and U2 discussed plans fora state-of-the-art multimedia stage-set for the band's forthcoming world tour. These plans became Zoo TV, a giant interactive television studio on the road. The UK leg of the tour brought this show to Wembley Stadium, where Phil Ward caught up with U2's video engineer Dave Lemmink to discover how far Eno's vision had become a reality.

The following is an extract from notes made by Brian Eno for Bono following their initial planning meeting for Zoo TV in November, 1991: "The visual aspect of the show should aspire to being as flexible and improvisational as the musical one: it wouldn't suit U2 to be locked into a programmed routine (although it might be OK to do that for certain limited set pieces within the show). The direction ought to be towards flexibility and evolvability and away from locked-in programs. This presents some freedoms and some problems; video is not by nature an improvisational medium".*

He goes on to say: "You don't want to use video just in the ordinary, boring old way - basically only as a means of making the singer look bigger - but you also don't want to produce a show that is just arty, bitty and confusing".*

Almost two years later, what you see as you enter the stadium - and let's not forget that this is a band with a solid stadium rock audience - is a towering set of antennae, 'Digiwalls' and 'Vidiwalls' which resembles a television relay station and an oil refinery in equal measure. Beneath the stage, in an area known as Underworld, a cool eight million dollars worth of video tackle is presided over by Dave Lemmink, chief video engineer and unofficial tour guide. This is the guy who has to make U2's dream actually work, night after night, and his explication is delivered with practised finesse.

"What we have on stage is three giant screens made up of 178 Digiwall cubes, a product developed by a Belgian company that uses European projectors, and which is available in an array that goes up similar to loudspeakers in a large touring environment. The computers are locked underneath one of these. The projectors inside the Digiwalls are your typical 3-gun projectors, like any TV, but modified to project onto a 41-inch screen. We alsa have an additional four large screens, which are 48 Vidiwall cubes - a Philips product."

Underworld is where all the video imagery used in the show is processed - a combination of live shots of the band on stage and pre-recorded, pre-sequenced events. Video director Monica Caston sits front-of-house and switches between the live cameras which are on stage - four broadcast cameras and a consumer 'Handicam' hand-held by Bono. In addition there are two satellite feeds coming in and two small cameras attached to the drum kit.

"What we do," explains Dave, "is take the live mix that Monica is doing up front, distribute that among the different video walls and intercut with the pre-recorded material. This is stored on ten laser disk players, each one of which holds an hour of material. So during the two and a half hour show you actually watch ten hours of television. Laser disk allows us instant access to any frame or series of frames or sequence on the disk, so it's a very easy random access format. With tape you'd have to cue it forward or back".

And following Eno's brief, random access is essential. "Everyday," reveals Dave, "different songs are added or deleted or changed or moved around in the set. There are about three basic sets that the band does. Plus, they are definitely a live performance band. They are not the type of band that wants to be regulated by a clock or a click-track. So most of the stuff they are playing is actually regulated by the speed that the band goes. It's actually up to the band. What happens is there is a MIDI rig for the backing tracks, but the operator back there has full control, so when the band skips a chorus, adds a verse, he can track with it.

"There are some pre-sequenced songs that are there just because of the visuals that are included with them. For example, 'The Fly' needs to be pretty tightly regulated so that the images come up at the same time. But then there are other songs which are pretty much free form - the B-stage songs for example, which are performed out on the auxiliary stage".

Dave and his colleagues sit three feet below Adam Clayton's bass rig... "so as you can imagine it gets a little loud during the performance," he smiles. "But it allows us real quick access if we ever do have a problem". Here they control what is essentially the insides of an outside broadcast truck, adapted for transport anywhere in the world within 24 hours and heavily protected against the harsh road environment. Included is a control panel for camera brightness and colour levels, standard amplification, monitoring and video effects racks, and record and playback decks for local footage shot at every venue and edited for integration into the show. "These are our video confessionals," Dave says with some relish, "where the audience has a chance to come in and make their 20- second confessional. It can be anything they want..." Shot in a converted portaloo by the mix position during the opening acts, the confessionals are edited together immediately before the show and broadcast before the encore.

The video team also source audio segments from the laser disks, which are mixed on their own audio console before being sent front-of-house. But the real showpiece of Underworld is the computer control of every video sequence. "This is what enables us to access any frame or sequence of frames at the drop of a hat," says Dave. "It's also set up in way that we can sequence a set of visuals - for example, just an ambient loop of, let's say, colour fields going through a spectrum of colours. We can also loop a visual, in which case we have a 7-second set of visuals auto-repeating. Some of Brian Eno's fractal images are looped towards the end of the set...

"This is probably what makes Zoo TV Zoo TV. The computer control has actually evolved over the course of the tour. We originally started with

WATCH MORE TV

two separate computers to control the video walls, and then a second computer controlling disk players and routers. When we went to the outdoor leg of the United States tour, we had three computers, and added additonal large screens. And then finally when we got to Europe here we transferred everything to a Windows-oriented language... so these are actually running on a

PC running windows. And it's all custom software that I wrote specifically for the tour.

"It's pretty much a visual sequencer, like the musical sequencers that are available now with MIDI. So we can click on individual screens with the mouse, anywhere on the three large screens or the four Vidiwalls which make up the projection surfaces. We can pick any section of the screen and route an image to that. That way we can have multiple images on each screen. We can break it up to as many squares as these are made of... each one of these squares [on the computer screen] represents one of the Digiwall cubes I showed you earlier. So we've got instant access to all that data, and all on a real-time basis.

"The routing controls allow us to route the 24 primary inputs to the system, those being cameras, laser disks, tape players and satellite feeds. And route those to the different outputs - there are over 200 outputs on the system and at any time any of the inputs can be routed to any of the outputs. So you'll notice that certains songs, like 'The Fly', will have the same thing projected on every screen, as opposed to a song like 'Desire' where you'll see up to seven laser disks running on different screens.

"And down here is our media control page. This is where we actually control the laser disks and tape players. What we can do is assign a frame number so that we can start a particular frame, end at a particular frame, run a sequence, run a loop, just run a segment, stop or freeze on a particular image. All that is pre-programmed in the cues that make up the show. What we do is we build these cues and take the cues and build them into effects. And, what we use effects for is essentially songs, so at any time we can jump from song to song and bring up the associated cues. We also have a SMPTE interface which locks on to the keyboard generating SMPTE time code.

"What happens is The Edge has a MIDI trigger, which starts his MIDI sequencer, which generates SMPTE time code which we lock onto. For certain segments - again, 'The Fly', which is very much a synchronous song - we will lock onto the MIDI song. There's a few other songs where halfway through we'll start a sequence, and it will automatically take over. As soon as the bands gets to that section, it will execute those cues. If the band takes their time getting to that section, we're not running graphics early.

"During 'Numb', for example, you'll actually see the visuals in the background, actually taking place and making the noises. A little bit of hardware is involved in this: we carry with us 486-66s, which is really high-tech as far as your personal computers go. The difference is these are all rackmounted in 19-inch racks! It's the same PC you buy in a store, customized for the road. It's truly what we call a visual sequencer, where we can sequence visuals as you would musical sequences".

The sequences themselves, featuring newsreel footage, animation, graphics and a kaleidoscopic montage of television imagery, were produced by Ned O'Hanlon and directed by Maurice Linnane, in conjunction with a number of producers from MTV and Brian Eno himself. The challenge, from the beginning, was to find the technological means to express visual and musical ideas in a flux, one which necessarily takes account of both the chaos of media culture and the improvisational give and take of a rock band. The solutions, courtesy of Dave Lemmink and his team, do more than meet this challenge: they offer a blueprint for interactive, multimedia expression that could serve a whole generation. •

*extracts courtesy of *Opal Information* Number 21 published by Opal Ltd, PO Box 141, Leigh-On-Sea, Essex

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REVIEW

Roland JV-1000

Music workstation

Roland's latest flagship sees them keeping the workstation genre afloat – but is the JV-1000 seaworthy? Simon Trask sets sail...

Unlike some of their competitors, Roland haven't seemed particularly wedded to the workstation concept. In fact, their new machine, the JV-1000, can be seen as a justifiable (some might say belated) attempt by the company to cater for this prestige end of the market – where the likes of Korg and Yamaha are already well represented by the 01/W Pro and Pro X and the SY99 respectively.

Essentially the JV-1000 combines Roland's JV80 synth and MC50 MkII sequencer into a single instrument, but with a 76-note keyboard replacing the JV80's standard 61-note affair. In addition, it provides built-in support for an optional GS Format module – the snappily-titled V-EXP board – which slots into a 'docking bay' on the underside of the new synth. Adding this board to the JV-1000 gives you 56-voice polyphony (28 JV80 voices plus 28 V-EXP voices) and 24-part multitimbrality (eight JV80 Parts plus 16 V-EXP Parts) before you have to start involving yourself with MIDI and external modules.

In essence, then, the 1000 gives you 'all-in-one modularity', if that's not a contradiction in terms. It even celebrates this modular approach by presenting its JV80 and MC50 components via separate front-panel layouts (synth to the left, sequencer to the right), each complete with its own LCD window. These layouts are broadly similar to those of the original instruments, bringing the added benefit of operational familiarity for JV80 and MC50 users. But whether or not you're familiar with these instruments, the 'modular access' approach adopted by the JV-1000 has much to recommend it over the more familiar centralised access; perhaps we shall see more manufacturers going modular in their front-panel designs.

The JV-1000 includes a few features in its synthesis section not found on the JV80. Perhaps most significantly, you get double the number of factory-preset sounds. Roland have taken the opportunity to reorganise the preset Patch selection in Banks A and B, although for compatibility purposes you can call up the original JV80 Banks if you want. The latest JV also has an expanded waveform ROM, with more drum and percussion samples (including a jazz kit) and a new sampled acoustic piano added to the existing samples. Roland obviously felt that, as a player-orientated instrument, the JV-1000 needed a better acoustic piano than the JV80 provided, and I'm inclined to agree; the new sampled piano dutifully fills this role.

Other new features are global transposition on/off, sustain pedal re-damp (which lets you sustain a sound at any point during its release stage), and Layer/Zone record on/off (used for multi-part recording), together with a very useful Info function which helps you to keep track of what Parts are in use in a JV-1000 Performance, how many voices they're using up, and which Parts are having real-time performance data such as modulation and pitchbend routed to them.

As on the JV80, a Performance can consist of up to eight Parts, each of which can be assigned a Patch.

The Performance is a flexible beast. You can, for instance, use it for recording and playing back multitimbral sequences or for playing sophisticated multi-part split/layer sound textures on the keyboard. You can also use it to turn the JV-1000 into a MIDI controller keyboard. In this context, you can have up to eight internal/MIDI zones on the keyboard, each with its own MIDI transmit channel and its own patch change, volume and pan settings which can be transmitted via MIDI Out when the Performance is selected.

The eight Parts of a Performance needn't correspond to the eight phrase tracks of the JV-1000's onboard sequencer: you could record all eight tracks using the same Patch if you really wanted to. Also, taking advantage of the L/Z record parameter mentioned earlier, you can record into a phrase track using, for instance, a double bass and acoustic piano split. Select a different Performance and your sequence will play back using the sounds of that Performance, a fact which you can turn to your advantage (eg. you can easily experiment with different sets of sounds for a sequence, or you can create mute 'snapshots' which can be called up spontaneously during playback). In fact, given all the possible applications for Performances, it's a crying (nay, sobbing) shame that Roland haven't upped the number of user-programmable Performance memories from the 16 provided on the JV80. Surely this could have been easily accomplished?

You can use a combination of internal synth sounds, V-EXP sounds and external MIDI'd sounds for your JV-1000 sequences. In effect the onboard sequencer has two outputs, and the synth section and V-EXP board can be connected to these outs in one of two possible configurations: either both hang off Out 1, or the synth section hangs off Out 1 and the V-EXP board hangs off Out 2. In both cases, Out 2 is routed to the Sequencer Out MIDI socket on the JV-1000's rear panel, giving you access to external MIDI'd sounds.

To add to this flexibility, each sequencer track can be routed to Out 1, Out 2 or Out 1 and 2; the JV-1000's keyboard 'soft thru' parameter provides the same choice of settings, giving you plenty of flexibility in the selection of sounds to add live over a sequence. And if you disable the soft thru function, you can use the JV-1000's keyboard to play onboard Patches and Performances together with external MIDI'd sounds via the JV's standard MIDI Out socket – leaving the Sequencer Out socket to handle all the sequenced MIDI parts.

File-o-fax

The JV-1000's ability to read and write Standard MIDI Files via its onboard disk drive means you can transfer your own sequences on disk between a computer-based sequencer and the JV-1000's onboard sequencer. You can also draw on the huge commercial libraries of MIDI songfiles available on disk in Roland's GS Format for use with the V-EXP board.

Through its MC50 heritage, the JV-1000's onboard sequencer is a tried and tested playback medium with a good reputation for reliability onstage, making it an attractive alternative to computer-based sequence playback at a gig.

Photos: James Cumpsty

The potential disadvantage of this approach is that you might need two external MIDI instruments where one would have done, but the advantage is that by separating live and sequenced MIDI parts onto two different MIDI busses you reduce the amount of data on each buss, and so lessen the likelihood of MIDI logjams with their attendant delays.

At the risk of oversimplication, sonically the JV-1000 is a great pianos 'n' pads instrument, with acoustic and electric pianos, ensemble strings and bright, shimmering, exotic pad sounds being its real forte. Tuned percussion has long been a Roland strong point, and here too the JV-1000 scores well. Its bass sounds are undeniably powerful, but to my mind they lack warmth and richness. The acoustic guitars are very effective, but I'm not so enamoured of the electric guitars, nor of many of the brass and lead synth sounds. The drum and percussion sounds are, as usual, competent but somehow less inspired (and definitely less off-the-wall) than typical offerings from Korg or Ensoniq. And Roland will insist on having a ridiculously small number of Rhythm Kits, too.

The onboard sequencer has much to recommend it: well thought out, straightforward in use, and possessed of just about all the editing features you could need, all presented in an accessible manner. However, I do wish Roland had upped the number of phrase tracks to a more reasonable 16. And while we're talking wishes, several individual audio outs wouldn't have gone amiss either.

I've concentrated in this review on the features which define the JV-1000 as an instrument in its own right – its workstation credentials, if you like. In this respect, it has, to my mind, plenty to recommend it for both stage and studio use. While being a versatile instrument it's also very accessible, blessed as it is with a front panel which says "use me!". Mature in concept and design, the JV-1000 could be criticised for being rather staid in attitude – but if that doesn't bother you, it may well be the right instrument for you. If you want to investigate further, you could start by reading MT's reviews of the JV80 and MC50 (May '92 and January '91 respectively).

Now, Roland, when are you going to bring out a *really* exciting, *really* new synth? ●

THE LAST WORD

Ease of use	A very accessible instrument
Originality	Not what it's about at all
Value for money	Reasonably good
Star quality	A seasoned performer rather than a fresh new face
Price	JV-1000 £2140 • V-EXP GS Format board £299 SR-JV wave expansion board £273
More from	Roland (UK) Ltd • Atlantic Close • Swansea Enterprise Park • Swansea • West Glamorgan • SA7 9FJ • Tel: 0792 310247 • Fax: 0792 310248

Hard fax

SYNTHESISER SECTION

Keyboard: 76 keys with attack and release velocity and channel aftertouch
Polyphony: 28 voices
Multitimbrality: eight Parts (in Performance mode)
Patch architecture: up to four layered/velocity-split Tones each containing a Waveform Generator, a Time Variant Filter (low-pass or high-pass, with soft/hard resonance) and a Time Variant Amplifier with dedicated envelopes (4-stage with velocity control over attack and release) and two freely assignable LFOs.
Factory presets: 256 Patches, 64 Performances, 4 Rhythm Sets
User-programmable memories: 64 Patches, 16 Performances, one Rhythm Set
Data Card (optional): 64 Patches, 16 Performances, one Rhythm Set
Wave Expansion Board (optional): 256 Patches (maximum)
PCM Card (optional): 128 Patches (maximum)
Effects: Chorus (three types); Reverb (eight types)
LCD: 2 x 40 characters, backlit

SEQUENCER SECTION

Memory: 256 Kbytes RAM
Storage capacity: approx. 40,000 notes
Tracks: eight multichannel phrase tracks, one pattern-based rhythm track, one tempo track
Songs: eight onboard; playback of a preset sequence of Songs loaded off disk is also possible
Maximum Song length:9999 bars
Rhythm Instruments: 32
Rhythm Patterns: 240 per Song
Resolution: phrase tracks: 96 clocks per quarter note; Rhythm Pattern: 32nd notes
LCD: 2 x 20 characters, backlit
Disk drive: 3.5" DSDD, reads and writes Standard MIDI Files (formats 0 and 1)

REAR PANEL CONNECTIONS

JV-1000 L(Mono)/R and V-Exp L(Mono)/R audio out jacks
Headphones jack
Sustain pedal jack
Assignable pedal jacks x 2
MIDI In, Out, Thru and Sequencer Out
Card slots: PCM x 1, Data x 1
Sequencer start/stop jack
Sequencer punch in/out jack
Metronome output jack (with output level knob)
Tape Sync II in and out jacks (RCA phono)

BOTTOM PANEL

One 'docking bay' for the optional V-EXP GS Format board
One 'docking bay' for an SRV-JV wave expansion board

Dimensions

48.5" (W) x 13.75" (D) x 3.75" (H)/1232 x 348 x 97mm

Weight: 29lbs 2oz/13.5kg

REVIEW

Studiomaster

Star System

8:4:2 mixer

Photo: James Cumpsty

Ian Masterson gets all ergonomic with a mixer that combines versatility with synth-style twiddlability

There are those who love to buck trends and actually produce machines that take account of the way we humans really work – equipment that is ergonomically-designed and fitted only with features we really need. Which sounds like the cue for a song. Or better still, the Studiomaster Star.

All right, no prizes for spotting why the Star is so outrageously different from the hordes of other budget mixing consoles flooding the market. But the vertical control panel is no mere gimmick – it's just a bit of logic, Studiomaster-style. I mean, which is easier: craning your neck to read the EQ settings on a traditional flatbed console, or glancing up at the immediately-obvious knob settings on the Star? After all, you wouldn't mount a computer screen horizontally behind the keyboard, would you? So it makes perfect sense to have a mixer's faders in the usual horizontal position, but tilt the rest of the channel controls up to eye-level. And, if your studio is short of space, the Star is ideal – it can be situated on a simple 12" deep shelf, rather than a massive table. Now *there's* intelligent design for you.

However, the cleverness of the Star doesn't stop at mere front panel layout. Versatility is one other key element in Studiomaster's design philosophy, and the various channel configurations contain some surprisingly useful features. The basic system consists of eight dedicated mono channels, eight secondary mono channels (which double as tape returns for multitracking), ten stereo input channels (four with full faders and EQ) and a master fader grouping system, which can route the stereo signal to any of the eight tape outputs. In short, the Star can be used as a 38-input keyboard mixer, a multitrack desk, or even a live stage console or submixer.

Each of the main eight channels offers balanced mic or line inputs and channel insert, with defeatable 3-band EQ (no sweepable mid-range, unfortunately), access to three auxiliary busses, gain, pan, routing switch, 'listen' button and 'channel on' button – nothing highly unusual there. The secondary (tape) input channels simply have gain and pan controls, and access to a fourth aux send; but it's also possible to swap the inputs on the primary and secondary channels, so if you need to EQ a tape return on mixdown, you can.

The four principal stereo channels contain similar facilities to those found on the main eight, although access to the four aux busses is switchable in pairs: you can choose to send your signal either to busses 1 and 2 or 3 and 4. Interestingly, each of the four stereos has a second set of inputs, on phonos, marked 'hi-fi'; these can be switched onto the channels instead of the main 1/4" line input. Since stereos 1 and 2 are capable of taking RIAA-level signals, you can even connect two turntables here – ideal for people who involve the use of records in their music. Each of these channels also carries a stereo insert circuit, so all possible connection options are kept open. The remaining six channels feature only a gain control and listen switch, so they're best employed as effects returns, or additional simple inputs for MIDI equipment. Incidentally, no less than *two* separate sets of connections are provided for mastering machines, complete with dubbing and copying facilities.

But the party doesn't stop there. Not only does the master section allow you (unusually) to add effects to the main stereo output signal, via dedicated aux send controls, it also incorporates a parametric EQ. And not only that – the EQ section actually has dedicated input/output sockets on the rear panel, allowing you to remove it from the stereo path and patch it into any of the channels using insert leads. It's this sort of attention to detail which has really won me over to the Star way of mixing.

Finally, the desk also incorporates a flexible monitoring system, switchable for either pre-fader or post-fader listening – you can even trim the amount of PFL signal sent to the monitor buss, to avoid deafening yourself when you hit one of the listen buttons. Naturally, a separate control for room monitor level is provided, and the final icing on the cake is a 'loudness' button of the sort normally found on home hi-fi amps. After all, if you're going to monitor your record decks, you'll need this – and if like me you're used to monitoring mixes through a hi-fi amp for comparison, a feature like this is invaluable.

The build quality of the Star is much like that on Studiomaster's flagship P7 console – similar components are used throughout. It's pretty obvious that the same attention to detail has been employed inside the box as well – the Star is incredibly quiet and sonically clean. The vertical front panel instantly makes the Star user-friendly and, er, 'charismatic'; this console is extremely enjoyable to use.

As usual with Studiomaster products, the price has been kept at an attractive level as well; despite the amount of careful R&D which has gone into the Star, it still costs under a grand (before VAT). But I reckon most people will buy it because of the distinctive and ergonomic design – I definitely fancy a whole bank of these surrounding me in my studio, in a formation reminiscent of the bridge on the USS Enterprise. And you can't help being reminded of the heyday of classic modular analogue synth design when you look at the Star; this alone will win it many friends. All I'd like now is a version with sweepable mid-range EQ and twice as many dedicated channels. But even as it is, Studiomaster's latest desk still sheds a completely new light on the phrase 'star quality'. ●

THE LAST WORD

Ease of use	Plenty to twiddle, but no nasty headaches
Originality	Just take a look at the case
Value for money	38 channels for just over a grand
Star quality	Well, it's already a Star, innit?
Price	£1081 inc. VAT
More from	Studiomaster ● Studiomaster House ● Chaul End Lane ● Luton ● Beds LU4 8EZ ● Tel: 0582 570370 ● Fax: 0582 494343

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REVIEW

Passport

Producer v1.1

multimedia software for the Mac

Fancy being the producer of your own audio-visual spectacular? Fancy doing it in the comfort of your home? Fancy Ian Waugh?

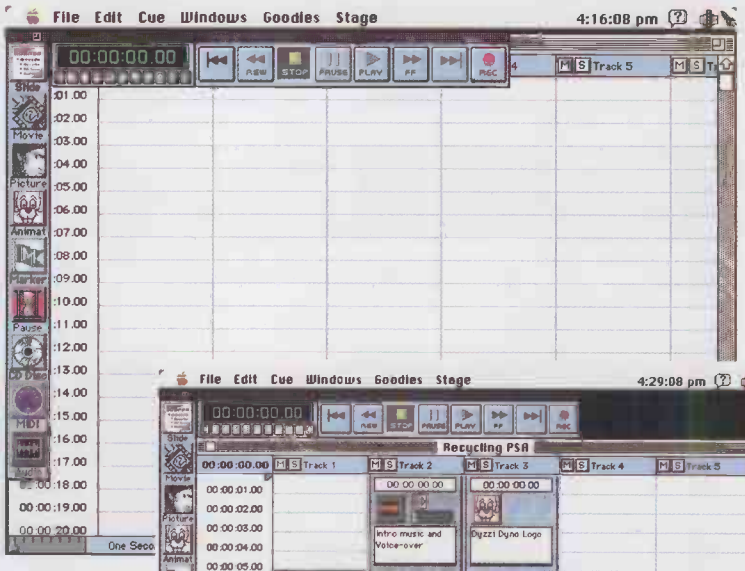
Over the past few issues, *MT* has done its bit to de-mystify the phrase *multimedia*. In case it's a word you're still not familiar with, multimedia (in computing) is about combining music, speech, graphics and animation to produce, well, a production of some sort.

Multimedia presentations are already widely used in business, but with the advent of affordable computer music, video and animation packages, it's now possible for any Tom, Dick or Harriette to produce backgrounds, graphics and animation to create a video which can represent anything from a promo to a work of art in itself. The technology at this level is not quite ready to challenge the professional TV studio and edit suite, but the results can be impressive and applications are becoming a lot more affordable.

Producer is concerned with assembling the various bits and pieces which make up a production rather than with creating those elements in the first place. Producer's timing system is based on SMPTE which makes it very easy to sync to external devices, though you can also select a Real Time option if you don't need to sync. Operation is very easy and, thankfully, most of Producer's functions follow standard Mac operational procedures.

Producer has a number of tracks, like a sequencer, arranged vertically in a cue sheet window. To assemble a production you simply drag cues onto the tracks at the required positions. The tracks are marked in seconds and a counter tells you exactly at which position the cues are as you drag them. This makes it very easy to place and move cues to an accuracy of 1/100th of a second.

A blank cue sheet in Producer waiting for cues to be dragged to it from the cue palette.



A typical cue sheet layout including slide shows, animation, digital audio and QuickTime Movies.

When you drag a cue onto a track, a dialogue box opens for you to locate the file you wish to play at that position. As Producer reads the files from disc, your production can be made up from many megabytes of data which does not all have to be in memory at once.

There are several types of media or cues you can work with – text, graphic images, movies, animation and sound files. The sound files can be digital audio files, MIDI files or sound files played from a CD – you'll need a CD-ROM drive for this. Producer supports several digital audio cards including Digidesign's AudioMedia II and ProTools, Media Vision Pro Audio Spectrum 16 and RasterOps Media Time.

If too much is happening, some of the cues may not appear at all. You may well spend a fair amount of time making sure that the things you want to happen actually do happen, given the limitations of your Mac. However, Producer's timing and syncing abilities are one of its strongest features and take precedence over the playing of cues, so you should not run out of sync even if you do lose a cue or two. This, I think, is the way it should be.

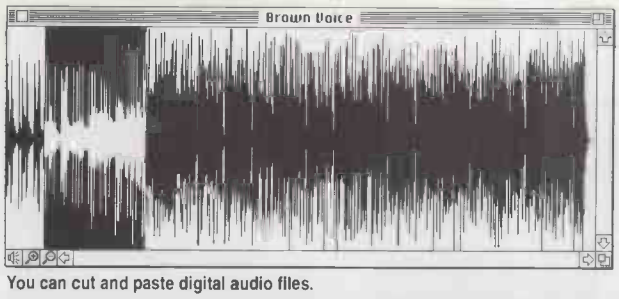
The program defaults to eight tracks – which should be quite adequate for most productions – but you can add as many more as you need. However, if you ask your Mac to do too many things at the same time, expect hiccups and delays. It will help of course, if you have a reasonably powerful Mac: the program recommends at least a IIci.

Although Producer will handle 24-bit colour, the productions run more

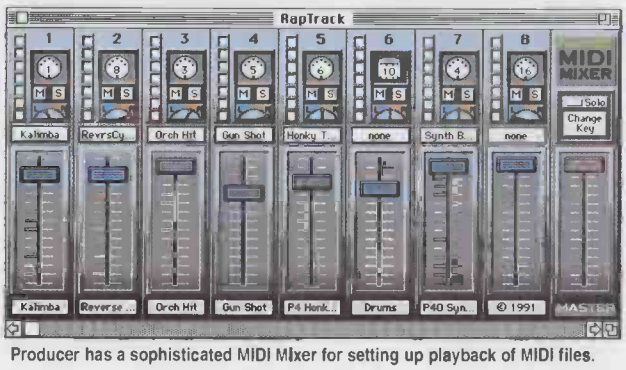
Take your cue

There are nine cue types:

Slide: A combination of text and graphics which share a common background colour or PICT image. There are transition functions which cause the text to be displayed by effects such as an opening iris, opening curtains and so on.
Movie: A series of frames in standard QuickTime Movie format.
Picture: Still graphic image in PICT format.
Animation: A series of frames in PICS format.
Marker: A placeholder used to mark a location within the cue sheet. These can be recorded manually into a track as the production plays and you can align Movies, for example, to the markers.
Pause: A command that stops playback and waits for a specific time or event such as a mouse or key press or a MIDI message.
CD: A command to play a CD audio track from a CD-ROM player.
MIDI: A command to play a Standard MIDI File in format 0 or 1.
Audio: A digital audio file in AIFF or Sound Designer II format.



You can cut and paste digital audio files.



Producer has a sophisticated MIDI Mixer for setting up playback of MIDI files.

smoothly in 8-bit colour. If you are using 24-bit, you'll need at least 8Mb of RAM, otherwise 5Mb will suffice. You can run with less, if say you're using a black and white system or a Powerbook or if you're just too plain mean to put some decent RAM in your machine, but once you start working with graphic images, you'll find RAM vanishes very quickly.

The visual cues are placed on a 'stage', which is that area of the screen used for the production. This defaults to the size of a 13" monitor but you can adjust the size and the position of the stage on the screen. The cues can be dragged to their required positions on the stage, too. One neat feature is the ability to work with multiple monitors although, of course, you need the wherewithal to buy a wall of Mac monitors in order to make the most of a production.

There are editors for the various cue types which let you tweak the associated files and perform functions such as retaining graphic files in memory for faster display. You can also link the files to proprietary editors such as Adobe Premier, VideoShop, Master Tracks Pro and Vision for more complete editing.

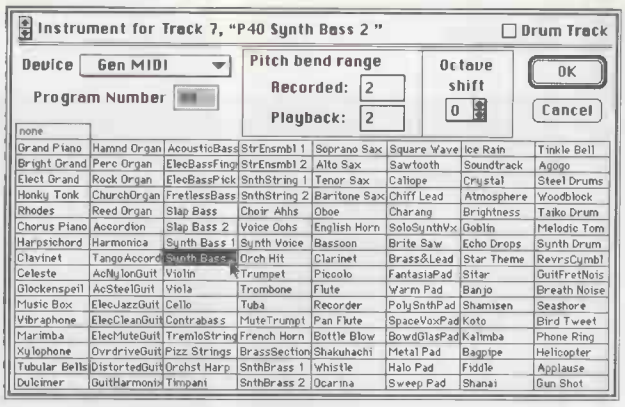
One of Producer's weakest points is its slide show and text editor, which is rather basic. It has limited formatting functions and lacks a transparent background so you can't print words on top of an image, for example. Also, it only supports PICT images, so if you want to use other types of image such as TIFF you'll need an image converter.

However, Producer has excellent sound and MIDI handling capabilities which is, perhaps, hardly surprising as it comes from a music software company. It also has a very good MIDI Mixer for selecting instrument sounds (defaulting to General MIDI), volumes and pan positions when it plays MIDI files. And it's possible to cut and paste digital audio files.

There are two manuals: *Getting Started* and a *Reference Guide*. The tutorial is excellent and takes you through most of the major features of the program. There is a 'Hints & Tips' section too which explains, among other things, how to speed up and improve the display performance. The package includes lots of backgrounds, audio and MIDI files which you can use in your own creations. When your production is complete, you can save it to video although you'll need a video card or composite video encoder for this.

You can also give away copies of your production to other Mac users using Producer Player, which is supplied with the package. This, as you can probably guess, is a playback-only version of Producer. It needs access to the files used to form the production and there are options to move, copy and produce aliases of the files. But if this is your intention, remember that graphic, animation and QuickTime files can be very large and even a fairly simple production will very likely be too large to fit onto a 1.4Mb floppy. Producer does allow PICS animation and AIFF files to be converted into QuickTime Movies using a range of compression techniques, but compression has its limits.

If you want to create a business-type presentation then you may find certain



You can assign GM sounds to each of the MIDI tracks.

of Producer's limitations in the text and graphics department more restrictive than you would like – even though the program is easy to use. However, if sound and music play a large part in your presentation, do give Producer a particularly close look.

If you're looking for a way to create some sort of visual display to accompany your music then Producer's text handling limitations will possibly seem less important, particularly in view of the program's excellent sound-handling capabilities and, as has already been said, its ease of use. This should not be overlooked when considering multimedia production software – some of it can take an age to get to grips with.

However, multimedia packages such as Producer are not digitised video editing kits, so don't think you're getting the computerised equivalent of a £20,000 video editing suite. QuickTime is fine as far as it goes, but it's not that good yet. Part of the problem, as ever, is the relatively slow speed of computers. The more Mac you have the better.

Producer has been well thought-out and although the die-hard multimedia user may enjoy picking holes in it, it does what you'd expect a multimedia package to do, and – here we go again – it does it with ease. Unless text is a major part of your plans, Producer has an awful lot to recommend it, and it's certainly a program to look at if you're new to the multimedia field. ●

You can select a wide range of backgrounds for your production.

THE LAST WORD

Ease of use	Excellent user interface
Originality	Its ease-of-use makes a refreshing change
Value for money	Ouch!
Star quality	Wins out with its sync and timing abilities
Price	£499.95 inc VAT
More from	MCMXCIX ● 9 Hatton Street ● London NW8 8PR ● Tel: 081 963 0663 ● Fax: 081 963 0624.

REVIEW

Zoom 9001

advanced multi-effects processor

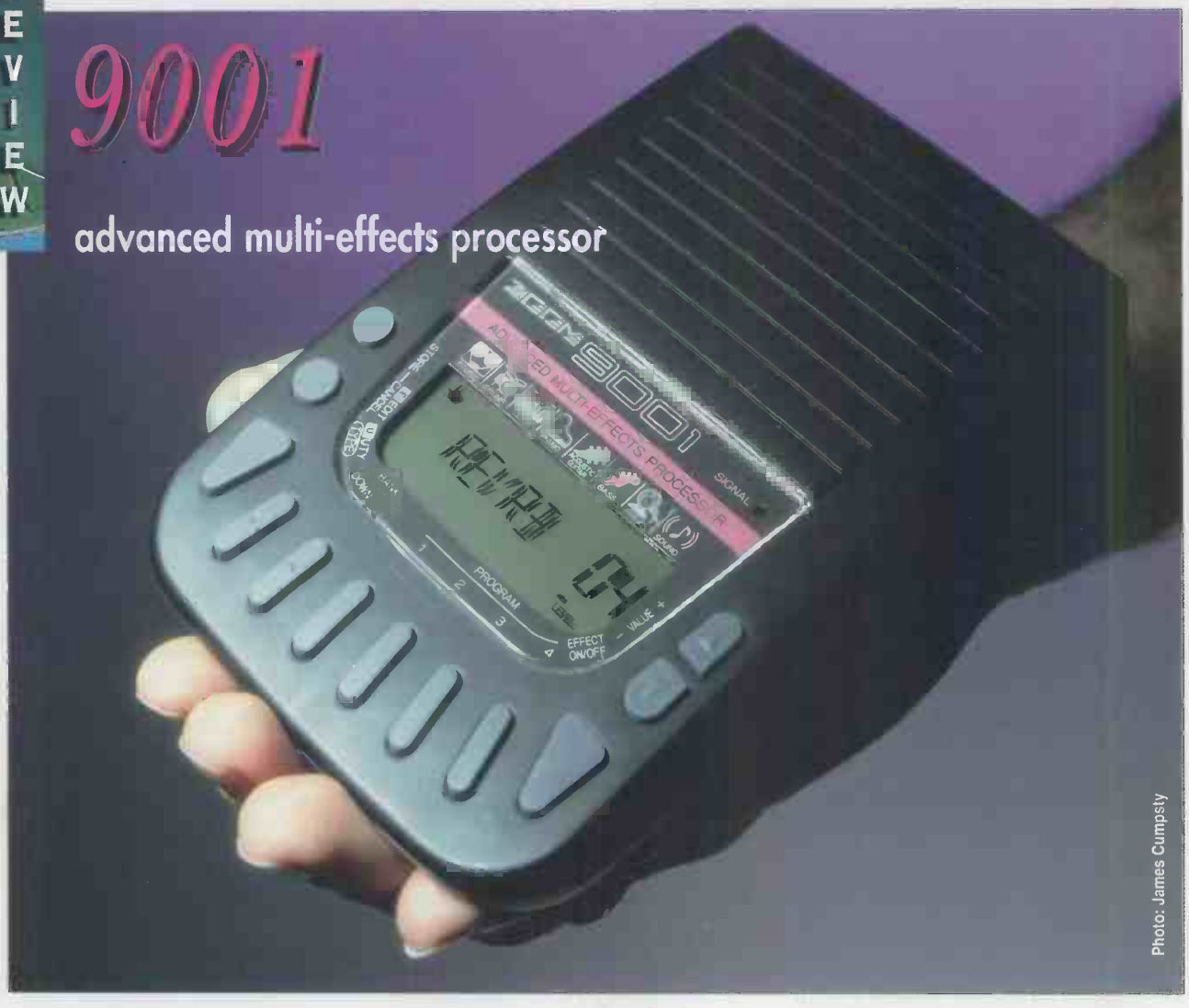


Photo: James Cumpsty

High quality effects, easy programming and a budget price – Ian Waugh asks who's Zoomin' who?

The more sophisticated hi-tech gear becomes, the steeper the learning curve which must be assailed by those trying to get the best out of it. A simple fact of life, this is particularly true of equipment such as FX units which may sport dozens of seemingly inscrutable parameters such as spectrum shift, diffusion and high frequency decay.

It makes a refreshing change, then, to find a multi-FX unit you can use while supping your scrumpy and without getting lost in a hornet's nest of recursive menus looking for the post-FX early reflection pre-delay parameter.

The Zoom 9001 gives you none of this. In fact, it looks more like a foot pedal than a studio FX unit. It doesn't have MIDI (be honest – do you *really* use MIDI to program your FX unit on the fly, or even use program changes to select new patches?) and it's mercifully short on psychoacousitc parameters, yet still retains a high level of programmability.

For such a small unit, it's surprising to find jack sockets instead of phonos – 10 out of 10, Zoom. There are stereo Ins and Outs on the back – although the Left In can be used as a Mono input – and there's a mini-jack headphone socket on the side. The On/Off button is also on the back along with a socket for a mains adaptor. The unit runs quite happily off batteries, but with a life of only three to six hours you really need to budget for an adaptor too.

Underneath the unit you'll find a Remote socket to which you can connect an optional FC01 foot controller. This has Bank and Patch switches for selecting patches, and it can activate the Bypass function.

The effects are arranged into eight banks and named to give you an indication of the area in which they would be most useful – although, as the manual points out, these are suggestions only. You are encouraged to experiment. In spite of the limited number of effects (compared to the 100-plus typically found on most current FX units), there is a surprisingly broad range. Zoom have obviously tried to cater for all potential users. We're not just talking keyboards here, but drums, guitars and vocals too.

Perhaps because of the limited memory, the effects tend to be quite different from each other – no room for subtle variations here. Of course, the mainstay of any FX unit is its reverb programs, and the 9001 is no exception. While

Effective programming

The Zoom 9001 has to be the easiest multi-FX unit to program ever. Having said that, it does deliberately limit the number of parameters you can tie yourself in knots with. Each effect has a maximum of five parameters – which vary according to the type of effect it is – plus a Program Level control. The parameters are selected using the Bank and Program buttons, and adjusted with the Value buttons – not too much multi-function button pressing going on here. The LCD display uses triangular bar displays to show the approximate values of the other parameters.

The 9001 has several effect types (reverb, chorus, limiter, EQ and so on) and when these appear in a particular configuration they are in a fixed order. For example, in the Slap Bass effect the signal runs through the Limiter, Enhancer, Mid Booster and Reverb in that order. You cannot create your own configurations – that would detract from the unit's ease of use and go against its basic design philosophy.

Although not much can go wrong, if it does you can recall the presets.

Hard fax

The Zoom 9001 has 20 different effects. These are grouped into eight categories and named to suggest the sort of sounds and instruments which would particularly benefit from them:

Studio: Reverb, Echo, Chorus
Drums: Gate, Ambience
Keyboard: Strings, Organ, Solo
Piano: Acoustic Piano, Electric Piano
Acoustic Guitar: Steel Guitar, Gut Guitar
Bass: Bass, Slap Bass
Vocal: Vocal 1, Vocal 2, Harmony, Robot
Sound: Wave, Test Tone Oscillator

The 9001 can store 40 presets which are selected using two Bank and four Program buttons.
Only the Studio and Drum FX have a Direct Mix parameter, which allows you to turn off the direct or original sound which appears in the mix. All the other configurations will feed some of the direct signal back to the output. When using an FX unit in the send and return loop of a mixer, you will usually want to turn off the direct signal.

these are generally good for a processor at this price, one has to conclude there aren't enough of them.

The Leslie speaker simulation in the Organ effects is also impressive, and can be switched to slow or fast rotor speeds. Some of the Piano effects add a nice cutting edge to the sound, while the chorus and reverb of the Strings program could sweeten any pad.

I particularly liked the way all of the effects and their parameters were listed in the manual, and the way it showed the signal path through the various effects with the aid of schematic diagrams. This enables the user to see quite clearly how their signals are being effected.

There are also diagrams to illustrate the principles associated with each of the parameters – including those found in reverb programs (level, direct, pre-delay, early reflection and reverb time), chorus, echo, gate reverb and comb filters – and additional listings of parameters for the 40 additional effects which you can program yourself.

What the manual doesn't give you are any detailed specs on the unit itself, so I can't quote a signal-to-noise ratio or a dynamic range at you. Subjectively, the unit is a touch noisy. Some effects (such as chorus) are worse than others, and even the Effect Off button doesn't mask the noise completely.

This shouldn't prevent you from using the unit in a recording, but you'll need to keep a check on the noise and familiarise yourself with the Direct Mix limitation (if you want to use it with a mixer).

Although a more up-market FX unit would almost certainly be more versatile, it will obviously cost more. But not necessarily that much more, so you need to work out what you want and how much you can bear to part with. The 9001 is certainly easier to program than any rackmounted FX unit, but it's not capable of the subtleties of many such units.

I suspect it will find a home with musos who play live, especially those who only need a handful of different effects throughout a set. ●

THE LAST WORD

Ease of use	Easy-peasy
Originality	Not much you haven't heard before
Value for money	Not bad
Star quality	Meretricious but not unloveable
Price	£249.95 inc VAT
More from	MCMXCIX • 9 Hatton Street • London • NW8 8PR • Tel: 071 723 7221 • Fax: 071 262 8215

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REVIEW

Ensoniq CDR-1

sample CD-ROM

Photo: James Cumpsty

Put it in your CD player and it's useless. Put it in an Ensoniq ASR-10 or EPS-16 sampler and it might knock your socks off. A sockless Ian Masterson writes...

When it comes to feeding your sampler from a library of sounds, you can't beat a CD-ROM drive. Hard drives might be fast, but CD-ROMs operate like lightning and are much more reliable. Of course, you can't save your own data to this particular format, but with more and more sampler owners relying on sample CDs and third-party disks to form the mainstay of their sound collections, it seems entirely logical to produce a single disk that offers several thousand sounds in a purely read-only configuration.

Ensoniq are showing their committment to supporting the ASR-10 and EPS-16 units by releasing the CDR-1, a CD-ROM literally brimming over with high-quality sounds. In fact, a quick glance through the booklet that accompanies the disc reveals just how many sounds Ensoniq are giving CDR-1 owners access to. Numbered from 1101 to 9705, each sample is formatted ready to load into one of the sampler's Instruments, and can be accessed immediately through a proprietary Macro-Dialling system. All you have to do is hold down the sampler's Load button, enter the number of the sound you want on the numeric keypad, and the CDR skips straight to the correct sound.

Sounds unlimited

You wanna hear some hot sounds? Well, try these on for size. If Ensoniq's in-house programmers are to be commended for one thing on this CD-ROM, then it has to be the section of string sounds. 'Orch strings 1' (1101), 'Epic strings' (1102) and 'Full strings' (1112) are some of the deepest, richest and most soulful bowed-type things yet to erupt from an Ensoniq. Similarly, while I could pass on some of the dodgier electric guitars (1411 'FX guitar 1' – eeeuch!), the assorted sections of world and traditional percussion are to die for. 3516 'Tabla' and 3415 'The shekere' are ones to listen out for.

Although I can't mention all the sounds on the CDR-1 that I liked, commendations have to be awarded to the assorted drum kits too, in particular 3120 'Jazz drums' (though I wish these guys would stop trying to emulate the sound of European dance 'kits' by simply ripping off a load of TR808 samples – they went out of fashion three years ago, lads). And while some of the pianos do need a little work in the multisampling department, there are a couple of superb Hammond impersonations, a gorgeous clanking Rhodes and one or two strong pipe organs. Then again, if it's rich, ambient pads and 'textures' (what a revolting phrase that is) you're after, you could do a lot worse than to employ any of the ten-or-so specially devoted sections presented here.

From there, it's simply a matter of selecting which Instrument you wish the sound to occupy, and confirming your selection.

For review purposes, I used a DAC RW4000II drive, which yielded excellent results. The whole process of loading a sample takes a matter of seconds.

Ensoniq have also supplied several banks of demo songs, for you to audition some of the sounds in context, and a section entitled 'Bonus Beats', containing a collection of individual drum and percussion sequences. Using the ASR-10's sequence functions you can arrange and compile these sequences into complete songs. Nifty.

But the last word, as usual, has to go to the quality of the sounds themselves. It's probably true to say that sound libraries produced by sampler manufacturers tend to be slightly 'conservative' in their selection and choice of sounds; after all, they have to cater for as broad a range of end-users as possible. However, the CDR-1 offers so many high quality, instantly usable sounds that any inherent conservatism becomes irrelevant; at the end of the day, the rich strings, dynamic percussion and superb effects (among others) make this CD-ROM an indispensable source of essential samples for any Ensoniq owner. ●

THE LAST WORD

Ease of use	The words 'fog' and 'falling' spring to mind
Originality	Some high points
Value for money	Excellent
Star quality	Something for everyone
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MEMORY

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DSP Effects Library (64 + 64)
100 Performances
10 Songs
Sound Patch Matrix (for DrumKit programming or special sound configurations)

EDITOR

Undo, Compare, and Clipboard features
Graphic Display: 240 x 64 pixels with neon backlight
Clock: Time and Date

SEQUENCER

Events: approximately 250,000
Background Song loading
Realtime, Overdub, Quantize, Realtime Delay, Microscope Editing
Compatible with Standard MIDI file (Atari/IBM compatible)

DISK DRIVER

1.62 MBytes formatted
Loads and Saves: PCM data, Sounds, Songs, Performances, DSP Effects
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Akai DR4d

hard disk recorder

Photos: James Cumpsty

4-track direct-to-disk recording without need of a separate computer. Ian Masterson stands alone.

Getting a format accepted as the latest word in recording technology must be a nightmare for manufacturers. I mean, look what happened to DAT. The perfect digital consumer tape? I think not. But for recording studios and gig backing tapes, it proved to be just what the doctor ordered. The consumer battlefield then extended to take in Minidisc and DCC; while DCC still stands a small chance of being adopted as a new hi-fi format, studios and professional musicians have given it a resounding thumbs down. Such a tacky little format...

Little wonder then that the digital multitrack arena is currently being torn apart by a battle between a number of equally impressive, but incompatible, recording formats. 8-track digital tape? ADAT will do nicely. Or is that Tascam's Hi-8 format? Oh dear. Well, maybe I'll go for hard disk multitrack instead. After all, it may be a bugger to back up, but the editing features remain unsurpassed. But do I opt for something like Cubase Audio, which tacks digital audio onto an established MIDI sequencer, or a proprietary system of the excellent Soundscape variety? And which host computer should I use?

At this point you'd be forgiven for either deciding to take up stamp collecting to escape the whole nasty problem, or simply waving two fingers at digital and sticking to your pancakes of analogue tape. Alternatively, you could take a closer look at Akai's new DR4d hard disk recorder. The R&D bods at Akai are well aware of the problems of digital formats, and have decided to turn the whole thing on its head, asking one simple question: what do people actually want their digital multitrack to be?

The answer, it seems, is a machine that offers the ease of use and accessibility of analogue, the comprehensive editing of hard disk systems, and the simplicity of digital tape. And they want all this in a single box with an attractive price tag. Quite straightforward really. But then, the DR4d is a pretty straightforward machine.

Essentially a standalone 4-track digital system (that means no extra expense for a host computer), the DR4d operates in the style of a glorified analogue multitrack. It isn't a personal-studio-in-a-box, so you'll need a mixer with grouping and buss facilities to get the best out of this machine. But the unit does have both analogue (switchable for -10 or +4dB operation) and digital inputs and outputs, justifying its semi-pro tag. In true Akai style, a host of expansion ports are provided; one for MIDI, one for SCSI-B (used for backing up rather than direct recording), one for a second set of digital I/Os, and one for a SMPTE board. Since you can sync the DR4d to a computer over MIDI or SMPTE, it seems strange that one of these 'options' isn't provided as standard; it would be much nicer if the DR4d could integrate seamlessly with your MIDI system from the start. Tsk, and indeed, tsk.

Although the DR4d is theoretically a standalone unit, the inclusion of a SCSI-A port indicates a possible need for hard disk expansion. And bearing in mind that Akai fit an internal drive of either 213 or 545Mb at the factory only at your request (and extra cost!), you may need to investigate adding extra megs sooner than you think. For example, a 240Mb drive offers approximately ten minutes of 4-channel recording at the maximum 48kHz sample rate (just like DAT, you can record at lower rates of 44.1kHz or 32kHz to increase the time if you prefer). To reach half an hour of recording, you'll need something like 650Mb. But there are quite a few tasty offers to be had on third party hard drives at the moment – the only restriction imposed is on the access time of the drive being used. MO drives are out – the DR4d needs an access time of 19ms or less to function correctly.

One of the DR4d's big selling points is its user-friendly front panel; plenty of big, clearly-labelled buttons and not too many fiddly multifunction parameters help speed things up considerably. The recording process is, as I said above, eerily reminiscent of an analogue machine; you select the input you wish to record from, the track you wish to record to, and off you go.

You'd probably expect a multitrack machine of this calibre to offer a host of editing and locating facilities, and the Akai doesn't disappoint. All location and editing is performed via the single LED-numeric display, which reveals time positions in a variety of formats. You can copy, move, erase or delete any section of a recording, or even insert blank space, quickly and effectively. And if you discover the final edit hasn't quite come out the way you intended, you can always undo it, courtesy of a dedicated life-saving button.

But obviously, any hard disk offers a finite recording time. So what happens when you've finished working on one song and wish to start on another? Where do you store precious data? Onto DAT, that's where – via the digital interfaces. Or onto a removable SCSI format device if you happen to have the SCSI-B board installed. You can even specify particular

sections of a song to be backed up; if you detest your performance in the verse, but love the chorus, this is the way to go about things. Then it's simply a matter of erasing the hard disk and starting afresh. Your previous work can be loaded back into the DR4d at any time.

As far as recording quality goes, the DR4d performs impeccably. No nasty digital 'glaze' so often associated with semi-pro formats is in evidence. As a basic digital recorder, the DR4d is faultless.

However, the editing side of things threw up one point of concern for me. Simply put, the single-line, simple numeric display takes a great deal of getting used to. Having for some time used Cubase Audio with its visual representation of song parts on a computer screen, using the DR4d's editing system was rather like returning to a twin-tub washing machine after using the latest Whirlpool Automatic. Not impossible, just...more 'involved'! Thankfully Akai are already working on computer software support for the DR4d that will ease editing headaches greatly. Then again, doesn't that defeat the object of a

Megabytes and minutes

A GUIDE TO CHOOSING HARD DISKS FOR THE DR4d

You'll have read in the main body of this review that the DR4d employs fast-access hard disks as its recording medium you can choose to have an internal disk fitted to your machine before it leaves the factory, you can rely entirely on external drives; or you can opt for a mixture of both, expanding your storage capacity as demand (and finances) permit. Akai have provided an extremely useful table in their manual (the one we've reproduced below), which allows you to calculate how much recording time you'll get from a certain amount of disk space, according to which sampling frequency you're recording at (32kHz, 44.1kHz or 48kHz). But do remember that you can't record any more than 24 hours worth of material in one stretch, no matter how many disks you use. Tsk, tsk.

Available minutes: Seconds (approx)

Hard disk size	32 kHz		44.1 kHz		48 kHz	
	4 channel	1 channel	4channel	1 channel	4 channel	1 channel
2Gb	132.:50	531:20	96:23	385:33	88:34	354:18
1.2Gb	79:42	318:48	57:50	231:20	53:8	212:35
650Mb	43.10	172:41	31:19	125:18	28:47	115:8
330Mb	21:55	87:40	15:54	63:37	14:36	58:27
240Mb	15.56	63:46	11:34	46:16	10:37	42:31
128Mb	8:30	34:32	6:10	24:40	5.40	22:40
100Mb	6:38	26:34	4:49	19:16	4:25	17:42
88Mb	5:50	23:22	4:14	16:57	3:53	15:35
44Mb	2:55	11:41	2:07	8:28	1:56	7:47

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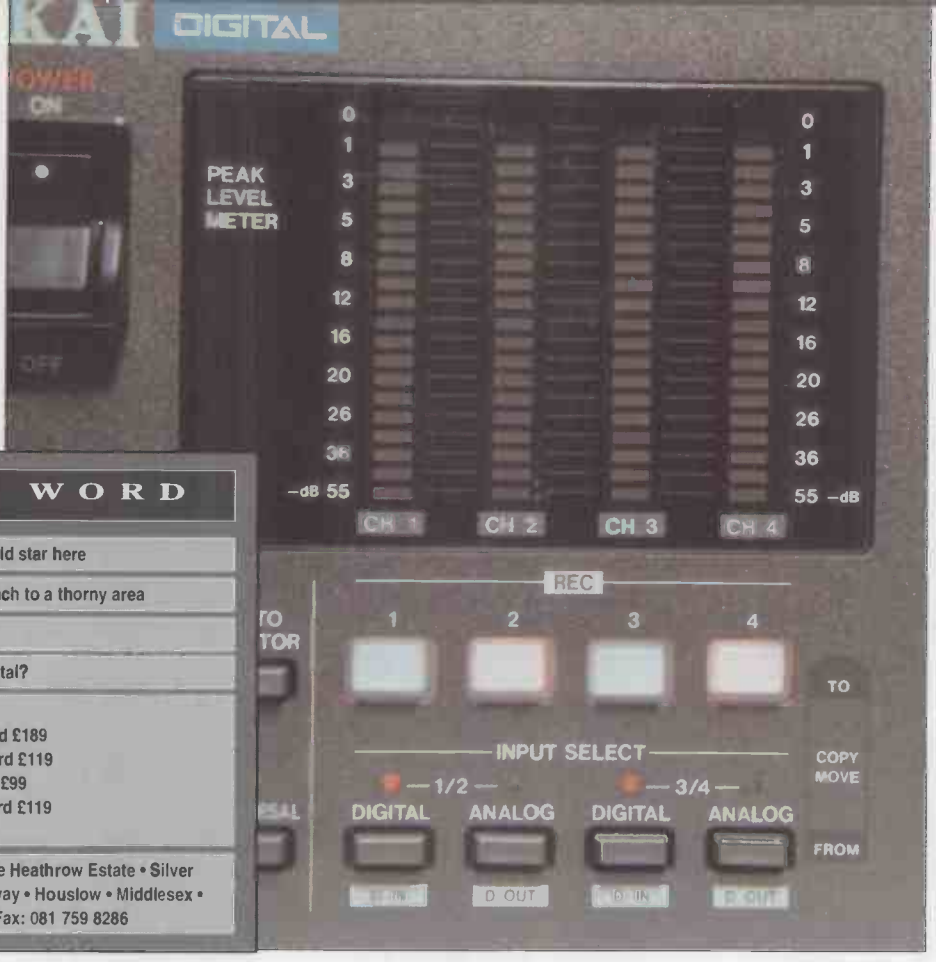
standalone system? I would have much preferred an LCD screen in the style of their S-Series samplers.

You, of course, may feel differently. There is a degree of subjectivity involved in these matters, but what is beyond dispute is that the DR4d is a well-designed, well-executed and professional-sounding machine; it is also extremely good value for money, and goes some way to solving the headaches of 'difficult' digital formats. Personally, all I want now is a DR4d with eight tracks. Anyone for the DR8d? ●



THE LAST WORD

Ease of use	Full marks and a gold star here
Originality	A refreshing approach to a thorny area
Value for money	Better than most
Star quality	A new dawn for digital?
Price	£1599 Inc VAT IB-110D digital board £189 IB-112T SMPTE board £119 IB-113M MIDI board £99 IB-111S SCSI-B board £119 (All prices inc VAT)
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REVIEW

Pulsar

Universal Interface

MIDI lighting controller

"Light up the sky with Standard fireworks". Well, it scans better than "light up your gig with the Pulsar Universal Interface". But you can, according to Ian Masterson, transform your performance with this simple black box...

Photos: James Cumpsty

You have to smile at Pulsar's sense of understatement. I mean, take this Universal Interface thing. Here is a device that can literally take your stage act – be it at a pub, club, hall or stadium – and reinvent it. It'll help you create a lightshow that not only complements your music, but which picks it up, shakes it thoroughly and sends it spiralling out at your audience. And how do Pulsar package it? In a bright pink and green case with loads of flickering LEDs and a badge that reads 'Instant Orgasmic Lightshow'? No. They put it in a black box with no front panel controls, a few simple LEDs and a smattering of DIP switches hidden around the back. Honestly, some people have no imagination.

If you've ever had the briefest of encounters with lighting technology, you'll know that it operates in a world of its own. Music has the MIDI data protocol, lighting has DMX. And, er, PMX. And analogue 10-volts. And mains, for that matter. All quite straightforward in their own ways, but not exactly designed to be mixed. Which isn't great if you're one of the countless musicians or programmers looking to create a lightshow that compliments your music – or, for that matter, which is capable of being programmed on the same sequencer controlling your sounds. Wouldn't it be great if you could 'play' lighting information on a keyboard, record it into a computer, edit it, quantise it and save it on disk the same way you can with a MIDI song file?

A couple of companies on the MIDI circuit (pun intended) have thrown their hats into the ring with various systems allowing MIDI-to-mains interfacing. These units work perfectly at a basic level, but are limited, for example, by the number of lamps you can chain off their mains outputs. To deal with the more professional lighting control protocols, be it straight analogue 10-volts for linking to dimmer packs, or digital DMX for more advanced control, you need to produce a unit that handles lighting information as well as it handles MIDI. In other words, an interface that will take in MIDI, DMX or PMX (Pulsar's proprietary version of DMX) data and translate it into analogue control voltages for linking directly to dimmer and switching packs, which in turn deal with the mains side of things. Enter the Universal Interface.

The simple design of the unit is, of course, both intentional and praiseworthy. For the purposes of this review I used the Universal Interface to control a bank of eight standard stage lanterns from Cubase on an ST, via one of Pulsar's own small dimming packs. This simply involved hooking a MIDI lead from the ST to the Interface's MIDI In (Pulsar also provide a MIDI Thru for chaining to further units), and one of the analogue outputs on the Interface to the dimming pack. A set of digital inputs and outputs for DMX/PMX are also provided, should you wish to control the Interface over that protocol instead.

In common with most of Pulsar's control equipment, the Interface takes its power from the 10-volt supply rail provided over the analogue lines by a dimmer pack. One of the LEDs indicates that everything is healthy in this area, while a further two indicate whether MIDI or digital information is being decoded (the unit automatically recognises which). The rear panel DIP switches are arranged in two banks; the first to select which of the 16 MIDI channels the Interface will respond to, and the second to select which groups of analogue channels over the six available outputs are to be controlled. For example, if you have six dimming packs connected, then you'll generally select all the channels to be controlled. There are also three further switches, the first of which runs a test sequence to ensure your dimmer packs are responding correctly. The remaining two allow you to select whether the brightness of your lamps is controlled by how hard you hit a key on your keyboard (MIDI velocity), and whether the lamps stay on as long as a key is depressed, or stay on until that key is pressed again (known as toggling).

Once everything is set up and ready to rock, you discover that playing a key on your MIDI keyboard causes the lamp 'connected' to that note (via the Interface) to – surprise, surprise – come on. From here on, what you do with your lighting rig is limited only by your imagination; you can do everything from programming simple chase sequences and flashes to complicated crossfades and animated displays. The analogue outputs can even be used to control strobes, multiple light effects, projectors and indeed anything else requiring mains and control feeds. Once you start exploring the options, you'll find it hard to leave your lighting rig alone.

And that about covers it. This is an invaluable unit for anyone wishing to put on a visual show of the more imaginative variety; with a whole bank of these, a stage of any size becomes your oyster. Add to this simplicity of operation and versatility, and you begin to realise that Pulsar have a lot to crow about with the Universal Interface. Not that they would, of course. But I will say this for them – if ever my stage rig gets shot down in a blaze of light, and my MIDI setup explodes in protest, this is one black box I'm taking with me when I abandon ship.

THE LAST WORD

Ease of use	No degrees in button-pushing required
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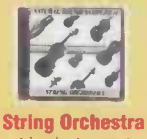

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SS28 Soundtrack 2	SS59 Video	SS90 Minneapolis
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SS31 Special EFX 3	SS62 Electro	

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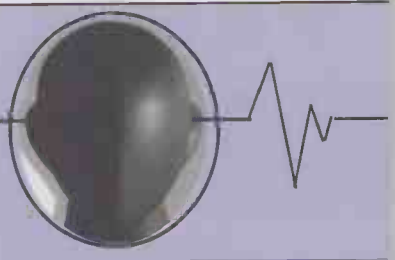

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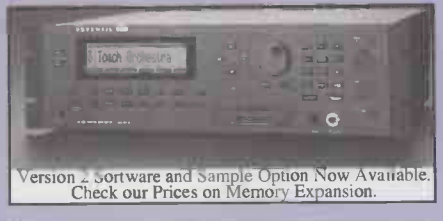

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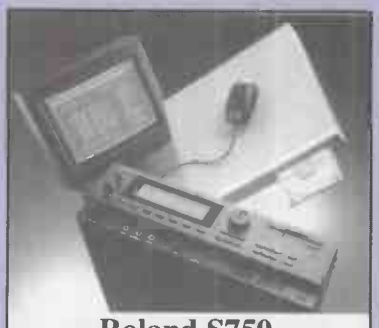

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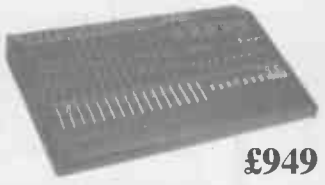

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89 50s SciFi	90 Warm Pad

Photo: James Cumpsty

If it ain't broke, don't fix it. Synthesiser manufacturers seem to have recently adopted the Stock, Aitken and Waterman philosophy of refusing to change an apparently successful formula; if the same combination of ingredients seems to consistently win favour with Joe Public, then why waste time and money finding an alternative? All very well if the recipe really is strong enough to ensure continued attraction, but not so hot when fashions, as they are inclined to do, change overnight. And what about innovation, progress, discovery and development? Sticking to your guns come what may doesn't exactly open up new horizons.

This multiplicity of metaphors is intended to convey my frustration with the major synth manufacturers releasing hordes of units all based around the same synthesis technology - and, even worse, preset sounds. Until recently, General MIDI (a supposedly refreshing set of industry 'standards') has seemed like a convenient excuse for the heavyweights to clone sounds from their existing models – and even each other's – and release them in assorted, but essentially similar, packages. Same sounds, different boxes.

Korg have taken a while to enter the GM fray, and the 05R/W module, on first inspection, appears to be a tentative rearrangement of the technology employed in the rest of their successful 0-series synths. Add a dedicated internal Mac/PC interface (so you don't have to splash out on a MIDI box for your computer should you want to get into desktop synthesis), and bundle the whole lot in a half-rack module with stereo outputs, and you pretty much have it. Or do you? After spending a while with this particularly cute Korg, it seems my initial scathing comments about the cloning of GM are a little hasty. The 05R/W proves that GM modules can have truly creative possibilities – provided they are designed with a little imagination.

I won't bore you with yet another account of Korg's AI² synthesis system – if you desire further information on the delights of having twice the synthesis power of an M1 in each individual program, refer back to MT's reviews of the 01/W, 03R/W *et al.* Suffice to say that the 05R/W features the full welly of its bigger brothers; the only 'cutbacks' concern the lack of individual outputs. Some may feel that routing all eight parts of the multitimbral section through a pair of stereo outputs is limiting; it depends on how much external control you demand in a mix. However, you can at least assign effects to certain programs in a combination and not to others – so not all your instruments are swamped with the gated reverb you use on your drum kit.

The 05 features 100 Combinations and 236 individual Programs, the first 100 being allocated to Bank A for a more traditional arrangement of sounds, and then 136 to Bank G for the General MIDI protocol. The factory presets supplied in both banks are extremely impressive; if you are familiar with Korg's AI² system, then you'll immediately notice that nothing has been spared here. Of course, as with all modern digital synths, the Bank A sounds tend to carry quite a few of the 'look what I can do with all these waveforms' type of sounds (particularly all those huge, sweeping D50-style evolving washes that are absolutely useless in a mix because they take up so much space!), but the box above lists only a few of the real gems that make me unreservedly recommend the 05R/W. Mind you, the presets tend to lose their importance when you consider what you yourself could program using this mode of synthesis...

However, I will confess to being truly surprised that the GM set of sounds amounted to much more than an afterthought. These presets are equally excellent, and some (such as the pianos) outperform their equivalents in Bank A. Korg really have paid a great deal of attention to making the GM side of things shine; and their efforts more than pay off.

At the end of the day, if you buy an 05R/W, you're getting the full processing power of the 0-series instruments, a built-in computer interface, a bonus set of GM-configured sounds and a half-rack unit with one hell of a lot of charisma, not to mention potential. This is no token, or even 'toy', GM unit; for one thing, it has given this reviewer faith in a manufacturer's ability to do something different, even when presented with roughly the same ingredients. The 05R/W isn't particularly new or exciting, but it is an excitingly new way of looking at an existing formula. ●

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Photos: James Cumpsty

Nicholas Rowland examines a budget PA system that could put the front-of-house sound back under your control.

No serious live act these days can afford to be without total control of their own stage sound. It's a lesson often learned through experience, but when your band has sweated blood and cried tears over the creation of that unique melange of grunge rock and jazz sampling sensibility, the last thing you want is for it all to be buggered up by someone on the mixing desk who doesn't know your act... or worse still, doesn't care.

The first approach to this problem is to nobble the resident sound engineers with excessive alcohol and quickly replace them with your own crew – risky and expensive. The second is to rush out and buy one of a growing number of mixer/power amp combinations designed for small scale gigging – definitely not as risky, and certainly getting less expensive as more and more manufacturers begin to compete for a slice of the pie.

Among them we have Peavey Electronics Corp of Meridien, Mass, with their 8-, 12- and 16- channel versions of a stereo mixer/amp combination which has the added luxury of an in-built 16-bit digital FX module.

Under scrutiny here is the 12-channel version (codename XR 1200D) which delivers 300 watts per side into 4 ohms. (As indeed does the 16-channel version. The 8-channel is only rated at 200 watts). Of conventional design the mixer offers no real surprises in terms of layout and design, except perhaps the fact that it can generate two separate monitor mixes.

The first thing you notice on switching the desk on is how noisy it is – not in terms of hissy signal paths, you understand, but in terms of the cooling fans. It sounds as though the only thing preventing it from taking off is confirmation from air traffic control! Of course, an efficient cooling system is necessary in the confined space of the casing, and the sound wouldn't exactly be intrusive during a gig. However, I'd think twice about giving the XR1200D a daytime job in my home studio. All mixer channels are equipped with 1/4 inch jacks and XLRs and can swallow mic or line inputs no problem. Phantom power is also available (all inputs at once) at the flick of a switch.

Channel controls comprise gain, pan and fader plus a 4-band EQ section. The EQ controls are all shelving types centred on frequencies of 350Hz, 60Hz, 15kHz and 2.2kHz. Some might lament the lack of a sweepable midrange, but in practice the controls prove musically useful and provide all the tweakability you'll need for live work. For tweaking further down the line the XR 1200D is equipped with a 10-band stereo graphic EQ covering frequencies 63Hz-16KHz.

There are two pre-fader (monitor) and two post-fader (FX) sends. FX send A is normally routed to the in-built FX processor which gives you a healthy selection of fairly high quality reverbs and delays plus some degree of programmability. This can be bypassed if necessary, and the signal routed to a second external FX processor. Each channel also has an insert point, and there are further inserts both at the input to the graphic EQ and at the input to the amplifiers.

HiSys 2 speakers

For the all important *MT* road test my review model came with a pair of HiSys 2 speakers, a two-way design rated at 350watts (continuous). A titanium compression driver/horn takes care of the top end, while a 15" keviar-impregnated woofer does the business down below.

Fresh out of the box, these speakers look pretty smart, but as they're covered in material reminiscent of Fuzzy Felt I'm not sure how long they'd stay that way. Still, they come equipped with integral stand adaptors plus reliable (though fiddly) Neutrik 4-pin Speakon input connectors, so life isn't all that bad. And, of course, they sound pretty good too, particularly below the stairs.

Hard fax

Mixer channel

Frequency response:	20Hz to 30kHz, +0, -2 dB
Distortion:	less than 0.02 per cent @ 0dB
Impedance:	low 2Kohm/high 8.6Kohms
Maximum gain:	53dB low input to patch send
Nominal input levels:	low - 30dB 70mV RMS/high -16 dBV, 160mV RMS

Amplifer section

Output power:	300 watts @ 4 ohms
Total harmonic distortion:	less than 0.1% 100mV to rater power 20Hz to 10kHz, 4 ohms (typically below 0.05%)
Hum and noise:	83dB below 300W

FX section

Frequency response:	20HZ-11kHz
Signal to noise ratio:	95dB minimum.

Like all good mixers, the XR 1200D includes separate masters for FX send and return and even one for FX pan. You can also apply two FX separately to each of the two monitor mixes – now this is luxury!

If you're going for a stereo mix out front, you'll need an external amp or two to drive the monitors. However, one shake of a patch cable and you can set up the one XR 1200D amp to drive the front-of-house speakers and the other to drive the monitors. (I use the plural here as each amplifier is endowed with two speaker sockets.)

Other ins and outs include headphone socket and connections for recording/playback of tape decks etc, all with associated volume controls.

Metering comprises of a peak LED on each channel plus four-bar graph meters – two for the main stereo outs and one each for the monitor mixes.

Never mind that Mrs Lincoln, how does it all sound? The answer is pretty pokey, as I discovered when using the system to try out a new electronic drum kit for *MT*'s sister magazine *Rhythm* while my accomplices pegged away on bass and guitar. The system certainly delivers a goodly amount of bottom end: we're not talking subsonics here, but it's easy enough to coax a happening low level groove out of this one, so clubbers take note.

If anything the speakers lack a bit of sparkle at the top end (though one man's sparkle is another man's excessive treble).

Whereas the sound is loud the desk itself is commendably quiet – and this time I am talking in terms of hissy signal paths. What's more, there's virtually no mains hum and no nasty crackling or clicks when you switch FX presets. The output from the amplifiers remains clean almost all the way up to number 11.

The ergonomics of the desk work fine too, although I would have liked to have seen solo/mute buttons on individual mixer channels and brighter coloured knobs – if only to cheer up the sound man a bit.

Overall, the Peavey turns in a solid performance. There's power enough to rock the house in your average pub or club, and sound quality is a definite cut above many of the (admittedly cheaper) all-in-one-box systems which seem to be springing up these days.

If you care enough to want to take charge of your sound, then take care to charge over to where you can give this system an audition. ●

THE LAST WORD

Ease of use	Plug in and play
Originality	Not really applicable
Value for money	Given the quality, yes
Star quality	More workhorse than prima donna
Price	XR 1200D £1299 inc VAT HiSys 2 speakers £295 each inc. VAT
More from	Peavey Electronics UK Ltd • Hatton House • Hunters Road • Corby • Northants NN1 71JE • Tel: 0536 205520 • Fax: 0536 69029

Peavey's FX

No rusty spring reverb jobby this – the effects unit is based on a high quality chip offering a more than halfway decent selection of reverbs and delays. These are organised in eight banks of 16 presets and selected using two rotary controls – one for the banks, one for the presets. The selected bank/preset is shown by a combination of LEDs which have to be cross referenced to a grid on the front panel. The first five banks cover small, medium, large and extra large rooms, gated and reverse reverbs. Banks six and seven give you a range of mono, slapback, stereo and multi-tap delays, (including one which appears to have an infinite loop). The last bank – Multi-Effects – comprises what proves to be a rather inspiring bunch of reverb/delay special effects. Maximum reverb time is 10 seconds plus – more than adequate for making that gig in the closet sound like it's coming from the Cavern. Decay times can also be tweaked using the Delay/Tempo control, which, as its name suggests, also allows you to match delay times to the tempo of the music. This feature is not programmable though, and any adjustments will have to be made by ear as there's no visual indication of selected delay times.

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8-bit COMPARISON

	MONO			STEREO	
	AZTECH SOUND GALAXY BX II	CREATIVE SOUND BLASTER VERSION 2.0	AZTECH SOUND GALAXY NX II	CREATIVE SOUND BLASTER PRO II	AZTECH SOUND GALAXY NX PRO EXTRA
No Of Sound Standards	2	2	4	3	5
AdLib	●	●	●	●	●
Sound Blaster Version 2	●	●	●	●	●
Sound Blaster Pro II			●	●	●
Covox Speech Thing			●		●
Disney Sound Source			●		●
FM Synthesiser - OPL2	●	●	●		
FM Synthesiser - OPL3				●	●
Manual Volume Control	●	●	●	●	●
Digital Software Volume Control			●	8 steps	16 steps
Digital Bass & Treble Control			●	●	
Sampling Rate, Recording Up To:	23KHz	15KHz	23KHz	44.1KHz	44.1KHz
Sampling Rate, Playback Up To:	44.1KHz	44.1KHz	44.1KHz	44.1KHz	44.1KHz
Game Port, With MIDI Option	●	●	●	●	●
Dynamic Filtering For Better Sound	●		●		●
CD Audio In	●		●		●
Can Use Microphone And CD During Digital Playback	●		●	●	●
SMT Board For Better Reliability	●		●	●	●
Free Speakers	●		●		●
CD-ROM Interface (AT-Bus)					
Panasonic Interface			●	●	●
Mitsumi Interface					●
Sony Interface					●
CD-ROM Interface (SCSI)					OPTION
Microphone AGC Amplifier	●		●	●	●
Stereo Microphone Input					●
Software Selectable IRQ, DMA & Address Setting Configuration Retained When Power Off			●		●
Mixer Support From More Than One Source During Recording	●		●		●
Built-In Amplifier	●	●	●	●	●
Stereo Lines In And Out				●	●

16-bit COMPARISON

	STEREO				
	AZTECH SOUND GALAXY NX PRO 16	CREATIVE SOUND BLASTER 16 ASP	MEDIAVISION PRO AUDIO SPECTRUM 16	AZTECH BUSINESS AUDIO BOARD	MICROSOFT M SOFT WINDOWS SOUND SYSTEM
No Of Sound Standards	6	2	2	2	1
AdLib	●	●	●	●	
Sound Blaster Version 2	●	●	●		
Sound Blaster Pro II	●				
Microsoft Windows Sound System	●			●	●
Covox Speech Thing	●				
Disney Sound Source	●				
FM Synthesiser - OPL3	●	●	●	●	●
Digital Software Volume Control	●	●	●	●	●
Digital Bass & Treble Control	●	●	●	●	●
CD Quality Sampling Rate, Record & Playback Up To:	44.1KHz	44.1KHz	44.1KHz	44.1KHz	44.1KHz
Game Port, With MIDI Option	●	●	●		
Dynamic Filtering For Better Sound	●	●	●	●	●
CD Audio In	●	●	●	●	
Can Use Microphone And CD During Digital Playback	●	●	●	●	●
CD-ROM Interface (AT-Bus)					
Panasonic Interface	●	●		●	
Mitsumi Interface	●			●	
Sony Interface	●			●	
CD-ROM Interface (SCSI)	OPTION		●	OPTION	
Microphone AGC Amplifier	●		●	●	●
Stereo Microphone Input	●			●	●
Software Selectable IRQ, DMA & Address Setting Configuration Retained When Power Off	●				
Mixer Support From More Than One Source During Recording	●	●	●	●	●
Option For Upgrade To 16-bit Wave-Table Synthesis	●	●			
Stereo Lines In And Out	●	●	●	●	●

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- *Mixer Support:*
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  Card Doesn't Reset on 'Power-Off'
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16-bit STEREO
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REVIEW

Novation mm10-X keyboard

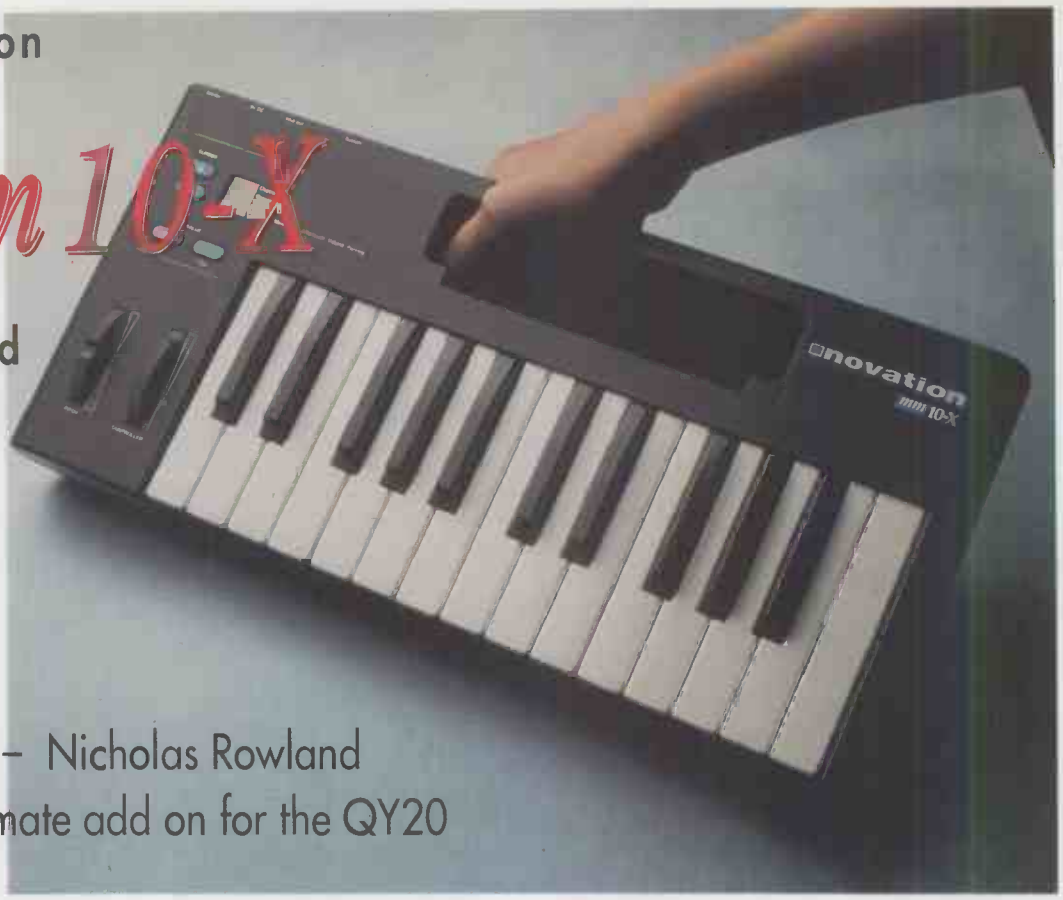

Photo: James Cumpsty

Two octaves to go – Nicholas Rowland checks out the ultimate add on for the QY20

Aeroplanes and buses, shopping malls, scout camps, Club 18-30 resorts, the Lake District... all places steadfastly avoided by MIDI musicians dependent on mains supply and easily embarrassed by taunts of "Give us a tune on yer workstation". All that has changed with products like the Yamaha QY10 Walkstation, a battery-powered multitimbral synth, drum machine and MIDI sequencer in a box smaller than a Gideon's Bible. The only problem, as users soon discovered, was that programming required the patience of a saint.

Enter the Novation mm10, a small but perfectly formed controller keyboard giving you 25 full-size keys, pitchbend and controller wheels, a sprinkling of MIDI functions, plus a slot in which to stick your QY10. Et voilà – the dinkiest workstation on the campsite.

The mm10-X is a new, improved version produced in response to the QY20, Yamaha's new, improved walkstation. What's so new and improved? Apart from an extra X in the title, you get a better display (LCD instead of LED) and the ability to assign different controllers to the mod wheel. The new model also dispenses with the mm10's audio connections which allowed you to listen to the QY10 through the keyboard's internal headphone amplifiers. Not a great loss, methinks.

Like its forbear, the mm10-X's design is very much tailored to the Yamaha machines, although you'll need a special (and rather expensive) plastic adaptor to fit the QY20 into the slot provided. However, don't let the ergonomics lead you into thinking this is only of interest to QY owners. If you're looking for a general purpose MIDI controller keyboard you can stuff down your socks, read on.

As befits a piece of equipment designed for the musician on the move, the mm10-X is powered by six AA 1.5V batteries which the manual insists will enable you to play completely unattached for 100 hours. Rather thoughtfully the mm10-X gives you five hours' warning of the end of battery life as we know it – a battery symbol starts flashing ominously on the small LCD screen.

If you're not playing in any of the places mentioned above and a mains socket is available, you can make use of the optional 9V adaptor. The mm10-X will also pass on power to the QY10/20 without needing a separate 9V adaptor (a combined MIDI/power lead is provided for this purpose.) Apart from MIDI Out the only other hole round the back is an input for a sustain pedal.

As you might expect, the keyboard is non-weighted, but is velocity sensitive. (Aftertouch can be added via the mod wheel, of which more below.) The two octaves are laid out C-C and on power up you'll find that the middle C actually plays Middle C (ie, MIDI note 60). A few prods of the cursor buttons and you can transpose up four or down three whole octaves: a few prods more and you can transpose by single semitone steps as well. These octave shifts are always displayed on the LCD so you should know which octave you're in at any time. (Unless, that is, you're shortsighted or playing in a darkened room, since the LCD is rather small and not backlit.)

If you shift octaves while holding notes down, those notes are unaffected. This means you can play a bass note then quickly skip up the registers and play the lead part over the top.

More prodding of the cursor buttons takes you through the MIDI programming functions: MIDI channel select (1-16); program change number (1-128); and controller wheel assignment which enables you to assign one of four MIDI controllers to the mod wheel (Modulation, Aftertouch, Volume and Panning). The last two can come in quite handy for MIDI-mixing QY20 sequencer tracks or indeed most other multiimbral keyboards or expanders for that matter.

And that's really all there is to it, folks. Grouses? The keyboard itself ain't no Steinway, though I suspect it would loosen up a little more after continued use. Oh, and nothing is saved to memory when you switch off – all settings return to default. Ah yes... and the RRP for the QY20 adaptor is a somewhat steep £14.99, but I've said that already.

Otherwise, this is a reasonably priced and well thoughtout piece of gear which apart from being ideal for the musician with wanderlust could find gainful employment in your spare bedroom... ermm, MIDI programming suite.

Whether you own a QY module or not, just don't let the mm10 X leave home without you. ●

THE LAST WORD

Ease of use	How complicated can four buttons be?
Originality	As original as the original
Value for money	Yes (apart from the QY20 adaptor)
Star quality	Hot to trot
Price	keyboard £159.99 carry case £15.99 AC adaptor £15.99 QY20 adaptor £14.99
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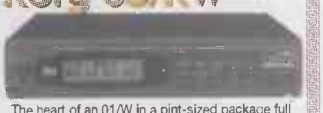

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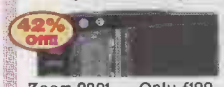

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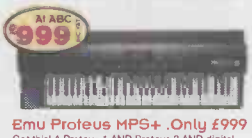

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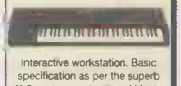

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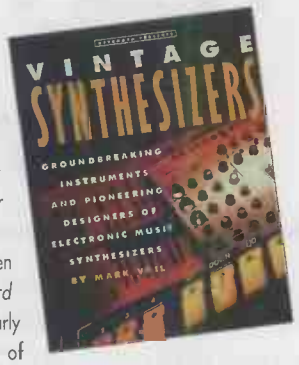

If you're interested in old synths buy this book. It's by no means a complete rundown of every vintage synth ever made; it's not logically planned; some of the black and white pictures are rather murky – but it's absolutely fascinating.

I should point out that if you happen to have been a subscriber to the American magazine *Keyboard* over the last ten years or so, you'll have seen nearly all of this book before: it's largely composed of straight reprints of articles from the magazine. But if not, you're in for a treat. In addition to contributions from Bob Moog on the rise and fall of ARP and Moog, the book features his evaluation of the ARP 2600, the Oberheim SEM module, the Minimoog and E-mu modular synths. Moog also pays respectful homage to some of the other all-time great machines, like the Prophet 5, the VCS3/Synthi AKS, the CS80 and the Chroma, and some specifically American detail on Buchla and EML which is hard to come by on this side of the Atlantic.

A further section is dedicated to classic digital synths like the PPG Wave, Synergy, GDS, Fairlight and Emulator, and there's a rundown of some of the best European analogue designs, like the Kobol, the Syrinx, the Wasp, the OSCar and, of course, the Mellotron in all its tape-driven glory.

But it's not only the success stories that are covered. The book offers due reverential regard to the almost unknowns, the brave failures and the chronic disasters that litter the history of synthesis: the Coupland (like something out of *Invasion Of The Bodysnatchers*); the Con Brio (which went through three incarnations and sold one unit for $30,000); the Kinetic Sound Prism (which also clocked up sales of one unit, this time for $45,000); and other expensive toys like the McLeyvier and Adaptive Systems' Synthia.

And it's not all top-end turkeys either. You could spend a lot less money and still end up with complete off-the-wall oddness – like the Vako Orchestron, the Gleeman Pentaphonic Clear and, of course, the Stylophone. The strange thing is that even if instruments like this don't sound that great, they do, at least, sound *different*. They have character, nostalgic appeal and just plain weirdness, and often appreciate more than the solid, useful workhorses. A few years ago, there were hardly any takers for combo organs, even at bargain prices. Suddenly, as a chapter in the book reveals, they've become desirable and collectable.

Vintage Synthesizers includes a price guide for many classic machines (prices, you will note, are much lower in the States) and this throws up some anomalies such as DX5s being cheaper on the street than DX7s, and Vox Jaguars more expensive than Continentals. It also includes tantalising references to keyboards I never knew existed, such as the Roland VP220, the Sequential Split-8 and the Minitmoog (sic) – a misprint or a rarity? The great thing about this book is that it makes you want to find out.

Peter Forrest

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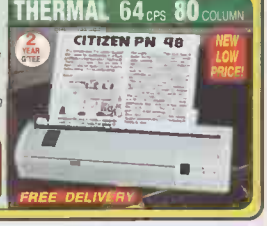

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Demos reviewed by Andrew Jones

Ben Bufton

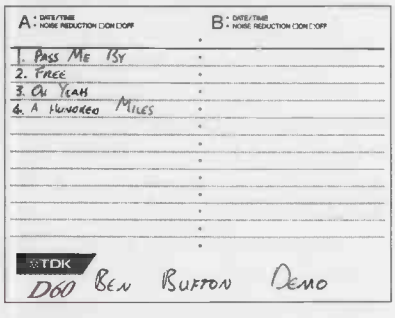
Tascam Porta 2, Alesis Midiverb II, Atari ST running Creator 3.1, Unitor 2, Roland D5, Akai S-950, Alesis SR-16, Behringer Autocom

ONE II WATCH

It's hardly tape cover of the month but sod that, because Ben Bufton wants to concentrate on the music and says "Believe it or not, I'm going to be a record producer one day". Well, Ben, if that's the case you'll be able to afford the better tape copying facilities that you desperately need. It's the old gang – wow, flutter, dropout and hiss – those cheeky chappies producers love to hate.

Well, every cloud has a silver lining and, boy, what a lining – a silver stallion galloping along a beach, through waves of rumble and disruption, the moon reflecting on its glistening back as it heads for the castle of hits, the tower of power... or something.

The post-minimalist demo sleeve



Because, underneath the effects of the poor copy, there is some outstanding music.

Ben is the mastermind, but works with a number of people who co-write the material with him. The best results are when Ben teams up with singers like PX to produce Oceanic-type anthems. The worst is when Ben teams up with himself and a sample named 'Prince' and ends up in self-indulgent city. But even this isn't bad and helps display the wide variety of techniques that Ben has mastered. How much input he has with writing the songs is not clear but they are, in the main, mind-sticking and he adds a further dimension that demands attention, demands action but still ultimately demands a better tape copy.

If producers are the ideas people, then Ben may one day make it to being that slightly overweight character with a pony tail on the other side of the desk in a studio near you.

Contact: Ben Bufton, 081 549 2371 (Kingston)

HenriC

Emu Pro/Cussion; Kawai R-50e; Korg DSS-1, M1, Mono/Poly, Polysix, Poly-800 and Wavestation A/D; Roland JP-4, SH-2 and TR-707; Yamaha TX81Z; AKG K-240-DF; Boss Chorus, DM-300 and Flanger; Crown CSL-460, JBL Control 5 and SB-5; Tascam DA-30; Yamaha MC1602 and REX-50; Apple Mac LC; Opcode Systems Galaxy Editor/Librarian And Vision

ONE II WATCH

French Canadians HenriC produce instrumental electronic music in the vein of Cretu and Jarre – bassy and tinkly sequences with a few layers of stringy-pads on board. Very cleanly produced, competently arranged and every so often a hint of menace (and melody) that separates them from much of the keyboard crowd.

Occasionally though, HenriC enter the domain of the West Coast, Tangerine Dreamesque TV theme – an indestructible, intelligent car/motor bike/helicopter racing across/over an empty Nevada desert, guns blazing – that kind of thing. It sometimes smacks of the mid-'80s, but almost intentionally so – clinical and following the recipe to a tee. Just add visuals.

A few ideas could easily bring this aspect of HenriC's output up to date and push the darker side of their music to the fore where it belongs.

Contact: Gilles Garneau, 400 Rousseau 2, Vanier, Que. Canada, G1M 3M1

Chant

Two Akai S950s, Emu Proteus 1, Korg Wavestation AD, Roland W30, Korg M1, Yamaha TG500 and TX81, Soundcraft 2" 24-track, TAC Scorpion 28:12 desk, Zoom 9010. Other equipment (not owned): Lexicon reverb, Korg DDL, Alesis quadreverb, Yamaha SPX900

A number of influences are reflected in Chant's music and the tracks range from real blinding, stomping epics to lemmings ➤

Furniture Beetles

C-Lab Notator 3.1 software, Unitor II synchronizer, Atari ST, Korg O1W/FD, Akai S950, Gibson Les Paul, Alesis Quadreverb GT, Alesis 3630 compressor, Teac A2340SX 4-track, Casio R-100 DAT, Sony Professional Walkman, AKG D140E mic, Teac 2A 6:4

ONE II WATCH

When Dave Warren is not travelling around the world with his tape recorder grabbing samples, the Furniture Beetles takes up his time as just one of his musical outlets. He has a three-phase musical plan, part two of which is represented on this tape. It's '90s Art of Noise; a blend of quirky samples, well-defined arrangements and liquid swirling basses.

The structure of each track breaks many unwritten rules – the old verse/chorus route taking a back seat – and you'll have to search hard for a hook. But it's this that keeps you interested – a case of 'expect the unexpected'. Occasional pad sounds drift in, and start to take the songs on a harmonic path to Yello oblivion, but then drop suddenly as the piece takes another unexpected 90-degree turn. A break in tradition that sometimes disappoints but always keeps you hanging on.

The best track is 'Malaysia' which opens with the Kuala Lumpur-Bangkok express train helping to build the rhythm, and contains a mass of 'you can almost smell the local cuisine' samples that pitch and yaw into the song like chunks of *Whicker's World*.

All in all, the tape leaves you with mixed feelings. It's not always an enjoyable experience but it certainly *is* an experience. One wonders what phase three will bring.

All three of the Furniture Beetles cassettes are available from Dave Warren, 81 Tamar Rise, Chelmsford, Essex, CM1 5QL at £1.50 each.

Hurrah! Another Demo Forum at the London Music Show, 27th-28th November. See page 13 for more details...

➤ teetering over an abyss that runs straight down the middle of the road. For the latter bring on the original mix of 'Changes', the title and first track on the tape (also available as three other mixes). Well arranged and produced, but often approaching Eurovision territory. However, all three mixes, with the exception of one or two samples, bring the song right up to date.

The best track by far, however, is 'Knock Me Down', an electronicised Jesus Jones smacker with enough variation, hook and energy to keep all but the most paralysed of feet tapping.

Not afraid to swing the mood again, Chant move to a slower style that threatens Enigma with Gregorian samples, but develops into a well-crafted ballad that completes a competent demo. Changes (sorry) in the order are required though.

Contact: Mickey Haughton, 0384 894679 (West Midlands)

DEMOcracy

Brian Marshall

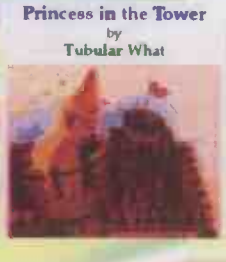
What a fantastic voyage it would be to travel around this man's mind. One instant travelling along on a steady ride to techno-inspiration, then whisked off to the MOR dead-zone until a sudden rush of blood takes you on a B-52 to Schizo-county. A Brian of all trades who never gets home. Don't ever ask him for directions. **Contact:** Brian Marshall, 058479 240 (Worcs)

DVS-X

Australian industrial rave with a Russian vocalist. Only one track, 'Liberator', which exceeds six minutes in length but says everything in half that time. More tracks are needed to explore all the avenues opened up by this unusual combination. **Contact:** Michael Andre Management, 010 61 03 458 4561

24 Satori

Four ambient dance tracks and four ambient, er, non-dance tracks. The up-beat stuff isn't quite up-beat enough but clever sound sketches provide points of interest behind occasionally formulaic pop. The best is 'Little Chill' – moody, deep and less twee than the rest. The "new age" stuff is, well, new age stuff. **Contact:** Steve Gilbey, 0733 241516 (Peterborough)



Tubular What

The poor Princess is locked in the nasty tower and Tubular What have written a song to fill her with glee and cheer. It features a competent dance backing but verges on a novelty record, with aggravating, repetitive samples from *that* telephone call featuring good ol' Di. **Contact:** Intrinsic Technology Ltd, 081 761 0178 (London)

20th Century Box

During time off from the Furniture Beetles (above), Dave Warren produces instrumentals with Chris Piper dedicated to films like Dambuster and Goldfinger. With classic tunes and corny synth lines, the result sounds like a piss-take. Given plenty of mind-enhancing drugs and a few keyboards, Barry Norman could probably do better. **Contact:** Mind Your Head Recordings, 0245 346490 (Chelmsford)

Rebus

A bad recording on computer cassette resulting in a distorted sound that could be loaded into a ZX Spectrum. The music itself is actually quite good – rave with a few novel ideas scattered among the (now) over-used samples, and an attitude screaming to get out from the mirk of distortion. **Contact:** Mark, 0742 874257 (Sheffield)

Fraxis

Yamaha SY77 and SY99; Ensoniq EPS and VFX; Atari running Cubase V3.0; Digidesign Turbosynth, MOTU MM7 mixer; Klark Teknik EQ, Panasonic SV3700 DAT

With an obvious talent just itching to get noticed, Robert Fraxis seems unsure about exactly where he fits in. He doesn't mind re-packaging ideas to give them a new lease of life but is against the "current excessive fad for cover versions". He claims to have developed an original style of music composition in the blurb accompanying his well-packaged CD, but the music is not just derivative, it often defies belief.

What you get is 'Hyperdance', a slice of Jarre if ever there was one – 'Magnetic Fields Part 8' (not on the original album); 'Deja Vu' (mm...), 'Oxygene Part 4' without the catchy bit and 'Azure', an Enya-like instrumental. The track 'Zanzibar', the best on the CD, is a pretty good piece of ambient house, and points along a route Robert should follow. The origins are a little more blurred, so on this occasion you don't find yourself shouting the album title and track of the influencing artist.

All Robert wants is revealed in more of his commentary. This CD is apparently intended as a calling card for record companies, to create interest so he can begin a dialogue and produce dance tracks if that's what they want.

Dialogue? Some hope.

What they'll hear is a CD that tries to combine pastiche and dance/pop tunes and demonstrate musical variety. A pastiche it certainly is – an imitation of musical styles. Unfortunately each track imitates just one style rather than borrowing and combining several ideas. What comes across is the work of a man one laser harp short of a Docklands gig.

Contact: Robert Fraxis, 0483 475826 (Woking)

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New look good, Zoolook bad

● *The new magazine looks great... a massive improvement – and it was already pretty damn good.*

Just a pity you chose to put a tired old git like JMJ on the cover. No he isn't the godfather of rave, he's just an out-of-touch Frenchman with more money than talent.

Yes, I know it's only my opinion... but you're entitled to it.
Dave Beresford
Brighton

➤ Indeed we are, Dave, and how do you know some of us aren't in agreement with it? **NL**

That'll do nicely

● *There is one possible source of help for Sky Jones (see Stamp, Aug '93) and that is a credit union. These organisations allow people to co-operate in solving financial problems without paying for the huge overheads of financial institutions.*

They are usually organised locally – eg, around a particular housing estate – and one of their main objectives is to keep people out of the clutches of the loan sharks. I saw some information on one recently and the APR was about half that of the average credit card.
Johnny Guano
Guanochester

➤ Thanks for the advice, Johnny, though it seems to me that Sky has no financial problems at the present time. Only when he borrows large amounts of money which he'll have difficulty paying back will he have problems – low APR or not. At the risk of sounding like someone's parent, might I suggest he saves the money he would spend on repayments and, when he has enough, buys the equipment he wants without the added cost of interest. It's a novel idea, I know, in this credit-ridden society, but hell, it might just catch on. **NL**

Follow that

● *You probably use keyboard tracking – or its alias 'keyboard follow' – every day. You innocently apply it to the filter to make high notes brighter than low ones, you confidently direct it to the amplifier to raise the volume of the bass octaves, and even people with a sheltered childhood use a delayed version to produce portamento.*

But some of us have dark and sinister tracking desires, with strange and exotic fantasies about patch chords, culminating in an animalistic carnal craving for more, MUCH MORE!

I've tried to suppress it, but to no avail. After using a modern digital instrument for a few days, I couldn't stand it any longer – I just had to lock myself away and use keyboard tracking to modulate the LFO and pulse width on an analogue polysynth. A wavetable helped for a while. I enjoyed orginal sound creation without recourse to keyboard follow on anything but the filter, but then a pretty young parameter corrupted me. Yes, I used keyboard follow to control how deeply the wavetable would be penetrated.

Then it struck me. Why should I be a secret keyboard follower? There must be hundreds of synthesists like me, poised ready to come out of the keyboard closet. Throw caution to the wind! Stand up proudly and tell the world that you want to route keyboard tracking to the LFO frequency, the LFO amplitude, the attack time, the decay time, the release time, the resonance, the number of poles, the pulse width, the key velocity sensitivity, the polyphonic aftertouch sensitivity and the envelope amplitude!

Is there a manufacturer anywhere on earth that can satisfy my desires? Are you man enough to manufacture the machine? Have you got the cash to quell my craving? Stop pussy-footing around and release a real synthesiser – I dare you.
Martin Straw
Southampton

➤ Dark and sinister keyboard tracking ideas? Strange exotic fantasies about patch chords? Help is available for your problems, Martin, but not from synthesiser manufacturers. **NL**

Yes, OK, but...

● *I won't pretend I wasn't taken aback by the new look* Music Technology... *sorry* MT, *I was. But after a few moments getting me bearings, I had to admit I was impressed. In fact, I'd go so far as to say it's the most exciting-looking music (technology) magazine I've seen – and I go right back to the early days of* International Musician *and* Sound International.

I couldn't help noticing that the increase in the number of articles has meant a decrease in the amount of space alloted to them, and hope that this will not mean any reduction in the thoroughness I've always associated with MT.

The layout, the paper and the use of colour are brilliant – in fact, the only thing I disliked was the typeface for the equipment review section, which I find difficult to read. I would, of course, also like to see more pages in the magazine – even if this means an increase in price. Any chance?
Darren Chapman
Darlington

➤ In line with our policy of always treating more favourably requests from those who lavish praise on us, Darren, we'll see what we can do. **NL**

Bent keyboard, anyone?

● *I have just completed an A-level course in Design & Technology in which my major project was to design and manufacture a remote MIDI keyboard. Due to lack of finance, I have been unable to complete either the keyboard mechanism or the MIDI interface, although I have hard wired all the controls from the rotating arm.*

I am writing to you to seek advice on the possibilities of further development, with regard to companies I could write to.

Any possible assistance or furher ideas would be gratefully received.
Ross Barker
Rustington
West Sussex

➤ It's a fascinating-looking instrument Ross, and one which clearly warrants the attention of the keyboard/synth manufacturers. Presumably, the tutors on your course have advised you on the subject of patenting (but if they haven't, look into this before discussing your design in too much detail with anyone).

In the meantime, if any enterprising companies or individuals would like to contact Ross, we'll be happy to put you in touch. **NL**

Saints alive

● *Re: Toys R Us article (August '93). I hate to disappoint the Utah Saints, who claim Sunscreem play live, but the fact is during their support tour with Jesus Jones the only thing plugged in was their DAT machine – FACT. Don't get me wrong, I love technology, but calling the 'live' singer redundant leaves me spinning a wee bit.*

For a start, the Saints would have nobody to STEAL from if the live singer, such as Kate Bush and Annie Lennox, were as redundant as you call them.

In addition, we all know that these beautiful women of song outsell, and will, I know, outlive such acts – and they certainly don't worry about their albums 'crossing over'. Crossing over? From where to where, exactly? - music is music. You show your own selves up.
Red
MCA Records
London

➤ I seemed to lose your drift towards the end there, Red, but it wasn't a moment too soon.

As you're so keen on facts, let's clear a few up... No one made any reference to Annie Lennox or Kate Bush being redundant as singers. Utah Saints handed over a large proportion of their royalties for the privilege of using the Bush/Lennox samples – no theft took place. And some bands simply prefer to utilise the available technology where vocals are concerned, just as they do with drums, guitars, strings, etc etc etc...

As regards Sunscreem's use of a DAT machine, perhaps they would care to comment? **NL**

Raving

● *This letter is a sort of reply to some of Jean Michel's thoughts in the August ish of your mag...*

Hi man, couldn't agree more with you about the need to communicate with other people. You bet it's important. It's essential for survival. But I gotta disagree with you about the rave scene. Challenging the formats of 'the industry'? Who are you trying to kid? I'm not taken in by any of that jive, are you? It's not so much music, more a conveyor belt. I'm sure you get pressurised to 'move with the times', but life's a bit different down here at the bottom end of the shit heap. It's more a case of "like it or lump it, Sonny Jim, 'cos that's all there is".

Basically, I see the rave thang as an artefact of 'the business'. It seems like little more than a way of giving the tired ol' disco/dance scene a new lease of life. Surely the oompah brigade have made enough dosh to retire on by now. I point my finger at the promulgation of ready-made sample CDs aimed at turning every would-be synthesist into yet another identikit raverboy.

Do I see a production line staring me in the face, or what??? Yep, it's that ol' copycat syndrome again and again and again... I rest my case. (We could blame Juan Atkins for all of that, but it probably wouldn't be fair, fair, fair...)

Look, I'm not getting at you for not seeing it. Just pointing it out. From a worker's point of view the whole thing smells of compulsory conscription with a welter of little Hitlers (and now 'liberated' Hitlerettes) on what should or should not be, along with the usual trick questions at the review board to fuck over anyone going for CO status. Very much a case of "do this, do that, obey orders and don't get out of line or set your sights too high, Sonny Jim".

A far cry from where I set out to get to when I dropped out of college 20 years ago. More like being hi-jacked by fascist bastards if you ask me. And about the reverb... I don't give a damn if it can simulate 1001 different environments and Arabian Nights, I'd just settle for one that works.

That life on the dole (about all I've ever known) brings a very different perspective than that of life in a chateau, I'm in no doubt, and I've got a spare pair of shoes if you wanna walk in 'em. Perfectly safe, no veruccas!

Well that's about all for now, folks! Shoes for the living, shoes for the dead. But above all... Shoes for industry!
Rory Cargill
The Invisible Band

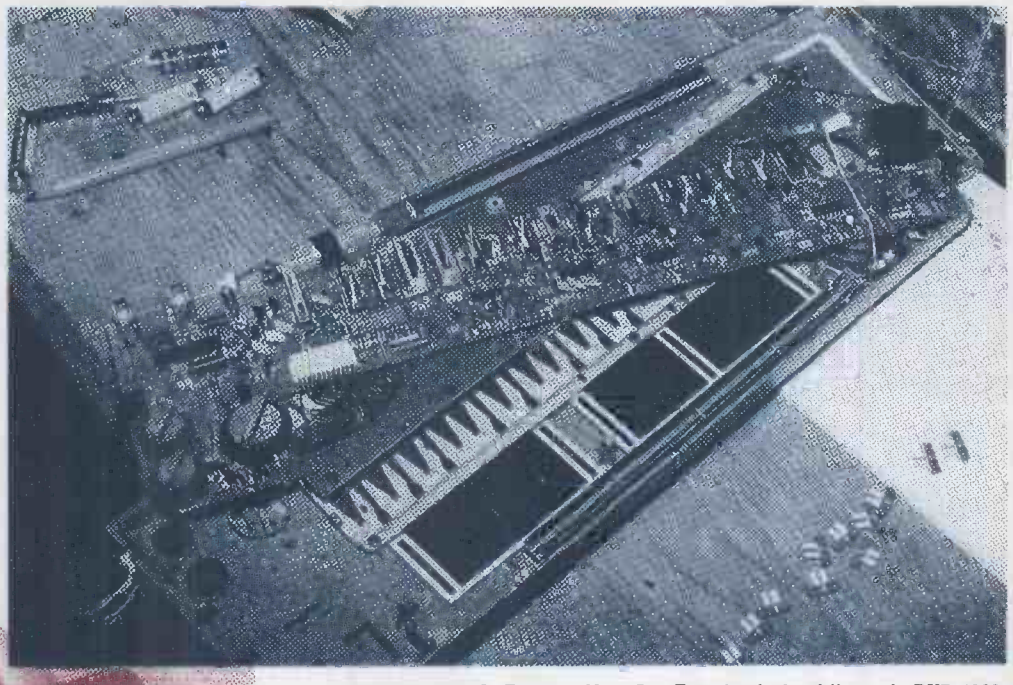
➤ Interestingly, Rory, the word 'rave' still retains it's other, original meaning.

Tell me, do they organise trips around your home planet? **NL**

Opinions expressed in readers' letters are not necessarily those of the Editor, who cannot be held responsible for their contents and reserves the right to abbreviate letters where necessary.

That was Then

"History is bunk"
- Henry Ford



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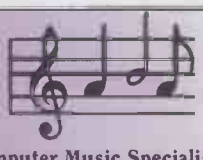

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MTease

'Tease me, tease me, tease me' sing Chakka Demus & Pliers. All in good time, gentlemen, all in good time. First of all, let *Rohan Heath* of the Urban Cookie Collective face the fax.

URBAN DEVELOPMENT

Although 'The Key, The Secret' – which has recently peaked at No.2 – is Rohan's first hit, he's been a part of the Manchester dance scene for some time. Last year, Urban Cookie released two singles on Phonogram, 'Pressin' On' and 'Lucky Stars', before the name change and a move to Pulse 8 Records. This followed stints for Rohan with Together – 'Hardcore Uproar' reaching No.12 in 1990 – and A Guy Called Gerald. Session keyboards for Yargo complete the impeccable Manchester credentials, but he's just returned from an extensive US tour at the keys with reggae legend Eek-A-Mouse. A follow-up to 'The Key, The Secret' is due mid-October, and in the meantime the Urban Cookie Collective have started work on their debut album.

1 What was the first synthesiser you ever played?
"Wasp."

2 Who is your favourite musical pioneer?
"George Clinton/Funkadelic/Parliament."

3 What's the difference between Take That and Stravinsky?
"Take That don't appeal to me. Stravinsky was a genius."

4 What's the difference between a drum kit and a drum machine?
"You can fit one in your pocket. Guess which."

5 Playing live: why bother?
"It ensures you keep your ability up and keeps you on your toes."

6 Which record says most to you about music technology?
"Brian Eno and David Byrne: My Life In The Bush Of Ghosts."

7 What does the phrase 'multimedia' mean to you?
"Don't know!"

8 How do you react to hearing a sample of your music on someone else's record?
"Great! It shows they liked what you originally did."

9 What is the next piece of equipment you would like to buy?
"Roland MKS70."

10 Will technology become invisible?
"No, just smaller."

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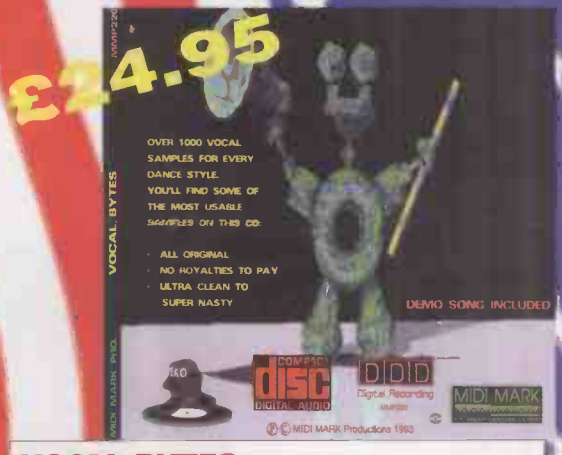

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grief

Plagued by technical and musical conundrums? Bring out your dead! Bring out your dead! Write to Grief, MT, Alexander House, Forehill, Ely, Cambs CB7 4AF.

Q Some time ago I acquired a second-hand Minimoog which I connect to my MIDI setup via a Pro 2 CV/Gate converter from Kenton Electronics. This drives two separate synthesisers on different MIDI channels.

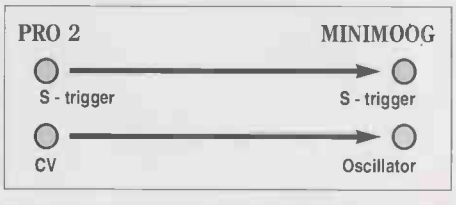
My MIDI keyboard/sequencer plays the Minimoog but not the same as when playing the Minimoog keyboard. The keyboard tracking switches don't have much effect and the glide doesn't work at all via MIDI.

Kenton Electronics will adapt the Minimoog for MIDI control. You can't, as far as we know, make the same adjustment to Gary Numan

Before being able to play the Minimoog I have to 'align it' against the MIDI keyboard by playing, for example, C1 on the Minimoog followed by C1 on the MIDI keyboard – or else a different pitch may be triggered, transposing the whole sound.

Is there a way of playing the Minimoog via MIDI using the Pro 2 just as if it were being played from its own keyboard? Having had some electronics experience I'd be able to carry out the work if you tell me how.

The Minimoog is connected to the Pro 2 as follows:



I also tried the Aux 1 and Aux 2 outputs with the Filter and Loudness inputs on the Minimoog and it worked okay. But the most important thing is making it work like the Minimoog's own keyboard – so controlling the VCF and VCA isn't my main concern.

I also have a Roland SH-101 which is connected to the second output of the Pro 2. The functions seem to work fine except one: by using one of the Aux outputs to control the Modulation input of the SH-101 (Kenton Electronics sells a minor modification for the SH-101 which adds external modulation and VCF control inputs) I only get modulation for a short while so I only get vibrato for half a second or so. What's wrong?

Hallvard Tangerass
Oslo, Norway

A *The Minimoog has many shortcomings in the way that it implements the control sockets – you seem to have discovered most of them! Here's a list: The 1. CV input does not drive the keyboard tracking switches.*

2. CV control has been placed after the glide circuitry so this won't work.

3. The voltage sent to the Minimoog from an external source is added to the current keyboard note. Bad enough, but this has a knock-on effect – see 5.

4. Even if the Minimoog has been modified to get around the problem in 3, zero volts plays an F rather than the more usual C.

5. The keyboard on most synths – including the Minimoog – has a circuit which 'remembers' the last note played (so that it knows where to glide from). However, the note voltage is stored in a capacitor which gradually discharges over a period of minutes so the voltage added to the CV converter output is also affected and this can cause a drifting effect.

6. It is not exactly the 1-volt-per-octave standard.

Kenton has fitted 'proper' control sockets to Minimoogs but the process is quite complex – it's not just a case of adding a few wires. The company would be happy to send you details but says it's not really in a presentable form.

As you have pointed out, Roland made a far better job of the control sockets on the SH-101. Your problem with the modulation sounds as if you have the Aux pot set too high. The one driving the modulation must be set to minimum (ie, fully anti-clockwise), as overdriving can cause the modulation to stop. If that doesn't solve the problem, check your installation. Kenton has fitted the modification to many SH-101s without problem.

And if all else fails, you can reach Kenton in the following ways – Tel: 081 974 2475. Fax: 081 974 2485. **IW**

Q I'm a relatively young hi-tech muso interested in dance, ambient and new age music. Until recently I had just been using my old Amiga A500 to sequence a couple of synths and an 8-bit sampler (you know, the internal thingy) but now feel it's time to get more serious. Perhaps you could answer some questions I have...

1. I have composed several pieces on the Amiga that I wish to keep. Can I send MIDI data from my Amiga while it plays to a Mac Plus and get the Plus to record in Cubase?

2. Does the Cheetah SX-16 sampler have digital outs? Can you expand it to more than 2Mb? Why do people slag it off when it seems to have a great-looking spec? Could an S1000 load and play SX-16 samples? Can I get sample editing software for it on the Mac Plus?

3. When you change patches on the Alesis Midiverb does it click? In other words is it a smooth progression from patch to patch?

4. Are there Mac editors/librarians for the Kawai K1, Roland Alpha Juno II, Roland SH101 (only kidding!), and Alesis Midiverb?

5. I have a view to expand my home setup and I really like the Mackie 1604 mixer, but at £899 it's a bit steep. Could you recommend another mixer with roughly the same spec?

6. As I can't afford an LC III or Quadra, can you see me running into any problems using a 68000-based Mac Plus with 4Mb of RAM and a 40Mb hard drive? I'm a bit concerned about speed as the Plus tends to slow down screen updates when using big applications. Would the machine's processing capability pose any problems for Cubase?

I know there are a lot of questions but I fear I will be totally lost if you cannot answer them all. It's a big step I'm making and I don't want to make any mistakes! Thanks.

Bryan Ross
Glasgow

A *Well, Bryan, m'boy, that is a lot of questions. Let's hope we can squeeze in the requisite number of answers...*

1. You don't say what Amiga sequencer you're using but as long as it supports MIDI Clock then yes, you can record your songs on Cubase. You could also transfer data via Standard MIDI Files but you'll have to get a DOS disk reader such as Messy SID or Cross DOS for the Amy, and Access PC or DOS Mounter for the Mac – unless you want to fiddle about with Apple File Exchange.

2. No, the SX16 doesn't have digital outs; no, you can't expand it to more than 2Mb and no, I don't know why people underrate it. Perhaps it's because it's a fairly basic machine which had reliability problems and was a reasonable rather than outstanding performer. But it can play stereo 16-bit samples and it's quite good value for money.

As regards S1000 compatibility – Akai machines cannot play SX-16 samples, but the SX-16 can play samples recorded on an S1000. It does support MIDI Sample Dump standard so you should be able to use it with a generic sample editor such as Steinberg's Avalon – but I have heard of problems trying to download samples from an SX-16 in this way, so no guarantees, I'm afraid.

3. Changes from some patches are smoother than changes from others. Try it and see.

4. There are few dedicated editors for the Mac, but if you have a lot of synths a

universal editor such as Opcode's Galaxy is probably your best bet. Contact MCM (081 963 0663) for details.

5. You generally get what you pay for – even in the music biz. Mackie mixers are generally quoted as being 8-10dB quieter than those of a similar spec/price. See what you can haggle your dealer down to. He may have a part-ex or ex-demo machine he can do at a better rate.

You could look at the Mackie 1202 with an RRP of £355, but of course, it doesn't have all the 1604's facilities. That said, Marcus Studios in London have just bought one to record vocals.

6. Which Mac to opt for? Weeeeell, the Plus is really rather long in the tooth now and all new program development is concentrated on the 030 and 040 processors (even though the developers will have an eye to backwards compatibility).

Most new progs are developed for use with System 7 and I'd hate to use that on a Plus! The latest versions of Cubase will run on the Plus and SE but Steinberg don't recommend them. 'Fraid I couldn't recommend one, either. But keep your eyes on Mac prices because Apple reduces them every week. The latest blitz offers an LC II 4/80 with a colour monitor for £699.

I'm afraid my advice to people with a (very) very low budget is to save until they can afford a reasonably-spec'd computer. If you're really strapped for cash, why not check out the Atari STs? They are cheap (particularly second-hand) and have a greater range of music software than all the other computers put together. This includes Cubase and lots of individual instrument editors. But the sooner you get rid of the A500, the better! **IW**

Q Please could you give me details on how to make my own fanzine or magazine? Also could you have some of my fave bands in your magazine, such as Talk Talk, OMD and New Order, and the instruments they use?

Trevor Anveyingeld
London

OMD (1986), New Order (1989) and Talk Talk (1986) – Trevor's faves.

A *Your own magazine? You're not going to launch a serious rival to* MT, *are you? If so, we're not telling you how. But if it's a low-budget fanzine you're after, all you need is a typewriter, a stapler, scissors (for stealing photos from magazines etc.) and access to a photocopier. Many a great punk fanzine was launched by these means alone. Then you can get a cult following, invest in an Apple Mac with QuarkXpress software, and sell-out to a multinational publishing corporation. Finally, take over a national daily, embezzle the pension fund and jump off a yacht. Easy.*

Meanwhile, turn to page 32 to catch up with Paul Humphreys and Martin Cooper, late of OMD. Further information on the bands you mention can be gleaned from our back issues, available from Lisa Watts, Mail Order, Music Maker Publications, Alexander House, Forehill, Ely, Cambs CB7 4AF. Issues are £2.50 each including p&p. Try the following: OMD – Music Technology *December 1991 and December 1986,* Electronics & Music Maker *June 1984 and December 1981; New Order –* Music Technology *April 1989 and* Electronics & Music Maker *March 1985; Talk Talk –* E&MM *March 1986.* **PW**

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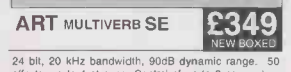

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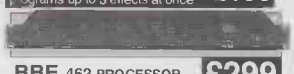

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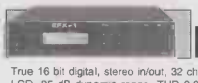

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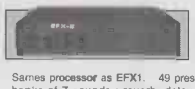

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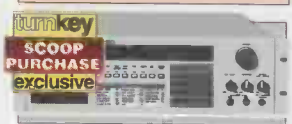

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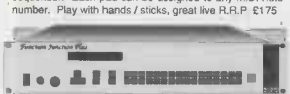

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VINTAGE

Despite the furious pace of technological upgrades, the world's leading musicians still look to the same classic synths for the sounds they need. Analog technology is too expensive to build nowadays, so the second-hand market is the only option. Turnkey takes the mystery and risk out of acquiring a classic synth. All the products in question are guaranteed, and each one represents a sonic legend that will last for ever. Offers subject to restricted availability!

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Voyager
Transmission (VC/Union Recordings)

On CD, this 'EP' includes two extra tracks worth 37 minutes and 55 seconds between them, and one of them, 'Arrival', clocks in at 20 minutes of open, fluid hisses and drones to match the album-length excesses of yer Tangerine Dreams any day. But it should come as no surprise to discover that the artist responsible is the black *doyen* of the UK acid house scene name of Tony Thorpe, responsible for club-friendly Moody Boys and Underworld releases and steeped in the pre-house traditions of experimental British funk (he was once on the same label as 23 Skidoo).

The acid tradition continues in spite of the sampler, resting on analogue laurels and a gorgeously soft bed of sawtooth and sine waves. Voyager's music is pure in that sense, an escape to an abstract yet familiar place with no final demands or other nasty reminders of home.

Ultramarine
United Kingdoms (Blanco Y Negro)

For a piece of "techno-folk", this is one hell of a funky album, and proves beyond doubt the theory that technology becomes invisible in proportion to the sophistication of its design and use. The sampler, in itself a dumb tool until fed, is the transparent expeditor of Ultramarine's eclectic musical framework, plundering styles from urban America to rural England. And so rich is the blend that only the surface coating of analogue bleeps reminds you that the machines are, in fact, in the driving seat.

A track called 'English Heritage' sums up the cultural reference points which abound in *United Kingdoms* and *Everything Is Now* may be celebratory, but by definition the sample is still a pocket of reality stowed away in the mix. *Transmission* banishes even this: it's acid; it's a voyage; it's a trip. PW

the irony of high-tech-meets-folk, and yet simultaneously reveals the flexibility of the chip: given the musical archives of the world at your fingertips, there's no reason why all kinds of incongruous hybrids shouldn't come into being. In a way, the continuing survival of the basic four-on-the-floor dance format which still underpins experiments of this kind shows what a robust style it is. Hence the reckless application of terms like ambient house to Ultramarine's music, notwithstanding the presence of ex-Caravan flautist Jimmy Hastings and rustic rocker Robert Wyatt himself on this album, singing – yes, I think I can use this word – songs. And yet, as I said, it's still damn funky. PW

Bassheads
C.O.D.E.S. (deConstruction/Parlophone)

Bit of a Wirral conspiracy developing in this month's *MT*, what with The Listening Pool on page 32 and now this superb 'electronic listening' album from duo DJ Desa and Nick Murphy, who hail from the same side of the Mersey. Right on cue, Bassheads combine a chill-out mentality with lengthy instrumental pieces and an averred admiration for Pink Floyd, without so much as a post-punk blush. Along with the Artificial Intelligence series on Warp, *C.O.D.E.S.* provides further evidence that the predicted maturation of dance forms into solid albumsworth of more melodic fare is well underway.

In truth, there's little to demonstrate very much Floydiness, save the gradual development of the intros, and the faint

The Drum Club
Everything Is Now (Big Life)

A dry, staccato recording which emphasises the myriad percussion sounds that no doubt constitute the necessary credentials for entry into the Club. Much fun is had with dub echo, too, and a sense of humour and eccentricity prevails which has something in common with Ultramarine's more bucolic pastiches.

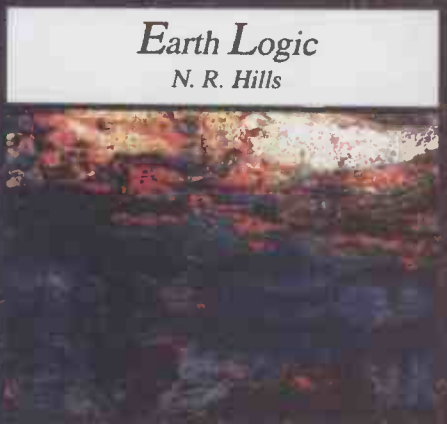
The musical freedom afforded by the sampler is also responsible for the rise of tribal trance, wherein the organic element is provided by more ethnic archives. And Drum Club retain an even stronger dance element, in keeping with their club proprietorship at The Sound Shaft in London, yet also some typically understated guitar courtesy of MIDI Circus guest Steve Hillage and some more guitar from Emma Anderson of Lush. I don't know... Caravan, Soft Machine, Gong... back to the planet, I guess. PW

MT RECOMMENDED

N. R. Hills

Earth Logic (Celeno)

Nigel Hills ploughs his own new, not to say middle, age furrow; this is an intriguingly fragmented series of keyboard instrumentals. Available from electronic music retailers GET (081 339 9965) and Ultima Thule (0533 854545).



Various Artists

Apollo (R&S)

Ambient compilation from Ghent's techno label, pulling together much dub and wash from, among others, Juan Atkins, The Orb and some character called Aphex Twin.

Dead Can Dance

Into The Labyrinth (4AD)

Possible subtitle: Together In Eclectic Dreams. A mournful collection of vocal samples from rustic European sources, set against a backing as sparse as the Irish countryside in which it was conceived.

Various Artists

Manifestation - Axiom Collection II (Axiom/Island)

Axiom is bassist/producer Bill Laswell's label in New York, dedicated to First World/Third World hybrids and representing a more developed global sensibility than even Peter Gabriel's Real World experiments. This compilation features fine tracks by Material (Laswell's 'supergroup'), Nicky Skopelitis and Mandingo in particular. Strong hip-hop undercurrents and loads of muso-applied technology.

Code

505 345 675 delta 9 (Remote Sentry) EP

We don't normally include EPs, but this is such a corker we couldn't resist. The title comes from the grainy NASA-style sample which heralds a beefy soup of fat basslines and crackling digital percussion and guitar. Available from Remote Sentry Records, Masons House, 8 Richmond Gardens, Bournemouth BH1 1JE.

Electro Assassin

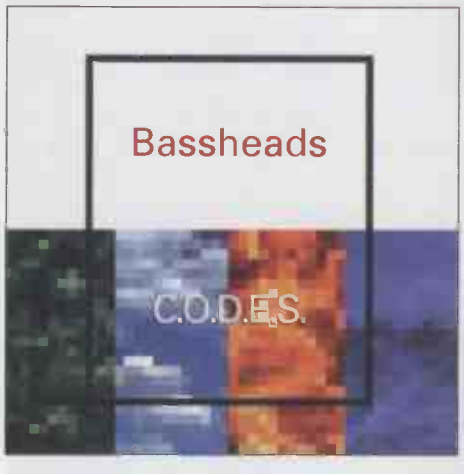
Bioculture (Hyperium)

Industrial-strength electronics with a strong Germanic flavour, but our accompanying letter was from someone called Kevin, not Klaus. It also had "big violence technofetish" emblazoned on the headed notepaper. Call 081 341 7584 for a fix.

Fantazia

Twice As Nice (Creation Entertainments) video

The third in Fantazia's glimpses of life after dark for the armchair raver, introduced by *The Word*'s Dani Behr and filmed at the organisation's second-birthday shindig in Milton Keynes. Complements the *Twice As Nice* double album.



resemblance to 'The Great Gig In The Sky' from *Dark Side Of The Moon* in those passages which float a female chorus over steady piano chords. Progressive rock proper is actually being kept alive by Magellan and a host of other bands who are currently reacting to the minimalist gestures of the dance boom by flouting all the virtuosity they can muster in an attempt to sound more like Yes than Yes. Genuinely original artists like Bassheads – or their marketing team, at least – can namecheck whoever they like, but dinosaurs are better left to Steven Spielberg. PW

On video

The Irresistible Force

Flying High - With Mixmaster Morris & The Wisemen (Telstar Video Entertainment)

The Irresistible Force's *Flying High* really is out of this world. I've rarely seen anyone get closer to simulated 3D on just a flat screen alone, and the graphics have a beautifully music-sync'd rhythm and flow. There are some truly original ideas in this mixture of fractal overload, morphing and splicing, and the levels of movement, layering and complexity are a mindblower. Mixmaster Morris lays down the ambient soundtrack, and although not his finest work it does still provide, in the words of the sleeve, "a 1.4 Gigatherms chill-out factor". Just try watching it with the glasses from *Cyberdelia* (reviewed last month)...

The TV screen is often a restriction for the prodigious talents of artists like The Irresistible Force, but much of your enjoyment depends basically on your social life. If you don't club or rave regularly, then buy this, turn on, tune in and freak out. Although anyone used to the multimedia sensory overload that is much of the current rave scene may find themselves occasionally twiddling thumbs, *MT* readers of any pursuasion can amuse themselves integrating video action from *Flying High* into their own audio-visual work ...it only takes a mixer. Bedroom multimedia? It's here. **Bruce Hepton** ●

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- **Dieter Meier** – Yello's mouthpiece
- Special preview: **E-mu's Morpheus** – synthesis moves on
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ELECTRO COMP poly box, £200. Paul. Tel: 041 772 9680.

EVOLUTION EVS1, £150. Casio CZ1000, £100. Fostex X15, £50 or swop all for Yamaha TG100. Gajits Sequencer 1 Plus, £20. Stereo Replay (for use with Sequencer 1 Plus sampler), £40. Tel: 0748 825481.

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KAWAI K1R rackmount multitimbral synth, excellent condition. Gary. Tel: 0702 349544.

KORG 01/W FD excellent condition, home use only, additional sound cards, £1200. Tel: 0668 7344 (Northumberland).

KORG 01/W FD boxed as new - never gigged, loads of extra sounds, £1200 or swop for Yamaha SY85 plus cash. Shaun. Tel: 0482 883303.

KORG EX T3 professional synth as played by Rick Wakeman. Excellent condition, 300 sounds plus loads more on disk. Includes stand and flightcase, £950. Tel: 0202 734415.

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KORG MS10 analogue synth, £100 ono. Sean Morris. Tel: 0782 343236.

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The Warehouse contains *MT*'s readers' ads – the largest repository of high-tech bargains in the Northern Hemisphere. Some of the ads are free to place; others are 'priority' ads for which you pay to jump the queue – next issue guaranteed. Priority ads appear in bold.

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- That's it

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The Warehouse is for private vendors **only**. Business vendors must use the classified ads at the back of *MT*.

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KORG WAVESTATION EX , £950. Proteus II, £525. Yamaha TG500, £750. Tel: 0248 713763.

MUCH SOUGHT AFTER Prophet VS, excellent condition, good flight case, updated ROM, need quick sale, £950. E drum pads, snare, kick plus 3 toms, no brain, £450. Rob. Tel: 081 761 8013.

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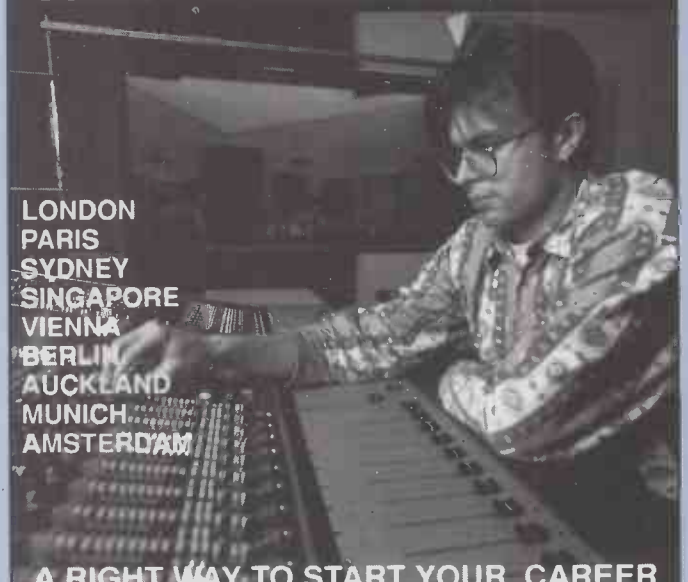

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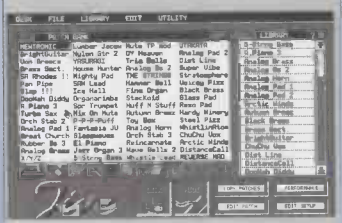

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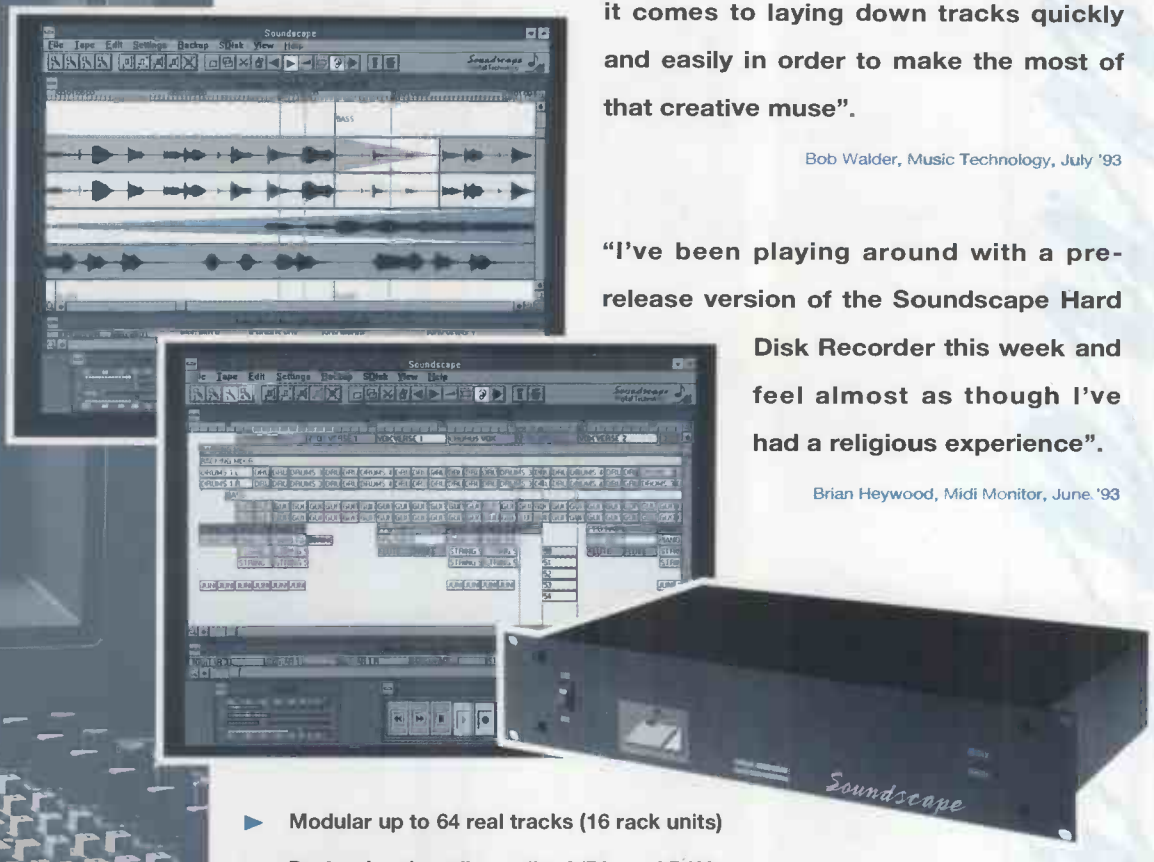

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