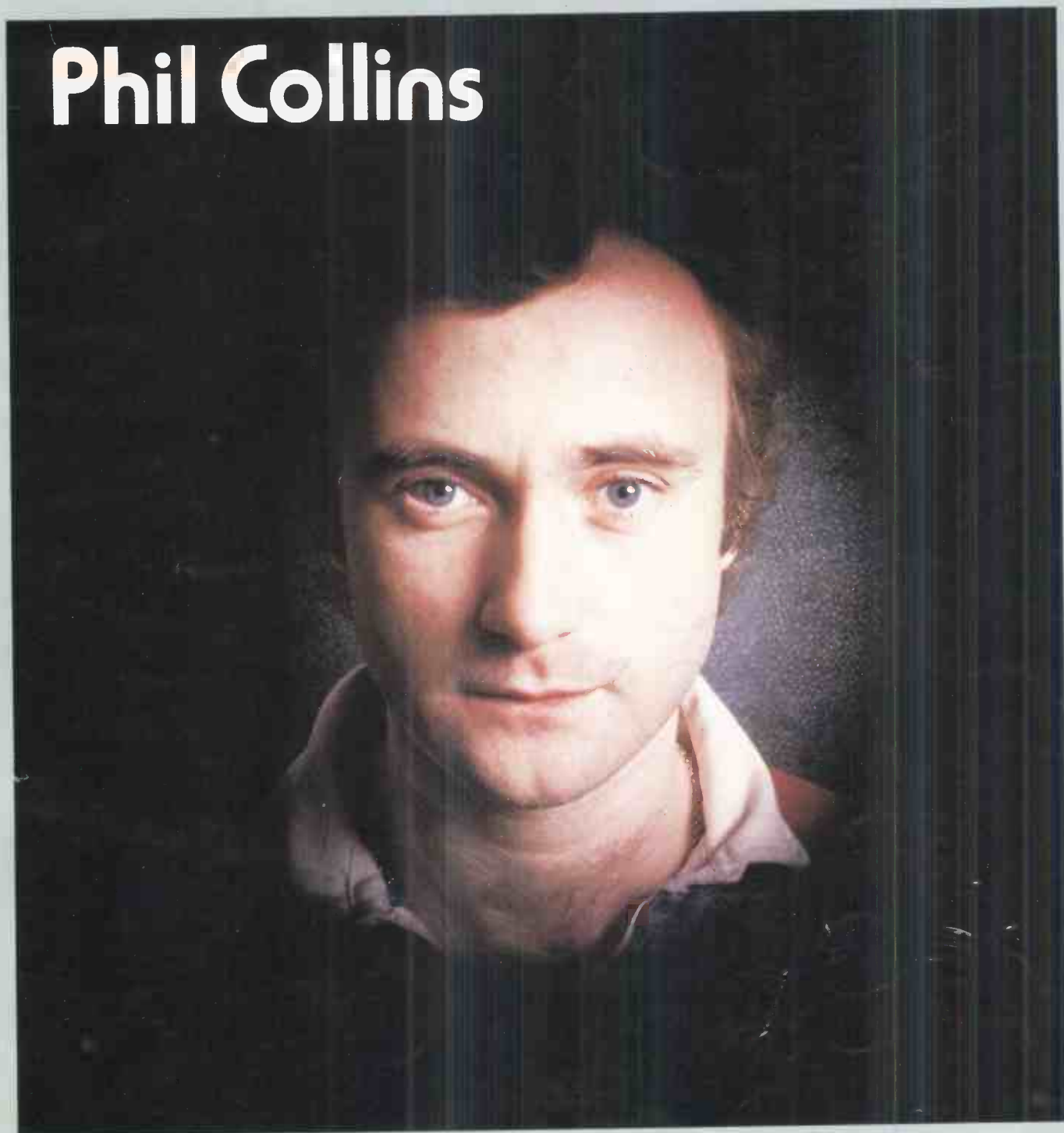


# Sound International

May 1981  
70p \$2

*incorporating* **BEAT**  
*Instrumental*

## Phil Collins



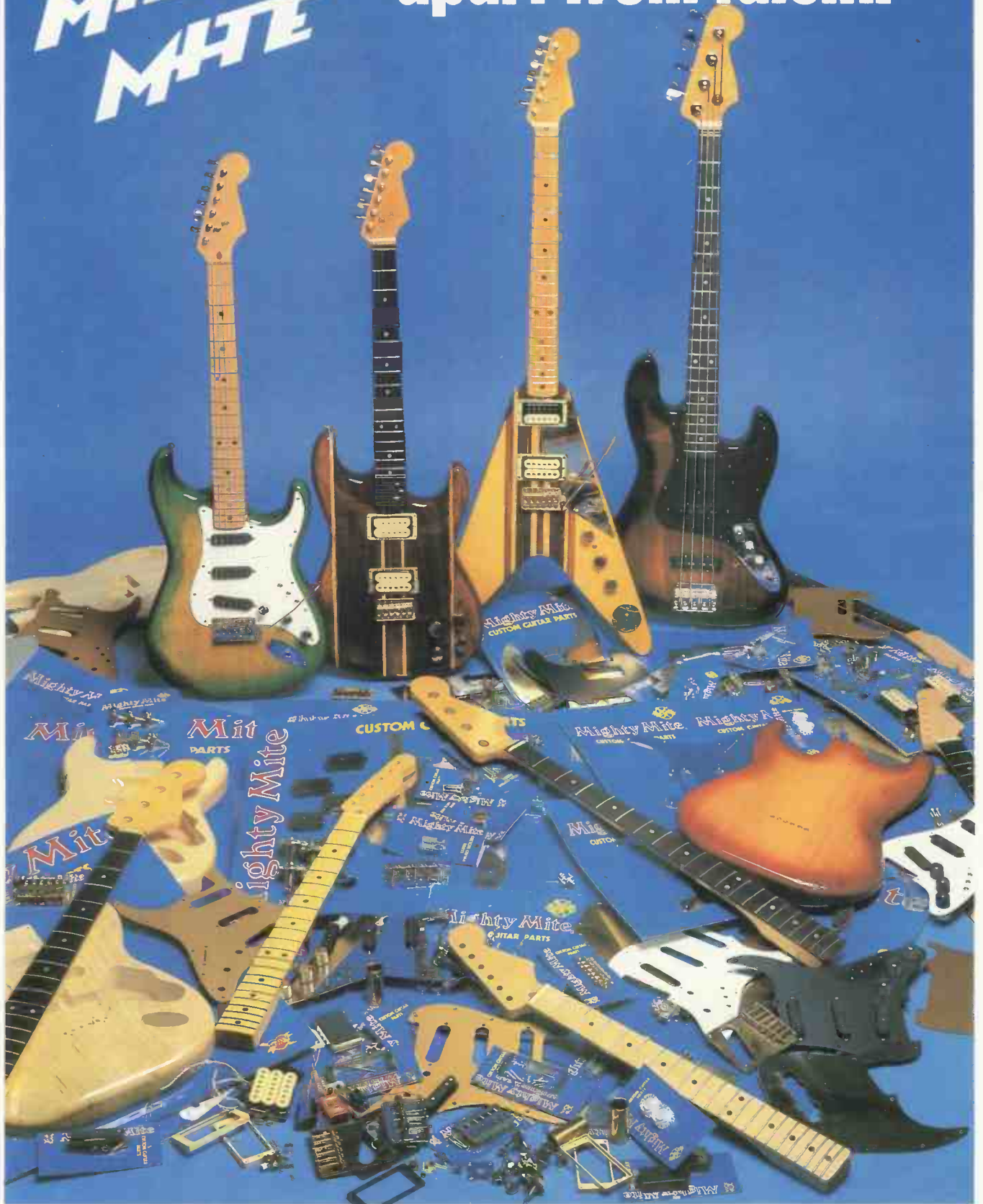
**Reviews : Vox stack · Roland bass synth**

**Cabaret Voltaire · Managers :  Yes No**

16

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## 18 The Revaluation of the Phil

The overwhelming success of the solo career of one P Collins forces our roving hack R Denyer to probe the face, hands, brain and other relevant areas of the said Genesis person. And just how does he get his kit to sound the size of Waterloo station?

## 22 A Look At Sound

This special survey by Dave Crombie follows up his very popular 'Listening To Pictures' series in *Artists Weekly*. This time round, the tireless Crumbly investigates such phenomena as frequency, timbre and all the other constituents of sound.

## 29 10% Of Tomorrow

Or: Do you really need management? Didy Lake considers the alternatives - to work one's genitalia off and reap all the (eventual) benefits that accrue, or to sign one's life away to the geezer with the big cigar. But of course it's not quite as simple as that...

## 34 Cabaret Voltaire

A set of instructions from the Sheffield boys as Dave Henderson catches the age of the train in a bid to extend sentences far beyond the outer limits. Thrill to the crossheads: The Sound, Live, Recording, Record Labels, Future Projects; Marvel at the vinyl: Factory, Rough Trade, Crepuscule, Industrial.

## 36 DIY - 7

Now I don't want you getting too excited, but I don't think it would be giving too much away to reveal that the second sentence of this month's DIY Studio instalment reads: 'This month there will be less arithmetic and more practicalities.' Now come on, I said not to get too excited...

## 42 Index: 25 to 36

This four-page extravaganza, brought to you at no extra cost, is a fascinating record of just what we've been up to in the past year - 12 issues' worth of fact, fun and, er, fellowship. Anyway, if nothing else, it should prove to you (as if you didn't already know) that *SI* is the best magazine in the cosmos for the caring, sharing musician. Kinda cute, huh?



Phil Collins (elbows) listens to the radio while Chris of Cabaret Voltaire (cathode-ray) gets televised

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### SUBSCRIPTIONS

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This could be an emotional one, so I'd get the man-sized tissues within grabbing distance. Funny how us chaps are supposed to have bigger noses really, it must be something to do with the... ah yes. You want the facts, right? Well it's the anniversaries you see. *SI*'s. And *Beat*'s. And, for that matter, *SI/BI*'s. *Beat Instrumental* is 18 years old this month - first issue of 'Beat Monthly', as it was in the early days, came out in May 1963. *Sound International* is three years old this month - we first hit the streets back in May '78. And the combination *Sound International* incorporating *Beat Instrumental* is nine months old this month - first issue was dated August 1980. Well, as you can imagine, the postman just hasn't stopped dumping sacks of greetings cards on the doorstep down here at the Croydon bunker, and we've had great fun sending vanloads of the things away to be recycled into next month's magazine. But we do have good reason to be joyful on this historic occasion - the coming together of *SI* and *BI* has resulted in the thing you're now holding. Yep, the magazine that today's musician can rely on at the beginning of the month for unbiased reviews, honest information, factual news and interesting features. I'm biased? Then try this on for size: In *SI* you can find editorial. And when you do, it's worth reading.

Tony Bacon

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SI.LM 5.81

## Newsnotes

A collection of short news items with contact addresses for further information ...

The 'Grand Draw' held by string manufacturers **Superwound Ltd** at last year's Olympia show in London produced two winners who were recently presented with their prizes at Superwound's Bexleyheath HQ. Mandy Thornton was the guitar winner and Dave Weaver won the bass, which were fitted with *Selecta* and *Linea* strings respectively ... And talking of competitions, our New York readers may want to dash along to the **Electro-Harmonix** Hall of Science at 150 West 48th Street to catch the Best Rock'n'Roll Band In The Country Contest (that's what they say). It started on April 25th and will run on consecutive Saturdays 'until all bands have performed'. This time next year? ... **AKG Acoustics** have announced that they are now UK distributors for equipment manufactured by Aphex Systems, including the aurally exciting 602B, along with newer items like a parametric and a compander. Details



Superwound winners Dave Weaver (left) and Mandy Thornton (right) with SW's Gary Charman



The Aphex Aural Exciter - excitement, now channelled via AKG

from AKG at 191 The Vale' London W3 7QS ... **Pete Townshend's** new video/audio complex in Twickenham will feature, among other things, **Solid State Logic's** 'Total Recall' studio computer, which is being installed this month ... **Spaceward** studio, beloved of readers of the ever-more-complex DIY Studio features in *SI*, have moved to their new studio in Stretham - contact them at the Old School, Stretham, Ely, Cambridge CB6 3LD, Tel: 035 389 600 ... Further to the correspondence in these pages (see March '81) about the **Neal/Ferrograph SP7** stereo tape machine, a new model to replace it, the **SP7S**, is now available. It has the addition of external varispeed, improved wow and

flutter, and a claimed improvement in reliability, quietness and operating life. N/F are at Simonside Works, South Shields, Tyne & Wear NE34 9NX, Tel: 0632 566321 ... **Modern Drummer** magazine, a specialist American publication, recently announced the winners of their third readers' poll, who include John Bonham (Hall Of Fame), Steve Gadd (Best All-Round Drummer, Best Studio Drummer), Neil Peart (Best Rock Drummer, Best Recorded Performance - *Moving Pictures* by Rush), Ralph MacDonald (Best Percussion Instrumentalist), and Stewart Copeland (Most Promising New Drummer). *Modern Drummer* is available from 1000 Clifton Avenue, Clifton, New Jersey 07013, Tel: (201)

778-1700 ... **Eddie Haynes of Cymbals & Percussion (UK) Ltd** has taken on some interesting lines recently including Tosco and Solaris cymbals, Evans drum heads, PSA drum heads, Tri-Sti sticks and the Computone snare pad. More information from C&P at 68 Swithland Lane, Rothley, Leicester, Tel: 0533 303184 or 303290 ... **Premier's Soundwave** range of drums have undergone various modifications, and now look and sound different. Drum tension brackets have been added, and the shell diameters of all drums have been reduced to give an 'extended' drum head. Prices remain the same, however, and more info can be had from the Premier Drum Company

Ltd, Blaby Road, Wigston, Leicester LE8 2DF, Tel: 0533 773121 ... Good cheap drum synth sounds emanate from the **Storm Drum Synce** which clips on to the rim of any standard drum and provides, when plugged into an amp, the gamut of dooo-dooo-dooo-type noises. Best news is the retail price of 36 quid, from your local music hypermarket, or from sole importers the **ABC Music Company** of 85 High Street, Esher, Surrey, Tel: 78



## Show Off!

The British Music Fair to be held at Birmingham's National Exhibition Centre in August has been postponed. Observers in the trade and the press have been using the word 'cancelled' rather than 'postponed', but the official statement from the organisers, headed 'Recession hits music industry' and dated 20 March 1981, reads as follows:

'Plans to promote the British Music Fair at Birmingham's NEC this August were postponed by a decision of the Association of Music Industries' general committee on March 19th. Only 50% of the reserved space has been formally contracted and deposits paid. Many companies have blamed cut-backs in their promotional budgets as a result of market conditions. Subsequent to the postponement of this year's show, invitations have been extended to form a joint working party from all sides of the industry, including retailers, to research a format, venue and timing for future fairs. A format which will meet the requirements of all interested parties could ensure the eventual emergence of a truly unified Industry National Exposition.'

Already, there are several other shows being planned for London in August as reaction to the 'postponement'. These plans were still in the early stages of development as we went to press, but fuller details will be published in *SI* in the coming months. Let's hope that the organisers of these shows bear in mind the fact that we, the musicians, will want to see the products that are put on display. Musicians want public shows.



## EDITORIAL

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MEET THE STAFF NO. 3.  
DAVE HENDERSON: ART EDITOR

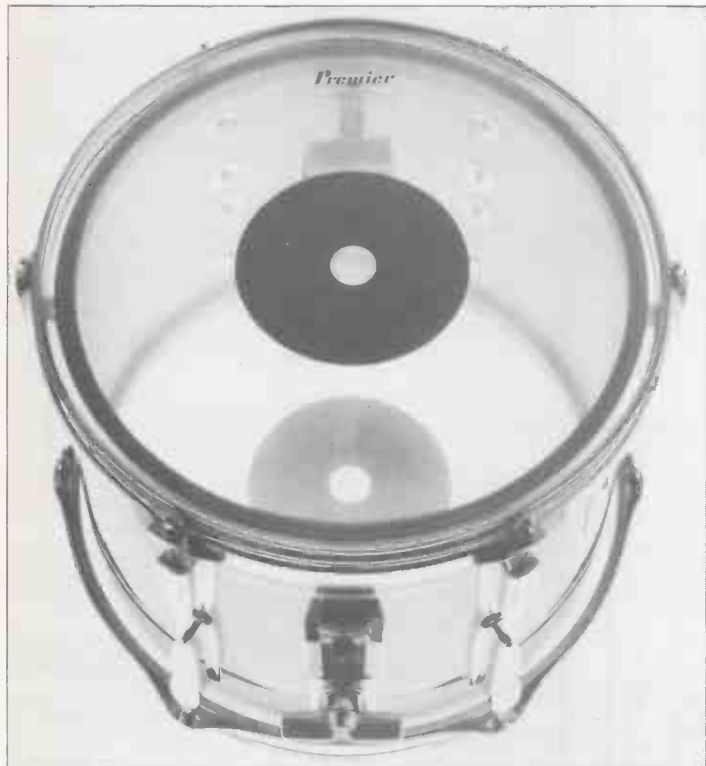
## SOUND INTERNATIONAL

incorporating Beat Instrumental is what you are holding. It welcomes comments, opinions on its merits and demerits, and contributions on the experiences of music-making. Like most people in the last 2000 years or so, we get things wrong now and then. Please let us know about mistakes; we'll correct them as soon as possible. We prefer being right. Replies, corrections and counter-attacks will always find a place in the mag. We can't be held responsible for errors, loss or damage to items contributed. The magazine's contents are copyright, but we'll generally give permission to reprint if we're asked in writing. That's about it, really.



66195... EMS synths and electronic equipment is to be marketed direct by **Datanomics Ltd**, who will retain the services of Robin Wood from EMS. Info: 7 Westminster Road, Wareham, Dorset BH20 4SP. Tel: 09295 6311... **Mac Fison**, an electronic engineer with specialist knowledge of Roland products, has developed an interesting tape-sync unit, the **MF100** which,

company imaginatively called **Dean Markley (UK) Ltd**, based at 296 Charminster Road Bournemouth, Dorset BH8 9RT, or you can call them on (0202) 520210... **Craig Anderton** has informed us that his magazine, *Device* has merged with *Polyphony* to 'create a more responsive publication' as he puts it. Anderton will now be editor of



One of Premier's redesigned Soundwave drums

essentially, enables the player to record a clock pulse and two control functions on to tape, and then replay the tape through the **MF100** to provide a clock pulse plus a grounding control pulse for footswitch-controlled units. If this is confusing, but you're interested in sequencers and drum machines, give Mac a call on 03743 5748. If it's not confusing, give him a

Polyphony, which has always been an interesting read for the musician into electronic music and synthesisers. For subscription details write to **Craig at Polyphony**, PO Box 20305, Oklahoma City, OK 73156, Tel: (405) 842-5480... **Carlsbro Sound Centres** have opened a new store in Sheffield at 720 City Road. That's simple, isn't it?... A unit designed to



Storm Drum Sync - value for dosh

call as well... **Guyatone FX** pedals are in the UK now thanks to Rose-Morris, including Distortion, Chorus, Compressor, Flanger, Overdrive and Analogue Echo pedals. Prices start at £33; more info: **Rose-Morris**, 32-35 Gordon House Road, London NW5, Tel: (01) 267 5151... **Dean Markley** strings, pickups and drum sticks are being distributed in the UK by a new

attenuate mains-borne interference and high voltage transients is offered by **Alan Kiddle Associates**. The **MF10** boasts 30dB of attenuation over the band 150kHz-30MHz; the **MF10A** 60dB over a similar band, with prices around £60. Info from Fairlight House, 729 London Road, Hounslow Middlesex TW3 1SE, Tel: (01) 543 0179.

## First Take the Head Join it to The Neck, Add on the Body...

**M**usical instrument distributors **Rose-Morris** have sponsored a solid body guitar competition among students at the London College of Furniture which could have far-reaching effects upon British electric guitar making. Or it might not. Either way, Rose-Morris' idea is a good one: several students from the college produced full-size colour drawings by the end of April, from which the two or three best designs were chosen. These few, selected by a judging panel consisting of personnel from the college and from R-M, have until the end of June to produce working prototypes for final consideration. There are few

limitations on the entrants, apart from the fact that the guitar should be aimed to sell eventually for around £300.

For the winner, apart from a total of £600 worth of prizes, there is the strong possibility of the design being put into production. Rose-Morris, who distribute Ovation and Westbury guitars in the UK, aren't saying yet how they are going to achieve this - they do not have any production facilities in the UK - but suggestions have been made that the Vox brand name could be re-activated (Vox Ltd operates from Rose-Morris' premises in north London). Watch *SI* for news of the winning design later in the year.



Isao Tomita: always in ESSP's electronic/synth 'charts'

## Extra Synthesiser Perception?

**E**lectronic Synthesizer Sound Projects is the grand title for a very commendable set of activities put in motion by one Dave Townsend down in deepest East Molesey, Surrey. ESSP centres on two main services for the musician - an information service and a library. The information service deals with questions and queries on electronic music and synth sounds generally, while the library holds extensive files on the chosen subjects. ESSP's mail order service provides

regular listing of books and records available in the form of a 'Top 10' for books and a 'Top 100' for records. Dave said to *SI* that he'd been 'amazed' when he realised that there were in fact 100 albums that could be termed synthesiser or electronic records available in the UK - but the list proves the point. For more information on the services available from ESSP, send a stamped addressed envelope to The Sound House, PO Box 37B, East Molesey, Surrey KT8 9JB, England.

# Two more reasons why Korg synthesizers lead the world.

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3. Multiple trigger.

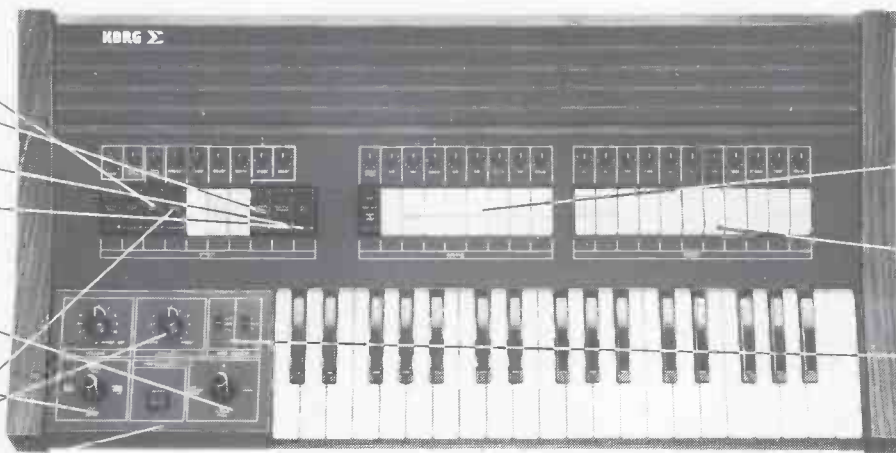
4. Keyhold.

8. Joystick for high low pass filter.

9. Programmable joystick control for pitchbend and modulation.

10. Volume balance.

11. Portamento.



5. Synth section with parameter adjustment.

6. Instrument section with parameter adjustment.

7. Programmable touch sensitive keyboard.

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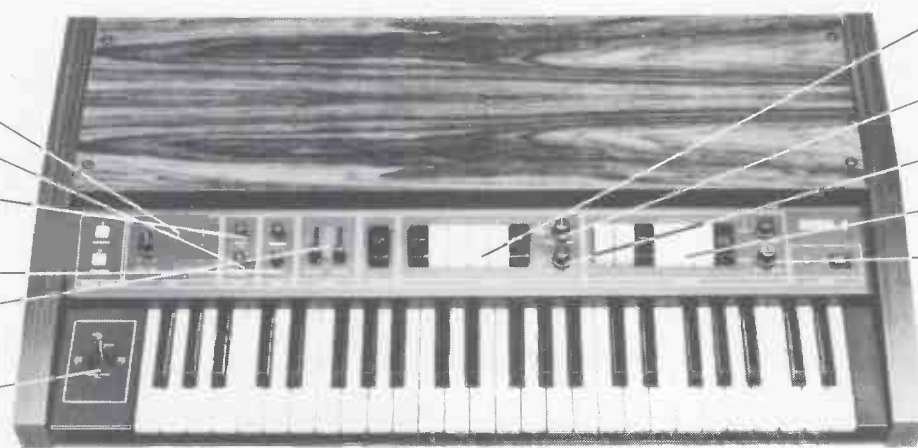
2. Key click, electric piano

3. Brass cut off frequency

4. Ensemble and percussive tone control.

5. Mixable volume control.

11. Joystick control of pitchbend and chorus phase.



6. Percussive section.

7. Tremolo speed.

8. Decay length.

9. Ensemble section.

10. Attack/release.

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Korg Products are available at all good Music Stores. Korg Key Centres maintain comprehensive stocks, provide demonstration facilities and give specialist advice.

To Rose, Morris & Co Ltd, 32-34 Gordon House Road, London NW5 1NE.

I would like to know more about Korg synthesizers, please send me all the latest information and brochures.

Name .....

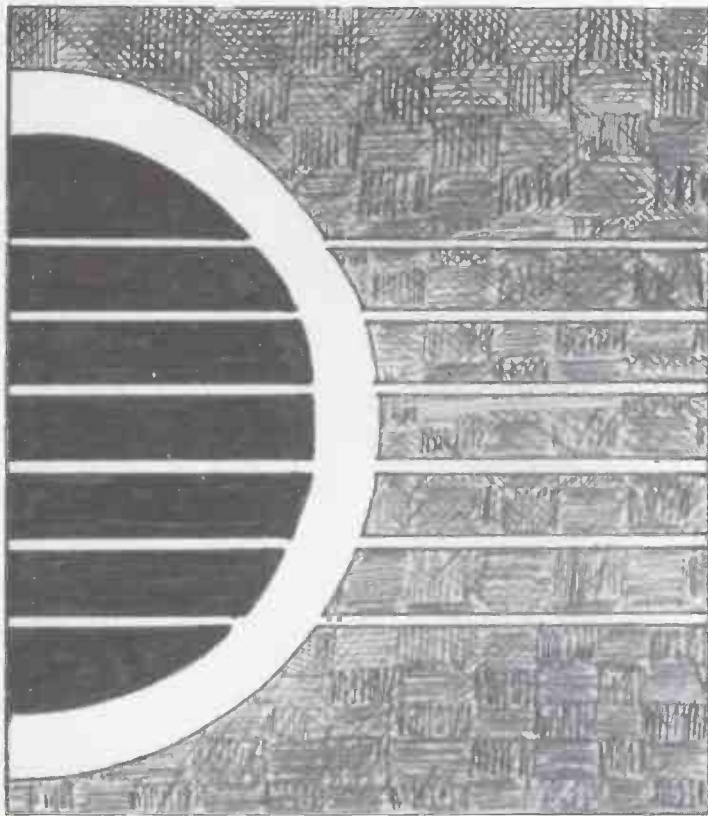
Address .....

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SI K 5 81





## Bringing the Acoustic Back Alive

Writing last month about the need for bands to experiment with unusual instruments set me thinking. Whatever happened to the acoustic guitar? No, I'm not joking. From all appearances the acoustic guitar would seem to be dying, dead or merely dormant, apart from a consistent loyalty from the folk and country people.

It's not that there's any significant shortage of decent instruments on the market – in fact a dedicated acoustic guitar player today is better served by far than he has ever been. The Japanese have done as much to get good acoustic guitars on the market at a low price as they have electrics and several that I've tried – the Aria Paul Brett, some Ibanez models, Mogens and a half dozen or so others aren't just good instruments – they're amazing for the price. And for those with a bit more bread and a taste for helping America's ongoing balance of payments situation, the latest samples I've seen from both Guild and Martin are as good as any instruments that either company has produced for many years. Prices are attractive too due to the relative weakness of the \$ against the £.

And yet when did you last see a band on *Top Of The Pops* or *Whistle Test* use an acoustic? I'll grant you that a few do and that much of the music currently fashionable doesn't really lend itself to the tender qualities of an acoustic. Or does it?

Back in the Sixties (it's not that long ago!) some fairly evil-sounding rock music was cunningly produced with acoustic guitars lying just buried in the mix. Think of the Stones' great singles – and many of their album tracks. A fairly well mixed-back acoustic gave a fullness to the overall sound which did

not emasculate their aggressive edge at all. It's a trick which a lot of recording bands today could learn from.

Yet again, using an acoustic guitar can greatly enhance the dynamic range of a band's material if used for solo passages. This was brought home to me several years ago when I was closeted in the studio on and off over a few weeks with a 'leading heavy metal band' who shall remain nameless. It seemed a good idea to use an acoustic for a short passage and yet neither guitar player in the band owned one and pot luck had to be taken with a hired instrument. As luck would have it, one of the finest Zemaitis acoustics that I've ever tried winged its way down to Morgan Studios and the results were impressive. Despite being metal merchants of the first (heavy) water it was a good move and one which the band in question should not have abandoned (but have) on subsequent albums.

What surprised me was that the band featured two extremely accomplished guitar players and yet neither of them even owned an acoustic. It had just never occurred to them, presumably, to buy one. Yet I would have thought that aside of any recording uses (which I maintain are legion) an acoustic can really help one's style considerably, developing finger strength, right hand picking technique and, perhaps above all, a finer understanding of the inherent dynamic qualities which the guitar is capable of.

Possibly the best illustration of this is Pete Townshend's use of an acoustic on a track from the *Secret Policeman's Ball* album where he manages to get a greater degree of expression from a simple Gibson Jumbo than I've ever

heard him get from an electric. It's a quite staggering – no, *brehtaking* – demonstration of the capabilities of the instrument. Check it out.

I would say, at a guess, that it's easier to get a good acoustic at a low price today than it has ever been. Or at least it *would* be if the dealers would get off their backsides and stock a few of them. That's another problem. We punters can only buy what's in the shops and I've been appalled by the difficulty I've had in buying from a decent range of acoustics on the two occasions during the past five years when I've bought one. Either you are faced with a choice from a range of about four models from one manufacturer or a blinding wall of ignorance from the shop assistant who would be quite capable of (and far more interested in) demonstrating some hideous synthesiser or Jap straight-through necked identikit electric.

I can see that retailers might not want to stock instruments which they will have difficulty selling, but on the other hand people can only buy what they can see and what the retailer has made some attempt to understand.

The problem was well demonstrated by Phil York, UK representative of Martin. Phil has been doing his best over recent months to sell retailers Double O and Triple O Martins as well as the more familiar Dreadnought Jumbos. Now the Double O and Triple O series are smaller bodied acoustics with a sharper, brighter sound. Put at its most banal, they suit the finger picker more than the strummer and so would have many uses in rock music, although admittedly perhaps fewer than Dreadnoughts. Phil claims, however, that only a handful of retailers in the country will even stock them – the rest just sticking with the Dreadnoughts and their Japanese imitators. The Japs (being market conscious as ever) don't even attempt to offer smaller acoustics along OO or OOO lines – they mostly stick to the 'cowboy strummers' guitars and leave it at that. Like me, Phil believes that you'd like the idea and the sound of these alternative instruments if only the intense conservatism of the majority of the retailers in this country would give you a chance to compare them side by side.

From both ends, therefore, from that of the guitar players and the retailers, there appears to be a significant lack of interest in acoustics generally. If this should eventually be reflected in a drop in the number of quality acoustics actually being manufactured – which I would think it inevitably must – then that would be a great pity.

I'm not saying that acoustic guitars are an immediate answer to a maiden's prayer – obviously they aren't, and they can be bitches to handle on stage (see this month's letter in *Sound Advice* for an illustration of that point). But they have their uses on record and live and are quite possibly yet another example of an unsung instrument which could be dying from neglect. □

## BRITAIN 0 REST OF WORLD 6

The story which broke on the morning I sat down to write my column this month was a sad one – that both EMI-Thorn and Racal are pulling out of the manufacture of blank recording tape – in both cassette and reel forms. The cause would appear to be, from information to hand when I write, the high cost of polymers in this country, the strength of the £ (which makes foreign imports cheaper) and a sharp decline in the number of blank cassettes being sold (what does that say about the bleating record industry and their blank tape levy?). The absence of EMI and Racal (the latter of whom held the bulk of the BBC's tape business reputed to be worth £600,000 annually) from the market, means that, with the exception of Pyral, all cassettes in this country will henceforth come from overseas and ditto all professional and home recording reel tape.

Without getting into a party political argument (I don't trust any party so don't misunderstand my motives) this rather reflects what we at *SI* have been saying for a long while. Recent columns of mine have drawn attention to the decline in British valve manufacture and, last year, I stirred the brown stuff a little by having a go at the alacrity with which British distributors will handle imported lines whilst they ignore many British ones. Many readers may take the Consumers Association line – that they should buy the best product regardless of which country it comes from and I would agree with that myself, I own enough foreign products myself to be a hypocrite if I took any other position. On the other hand I wonder if we have developed a negative prejudice towards our own products in recent years, a position where we assume that foreign products are better made simply because we have been repeatedly told that this is the case by a story-hungry mass-media? Just for the reliability record my own hi-fi set-up is British/Japanese and American in its components. Thus far the only products which have shown signs of wear and have actually failed have been the Japanese ones. Friends' experiences seem to bear this out. I'm not saying that it is the rule, rather that we shouldn't make assumptions based on hearsay.

I think that we would be doing ourselves a distinct service in the long run if the next time we went out to buy an instrument or an amplifier or a set of strings we at least bothered to look at the English competition. I'm all for free trade (so please don't shower me with letters, importers of foreign equipment). I review with prejudice and buy without it. I just wish that I had some British products to choose from in some fields. It looks like the virtual shutdown of the blank tape business in this country is going to be yet another example of an area where no choice is possible. □



# Penny-pinching Packages from ITA.

	List	Package
4 track package. Teac A3440, Revox HS77, Model 2A Mixer	£1668	<b>£1350</b>
4 track package. Teac A3440, Revox HS77, Itam 10-4 Mixer	£2535	<b>£2090</b>
8 track 1/2 inch package. Itam 806, 10-4 Mixer, Revox HS77	£3917	<b>£3220</b>
8 track 1 inch package. Otari MX7800, Allen & Heath 16x8 Mixer	£7185	<b>£6395</b>
16 track 1 inch package. Itam 1610, Allen & Heath 16x8, Revox HS77	£9045	<b>£8185</b>
16 track 2 inch packages	from	<b>£13800</b>
24 track 2 inch packages	from	<b>£23000</b>



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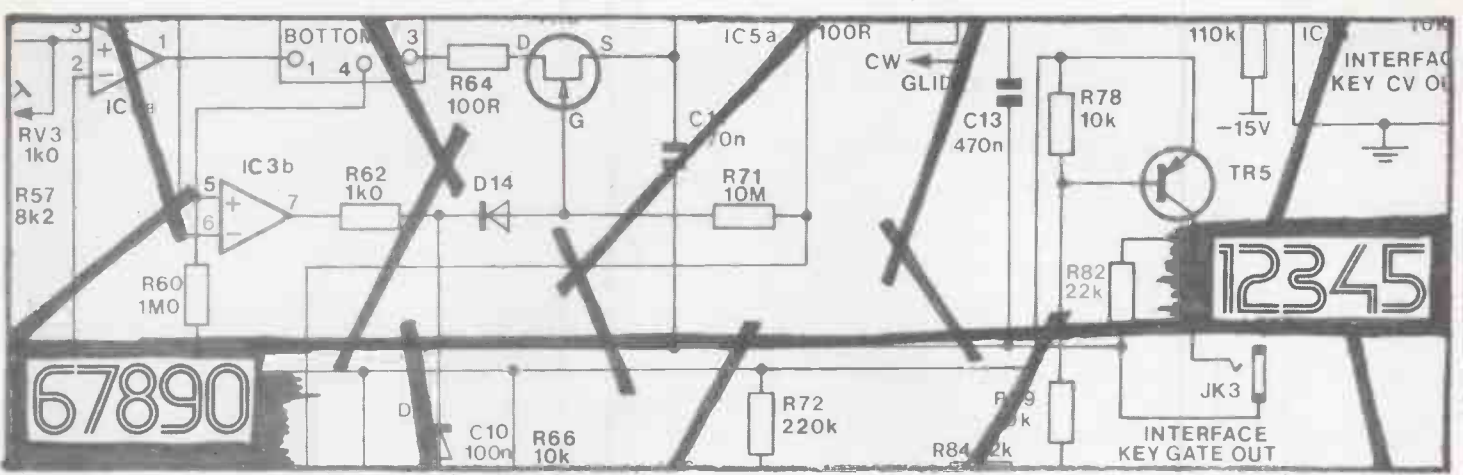
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Digital diggings...

As I have mentioned on more than one occasion in these pages, the Age Of Digital is well and truly with us. The ground broken by such superb offerings as Ry Cooder's *Bop 'Til You Drop*, Herb Alpert's *Rise*, and numerous 'audiophile' classical albums, has hailed the inevitable demise of conventional recording techniques. Having experienced for yourself just how much crisper and downright cleaner-sounding a digital recording is compared to an analogue track - albeit while listening through the crackles and surface noise found on most vinyl pressings - there really is no turning back.

Of course, there are many ways in which advantage can be taken of digital's potential to provide superb transient response, virtually flat frequency response and negligible distortion and tape hiss. For those of us who cannot quite afford the higher rates charged by studios equipped with a 3M digital multitrack machine - and with only Roundhouse and Townhouse studios having taken the binary plunge in this country, finding session time is not without its own difficulties - why not record the master tape digitally? Saving at least one stage of analogue recording has its obvious advantages, not to mention being able to do away with fickle Dolby line-up tones and reference levels between a studio and cutting room.

A growing number of facilities are buying or leasing Sony PCM-1600 digital encoders, which record a stereo signal on ordinary U-Matic video cassettes. With the recent introduction of improved and simple-to-use editing systems - based on virtually the same technology used routinely in video post-production and editing - splicing your finished mix presents few problems. (Once, that is, you have got used to working with a keyboard and SMPTE code readouts, rather than a humble wax crayon, editing block and razor blade.)

Just around the corner are digital mastering machines that will even enable ordinary-looking 1/2" tape to be cut and respliced in the normal way. Sony and Mitsubishi are both currently hard at work developing 'fixed-head' recorders - as opposed to VCR-based systems - that incorporate very elegant error-detecting circuitry to cor-

rect for sudden drop-outs. Once that particular, mostly psychological, barrier has been overcome, and engineers and producers can actually run lengths of tape through their fingers during an editing session, there is very little left to put us off making the fullest use of digital technology.

Operational flexibility aside, however, there are still those who claim that digital is not the universal panacea for improved recording quality. (Ever wondered why quite a few of these put-downs invariably come from engineers working at direct-to-disc facilities or half-speed mastering rooms? Funny juxtaposition of vested interest, no?) Bizarre stories - including one which claims that listening to digitally-recorded music will cause your muscles to wither away - have been circulating throughout the industry for several years now and, to my mind at least, bear as much likelihood as the existence of Maggie Thatcher's political credibility. Apart from the fact that for many years now the BBC has been using 13-bit PCM digital circuits to route programmes around the country, when have you ever seen an HM Government health warning on a record sleeve?

One area of potential criticism to which I do give some recognition is the opinion that digital recordings end up sounding brighter and somehow more harsh than analogue. One possible explanation for this effect could be attributed to the fact that good ol' analogue tape just isn't all that wonderful at capturing high-level upper frequencies, to say nothing of sudden transients. Maybe too many of us have become used to the way in which the sound changes from the studio to tape. While we might all rave about how wonderful the track sounded during a take, could it be that when it comes to playing it back we automatically forgive a loss in the top-end, or a dulling of the transients, simply because we know the music has gone through a tape stage? If now, for the very first time, we are hearing our music exactly the way it sounded in the studio, then it's hardly surprising that a digital playback sounds so different. Like a lot of these things these days, it's all too common for some of us blindly to equate 'not-the-same' with 'worse', rather than make up our minds objec-

tively about a particular innovation.

Academics amongst the recording fraternity have a somewhat different explanation for this oft-quoted phenomenon. They say that the very sharp roll-off filters through which the audio signal passes - which ensure, for technical reasons too convoluted to go into here, that no frequencies greater than half the digital sampling rate enter the analogue-to-digital converters - give rise to objectionable 'ringing' and low-frequency nasties. Although the mathematical part of my brain can get behind such a theory, I've yet to actually hear it happen.

But I'll have to come clean and say that, until quite recently, my appreciation of digitally-produced material - both recorded and/or mastered on digital hardware, and encompassing a wide range of musical influences - had been confined to commercial album releases. And what can you really tell about extreme subtleties of sound from a chip of diamond running around a sheet of vinyl that can only handle a limited dynamic range, doesn't respond all that well to transient information, and is somewhat prone to producing extraneous pops and clicks? (Exposure to brief special demonstrations of digital audio at AES and similar trade shows doesn't count, since the acoustics of a hotel room or exhibition hall invariably leave a lot to be desired.)

Not before time, perhaps, I have now had the opportunity to hear a replay of a digital master tape recorded directly to stereo with a Sony PCM-1600 and U-Matic video cassette deck. That there were no intervening stages of either analogue or digital multitrack tape between the sounds that the microphones picked up during the session, and what I heard coming out of the control-room monitors, made the results even more stunning.

The tapes in question were from an album entitled *The Kansas City Shout* by The Count Basie Orchestra, released (at least in the States) on the Pablo label, and recorded at Spectrum Studios, Venice, California. Even though I wasn't present during the actual recording stage, nor do I know what microphone layout was used (but at least I'm aware of what a properly-miked drums kit and horn section

should sound like), I can honestly claim that in terms of dynamic range and sheer clarity I have never heard anything to match it. The snare and bass drums, in particular, were reproduced so faithfully in the stereo soundfield that the entire kit took on a cohesion I've seldom encountered before, to say nothing of the scintillating sound of wire brushes on hi-hat and ride cymbals. Also, because of a noticeable lack of crosstalk between tracks, the depth of stereo that can be reproduced off-tape really is quite staggering. And when the horns and grand piano suddenly make their presence felt during a crescendo, the amount of dynamic range they have at their disposal - to borrow a phrase from Urei's ad campaign for monitor speakers: 'From a whisper to the threshold of pain' - practically takes the top of your head off!

All I can say is that, having experienced the bewildering quality that can be obtained from digital, anything else now seems a poor substitute. I'm aware that session time at digitally-equipped studios isn't exactly cheap - but have you seen how much these binary boxes of tricks cost at present? Even so, a couple of days recording time for a direct-to-stereo session shouldn't break the bank. I realise that such a process wouldn't suit everyone - overdubbing could be achieved by bouncing tracks between a pair of machines, but certainly isn't as flexible as conventional multitrack. For jazz or orchestral work, however, or maybe a live gig, direct-to-stereo digital recording has a great deal to offer.

An inveterate pessimist could argue that there isn't much point in improving the quality of your master tape, if it's destined eventually to be committed to indifferent vinyl. Which, unfortunately, is a fact of life we'll all have to live with at present. But what of the audio digital disc, which can only be a couple of years from hitting the consumer market? When the record-buying public starts clamouring for cleaner recordings with an enhanced dynamic range, the advantages of mastering on digital as opposed to analogue will be overwhelming. Quite what will happen to good old steam wireless, which has a technical performance not much better than that of a record, remains to be seen, however.

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## PAUL DAY on... MATON

# GUITARS

The electric guitar market is now worldwide, of course, but even in earlier, formative times the demand was often still sufficient to promote the emergence of makers endemic to each country. In Britain we've been fortunate to have had quite a choice over the years, but other countries have usually produced one clear-cut leading guitar manufacturer. I've already covered Hofner from Germany, Hagstrom from Sweden and Vox from Britain in this series and this month's feature involves a long trip to Australia (travel can broaden the mind, even where guitars are concerned).

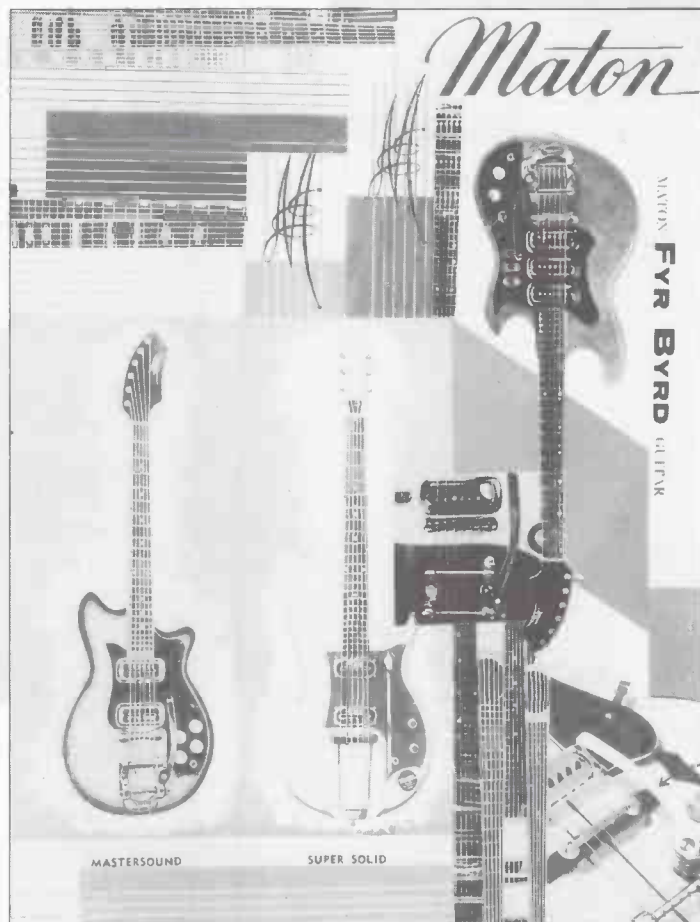
The Maton company was founded in 1946 by the May brothers, Bill and Reg, the name being derived from 'MAY-TONE'. Obviously, acoustic guitars were the order of the day originally and the first electric versions didn't appear until 1949, these being the *Starline*, *Supreme* and *Premier* models. In 1954 the first Maton solids made their debut; the *MS500 Mastersound* model was top-of-the-range, a short-scale guitar of conventional styling, although the headstock was a little out-of-the-ordinary – a foretaste of future Maton design. This two pickup quality solid guitar utilised conventional circuitry and was fitted with a Bigsby vibrato unit.

Down-market came the *EG75 Goldline*, with more adventurous body styling and featuring a trapeze-type bridge/tailpiece, very similar to that used on the early Gibson *Les Pauls*. Again, this was a short-scale, two pickup solid with simplified circuitry. The third model was the *BB* electric bass, which featured very distinctive styling, suggestive of later Maton solids. By now the original high-quality Maton electric/acoustics had been refined and updated in keeping with changing requirements. Around this time Maton also offered a budget range under the Alver brandname, later including a two pickup electric/acoustic model.

The early Sixties saw the launch of the *Fyrbyrd*, destined to become the most popular of all Maton solids. The original version featured styling reminiscent of the *EG75 Goldline*, but was definitely more distinctive. Three new Maton *Magnamettle* pickups were fitted, together with comprehensive tone circuitry, including a 'Sound Barrier' switch for 'Break thru' solos – aah, those were the days!

Also introduced around this time were several other solids, including: the *Ibis*, a down-market two pickup model sharing the *Fyrbyrd's* styling idiosyncracies; the *Flamingo*, again with two pickups but with different, if equally unusual, body design using Maton's own vibrato unit; and finally the *Big Ben Twin* bass, a two pickup version of the earlier *BB* model. The electric/acoustic range had also been revised, the *Supreme* now featured a twin-cutaway body, also shared by a new model, the three pickup *Capri*.

The *Fyrbyrd* later underwent slight design changes, while the *Ibis* received



an extensive facelift, being up-graded to a three pickup version incorporating a comprehensive selection of switchable tones, and sporting completely new styling. The matching *Ibis* bass was introduced at this time, a relatively simple one pickup affair. Another new model was the *Vampyr* 6-string bass, a three pickup solid of similar styling to the *Fyrbyrd* and available with optional Bigsby vibrato unit. By this time the Maton range was available in Britain, having enjoyed earlier success in the dance band/jazz field. However, it was rather a low-key operation and consequently reaction and sales were limited.

The latter half of the Sixties saw the introduction of new models and yet more styling alterations to the existing range. The *Starline*, with certain design changes, was now available in one or two pickup formats, and this was joined by two new electric/acoustics, the *Slenderline*, *DC1500* and *DC545* models. These featured twin-cutaway bodies, two pickups and new tonal circuitry with 'Bass Expander' and 'Treble Extender' controls. Also launched was the hollow-bodied *Mastersound* two pickup bass – thus coverage of the electric/acoustic field was complete.

By now the *Fyrbyrd* had been revised again and sported a more conventional body, although the headstock was a unique 'half-Spanish' design, both features shared by the new *Fyrbyrd 12/20* 12-string version, which also incorporated the 'Bass Expander/Treble Extender' circuitry

and came complete with Bigsby unit. Another new model was the budget-orientated *Leaderman* two pickup solid, again styled along similar lines.

In the late Sixties, even more new models appeared including the *Sapphire* range of twin-cutaway electric/acoustics, comprising two and three pickup, 6-string and 12-string versions, plus a two pickup bass, all very conventional by Maton standards! More unusual were the *Lute* guitar and bass models, similar in shape to the Vox *Phantom* teardrop solids. Also introduced was the *Baroque* bass, a 'traditional' design very much like the Gibson *EBl* 'violin' bass, and aimed at the upright-bass-player crossover market.

The *Fyrbyrd* was re-vamped yet again, emerging as the *Fyrbyrd 70* model, still sporting three pickups and that unusual 'half-Spanish' headstock but with a new, very conventional body shape and simplified circuitry. A new solid was the *Wedgetail*, the name describing the body shape with its 'flattened' bottom bout. The 'half-Spanish' headstock was utilised, and the two pickups were governed by conventional circuitry.

In 1969 Maton seemingly entered the copy market in earnest with the introduction of the *AX5*, obviously based on the Gibson *Les Paul*, plus the *G250* which had definite Fender *Telecaster* learnings, shared by the matching *B250* bass. The *Fyrbyrd* underwent its final design changes at this time and now showed obvious Fender influences, especially in head

shape. It was reduced to two pickups, twin and single-coil, governed by simple but versatile circuitry. The styling was shared by the matching *Fyrbyrd 71* bass, a conventional single pickup model. Also available was the *505*, a very straightforward twin-cutaway, two pickup, hollow-body guitar. The *El Toro* two pickup guitar and bass models had far more character, being of very appealing design, strongly based on the Danelectro *Longhorn*. Both models utilised 'Ultrasound' pickups plus conventional circuitry, and the guitar version featured a 31-fret neck, again like the Danelectro. Two new electric/acoustics were introduced, these being the up-market *George Golla Starline* model, and the one or two pickup *Jazzman*.

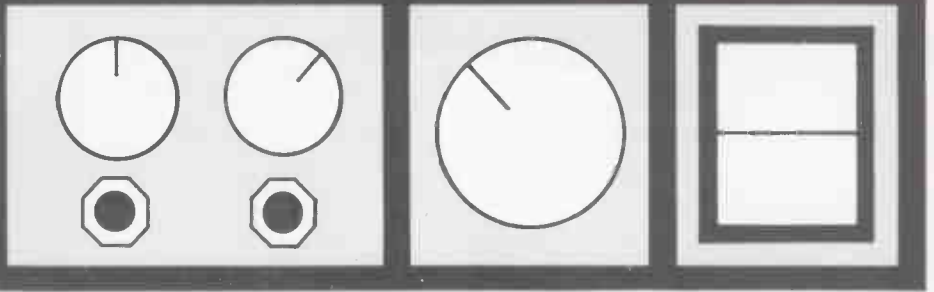
The early Seventies brought several more new models: the *Goldline* electric/acoustic featuring some innovative ideas, including a special bridge, incorporating a ceramic pickup linked to an internal, solid-state 'Acoustic Fidelity' control system; also in the same field was the *Statesman*, built on more traditional lines. The *Wildcat* solid guitar and bass models were introduced, the former featuring a choice of body styling, with the option of an extra 'cutaway' on the bottom bout. A later model was the *Phil Manning Custom Stereo*, a conventional design but featuring comprehensive tone circuitry.

These days, the Maton range is somewhat condensed, Bill May preferring to concentrate on quality rather than quantity. The *George Golla* and *Sapphire* electric/acoustics still survive, alongside the new up-market *Jumbuck* solid guitar and bass models.

Maton instruments have obviously been used by virtually all Australian musicians at some time, while further afield famous users include George Harrison and Carlos Santana. Bill May's instruments still enjoy a high level of popularity, and his company produces around 300 guitars a week, also exporting to many countries. Maton has a consistent reputation for quality, due to Bill May's constant efforts to improve upon techniques and materials. This is reflected in the many models and changes over the years, and while the latest range is probably the epitome of Maton production and development, it's those earlier, highly individualistic instruments that hold more appeal to the collector and nostalgic like myself.

For more information, write to Bill May at Maton Pty, PO Box 5, Canterbury 3126, Victoria, Australia.

# Sound ADVICE



## The Hucknall Bug Ball

I am writing to you with a query many stage guitarists must suffer from – non-loudenufuitarapickupa or acoustic guitar amplification.

I play with a pop/rock group and I use a Fender Strat, but I recently purchased an Aria acoustic (metal string). I have tried to incorporate it into the act using firstly a DiMarzio 'quickmount' pickup but it didn't really give an acoustic sound – more of a very clean electric sound. So I tried several bugs, an Ibanez and two different Barcus Berry types but the problem with bugs is that they aren't loud enough and when I tried it in conjunction with a power booster (overdrive) I just got feedback.

So what is the answer? Pickups seem to have no acoustic sound and bugs are either insufficient in volume or they feed back. I've got a price limit of about £30 and I'm out of ideas. I'm sure that any help would be of interest to me and many other guitarists.

From Paul Burley, Hucknall, Nottingham.

The problem with getting acoustic guitars heard on stage is that it's a compromise whichever way you approach it. Clip-on pickups like the DiMarzio and the Bill Lawrence are all very good but I agree, they make the acoustic sound like a clean electric. Bugs are generally better but they usually need a good pre-amp to compensate for their low output. Barcus Berry make one, I believe, and I'm surprised that you seem to have employed some form of overdriver to up the voltage. A clean pre-amp is what you need. You may, however, then get feedback and there is only one way round that – get a graphic equaliser or parametric equaliser foot-pedal. With an equaliser you should be able to set it for each gig to allow you sufficient volume without feedback. It still won't be a perfect acoustic sound – the only way you'd get that would be by miking the guitar properly, using a good quality mic. This will almost certainly prove unsuitable if you wish to move around when playing.

If you don't like Barcus Berry transducers, you could wait a while and try the Shadow range which will shortly be available from Gigsville Ltd (Aria's importers by the way). They are at Phoenix Way, Heston, Middlesex, and will give you details and prices. A suitable pre-amp might also be one of their superb Danish-made TC Effects pre-amps which I've tried and rate as one of the best on the market. Several

manufacturers offer equalisers and I'd recommend either one of TC's (again) or maybe an MXR pedal graphic. Personally I think that graphics are a bit easier to use on stage in a hurry. Other makers, like Ibanez, also offer equaliser pedals so you've got a wide range to choose from. The only problem is that you'll overshoot your £30 budget. I'm afraid that a transducer/equaliser set-up is the only way round this one, though.

## Active Interest

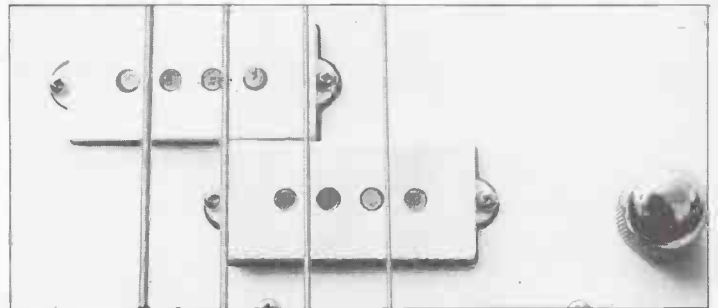
I gather from your reviews that you've played around with active basses and if that's the case what would you currently recommend as being the best under about £600? I'm currently playing a Rickenbacker 4001 through an Acoustic stack and feel like a move up to an active.

From: M J Webber, Greenford, Middx.

Yes, I have tried most of the actives currently going the rounds but it's only my opinion ain't it? The trouble is that if you like the neck on a Ricky you'll have real fun and games with some of the monsters currently calling themselves bass guitars! The 4001 has the most amazingly thin neck and some of the actives I've tried can be real pigs till you get used to them. Still, my fave raves under £600 (what a funny figure!) would be the Aria SB 1000, the new series WAL Custom bass (which is cheating a bit as the latter is currently £644 inc VAT) and the Peter Cook Axis. A close follower would be the Precision Special which is a bit of an eye-opener as it's a Fender and one may not normally associate them with actives. Having to make a decision between any of these would be difficult and would depend on your taste in necks and sound. Bearing in mind your preference for Rickys I'd suggest you nip off sharpish and try an Aria SB 1000 before they widen the necks (which I hear they may be doing soon). If you want something very versatile and can take a bit of a thicker neck then try the Peter Cook as well.

## Freedom of Compression

I'm fascinated by the possibilities offered by compressors on bass but my amp (Hiwatt 100) and bass (Precision) don't offer the feature and I don't want to change either – can you suggest what is the best thing to try? Does anyone make any effects units which might do and if so who and how much?



The Precision with classic split pickups pioneered by Fender.

From: Paul Cooper (no relation!), Southampton.

I think that there are several compressors on the market but the specs of the latest MXR Sustain/Limiter/Compressor look good, so does the price at about £77.50 inc VAT. Most MXR retailers will have them soon, or write to Atlantex Music Ltd, 34, Bancroft, Hitchin, Herts.

## A Champ For Liverpool?

I want to buy an amp suitable for a good overloaded sound for recording. I'm currently playing an Ibanez with DiMarzio pickups but I'll shortly be buying an old Strat from a friend and I'll want something which will work well with both instruments. The recording will be at home with the usual Teac set-up and I want to be able to get the same sound as I can with my Marshall 100 valve equipment but without the volume.

From: Mike Kennedy, Liverpool.

A tricky one this because there is a significant variance between a Fender and an Ibanez/DiMarzio. Even if it was just one of those two guitars it wouldn't be an easy question to answer because what is a good sound to you may not be to me and vice versa. Paul Day of SI column fame is the expert on this and he, like me, likes the Park Vintage combos but he reckons they vary one from another. I've only used the one (mine) and so can't say. Even then they don't have a master volume control and so you have to use their very loud 20 watts up full to get an overload from them. On the other hand, the Carlsbro Homet is a great small amp (as reviewed by me in a recent SI) and this does have a master volume arrangement with which I have got a good distortion with both Ibanez and Fender guitars. Worth checking out. Another choice might be an old valve Fender Champ, or almost any old small valve amp of the 50s or even early 60s. Some of these can be got cheap and can sound great. I

presume that your Marshall is minus a master vol. arrangement so I'd opt for an old Champ (try several, they vary) or if I wanted a new amp, a Carlsbro Homet Shop around is the moral here.

## Pick a Pick – Any Pick?

I know this may sound like a stupid question but I think it's an important one and wondered if you had any opinions about it. I've been playing electric guitar for a couple of years and have never bothered to think about picks. In your opinion do they make any difference to your sound and, if so, what are the best types to use?

From: Ian Jones, Ealing, London W5.

This isn't at all a silly question. Like you I never used to worry about guitar picks until either Laurie Wisefield or Andy Powell from Wishbone Ash (I can't remember exactly who) went into some considerable length on the subject in an interview which I was doing with them some time ago. I was told that the heavier the pick the better and so experimented with Gibson heavies. There was a significant difference in sound once I'd got used to it and so I've stuck with them ever since, even going so far as to use the giant bass Gibson heavies from time to time with interesting results. Generally speaking right hand action is an unsung art in rock guitar and the angle of pick attack, strength of stroke etc, plays a tremendous part in overall sound with a highly amplified instrument. The only answer to your question, though, is to play around and see what you like best. One thought is the infamous Min'd pick which I can't get the hang of. This is a mineral pick (quartz or something) which was launched a couple of years ago and has some interesting sounds once you master it – which I can't. Most players tend to go for a medium weight job but I'd recommend you try a hard one, it's worth a go at any rate.

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## The Case of the Vanishing Valve

I read the valve article by Gary Cooper in your Jan '81 issue. My immediate reaction was one that gave me the impression that Gary and a senior representative of GEC/MO-Valve, mentioning no names, had got together over a pint and discussed what amounts to that representative's future. The way I see things, as far as GEC are concerned, is that the valve division is really only a very small part of the GEC/Marconi activity in the electronics business, the audio valves being a spin-off from the communications and transmitting involvement. If it were not for the ministry contracts to supply high quality valves to BS9000 approval (and these must be UK manufactured) then GEC valves simply wouldn't exist. So, as long as these orders continue and are profitable then GEC valves will be available, and I think for a long time to come as solid state devices do not exist to do the same job as transmitting valves etc and probably never will. Not to mention the cost of replacing all existing ministry equipment using such beasts. I'm sure that 'the board' would like very much to axe this involvement and use the capital and premises for more lucrative ventures, but government money, politics etc ward this off, at least for the time being.

Similarly, if it were not for Sylvania's and GE's activity in specialised valves, oscilloscope tubes, radar screens etc the same would apply. Still, as they are using the basic raw materials anyway, they might as well produce audio valves to slip in when the plant is quiet, so to speak. Now, speaking as an ex-salesman for Texas Instruments and Mullard, I can say, with confidence, that the music business over-value their importance to component manufacturers. Let's take Marshall as an example. Marshall's turnover per annum is probably around £1.5/2m and I'm sorry to say that no electronic component manufacturer is going to get very excited in such a small company. When you take into account that the major cost items in a guitar amp are the cabinet, transformers, drivers and chassis, you can see that the actual component value is a small part of the final product value. Therefore, I cannot believe what was said about Marshall demanding such high standards of valves, they do not have the muscle to get the attention – certainly not from Mullard/Philips! I know, I suffered the schoolboy politics for long enough.

I would also point out that not even Peavey are big enough to carry any weight with the major component

manufacturers. As for Marshall stockpiling valves, well, I find this a nice romantic touch. What company, regardless of size, can afford to tie up cash in huge stocks big enough to last even one or two years? Stock on the shelf must cost 2.5 – 3% per month – work that out in compound interest over two years! In today's competitive market-place the only way to survive is to turn your stock round as many times as possible in a financial year. Anyway, if they did have huge stocks of Mullard valves it's no guarantee that Mullard made them, they have been known to buy E/European product with their markings on, just as GI made 1N4000 diodes for Texas Instruments marked TI! I could tell quite a few tales about what really goes on in the component business.

On a technical note now, in my experience spanning nearly 20 years, I've found E/European valves acceptable providing you treat them with respect. Don't bounce your gear on the deck! Yes, musicians must look after their equipment if they want long reliable service, as Gary so rightly pointed out – tubes weren't meant for this purpose! I've found in general not much tonal difference between various quality valves, which is only detectable on test equipment and is usually well outside the frequency range required in guitar amps, so is of no real significance. I would say anyone who replaces an EL34 with a KT77 will not detect any difference in sound, but may experience 4/5 watts more power – if your ears can sense such a small change in power, probably not! Psychological difference, yes, if you want them to sound better then they will – but £8's-worth better? They are however, much stronger physically and that is probably the only attribute.

Another point worth a mention is musicians now buy an amp because of the way in which it distorts, more so than in the 60s and 70s. Music is now also much louder and more demands are placed on back-line amplification, so it's no wonder that amps have to be re-valved after each gig or so. This is

further hindered by the use of plug-in gain boosters to assist the amps to overdrive causing the amp to oscillate internally at frequencies just above the audio range (parasitic oscillation), this misuse will shorten the life of valves and transformers because it happens at full power and you can't hear it! Ideally, any 50 watt amp expected to run at full overdrive should be equipped with four output valves, not the usual two. This would ensure that the valves run well within their safe margins always, even when distorted.

Well, perhaps I'd better wrap up before I give away too many trade secrets or destroy any myths that amp makers may wish to perpetuate for obvious reasons. I did, though, think the article was a bit journalistic with the odd splash of salesman's frenzy and overenthusiasm of his own product. Salesmen are always selling, even when talking to family and friends – it's his nature, he doesn't always know it. If he did then he would never get the order.

If GEC want my business then they'll have to earn it – give me an honest tube to the old Mullard spec at around £1.2 and my support is guaranteed but I do not think I should give them the order just because they're an English company. When my customers buy my amps for this reason then I might change my attitude. If valves disappear from lack of support then I'll make tranny amps – we'll all be in the same boat. It's a good product but overpriced. It's no good having good products if no one can afford it!

From: Stewart Ward, Director, Access Electronics Ltd, Basingstoke, Hants, England.

Gary Cooper replies:

Stewart seems to have understood what I was saying but perhaps missed the point. The article in question came not from an idea by GEC (whom I mistrust for being a multi-national

anyway) but from amp makers, mainly Peavey whose experience, unlike Stewart's, is that eastern European valves may not prove suitable replacements for English or American ones. This was confirmed by other makers as well.

Marshall's stockpile of valves does exist. It may be economic nonsense for them to do it, but there you are. I did not try to suggest, however, that Marshall have valves made specially for them by Mullard but rather that they buy first-grade valves and pay extra for them.

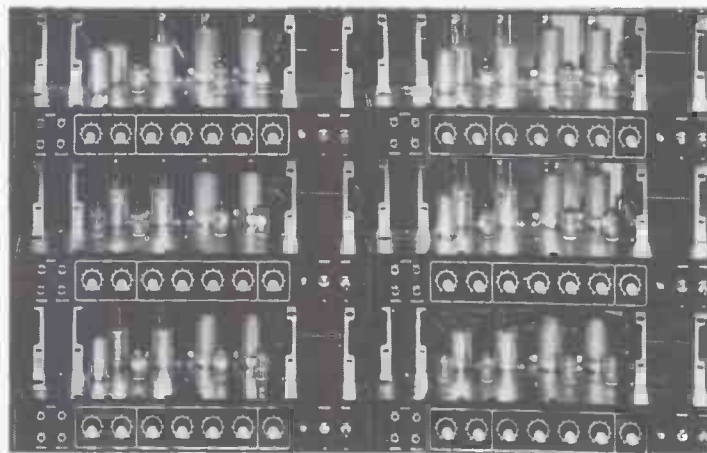
Personally, I couldn't care less why GEC, Sylvania or General Electric still make audio valves, I'm just glad they do. Unlike Stewart I am worried that if they close down due to lack of support (and that means any of them) musicians could be left high and dry. He may feel that transistor amps will have to be good enough. I would argue that, as yet, they are not and may never be. Therefore, politics regardless, it would seem to me that an industry which fails to support its sole home producer of a vital component has only itself to blame if there is no supplier left in the fullness of time. I don't care whether that supplier is GEC or Joe Bloggs Electronics – I would just hate not to be able to get decent valves in a few years' time.

As for whether or not KT77s sound better than EL34s I really cannot say. All I know is that EL34s are now no longer made and that unless amp makers over here start using KT77s they may well not be made either. It's not that it's GEC or anyone else, rather that we should have a continuity of supply. If GEC will provide that supply – fine.

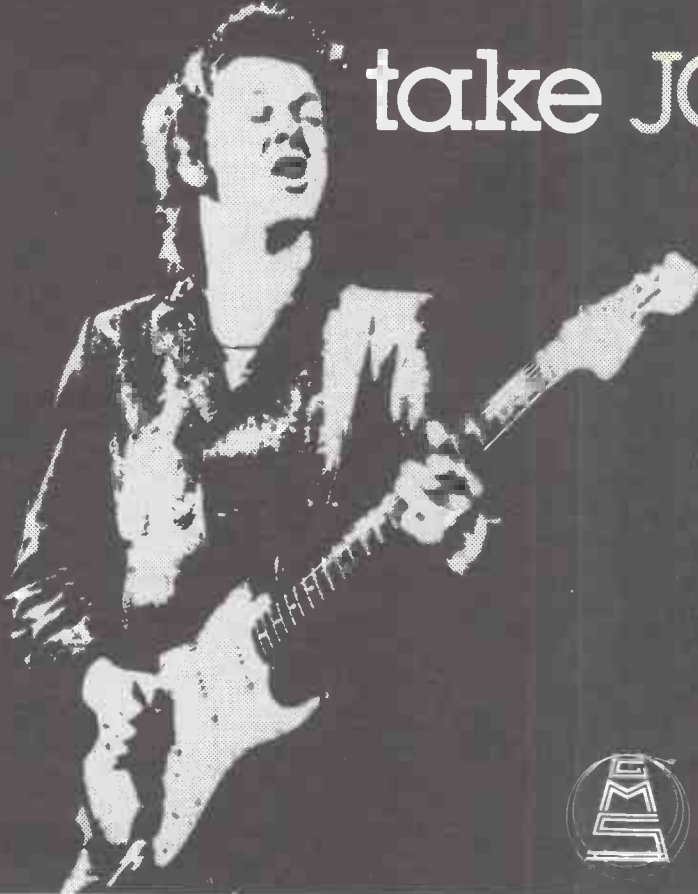
## Look Back In Angst

Thanks for publishing my letter in your February issue. However there was one mistake which I'd be grateful if you'd correct. The double-EP *Angst In My Pants* featuring The Instant Automaton, The Door and the Window, Mic Woods, The Midnight Circus, The 012, The Digital Dinosaurs, Lily Malone and Angus McSteering Wheel, Colin Potter and Missing Persons is available from Deleted Records, Low Farm, Brigg Rd, Messingham, Scunthorpe, South Humberside and not the address you printed, which is my address for information on the Midnight Circus only (I realise the info sheet doesn't make this clear but I'm updating it.) Also the price has had to be increased to £1.15 inc p&p but even so it still represents good value in my opinion.

From: Mike Sinclair, Loughborough, Leicestershire.








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Mr Collins attempts 16-note chord on 5-voice Prophet – silly boy!

# The Revaluation of the Phil

by Ralph Denyer

Phil Collins' polymorphous approach to music has confused more than two or one people. He was a successful child actor, playing the Artful Dodger in *Oliver* on the West End stage. He moved on to being a rock musician, but didn't attract too much attention as a drummer until around 10 years ago when he auditioned his way to the top of a pile of 14 other drummers to join a little-known combo called Genesis. The band gradually became more and more popular, releasing *Nursery Cryme*, *Foxtrot*, *Genesis Live*, *Selling England By The Pound* and *The Lamb Lies Down On Broadway* albums. Also, by 1975 they were a great favourite with the critics.

But the winds of change were blowing. In May 1975 the group's frontman and vocalist 'flabbergasted the rock world' (according to Tree-ist Pete Frame) by quitting the group. But, surprise, surprise, Collins stepped up to the mic to fill the breach and displayed a voice at the time similar to Gabriel's but if anything with a more commercial edge. The group went on to enjoy even greater success but an inverse law of popularity came into force.

The more popular a group becomes, the more likely it is that the tide of critical appraisal will turn against them. And to cap it all, the punk/new wave explosion sent crap flying all over Genesis.

The departure of Peter Gabriel and then Steve Hackett meant that the nucleus of Genesis was narrowed down to Collins, Mike Rutherford and Tony Banks, who would gradually bring in sidemen such as

drummer Chester Thompson and guitar player Daryl Steurmer.

When Genesis were off the road Phil found that he had a surplus of energy. He managed to fit in playing with another band, the highly musical Brand X, with whom he played on all six of their albums. As time went by he confounded his critics by becoming involved with music projects that were the very antithesis of Genesis. He made guest appearances on records by Eno, Peter Gabriel (who was defying gravity) and John Martyn.

And so because of these excursion trips to other musical galaxies it wasn't all that surprising that Collins' first solo album, *Face Value*, should cause a bit of a stir with its broad base of influences.

Phil wrote all of the songs for his album with the exception of *Behind The Lines* (which is a Collins/Rutherford/Banks song first recorded on Genesis' *Duke* album) and *Tomorrow Never Knows* (which was recorded by Phil some time before Lennon's murder).

Phil simply loves music – particularly with a black bias – and was thrilled by the fact that so many of his favourite musicians contributed to the record. The bass players were John Giblin and Alphonso Johnson; the horn section comprised members of Earth, Wind & Fire; guitars were played by Joe Partridge, Daryl Steurmer and Eric Clapton; L Shankar played some violin, Ronnie Scott played a sax solo, Stephen Bishop did some backing vocals, Peter Robinson played a *Prophet* and Arif Mardin

took care of the string section. Hugh Padgham assisted Phil on production and made a positive creative contribution on a footing with the musicians with his state-of-the-art engineering.

I caught up with Phil at the farm where Genesis have just completed building a private recording studio close to their homes in the heart of the Surrey countryside. Work on promoting *Face Value* had spilled over into the time set aside for recording the group's new album.

Phil left the main building which houses the studio to join me in what I presume was originally the farmhouse. I had been told he was a very amiable fella who is very easy to get along with: that is exactly how he turns out to be but time is tight. Can we cut the interview down from the agreed time of an hour to half-an-hour? And no, he'd prefer me not to take photos of him and the band or the studio. He wasn't pulling a moody but he does have to be ever mindful and careful that his hyper-activity doesn't put a Spaniard in the works of the Genesis machine or rub Mike Rutherford and Tony Banks up the wrong way. Phil managed to keep his work with Brand X and his many guest appearances on other people's records from causing problems with Genesis and is obviously a dab hand at such matters.

As it transpires, Collins articulates at such a rate of knots that we manage to cover quite a bit of ground in the reduced time. What better point to start at than discussing the recording of the *Face Value* solo album?

'I did a Genesis tour which ended last year in America and then I came back and straight away started work on polishing up the demos, the 8-track stuff. So I didn't stop, I just did the album. Then I went on to the rehearsals for the new Genesis album in this room in November and that finished around Christmas. The album's doing well over here now and it's beginning to move in America as well.'

Phil says that in a way the album was just something he wanted to do for his own pleasure which started out as demo tapes recorded at his home. Then he decided to use the 8-track stuff he had on tape – mainly keyboards and drum machine tracks – so he copied on to 24-track to enable him to overdub in professional studios. 'So it kinda crept up on me, it wasn't a case of me saying: I'm going to do a solo album. It's been coming together over the past year-and-a-half. When I realised that I had the songs on tape already, all the hard work had almost been done and I just got my mates in really, various people to play specific roles.' I wondered how close the finished album is to Phil's initial conception, once he had decided to put an album out. He reckons that he knew exactly how he wanted the songs to sound. 'That's why I didn't have a producer, I decided to do it myself because I didn't want an interpretation of what I wanted. From that angle there is nothing I would change, really. It's not often that you can say that. You never have the definitive mix, we kept on mixing all the tracks right up until the time when the album was due out, sort of thing. There are lots of theories behind various ways that I did things. The mixing is an example. You know when you're in a band with three, four or five people plus an engineer and producer trying to get everybody happy with the sound, someone somewhere along the line is going to have to compromise.'

'When you are mixing, the engineer's hat comes off and the producer's hat goes on. Then you spend all day mixing a song until you're sick to death of it by the time you come to the end of the day. But you've gone through so much shit that you've got to get a version down. That becomes the definitive mix of the song. The same thing happens when you are recording the tunes. Bands go in the studio and try to play tight together and when it is, that becomes the definitive version of the song. Because I did it piecemeal I could go back and re-record drum parts or whatever. I had two bass players – John Giblin and Alphonso Johnson – but both of them did the same songs and I just chose the best one.'

'I wanted to get rid of that attitude that suddenly: We're mixing! So we did lots and lots of short mixing sessions for all the tunes and then chose the best ones. You feel a certain way one day and a certain different way on another.'

'Also, doing things on your own keeps you fresh for the group. The songs we've been working on in Genesis for the new group album is all group-written now. We're kind of keeping our own stuff back now for our own albums and in a way just using the group to do what it does best, which is writing together and sparking each other off.'

This seemed to represent a considerable change for the group inasmuch as *Duke* – their last album – featured two songs written by each member of the group and six songs written together. Collins explained that the band all prefer the group-written stuff now. 'While we were doing *Duke* we realised we hadn't written

together as much as we used to, just odd songs on different albums. I guess we just figured out that I have specific ideas about my songs, Tony and Mike have ideas about their songs, so now we're just going to use the group for writing together. It gives the group a new identity, or whatever.'

The production on *Face Value* is as impressive as the music. The album employs dynamics (especially on some of the drum recording) to astounding effect. When Phil guested on Peter Gabriel's last album just over a year ago he found himself working with Hugh Padgham. To say that Phil was impressed by the engineer's work is something of an understatement. They have worked closely together on *Face Value* with both of them stepping over the line which divides engineering and production. 'I don't know the reason why it worked so well. Hugh is a wonderful engineer, he can make a few instruments sound very large. If you are in a group you rehearse and everyone has parts they work on and become attached to. Then you go into the studio.'

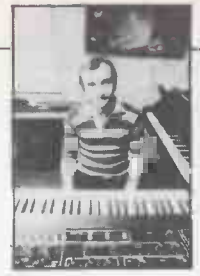
'Although the parts might sound nice in the rehearsal room, when you actually get them under the microscope there might be too much in there – but people have rehearsed and written arrangements and so they want to play them. So working that way you can end up with too much whereas if you are doing it piece by piece, you stop where it starts sounding good. With *This Must Be Love* or *In The Air Tonight*, I could have put a lot more stuff in there and I guess it's just a case of knowing where to stop. Just like playing instruments, you have to leave some space.'

'I was lucky with the people. The people that I like to listen to came and played on my record which is great. I had a very distinct idea of what I wanted the record to sound like and 99% of it came out the way I wanted. That is why we have decided not to use a producer on the new Genesis album. We decided to produce the new album ourselves and just have a good engineer, which Hugh is.'

Though called a cottage, Phil's home – totally secluded at the end of a very bumpy track – has an upstairs. His music room used to be his master bedroom before he moved the bed out and his equipment in. There is absolutely no acoustic treatment unless a wall covered in Genesis gold and platinum records qualifies for the description. He has an 8-track recorder plus an Allen & Heath desk which looks as if it has been through the wars. A drum kit appears to be permanently set up and is close-miked. The rest of the room is filled with synths, a piano, drum machines plus a rack of MXR and similar up-market rack-mounting effects and sound processors. The original keyboard/percussion tracks were recorded on Collins' 8-track set-up and then transferred to 24-track to allow him to track-on and finish the album at London's Townhouse and The Village Recorder in LA.

Accepting that a large part of being a rock musician today involves concentration of effort on getting a good sound from an instrument and then getting that sound down on tape, the approach of regarding the recording desk/console as an extension of the instrument being recorded is a valid one. Some of the percussion/rhythm tracks on Phil's album are a perfect illustration of that attitude, a fine combination of recording techniques and Collins' playing techniques.

'I'm a bit of a catalyst. I listen to Keith Moon



as well as Tony Williams and John Bonham. Specially playing in a band like Genesis, there are lots of different types of music. If you hear a very simple chord sequence like *Squonk* it's no good playing like Cobham. You've got to play what is required and I kind of draw on Bonham inasmuch as keeping it simple and also putting on different hats for different situations.

'I listen to everybody and take what I like from them and I guess that because it comes through me it doesn't sound like the people I've mentioned. But at the same time, I'm happy to play anything. That's why I like Steve Gadd, he can play anything from Paul Simon to Stuff plus everything else he does, he's a very versatile musician. I've always liked playing with lots of different people in my time off, as it were.'

'I taught myself to play drums and then I had reading lessons purely because I wanted to do it as a profession. Before I started making money in Genesis and even when the band started to become popular, I thought that when the pop group business finished I would have to go into an orchestra pit somewhere. But I was never any good at reading because I didn't practice enough.'

'Since then I've kind of decided that if it's not intuitive – if I can't just sit down and do it – then forget about it. Bill (Bruford) is quite the opposite, he'll sit down and analyse everything he does – writing it down so that he doesn't forget it – and that's the other way of looking at it which has to be admired. I just haven't got that kind of patience.'

We agreed that it wasn't a question of which approach is right. Both approaches are right as long as the player comes up with a result. 'It's the same with the keyboards that I did on my albums. I could have got a much better keyboard player in but not someone who would use the same groupings (chords and inversions) that I do. If you don't know the rules you don't know what you're playing. I like intuitive playing.'

Phil has in fact used drums in a wide variety of styles on *Face Value*. Though some of the tracks are relatively orthodox, others feature a drum kit that sounds as if it's the size of Waterloo station. *In The Air Tonight* is a character of that sound. When I worked with Peter and Hugh on getting drum sounds, Peter didn't want any cymbals on the album (*Peter Gabriel*, 1980). It was an interesting idea and I went along with it because it was his album. But the sounds we got in the live room (at The Townhouse) were staggering and there was no room for cymbals because they do dominate certain frequencies. You couldn't have all the compression, you couldn't have all the ambient miking because the hi-hat sounds really huge if it's not close-miked. And to get the size of *In The Air* or *Hand In Hand*, because of the nature of the sound, you had to lay off the cymbals – so I didn't put any up.

'Other things: on *I Missed Again* we went for Tamla Motown, and got the old bathroom sound and then it didn't really matter if the cymbals were splashing around. Hugh and I worked on different sounds for different tracks.

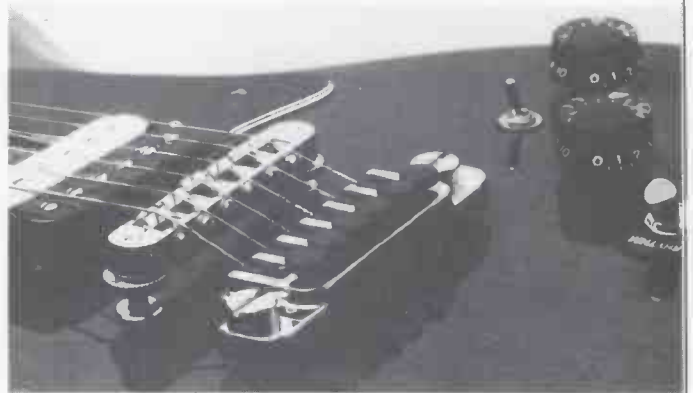




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Gary Cooper – Music World – Feb. 1981

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Very dry for *This Must Be Love* and really huge on *In The Air and Hand In Hand*, just different things for different tracks, really.'

On the 'huge' drum tracks as well as some others, Phil gets a very resonant sound somewhere between Syndrums and tuned tympani. Obviously he doesn't use much Gaffer tape, but could he explain a bit more about how he gets the sound he does? 'There is no damping at all, I never have used damping on any Genesis albums. Not on any of the tom toms or the snare drum. If the sound is coming off the drum and the mic is in the right place it will pick up whatever you give it. Obviously it is different for studio drummers who do three sessions a day and have to get a sound in five minutes flat.

'I've never had trouble getting good drum sounds, maybe I've always been lucky and had good engineers. I know what I like my drums to sound like and if it means hitting them really hard – which I usually do in the studio – then OK. I like the pitted sound (note dropping in pitch as it drops in volume). Again, different tracks. *In The Air* needed that kind of concert tom loose flappy sound.'

I asked Phil how exactly he achieved that particular sound. 'Well, I don't want to give the game away because on *The Intruder* (on Gabriel's album) it was Peter, me, Steven (Lillywhite) and Hugh. And it is a combination of the live room, ambient mics, lots of compression and noise gates. But that is definitely a patent Padgham sound, he's very good at that.

Speaking subjectively, I much prefer the production on Phil's album – which of course he produced assisted by Hugh – to the production on the last Genesis album, *Duke*, produced by David Hentschel. The new Genesis album is to be produced by the group working with Hugh, and I asked Phil about the change. 'What used to happen – no disrespect to David because he's a mate of mine – but he used to come into the studio and polish up our sound, making it shine as opposed to making it rough. That's why a lot of people's impression of us is that we are a very smooth, pompous group. That's not really the way we are at all but that's the way we always sound on record. That's why the live gigs sound so good because most of it is happening as opposed to the sheen that is given off.'

Phil is certain that the high quality of the lacquer cut for his album enhances the production. Although he 'spent a lot of time' on the production he pointed out that the superior cut was probably a contributory factor in *Face Value* sounding so much better to me when played back-to-back with *Duke*. He went on to explain: 'In Genesis there were the three of us and David and we'd never taken an incredible interest in the cut. It's only recently that I've discovered how important the cutting engineer is. He really has total control of something that you've been spending months and thousands of pounds doing. You just go in and give him the tape and in an afternoon he cuts it and he is like another producer, he can make it sound good or bad.'

Collins first flew to the US to have *Face Value* cut at Sterling Sound in New York, but wasn't happy with the results (even though 'Mastered at Sterling Sound' erroneously appears on the cover). Then another cutting room in London had a bash: 'They know who they are,' says Collins. 'I had about three or four cuts from that room and it was beginning to depress me. And the record company were

asking me where the record was. I just had to tell them it wasn't ready yet because it didn't sound right.

'I was putting Earth Wind & Fire and Jacksons albums on. They sounded great. Then I'd put my acetate on and ... yet potentially it sounded like a black album. All it needed was a good cut. So in the end I looked on the back of the sleeves of the Earth Wind & Fire and Jacksons albums that I liked and the name Michael Reese kept coming up. "Mastered by Michael Reese, The Mastering Lab, LA". I thought: Shit, I'll just ring him up. I got the number through Directory Enquiries and rang him up.'

Once again, Phil was heavily involved with Genesis rehearsals so he couldn't go over to the States for the mastering session but gave Reese a few instructions on the relationship between different track levels and let the American get on with the job.

'It was staggering,' claims Collins. 'I put the cut on and it was much blacker, it just sounded better coming out of the speakers: the sound came out of the speakers as opposed to staying in it. So there are good people ... it depends on where you go.'



It now seems that there are several cuts in existence on finished records: the original Michael Reese cut has TML stamped in the disc's run-off rim, while the later 'copy-cuts', cut by Ian Cooper at the Townhouse, are stamped TOWN HOUSE in the rim. Some reports even suggest that there are copies of *Face Value* with one side cut by Reese, the other by Cooper!

We moved on to the subject of lyrics and the fact that, to my ears, the songs written by Phil for *Duke* have a far more earthy quality than those of Mike Rutherford and Tony Banks. 'I think that comes from being a singer. Tony writes words that read very nicely but he doesn't sing so he doesn't know what you need to sing. A lot of things are water under the bridge since *Duke*. Methods of people's writing, less words per minute and all that sort of stuff. But it's knowing that you can't reach certain notes unless your mouth is in a certain shape. Also I don't read a lot and they do. So their lyrics will tend to be different. I'm quite happy to say "I love you" as opposed to the fact that they wouldn't. I suppose that's good for a



band, it makes everything different. *Please Don't Ask* is an incredibly personal song. I'm surprised we did it actually because it is so obviously a personal song. I had both that song and *Misunderstanding* down for my album. It was only the fact that the band liked them as they were when I played those two songs to them.'

So at the time Genesis had first refusal on Phil's songs? 'Yeah, I said anything they liked – as it is – we'd do. Anything they didn't like, I'd rather save. Because I'm quite happy to play two or three chords for five minutes if the groove's there.'

And by offering material in that way, there wouldn't be any bitching at a later stage because Phil was holding material back for his own album? 'That's it. Again, I had this very specific idea of how I wanted the songs to sound.

'I felt closer to *Duke* than any other album Genesis has done but that was because I had the time and wasn't married anymore. I had the time to be in the studio first and leave last. A lot of time and energy went into *Duke* which is why I was upset when people didn't like it. It was like the first taste of what it might be like with this thing (*Face Value*), you're very close to something and then someone just writes it off. I guess, fair enough.'

As it happens, Phil didn't have to worry about the album being gleefully shredded by the music press and at the time when I spoke to him he was close to completing a *coup de grace*. *In The Air Tonight* had topped the singles charts and *Face Value* had lodged itself at number one in the British album charts from which position it was repelling all boarders, no sweat. But the big surprise was the critical response to this album by the drummer from the group the critics love to hate. Generally speaking, then, Phil was patted on the back for his solo album at the same time as being kicked in the balls for being in Genesis. Back over to Phil, who didn't seem to realise that he'd won over quite as many writers as he has. 'I always feel that if people don't like Genesis it's because they haven't given it enough time. Because as far as I'm concerned I like good music and I like what we're doing. So I can't understand why other people don't. In some interviews they wanted me to knock the band but there's no point in my doing that, otherwise I wouldn't be in it. There are faults with Genesis but you stay with a group until faults are rectified. When there are no more faults to rectify you leave or the group splits up. You certainly try to make it better, that's why you keep doing albums – or at least that's why we do.

'But some of the things I've been slagged off for, like in the *NME* review: I just put a picture of me on the front of the sleeve and wrote "Me" so that I didn't have to write "Phil Collins" all the time. I didn't write PC because Peter used his initials on his albums. So I referred to everyone on the album by first names and put 'Me' instead of Phil. It seemed a logical thing, warm and informal. But the guy in *NME* saw that as twee, selfish and odd.' ■

# A Look At Sound

Dave Crombie puts on his X-ray spex, and 3-D headphones and discovers that by getting to grips with the basic fundamentals of sound you can get closer to the sounds in your mind, man.



This month you lot are going to learn something useful – and I don't mean what Bob Geldof has for breakfast. No, the pearls of wisdom contained in these next few pages are going to be of limitless value right up 'til you meet that great guitar manufacturer in the sky.

What we are going to do this month is to look at Sound, not an easy thing to do; we are going to see how sound works, and once we have a better understanding of the concepts involved, we can see how to use the synthesiser, and other keyboard instruments to greater advantage – should be good, eh? Synthesising is all about building up sounds from basic fundamentals – unless you can get to grips with these prime elements, you will never be getting the most out of your instrument. Like most things in life, if the foundations are no good, then the building's going to fall down (such profanity). Although you may not be into using the synthesiser (or organ) to simulate existing musical instruments, it is important that you have the ability to do so, because only then will you be capable of producing the sounds that are in your mind from the instrument in

front of you. This isn't going to be another A to Z of the synthesiser, so you guitarists, and, dare I say it, even you drummers, may reap some benefit from this feature.

Sound is the sensation that we experience when movement or vibrations in the air are detected by the 'mechanics' of our ears. Although our ear is sensing just vibrations of particles in the air, it is able to pass this information on to the brain, where it is decoded and translated into our concept of sound. There are three qualities to these vibrations that enable us to distinguish between different sounds; these are pitch, timbre, and loudness.

Figure 1 (see page 24) shows how this vibration in the air relates to the pitch, timbre, and loudness. When a sound is created from a source, the air molecules are disturbed causing a compression and expansion (or rarefaction) in the structure of the air. This is the vibration that the ear translates into sound. Figure 1a shows the sound waves emanating from the source; Fig 1b shows a cross section of the movement of the particles in the air and 1c illustrates the waveshape that this disturbance represents. It is this

waveshape that is the most useful for us to work with. Now if the sound produced is a continuous tone the waveform produced will be cyclic, *ie* it will keep repeating itself; from this we can determine the pitch of the note. In our example, the distance covered by the waveform during the time it takes to complete one cycle of compressions and expansions, and hence to return to its initial position, is known as the wavelength. And a simple sum will enable us to give the pitch of the waveform a value, *ie* a frequency. So, say our example in Figure 1 had a wavelength of 75 cm (0.75 metres). Well, sound travels at around 330 metres per sec, therefore, as the waveform completes one cycle in 0.75 m, it will complete 440 ( $330 \div 0.75$ ) cycles in 330 metres, so, therefore, it will vibrate at 440 cycles per sec. This is known as the frequency of a sound, and can also be labelled in Hertz (Hz), so our example oscillates at 440Hz (which just so happens to be the frequency of middle A in our system of musical notation).

The timbre, or tonal characteristic, of a



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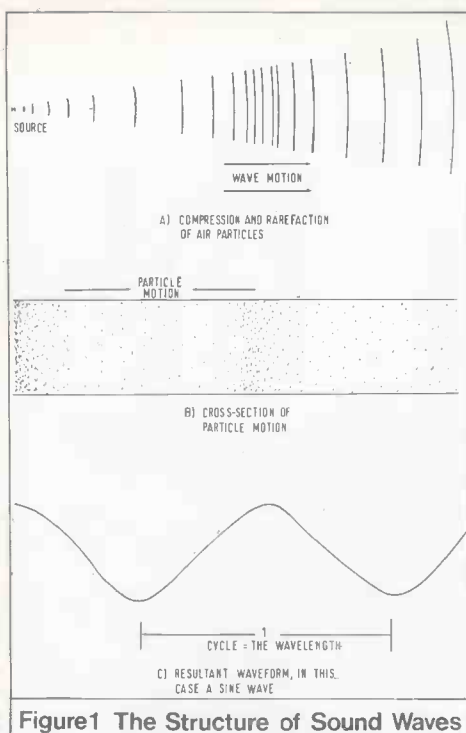


Figure 1 The Structure of Sound Waves

note depends on the actual shape of the waveform produced. In Figure 2 we have what is known as a sawtooth wave, and it is clear that the air particles are arranged differently to those in Fig 1. The sound still travels at the same speed, and therefore the frequency is unaffected, but the vibration of the air particles is different, and consequently the ear will interpret the sound of the sawtooth wave in quite a different manner to the sine wave of Fig 1.

Unlike pitch, there is no simple quantitative measurement of timbre. The only way to express this parameter is to describe the waveform produced. This is all very well and good for basic shapes such as sawtooth, triangle, square, and pulse, but as only a small variation in the shape of a waveform can make a considerable difference to the sound the ear perceives, then problems can occur when trying to label a timbre. It is possible to describe any waveshape using mathematical formulae, but the calculations involved are pretty complex and best left to the mathematicians and to computer-based instruments (see later).

Loudness is, on the surface, a much simpler concept to grasp. Consider Fig 1 again. If the pressure peaks and troughs of 1c aren't so great, ie the compression and rarefaction of the air molecules is less pronounced, then the ear will perceive the sound to be less loud; if the peaks and troughs are increased, then obviously the sound will appear louder. Now the ear behaves in rather a strange manner to different levels of sound; it doesn't respond linearly. This means that a waveform that is twice the amplitude won't sound twice as loud to the ear – however, this is a complex story, and at this stage not particularly relevant. Another anomaly concerning the ear and the perceived loudness involves the timbre of the sound; a brighter tone will sound louder than a pure simple tone.

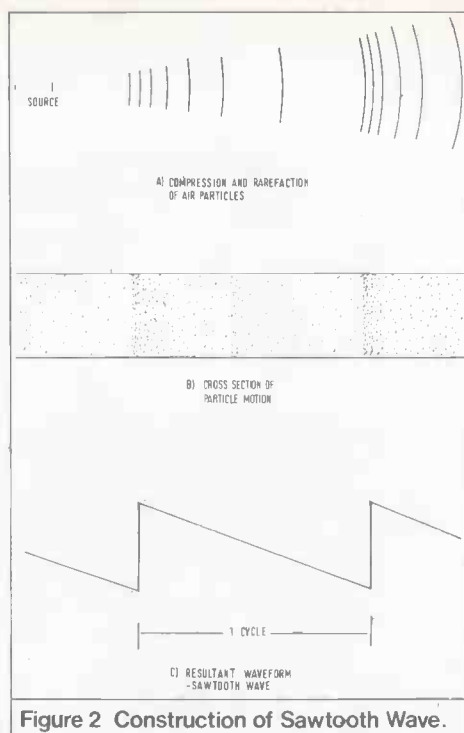


Figure 2 Construction of Sawtooth Wave.

Because the ear doesn't respond in a simple linear fashion, loudness is normally measured in decibels – this is, in fact, a ratio of two values whereby a sound is compared to a reference level. Normally this reference is considered to be the threshold of hearing – that is a sound level that is only just perceptible. On this scaling live rock music has a rating of 90-120 dB, whereas a transistor radio, in an average room, would be at around 50 dB, and is quite clearly not half as loud as a rock concert.

So now we have a basic grasp of what is meant by pitch, timbre and loudness under our belt, but up until now we have just discussed an arbitrary sound source. Electronic instruments such as synthesizers generate sounds indirectly. They produce currents in electrical circuits and these represent the pitch, timbre and loudness of the sound; it is only when they are fed into an amplifier and speaker that they cause vibrations in the air which the ear subsequently detects.

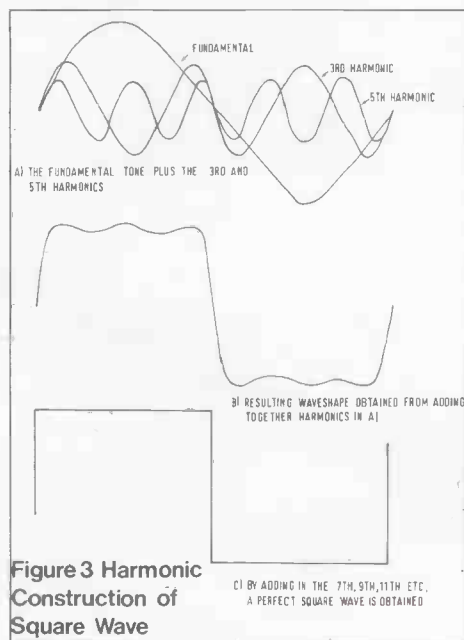


Figure 3 Harmonic Construction of Square Wave

However, there is a very close correlation between the behaviour of the electrons in the circuit and that of the particles in the air – the main difference being that the compressions and rarefactions are represented by changes in voltage levels in the circuitry.

### Additive and Subtractive Synthesis

It can be shown that any waveform can be constructed by adding together sinewaves of different frequencies. The sinewave is a smoothly varying waveshape (Fig 1c) and is the same shape as the waveform produced in the air by the prongs of a tuning fork, which produce a fundamental tone, no overtones. Figure 3 shows how the addition of various sinewaves can be used to construct a square wave. Most of the sounds produced by musical instruments consist of overtones that are simply sinewaves at frequencies that are multiples of the fundamental pitch. So, for example, a tone of fundamental frequency 110 Hz would have overtones at 220 Hz, 330 Hz, 440 Hz and so on. Now in Figure 3a we see the fundamental, the 3rd harmonic and the 5th harmonic in diminishing proportions. When these harmonics are added together a waveform as shown in Fig 3b is obtained.

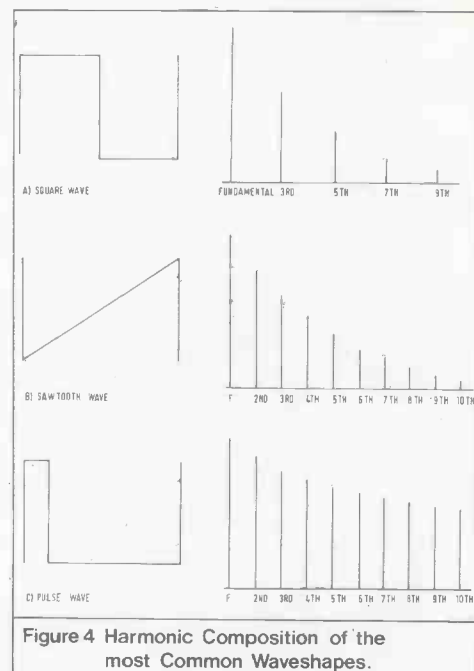


Figure 4 Harmonic Composition of the most Common Waveshapes.

This is on its way to becoming a perfect square wave, but it is necessary to add in further harmonics (7th, 9th, 11th, 13th, etc.) to square things off. Figure 4 shows the proportions of the various harmonics required to make up some of the most common waveforms.

Now these harmonics are not only multiples of the fundamental frequency, but they are also related to one another note-wise. Consider, therefore, if the fundamental were pitched at a low A, the second harmonic would be an A, an octave above, the third harmonic would be the E above that, and so on as shown in Figure 5. The organists amongst you will be aware of this harmonic progression,



because it corresponds to some extent to the footages of the drawbars found on nine-drawbar organs (eg Hammond C3, Roland VK-1, Korg BX-3).

I'm sure that you are all aware that different lengths of pipe, in pipe organs, produce different pitches – the longer the pipe the deeper the note, hence early organ manufacturers labelled stops ac-

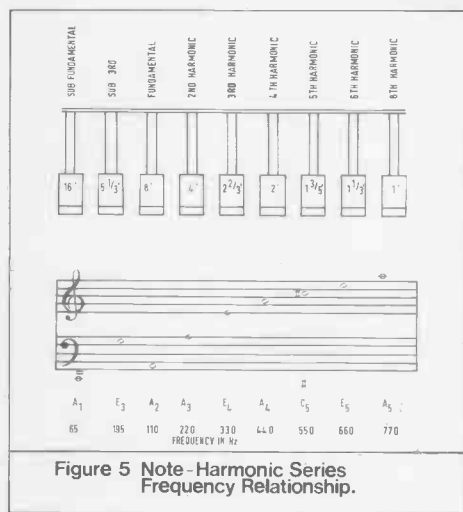


Figure 5 Note-Harmonic Series Frequency Relationship.

cording to the lengths of pipe used. This has been passed on over the years, and still exists in many of today's instruments, especially the aforementioned drawbar organs with their 16', 8', 5 1/2', 4', 2 2/3', 2', 1 3/4', 1 1/4', and 1' harmonic voicings. This progression follows the standard harmonic series, so as each drawbar produces (or at least should produce) a pure sinewave tone, it is possible to create almost any cyclic waveform. This is known as *additive synthesis*.

Most synthesisers, however, function on a different system. They generate tones that are usually very rich in harmonics, and then filter them to remove the unwanted harmonics, leaving the desired waveform. This is known as *subtractive synthesis*. The advantages of this system are primarily related to cost, as it is an expensive business building up banks of sine wave generators. If we look back at the harmonic structures of the various waveforms, it can be seen that these waveforms, which are generally to be found on yer average synth have a fairly complicated harmonic make-up. These waveforms, however, are very easy to produce electronically. A square wave for example is produced by an oscillator (normally voltage controlled) that switches between two states 'on' and 'off' (or 'High' and 'Low'). By just switching an electric light switch on and off you are, in effect, producing a square wave!

Various types of filter exist to remove the unwanted harmonics; a high pass filter takes out the frequencies below a certain value (known as the cut-off frequency), a band pass takes out frequencies at all but a certain value, whereas the most common type of filter, the low pass, will remove all frequencies above the cut-off frequency. In an ideal world, therefore, by heavily low pass filtering a square wave, ie

by setting the cut-off frequency to that of the square wave, all the harmonics could be filtered out so that all that would remain would be a sine wave at the fundamental frequency. Unfortunately filters aren't 100% effective, and they will let some frequencies above (or in the case of the high pass filter below) the cut-off frequency through. This all depends on the roll-off characteristic of the filter, but again this isn't too important at this stage.

The filter of a synthesiser can be compared to the body of a violin, or the soundboard of a piano, as it determines the tonal character of the instrument. The filters of one manufacturer sound different from those of another, and it is this difference that often dictates the eventual popularity of a given instrument. With a bit of practise it is possible to distinguish the sound made by one synthesiser from that of another. For example, a Roland synthesiser has a slightly mushy quality to it whilst an Oberheim, say, sounds rather brassy. I always used to think that wine was wine, and these experts couldn't really tell the difference between wines of different vineyards and vintages, but having studied synthesisers over the years, and having acquired 'the ear' as you might say, I'm now willing to accept that expertise in the senses can be learnt in all manner of different fields, and that these guys can tell which side of the hill the grapes came from. Meanwhile, I've only just grasped the difference between Pomagne and Champagne (the latter doesn't give quite such a killer headache the next morning). But I digress. There is another parameter associated with the filter, and that's known as the resonance. If you consider a semi-acoustic guitar, then increasing the resonance could be compared to the moving of the guitar closer to the amplifier. In this situation there would come a point when the body of the guitar would start to resonate under the effect of the amp/speaker, and at some point this resonance would induce feedback. The resonance control of a filter creates a very similar effect, such that there comes a point when the filter will break into oscillation. This produces a sine wave at the same pitch as the cut-off frequency of the filter. This is an important and very useful feature.

Finally we come to the envelope generator, which is used in conjunction with the voltage controlled amplifier to shape the loudness of the synthesised sound. This area is very often overlooked in terms of synthesis. The envelope of a note determines the manner in which the ear hears the whole sound. And of all the parameters, it is probably the first quarter of a second of the note that is the most important; this is generally known as the attack phase, and from it the brain can determine whether the synthesised sound is percussive, sustained or crescendoed (see Figure 6). The rest of the envelope isn't quite so vital, because, as with reading, the brain imagines the rest of the

note, so if the first part isn't dead right the brain will pick out that there is something wrong.

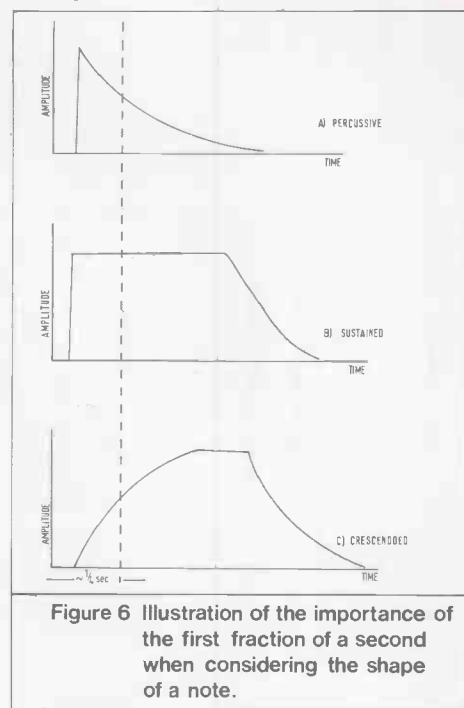


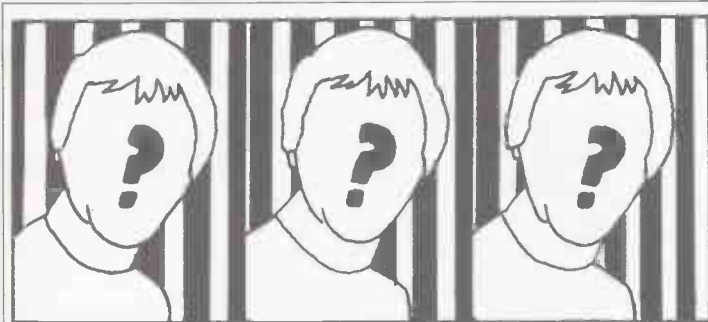
Figure 6 Illustration of the importance of the first fraction of a second when considering the shape of a note.

If you were to analyse a particular sound in detail, you would notice that it wasn't the overall loudness of a note that was changing over its duration, but the amplitude of every single harmonic that was present in the make-up of the sound that was continually and independently changing. So ideally a synthesiser would be of the additive type with a series of sine wave generators for all the harmonics, and with a separate envelope generator and voltage controlled amplifier for every harmonic; consequently there wouldn't be a need for any filters. This, however, would be a very expensive exercise, and in nine cases out of ten, such sophistication would be unnecessary: so for the sake of producing synthesisers that you and I can afford, manufacturers normally have separate envelope generator for moving (or modulating) the cut-off frequency of the filter during the course of the note. This is usually a satisfactory compromise, however, many pseudo-polyphonic synthesisers have just one filter and filter envelope, which is shared by all the notes, and therefore it is impossible to shape individually the harmonics for each individual note, so the imitative abilities of these types of instruments are restricted.

Over the past few years, computer based systems have started to appear that do offer complete control over the individual harmonics of each note. Unfortunately these are too bloomin' expensive for most of us, but I shall be looking at a couple of these instruments in a forthcoming issue.

Next month, to conclude this epic feature, I shall be looking at the way in which various instruments can be synthesised and how to pick out the specific qualities of certain instruments and translate them to the synthesiser and (lest we forget) the drawbar organ. ■

# THE DAILY SLOG



If you think people who work in record shops do nothing but stand around all day listening to their favourite sounds, you're wrong. Didy Lake finds out from the manager of a typical record store what goes on behind the scenes. Because the shop is one of those involved in the British Market Research Bureau chart return scheme both the manager's and shop's identity must remain anonymous.

We start on a Monday morning by ordering the back catalogue and chart stuff. That's the first thing we do, then usually we have a delivery of some new releases for the week which we process – wrap them and put them out on the shelves. The rest of Monday is usually spent phoning in the orders to the record companies and finishing off our paper work from the week before, tidying up all the loose ends so that everything tallies.

We get advice notes with the stock from record companies which we have to summarise so we know exactly how much stock we've had through in the week and on the other side is what we call the cash paperwork – when we write down how much money we've had and in what form so we know how much money we've spent and how much money we've taken. This paperwork is then sent off to our head office and they do all the rest there.

Monday is a busy day – the shop opens at 10am but the assistant manager and myself start much earlier than that to get all the orders ready.

Tuesday all the orders come in from the record companies so all the singles have to be priced and put away, all the albums have to be wrapped and priced and that takes just about all day. We have a staff of six and half of them are serving as well. We get deliveries from nearly every record company on Tuesdays. It's a constant flow – you get one lot put out and another one arrives.

Wednesday we start another order. One member of staff spends the whole day out in the shop doing album ordering, a thorough back catalogue order. The singles staff change the chart because there is a new one on Wednesdays.

The orders we phoned in on Wednesday arrive on Thursday and we have to check the Top 60 to make sure we've got enough stock for the weekend. We also start doing this week's paperwork.

Friday again all the deliveries are coming in from the Thursday orders so we have all that to process, the same thing again as on a Tuesday. On

Saturdays we usually have very few deliveries. We re-wrap any album that has been played and anything that has been returned that's not faulty. We make sure that all the stock is in the shop on a Saturday and tidy everything up. Most of the staff are involved in serving in the shop on Saturdays as it is the busiest day of the week for customers. Custom builds up during the week but we usually have between two and three times as many people on a Saturday as we do on a Monday or Tuesday.

I have very little personal contact with the customers unless I am out in the shop. If I am putting out the orders in the shop customers will ask me questions and also I do some serving on the singles counter. I would prefer to have more contact with the public, it keeps me in touch a lot more with what is happening.

Quite often people ask for things that you know about and you can tell by how often people ask for things how much interest there's going to be in, say, a new album. It's very useful. You can get bogged down with administration unless you try and spend some time serving people, because that is what the shop is about – serving people and helping people rather than doing paperwork.

It is very important to listen to what customers ask for as quite often they will hear things in clubs they go to, especially the disco people, that you don't know about. There's so much import disco music you don't hear on the radio and you don't know a rep who is going to come in and sell it to you so you are very reliant on the public to give you that information. There is a lot of good soul which is only available on import. Also, if a rep offers us an album by a new band we are very cautious about it but if we know the public are interested then obviously we are going to stock as many as they want.

I try to listen to the radio but it's very difficult to find the time to do it. Being in the shop all day obviously I can't listen to everything that's happening, but I catch what I can. I read the music

papers to catch up with what's happening. I think we all get every music paper which comes out every week.

We are hardly persuaded by reps at all when ordering stock. Any rep from any given company is going to be interested in his own product but I think most of our reps are quite fair. If you say to them, well, what do you think, they'll give a very fair estimate of what they think we can shift. But on the whole we tend to trust our own instincts and what our customers have asked for.

There aren't very many freebies around now being given away by reps. Two or three years ago there were an awful lot more – I suppose there is less money to spend on promotion now in that sense. That money is spent on adverts and things like that. In terms of free albums there are hardly any at all now. The incentives now tend to be much more in terms of discounts rather than holidays or free things of any kind. It is a much more business-like approach, companies set up deals with our head office for discount on stock.

Although we are a chart return shop there is very little extra work involved. All it means is that every time we sell a single or an LP we write down the number in the book and that is the only extra work we have outside of an ordinary record shop. And we make sure that we do write down every number as this is the only way the system works, if you do it properly. If we get busy on the main till on a Saturday we'll have two people down there – one shouting out the prices and writing the number down and bagging the record and the other taking the money and ringing up the till.

We have no way of telling if the information we give is used every week and we don't know which other shops are involved in the scheme. We just don't have access to that sort of information. A courier comes and collects the book late on Saturday and that's the only contact we have.

We don't seem to have reps or anyone trying to influence us in this shop. Obviously all the staff are aware in case suspiciously large numbers of the same record are bought by the same people but we've never come across it. If it were to happen we would register it, we'd write a note to go in the book describing whatever had happened and leave it up to them to judge it. There is another chart system whereby shops are phoned and asked what their top sellers are but we don't use that one – we use the *Music Week* chart.

There are no academic qualifications needed to work in a record shop, you just have to be able and willing to learn. Obviously you have to be interested in records and know what is current and you have to put in quite a lot of hard work. Apart from the paper work, in the case of a shrink wrapper for instance it is hard physical work. They are working the machine all day and carrying records backwards and forwards.

Also it is quite taxing dealing with the public all the time. You have to have a fair knowledge of the music business and what is happening with records. Quite often people hear something on the radio and don't

know who it is by or what it is called but they know the main line to it and we have to know what it is. So your mind is working all the time. It is a constant circle of selling, re-ordering, putting the records in stock, selling them ... You have to know what is going on so that you can help people who have only a vague idea of what they want or even only a vague idea of the sort of music they want. We get foreigners coming over in the summer who say, I want something to take back for my 16-year-old daughter and you have to recommend something that you think they'll like. It's not always easy and you can't always be sure, but that's a really nice part of it – it's a good feeling sending people away with something that they feel happy about buying.

During the week we play what we would like to hear. Considering there are six different people with different tastes, it gives a fairly wide spectrum of listening all week, but on Saturdays and at lunchtimes we play new chart stuff so people can hear before they buy so they know what they are buying and can keep in touch with what is new. You can't play one thing over and over again in the shop so people will hear it and buy it because we would all get fed up to the back teeth with it.

We don't have window displays. We use modules to display our discounted offers and any special offers that we have and that's purely down to the shop – we decide what goes in them. We have record company displays on the wall and that's largely based on what is relevant. It's nice to have a display for new albums. We do say no to reps who want to put up displays of records we think are too old or not big enough but we can also ring up and ask for displays of albums that we think are really good and selling well. The displays are totally at our discretion.

It's nice for the customers to have things to look at. We have video and use odd tapes we've got or Captain Video tapes which have got lots of different artists on them. You can see how much of an effect it has on people. They may see something they haven't heard before or they find out, finally, what the thing they heard on the radio is called.

Another thing which is really good fun is when bands come in, either well known artists doing a pa (public appearance) or lesser known bands who just set up in a corner and play! But the best thing of all is when someone comes in looking for something they say is really obscure and that they think we might not even have heard of. They worry that we might not have it but it's marvellous when we can say, yes, it's here!



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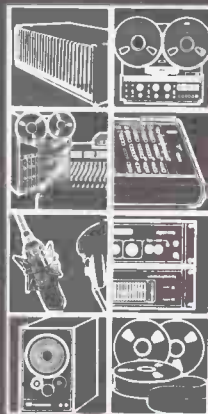
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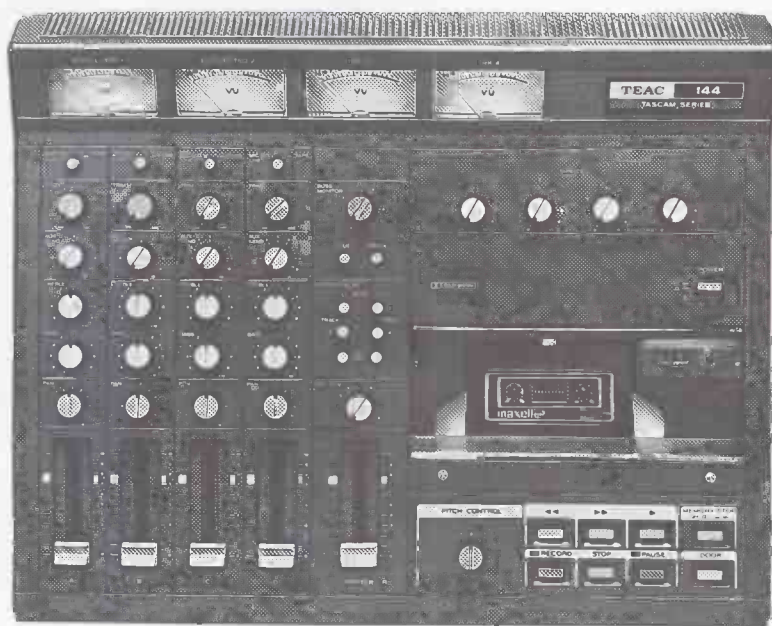
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# 10% of Tomorrow

If you are the kind of musician who expects a manager to find you, finance you, feed you and generally rocket you to stardom without your lifting a finger to do anything but pluck the particular chords recommended then this is not for you. I do not wish to address myself to puppets but to intelligent, responsible human beings who also happen to be musicians. They do exist but one finds this a little hard to believe when hearing the countless sorry tales these poor dears relate.

The traditionally popular view of a manager is of an opportunist shark, driving around in flash cars, wearing loud, tasteless suits and eating out in expensive restaurants, all paid for by the hapless artists this monster signs. The earth is promised, and when the group find themselves booked in to do the cabaret spot in some seedy dive in Weston-Super-Mare when they thought they should be appearing on *Top Of The Pops*, they figure they picked a bad 'un and cast around for another fast talking father figure who will crook his finger and beckon them in the direction of fame and fortune. And if they eventually do achieve a modicum of success, a couple of singles in the charts, say, the band bleats because they find that manager no 1 is now suing them for as much money as they can make.

Dreadful isn't it? Yet with a bit of common sense and some hard work nothing like this need ever happen. So, assuming you are intelligent, responsible etc how can you get yourself management you can trust? The first question you should ask yourself is, do you really need management anyway?

This is where the hard work comes in because initially it is positively advantageous for you not to have any management at all, but to do as much as you possibly can yourself. Although it often appears otherwise, there are no short cuts to commercial success. You have to put in a lot of groundwork and many bands who seem to have just been 'discovered' have, in all probability, been playing together for years before you heard of them. I'm talking here of success in the commercial sense and by that I mean maximising the potential you have as a musician to reach, through live performances and recording, the largest possible audience. That means hard selling in a market which is well known to be highly competitive. If that's what you want you can't pussyfoot around.

Should your manager(s) decide what your new single is? What you wear? Where you play? Should you be doing all this yourself and employing a glorified accountant? **Didy Lake** investigates.



It is at the beginning of an artist's career, before they have had a chance to learn the hard facts of the business, that most mistakes are made, so it is precisely at this time that you should keep your wits about you and with eyes and ears open learn as much as you can as you go along. Forget any glamorous notions you may harbour of seeing yourself dazzling audiences in auditoria holding thousands, lining your lode with gold records – you may get there but not without a lot of hard graft.

To start with you'll have to play with the best equipment you can afford. Your drummer may yearn for the latest electronic kit and your keyboard player for, say, a *Prophet-10* but be wary of anyone offering you large sums of money to get such things until you are sure that the kind of gigs you are being offered demand a superior sound to the one you've already got. You probably aren't actually being

offered any gigs at all at this stage. It's down to you to get them and that too is hard work, but it is well worth doing it for the experience you will get out of it.

This is not the place to talk about how you go about getting gigs, but it really does no-one any harm ringing round local promoters, phoning social secretaries at colleges and generally badgering anyone you can to let you appear. You'll find yourselves having to deal with other aspects of promoting yourselves too, getting publicity handouts together, arranging cheap photograph sessions and pasting up your own hand made posters when you do have a gig to promote.

On top of all this, of course, you'll be rehearsing as often as you can, writing and trying out new material and generally getting your act together. And you'll start thinking about making a demo. NOT to send to record companies and publishers, yet, but to your local radio station, promoters, John Peel, etc.

If you are any good you should, by this time, have built up a sizeable local following and be getting a lot more work. You can start going for more prestigious gigs, playing quite well-known venues in the major cities. This is when your name starts appearing in the rock press gig guides and you will start to be noticed. It is notoriously difficult to get the rock press to review you when you want them to but if you keep on at them enough someone will turn up eventually. Rock journalists like to discover unknown bands before anyone else has heard of them and you might be lucky enough to get a small piece in one of the papers.

Still no mention of a manager, you notice. Having done all the work yourselves so far you may decide to continue this way. After all, why give a manager a percentage of your earnings when you could keep it all for yourselves? But usually, as their careers accelerate a working band doesn't have the time to do everything themselves.

There are many musicians who prefer to limit themselves to recording only, whether as session musicians or recording artists who will only perform live on television or the occasional concert with a backing band of session musicians. If this is you and you feel sufficiently knowledgeable about recording, publishing and production deals then all you need is a good accountant and lawyer. But if you are a gigging band at the stage where you wish to start approaching

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record companies for a deal it is advisable to consider the question of management very seriously. And that means understanding what management is, what you can expect a manager to do for you and, most important, how much you pay them.

As I said earlier, we are talking about commercial success and it is this more than anything for which a manager will strive. That means that whoever you choose will be your *business* manager. Although they will often behave as such, don't go looking for a surrogate parent. It is a manager's job to look after your business interests so don't go throwing tantrums when you're booked to do a tour of Belgium, for example, even though the manager knows you absolutely *hate* Belgium - they're doing it in what they believe are your best interests.

Although every manager has a different approach and whether you sign to one person or a company, there are certain basics which all managers should have. They are: 1 a sound knowledge of every aspect of the music business; 2 a knowledge of law; 3 a knowledge of accountancy and book-keeping; 4 personal contacts with key people working within the industry; 5 a genuine enthusiasm and love of the business.

If managers do not have all the qualities mentioned above, haven't a clue how to organise a sound check for instance or where to go for that custom built bass you want for your Rainbow appearance then they must have enough money to employ people who do.

On the personal side, most managers will announce proudly that they are 'hustlers' and this is a good thing to have on your side as quite a lot of managers' work is precisely that - hustling record companies, promoters, press agents and so on, geeing up anyone working for you. Managers, in common with most people in the music business, have an innate ability to bullshit. This too is no bad thing, so long as you are not the one being bullshitted. To you your manager should talk straight and in figures.

Good managers are thin on the ground but there are an awful lot of bad ones around. There are no formal qualifications required and unlike lawyers and accountants there are no professional bodies to whom you can refer when things go wrong, so it is important not to make any mistakes when putting your career into someone else's hands. It is quite likely that you will have had a few enthusiastic friends helping you out along the way who perhaps hope that as you get more successful they will be able to slide into the position of becoming your official manager. Unless they are truly experienced it would be a misplaced loyalty to take on a mate as manager. But finding a manager willing to take you on is not easy. However, there are a few tried and tested ways in which you can go about it.

One is to approach those managers

already known to you as managers of other bands. If you look at other bands' careers and see them taking off in the kind of way that you would like your own to work, then ask around and find out who is the manager responsible for this. Having got the names and addresses of a few people you think you would like to handle your career then approach them in much the same way as you would an A & R person. Send them a brief, but clear, biography of all the members in the band outlining past experience, age, ambitions and so on. Include a photograph and neat copies of any press cuttings you may have. A cassette of your best songs, clearly marked with your name and address, should also be sent, the better the quality the better your chances. If you have ever done a radio session then a tape of that would be most impressive. You should explain in the letter what your present



commitments are, if any, and give details of any interest you may have had from publishers and record companies.

It could be that a manager will approach you. The British music business, concentrated as it is in London, is comparatively small and quite incestuous. Most people working within it tend to know each other, or know of each other and since there is a constant demand for fresh blood if you are making any impression at all on the gig circuit the word will get out that you are looking for management and you could be hearing from people who are looking for new acts to take on.

Many would argue that this is actually the best way of all of going about it. Any potential manager who simply turns up at one of your gigs out of his or her own interest obviously has the kind of *nous* that you are looking for, as opposed, say,

to a response you might get from an advertisement placed in the rock press. The term manager is a broad one and just because someone has been very successful managing, say, a stand-up comic or the last Miss World, it doesn't necessarily follow that they are going to be able to give you the best guidance in the area in which you work.

When talking to managers you should be at your most cynical. The prime consideration should be money - the percentage the manager takes of what, how and when you receive your money, what is paid to whom, what you can expect in the way of advances or wages. Be wary of managers who tiptoe around this crucial subject and try to blind you instead with how well-connected they are (which of course they should be) by dropping names all over the place or enthusiastically throwing around names of top-line producers they could get in to produce your first single. Find out how well their other acts are doing or why it is that they aren't actually managing anyone at the moment.

Be wary too of a manager who advocates the kind of recording and publishing deals whereby the band gets a massive advance initially then nothing at all, apart from what they earn live, for the next three years or so. These people are called commission skimmers and a deal like this is very much in their favour, but not yours.

As to the type of management you want, whether you want to sign to a well-known management company or to an individual really depends on the type of artist you are. There are advantages to both. An individual manager may not necessarily have a lot of personal capital but to compensate for that experience may be on offer, plus energy and the kind of creative dynamism that will have you riding along Oxford Street on elephants if it's thought the publicity will be good for you. Managers such as this never switch off, they are working for you all their waking hours and would probably be prepared to go to the limits of the law (and beyond!) to further your cause. A regular wheeler-dealer, this person will know exactly what is happening at so-called street level but be able to deal with equal ease with any business executive too.

An established company, on the other hand, operates with consistency and stability, dependent less on creative flair, more on smooth administration. While both types of management have got to be efficient, a management company can offer artists a greater feeling of security, through your awareness that everything is being taken care of.

And by everything, I mean *everything*. A management company is much more likely to want to take care of every aspect of your career with an eye very much to

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the long term. It is possible that the company will have its own record label, its own publishing company and its own agency. You sign everything to them and they, in turn, will do a lease tape deal with a major record company, for instance, or licensing deals with well-known publishers. In this way all rights are kept securely in the hands of your management. If this idea frightens you a little then the big company is not for you. There are tremendous advantages of course, not the least of which is money. A big company can pay out advances, buy you the equipment you want, pay for the new threads you want for your TV appearance, and give you a retainer to live on. Obviously all this is recoupable from you but any sums paid out in this way are the management's own risk - you may not make the money back in which case the company has lost this cash. But if you do go on to become a world superstar then your management company can act as your own personal finance company if you wish, investing in the kind of business venture which will keep on going long after you have retired and hung up your glitter and satin for good. The choice is yours - all you have to do now is persuade the manager you want to take you on!

The kind of deal you sign is very important. Although managers must be free to work and negotiate on your behalf without having to refer constantly back to you, they should not be able to enter into major deals without consulting you. If you sign to a company that requires you to sign also to its subsidiary recording and publishing companies, be sure that this doesn't give them a totally free hand to do what they want with your music - they should consult with you first before licensing it to anyone else. Similarly any contract of importance should need your ultimate authority. Managers should expect to have the authority to sign gig contracts, however, as obviously they can't wait for you to come back from Japan to sign the deal for your Hollywood Bowl concert!

The duration of the deal you sign should be long enough to give the manager a reasonable opportunity of getting you launched and he or she will want options for a further two, three or even more years. You could set an amount of money to be earned within the first year which, if not reached, leaves you free to leave and seek different management. Do not agree to anything which means that you will be paying a manager a percentage of your income for the entire duration of your career! However, it is reasonable for managers to expect a percentage from all the deals they made on your behalf for as long as these deals go on earning royalties.

The amount of the percentage your manager takes can vary but 20% is quite usual. This will not usually include any expenses other than those directly concerned with the manager's own over-

heads. You won't have to pay the rent on their office, for instance, but the taxi that arrives to take you home from the studio, the business lunch with foreign licensees and the drinks bought for the press at your gigs will probably all be put down as your costs. Be quite sure you know exactly what you will have to pay for in the terms of the contract or agreement you make with your manager.

Your manager should make regular statements to you so that you are constantly in the picture as to the state of your finances. However, the more work you do and the busier you get, it is quite easy to lose track of all this. You should get your own accountant, quite separate from your manager's accountant, just to check, from time to time that everything is as it should be. It is a good idea to have your own lawyer too and any management worth its salt would recommend you to do this.



As to the kind of personal relationship you have with your manager, do not expect a surrogate parent. You will have disagreements of course but having, by the act of taking on a manager, given over the direction of your career to your manager it would be unreasonable and churlish of you then to expect to dictate *yourself* where you tour and when, what you record and when, the kind of hotel accommodation you want to stay in, the kind of press interviews you'll agree to do and so on. There is room for discussion in all these areas, but if your manager books you into cheap bed and breakfast guest houses on your first tour rather than Holiday Inns because this is all you can afford, don't go around sulking because that's just a pain in the neck for everyone.

However, if you really do want to keep absolute control of your career and take responsibility yourself for all your areas of

work and only need someone to act as a glorified secretary for you, then you should make this quite clear at the beginning. Also, the degree of control your manager has over your music should be discussed thoroughly before entering into any binding agreement. Obviously your manager will appreciate and enjoy the music you make - this is after all what's being promoted and you should be suspicious of anyone who wants to manage you but who personally doesn't like what you do, just the possible money it can make. There will be times, though, when it comes to releases that your manager will urge you most strongly to release one song rather than another because it makes more commercial sense. Or your manager may want you to take your next single release from the album when you would rather put out the song you've just written. Or your manager may wish to use one producer and you another. These can be emotional times and will require a lot of discussion and understanding on both parties' sides. It's best to be aware of these potential problems in advance.

Ideally a manager works to promote the artist and further the artist's career to the utmost, taking care of all the business arrangements and day to day details necessary so that the artist is left free to concentrate on the music. Whilst protecting the artist from the business world as much as possible, a manager should not keep the artists totally away from it. Record companies do, on the whole, prefer to deal with other business people like themselves but it just wouldn't be any fun if the musicians themselves never went inside a record company, teasing the receptionist and spilling coffee all over the press office!

Managers are buffers between his acts and the music business. But the best thing of all about having a manager is that you've always got somebody to *blame!* Managers are used to this. They book you to do an open air festival and it rains. Naturally it is their fault. The van collides with a juggernaut halfway up the M1 and all your equipment is smashed to bits. That is the manager's fault too. They won't expect any credit for the fact that they can whisk up a whole new rig an hour before you are due to go on stage, but the fact that they do it is reward enough for them. This is what managers like, the behind the scenes manipulation that has your name in lights! Beware of managers who want their own names there - most, really, are quite content so long as they are never more than three yards away from a telephone, have a contract in their hands to scribble all over and a band with its name plastered all over the world!



# Cabaret Voltaire

Mr Henderson (words) and Mr Pyke (pictures)  
explore the Sheffield syndrome with  
three experimental vinylists; read on...

## THE SOUND

Cabaret Voltaire with tongue-in-cheek humour claim they are unable to play their instruments. The truth of the matter is they cannot and do not wish to play their instruments in an orthodox rock style. In a dog-eared room in Sheffield the three-piece reveal the secret of the set-up.

To those unaccustomed to CV, first, the sound. All instruments are put direct-input through the mixing console: no amps, no cabs, so live a lot depends on PA monitoring. Richard Kirk (guitar-through-effects and clarinet) uses a Kimbara *Strat* copy live, in the studio a Burns which, he enthuses, gives a great 'Wild Dog' effect. Both guitars were cheap, second-hand, there being no desire for an expensive guitar with crystal sound as so many effects are used.

Effects range from fuzz boxes, made by Chris Watson, wah-wah, MXR flanger, Pro-effects phaser and a WEM *Copicat* which he swears by. The clarinet is a simple system B flat, again picked up second-hand. In a vain attempt to become a low budget orchestra Richard has ob-

tained a violin and claims to be thinking about oboes. Stephen Mallinder ('Mal'), bass and vocals, claims he chose his violin bass because it looks a bit different and with its hollow body is not as heavy as other basses. He firmly denies any association with Paul McCartney.

There are no effects on the bass, but a unique sound is created with a 10-band graphic equaliser. The vocals are put through an echo unit and a synthesiser (again built by Chris) used to modulate or occasionally envelope-shape the voice. Chris is involved in the electronics and tape side of things and still finds time to tinkle the simulated ivories of his synthesiser. Chris uses three drum-machines and various rhythm tracks on tape, treated drums, electronic percussion etc.

Chris also uses a variety of sound/noise/speech on tape. Cassettes are used rather than reel-to-reel for versatility and easy transport. And with his other hand Chris mixes his effects through a six-channel mixer which then goes DI into the desk.

Richard Kirk



## LIVE

Although CV tend to appear with the *avant-garde* clique, Mal made it clear that they don't feel part of the industrial/grey bracket and would like to appear with more orthodox rock bands to reach a wider audience and provide contrast. CV were surprised to be labelled thus, as they felt Killing Joke were that sort of thing. Richard intervened that there must be different levels of doom and gloom, and the conversation moves on to the live sound.

CV have suffered from the 'I've-just-come-off-the-Elvis-Costello-tour-I-don't-need-to-do-this' Soundman Syndrome, but agreed that headlining was their only saviour as the soundman is usually geared to the last act's requirements. Luckily they have obtained a sympathetic approach from some of the more experienced veterans, but still, as in their ICA appearance earlier this year, they can suffer: no monitors left them to struggle for what could only be a flat sound.

CV's attitude to touring is very plain - small tours only, four or five dates, and only when there is something specific to promote. The live set is never the same twice, and new venues may be treated to a selection of older material mixed with newer material. But generally, a reasonable amount of time is spent in putting together a structured set. Live, the music is enhanced by slides and film, Richard's department, although a friend, Nick (also an occasional drummer on live appearances), has also contributed. The films were Standard-8 and have degenerated through wear-and-tear; the plan is to transfer them to Super-8 via video. More film loops are planned.

## RECORDING

All of the CV material with the exception of *Nag Nag Nag* (single) was recorded at their own Western Works, where we are holding this *soirée*, above a dress-making sweat shop reminiscent of *Coronation Street* - two rooms, 8-track facilities, £39 a month, a good reason to stay in Sheffield. Such a place would cost the earth in London, and their self-imposed seclusion enables them to look at things in perspective. Their equipment has been purchased as they've progressed with the royalties from their records. About a year ago, it had been the only 4-track in Sheffield, and as well as their own projects CV had entertained I'm So Hollow and Clock D Va amongst others.

Since going 8-track (through the sales of *Voice Of America*, CV's third album), they haven't had too much time for outside work although, at the end of last year, New Order and Eric Random were there and the intention is to work with more groups in the future - this strictly on a production basis as the studio is not open commercially and CV would not be interested in functioning as engineers only. Chris explains that they have de-

veloped their own recording techniques over the years which probably wouldn't be accepted elsewhere. The numerous problems that have been encountered and overcome have now become part of their current technique. Each member of CV is accomplished in his own style enabling the group to become totally self-sufficient in that respect.

## RECORD LABELS

The idea of their own label was dismissed through lack of time, but mainly through the fear that they would not be able to change the identity of CV so easily from record to record as they can do with Rough Trade. CV are contracted for each individual recording, which explains their releases on Factory, Industrial, and Belgium's Crepuscule label. CV's relationship with Rough Trade is described as 'homely' although they were not too pleased with Rough Trade's promotion of their last single *Seconds Too Late* as they felt it was only reaching the same people their previous singles had, and still wasn't being heard by a lot of people who would have been interested in it. The attitude to getting involved with one of the major labels is quite simple: apart from losing a lot of the respect that the group has built up for its independence and uncompromising attitude, the majors couldn't really offer them anything that they hadn't already got except for thousands of pounds' worth of advertising. CV felt they would also be placed under a lot of unnecessary pressure, something which they had observed of fellow Sheffield group the Human League.

## FUTURE PROJECTS

Having just finished a film soundtrack, which will hopefully be released as a cut price LP, CV have set aside two months without live performance to work on a new album, possibly using Nick playing drums on some of it. The use of a fourth member is by no means permanent, although the idea is to use various musicians for one-off live shows, just to try different approaches. Various other projects have been suggested: a single to be released at the same time as the LP, a cassette of their recent Lyceum show, a pack of three solo-orientated singles.

Definite plans outside of the group see Mal working in a production capacity with bands from Manchester, Richard working on another solo cassette and Chris doing some solo work along the lines of the *reportage* documentaries done by Charles Parker during the 1950s. Obviously, in the two months out of transit the group are going to be far from idle, and if there is time Chris feels there is a definite need for a private surveillance agency in Sheffield if only to recover the £7.50 owed to him by Clock D Va. Meanwhile, Mal is aiming at the cover of *Smash Hits* and Richard wants a flexi CV single on the front of *Flexipop*.



Stephen Mallinder

## ENGLISH RELEASES

### Singles

*Extended Play* (4 track EP) Rough Trade RT 003  
*A Factory Sample* (two tracks included) Factory Fac2

*Nag Nag Nag* Rough Trade RT 018  
*Silent Command* Rough Trade RT 035  
*Seconds Too Late* Rough Trade RT 060

### 12in

*Three Mantras* Rough Trade RT 038  
*Sluggin' For Jesus* Crepuscule 3

### LPs

*Mix-Up* Rough Trade Rough 4  
*Live YMCA* Rough Trade Rough 7  
*The Voice Of America* Rough Trade Rough 11

### Cassettes

Richard H Kirk *Disposable Half Truths* Industrial IRC34  
Cabaret Voltaire *1974-1976* Industrial IRC35

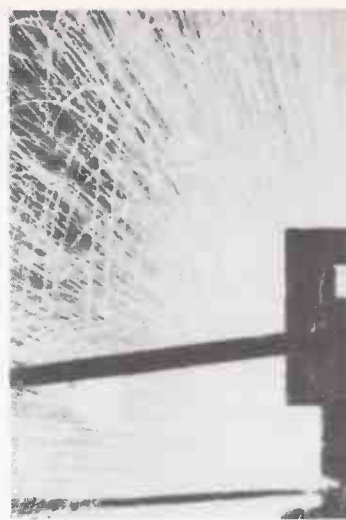
Chris Watson





# The DIY Studio: Part Seven

John Morrish absorbs more knowledge and comes up with an absorbing part 7 on sound absorption in the Do-It-Yourself Studio.



Last month I was half-way through the complicated business of acoustic treatment when I was rudely interrupted by my own innumeracy. This month there will be less arithmetic and more practicalities.

As we saw last time, the classical methods of calculating reverberation time are not much use when it comes to small rooms, because of the distortions introduced by the existence of the famous *modes of resonance*. These modes lead to an increase in reverberation time and loudness at the frequencies where they occur. Thus a painstaking reverberation time calculation like the one we did last time for Spaceward's studio is only useful if we also take into account the room's natural modes.

The modal frequencies of a simple rectangular room can be predicted by calculation. The books will show you how to calculate the various modal series arising from the interaction of all the surfaces in a room. The calculation is not difficult, but it is long-winded and not, in fact, very useful for our purposes. That is because the only modes to have substantial audible effects on the subjective reverberation performance of a room are the *axial modes*. These are modes of resonance that occur between a pair of parallel surfaces.

To calculate the frequencies at which the axial modes between a pair of surfaces are likely to occur, it is only necessary to find the lowest (or *fundamental*) resonant mode. The remaining axial modes are simple multiples of this fundamental frequency. To find the fundamental frequency the basic wave equation is used. You may have learnt this at school:  $c = f\lambda$  (where  $c$  = the speed of the wave,  $f$  = the frequency in hertz ie cycles per second, and  $\lambda$  = wavelength). This is the same equation you use to convert nasty modern pan-European kilohertz into good old BBC metres when you want to tune in your ageing British radio to something foreign, only there you use the speed of light and here you use the speed of sound, which, for the sake of simplicity I declare to be 340 metres per second.

The fundamental resonant axial mode occurs at a frequency, the wavelength of which is equal to twice the distance between the two opposite surfaces involved. In other words,

$$f = \frac{c}{2l} \quad (\text{where } c = \text{the speed of sound, and } l = \text{the distance between the two parallel surfaces}).$$

The higher modes are all simple multiples of this frequency.

So now we can draw up a table of the axial modes in each of the three pairs of surfaces that make up a rectangular room. In practical terms there is no point in going beyond 350 Hz or so at the top end, because at that sort of

frequency the other types of modes (*tangential* and *oblique* modes) become so close together that effectively all frequencies become equally resonant.

Let us imagine a rectangular recording room of length 6.5 metres, width 5 metres, and height 3.5 metres. The table of axial modes between each pair of surfaces would look like this:

Hz	l	w	h
26.15			
52.30		34	48.57
78.45		68	
		102	97.14
104.60			
130.75			
		136	145.71
156.90		170	
183.05		204	194.28
209.20			
235.35			
		238	242.85
261.50		272	
287.65		306	291.42
313.80			
339.95		340	333.95

Of course, drawing up a table of modes is one thing, but predicting where those modes will be noticeable as subjective colorations is quite another. You will remember that last time when we were discussing studio dimensions I noted that these dimensions should never be in simple relationships to one another, otherwise the modal frequencies of the three sets of walls could coincide. In the example given above the dimensions of the studio have been chosen to reduce such coincidences to a minimum. All three pairs of walls share modal frequency at almost exactly 340Hz but that is probably too high to cause any trouble, and the modes are a long way above the fundamental and therefore weak. Further down there are no exact coincidences, but there might be trouble at the near-coincidence around 102Hz, where one of the modes is a first overtone and one a second overtone, both powerful resonances, and again possible at around 238Hz. Generally where a frequency is modal for more than one pair of surfaces it is likely that the consequent resonance will be pronounced.

For instance, if a studio was rectangular and its dimensions were 6m x 3m x 2.65m the

chart of axial modes would look like this:

Hz	l	w	h
28.33			
56.67		56.67	
			64.15
85.00			
113.33		113.33	
			128.30
141.67			
170.00		170.00	
			192.45
198.33			
226.67		226.67	
255.00			
			256.60

and so on.

It will be seen that because the length of the room is double its width, the two modal series contain many common terms. It is probable that there would be pronounced resonances at 56.67Hz and 113.33, with lesser ones at 170Hz and on up the scale. The most troublesome would be the one at 113.33Hz because the amount of musical information contained at 56.67 Hz is small.

Even when each set of modes in a room is entirely different, single modal resonances can still cause trouble Gilford has done some work on the relation between modes and coloration on speech. He found that axial modes that are separated by at least 20Hz from axial modes on either side can cause coloration on speech, provided they also coincide with certain characteristics of speech sounds.

Our first table shows no such isolated modes, except the group at around 238Hz which would probably act as a single mode. But this is outside the crucial range of speech frequencies. But the second table has isolated modes like this at 170Hz and 226.67Hz. In both cases these modes are also modal for two sets of walls, and therefore reinforced anyway. The evidence would suggest that this second studio would suffer from pronounced resonances at each of the frequencies of the modal series arising from its width: 56.67Hz, 113.33Hz, 170Hz, 226.67Hz and so on. At the latter two frequencies the resonances would probably be audible as coloration on speech material. Unfortunately no work has been done on the relation between modes and coloration on musical sources, but it can reasonably be assumed that at least some of

these resonances would be audible, depending on the instrument being recorded. How damaging such colorations would be is a matter of personal subjective taste and practical experience. But it would obviously be better to spend a little time working out a set of studio dimensions that would avoid such mode problems than to spend many hours and a small fortune trying to get rid of them later on.

One last problem connected with the modes is the flutter echo. This certainly is audible and can be very troublesome. It occurs between reflective parallel surfaces close together, and sounds like a pronounced 'ringing'. If you ever walk along a narrow alley with high walls on each side you will hear such a ringing, caused by the sound of your footsteps. Luckily it can be cured fairly easily in most studios, either by angling the surfaces or by the use of absorption.

After all this figure-work we are finally in a position to put into practice what we have learnt. The most important thing to remember is that when something calculated doesn't correspond to subjective experience it is better to ignore it. Certainly there is no point in being slavishly bound to calculations which are at best less than accurate and at worst positively misleading. They should be used as a general guide and should be checked at every step of the way by subjective impressions and where possible by experiment. If you can borrow or hire an accurately calibrated audio signal generator then it should be not too difficult to set up a system capable of pointing out gross resonances in the room's frequency characteristic, but remember that even your very best monitor speakers and microphones will have pronounced frequency imbalances of their own which you will have to take into account.

Generally, the procedure for acoustic design of a studio goes like this. First do the calculations to decide room shape and size, bearing in mind the necessity of keeping the three axial mode series separate. Second, build your shell and work out its reverberation time and check this against your subjective impressions. Then decide on the sort of reverberation time characteristic you want. Next, work out the amount of absorption that will be present in the studio anyway, in the shape of furnishings, musicians, instruments and so on. Take this value away from the total value of absorption you need to bring your empty studio shell's reverberation time down to the time you are seeking. You will be left with a figure for the amount of additional absorption you need. Install this, making particularly sure that the treatment is effective at any remaining modal frequencies. Listen carefully to the sound of the room at this stage. Adjust the absorption as necessary. Experiment until you are satisfied.

Behind that bland summary lies a world of complications, particularly in the area of sound absorption. This should not be too intimidating a prospect: there are books to help, but ultimately only you can decide how your studio ought to sound, and only you can do the experiments needed to get it right.

#### Sound Absorption

Sound bounces around a room until all its energy is dissipated, and then it disappears. Each time a sound wave hits a surface some of its energy is lost, or rather, converted into heat. The sound is *absorbed*. There are only two ways this can happen. One is by making a

surface vibrate, and then sound energy is dissipated in mechanical losses. The other is by the sound entering porous materials, where energy is dissipated by viscous loss as the air within the material is moved about. Practical designs of absorber generally use one or other of these principles. There are *resonance absorbers* and *porous absorbers*.

Common examples of porous absorbers are acoustic tiles, curtains, carpets, woodwool slabs, unplastered blockwork and so on. All porous materials absorb efficiently at high frequencies. They can absorb at lower frequencies too: as the thickness of the material is increased, so the low frequency cut-off of its absorption drops. Absorption is at a maximum at a frequency for which the thickness of the material is one-eighth of a wavelength. Doubling the thickness will halve the frequency. Progressive doubling of the material's thickness will continue to bring down the cut-off frequency of the material's absorption but this is an expensive and wasteful way of absorbing low frequencies. Similar results can

be achieved by using a thin layer of absorptive material backed by an air-space to make up the required total depth. Practical porous absorbers designed to remove mid and low frequencies as well as high frequencies make use of this. The porous material is suspended away from the wall at a distance equal to one-eighth of a wavelength of the lowest frequency required to be efficiently absorbed. Effectively this means porous absorbers are not of much practical use below about 250-125Hz, depending on design. Above 250Hz, their absorbency can be modified by the use of different facing materials.

Resonance absorbers come in two forms: panel or membrane absorbers, and Helmholtz resonators. Panel and membrane absorbers are used to remove low frequencies and can be accurately tuned to specific frequency bands. The Helmholtz resonator is capable of being very finely tuned to individual frequencies, and it is used to remove specific modal resonances. In practice, it is not much used, because most



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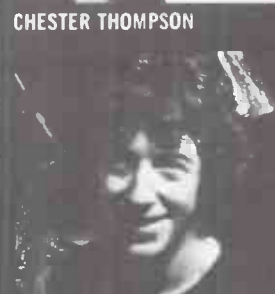
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resonances can be removed at the design stage. It works by allowing a trapped volume of air to resonate, like someone blowing across the top of a milk-bottle. By changing the size and shape of the bottle, different resonant frequencies are achieved. But Helmholtz absorbers are difficult to construct and install, so if you want to know more about them you can refer to a higher authority.

A good example of a simple panel absorber is the sort of wood panelling you find in the main hall of stately homes. By flexing when low frequency sound strikes it, such panelling controls any bass notes that might be produced in the room quite efficiently, whether by a band of strolling players or the relentless trudging of touristic feet. You can do the same thing with 1/2 in hardboard on 1 in battens. This will give you an absorption coefficient of 0.32 at 125Hz, rising to 0.43 at 250Hz and falling thereafter. Easy, cheap, and fairly efficient if you don't have much space. Hang a heavy curtain in front of it and you can maintain an average absorption coefficient of about 0.4 from 125Hz up to 8 000Hz and beyond.

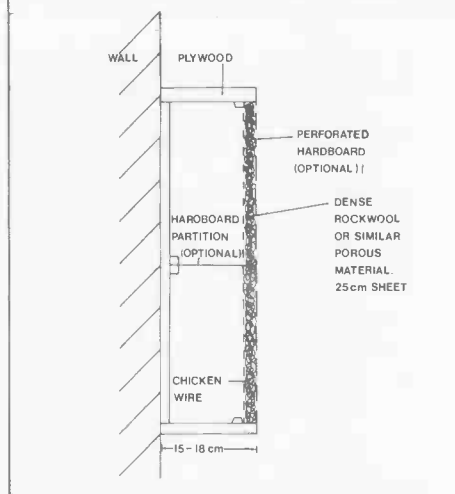
But in practice, to achieve the sort of 'deadness' we have been discussing you will need to use smaller areas of more efficient absorption. And you will need to take decisive action with regard to frequencies below 125 Hz. To achieve both these ends you will need to use some kind of membrane absorber, which is not unlike the panel absorber mentioned above, except that the vibrating element is a 'membrane' made of heavy bituminous roofing felt. By altering the density of the membrane and the depth of the air-space behind it various absorption characteristics can be built into the absorber. Practical designs of membrane absorber incorporate different facing materials to adjust the high frequency response, and also a small amount of porous absorption material behind the membrane. They are less easy to build, and expensive, but necessary nonetheless.

### Applying acoustic absorption

Before moving on to look at practical designs of absorbers it is worth looking at the ways absorption should be used in a studio. Firstly it is not necessary, or even desirable, to apply absorption to the whole surface of the various walls. Absorbers work more effectively when the sound wave fronts are broken up, and this is most easily achieved by using the absorbent material in patches scattered across the whole surface of a wall. But care must be taken that the untreated areas on a pair of walls are not left directly opposite each other, otherwise flutter echoes will result. If they do occur, a patch of absorber on one of the surfaces will solve the problem. For instance, if it is decided that one end wall of a studio will be left untreated to give a more 'live' sound to instruments recorded at that end, the opposite end must be treated heavily enough to keep the average absorption coefficient of the two ends sufficiently high, and to keep flutter echoes down.

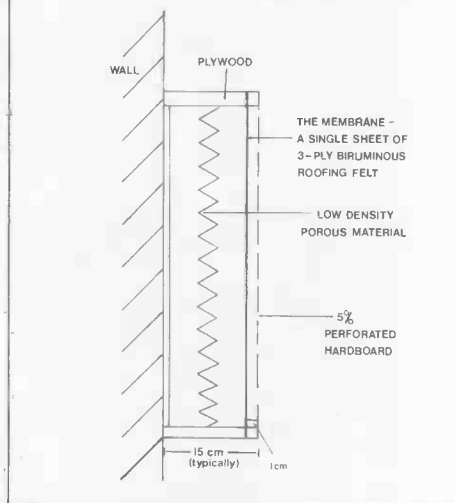
Secondly, full account must be taken of the unavoidable absorption provided by the furniture and fittings. Remember the aim is to maintain a single reverberation time across the entire audio range. To do this, the room's absorption coefficient should be substantially the same at all frequencies. But it is no good going to extreme lengths to install a 'flat' absorption system if you forget that you have carpet on the floor. Carpet barely absorbs at all

FIG 1 A Practical porous absorber (cross section)



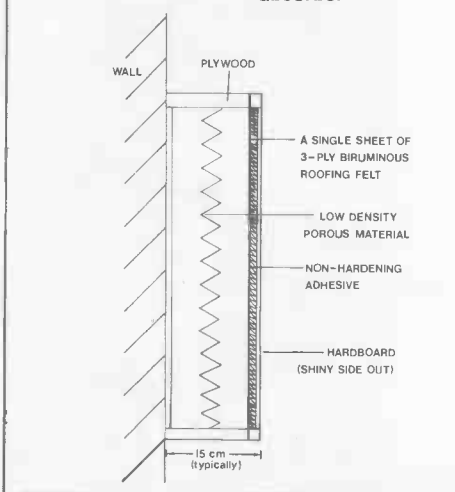
*Porous absorbers can cover whole surfaces or they can be used in small units. If used in small units (typically 60cm x 60cm) there is a general increase in absorption per unit area. The use of hardboard partitioning increases low frequency absorption, depending on the size of the cells created. 30cm x 30cm is a useful size.*

FIG 2 A practical membrane absorber



*The area of each membrane absorber should be between 0.56m<sup>2</sup> and 0.84m<sup>2</sup>. The 5% perforated hardboard reduces the high frequency absorption of the unit.*

FIG 3 A composite membrane absorber



*The area of each absorber should be between 0.56m<sup>2</sup> and 0.84m<sup>2</sup>.*

at low frequencies, but at 2,000Hz and above it has an absorption coefficient of about 0.7. Woodcemair, the woodwool slabs used for ceilings, has in untreated state, a very similar absorption characteristic. If nothing is done specifically to counter these problems, the floor to ceiling axis will have a disastrous reverberation characteristic. Everything above about 1kHz would be absorbed out of existence; below about 250Hz sound would be free to wallow about as much as it liked, drowning any subtleties in booming resonance. The lower modes would be unrestrained.

In fact this sort of problem is very common in small studios. It results in that typical oppressive studio sound. People start applying mid and high frequency absorption willy-nilly, because they think that's what a studio ought to look like, and totally ignore the fact that those frequencies are inevitably going to be absorbed by the ordinary furnishings of the room. The result is a leaden, lifeless sound that they have to try and brighten up with heavy doses of eq.

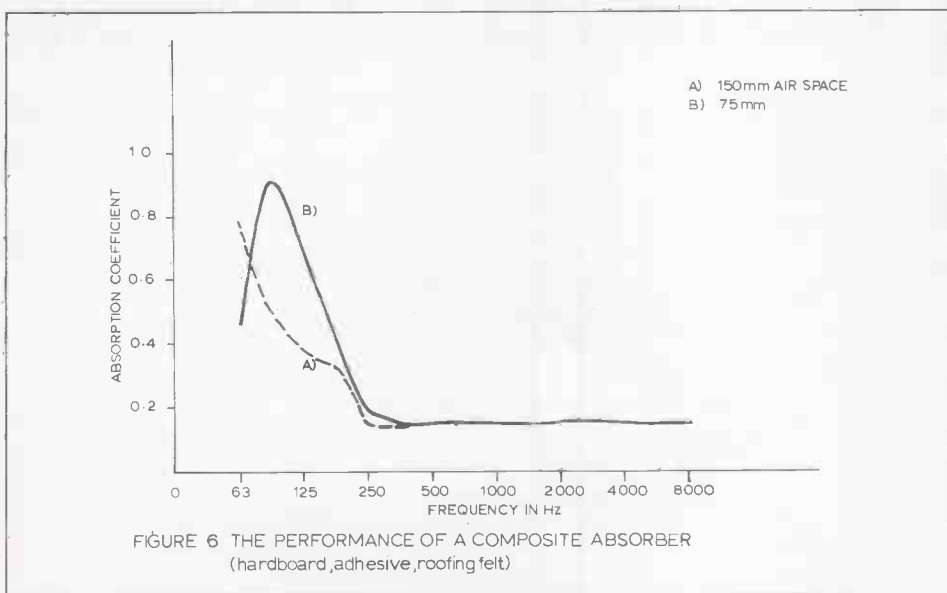
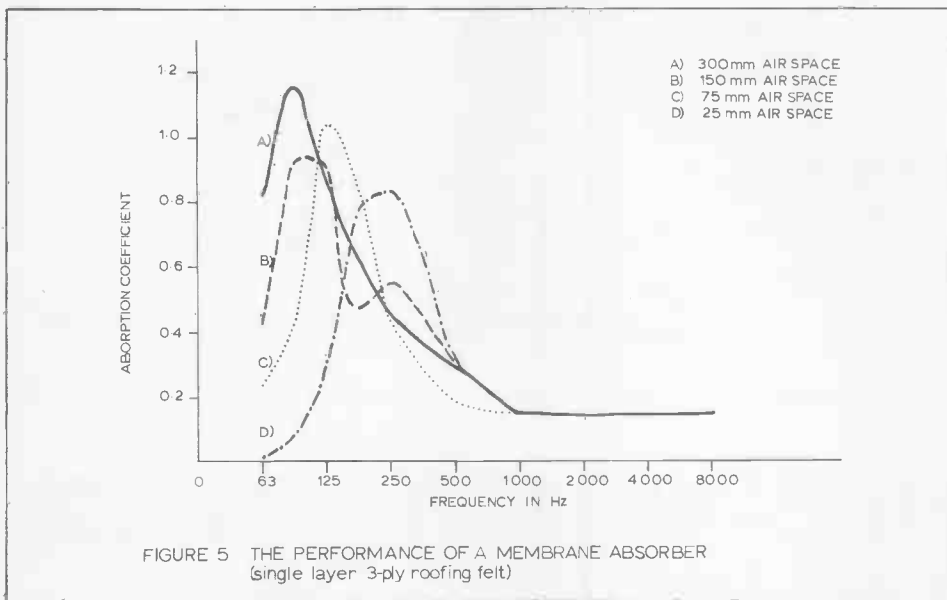
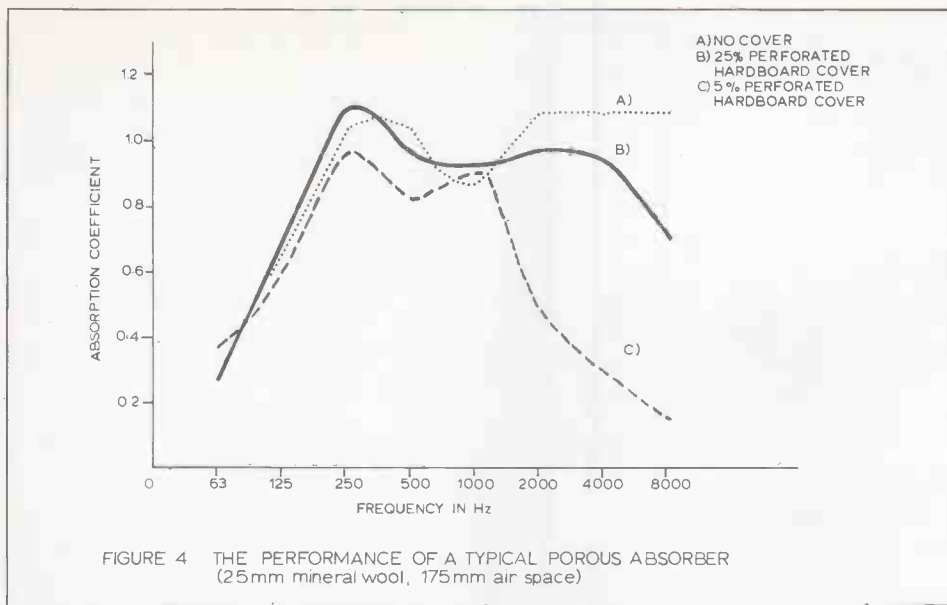
The third thing to remember is that each pair of surfaces ought to have approximately the same level of absorption. The two surfaces in a pair can have widely different absorption coefficients, but the average coefficient of each pair should be approximately the same. If two pairs of walls have the same level of absorption, and one pair is left substantially more reflective, the resonant modes of that pair will be more pronounced.

Of course, there are those who like the sound of particular acoustic colorations. One example that I feel particular sympathy with is the characteristic 'village hall' drum sound you get from unrestrained reflections between floor and ceiling. Ideally you would build a drum booth with such characteristics designed-in but this is probably a waste of space. Alternatively you might employ a removable carpet on part of the floor. With the carpet in place, the floor-ceiling axis would have a flat reverberation characteristic. When the carpet is pulled back, there would be a pronounced mid and high frequency boost and associated ringing. The bass reverberation would be under control, so your floor toms would still sound tight. There are plenty of opportunities for this sort of 'variable acoustics', and many more for tailoring your studio to suit your taste, or that of your customers, but don't overdo it. Nobody wants to be stuck with 'last year's sound'.

Finally, there is no point in spending a lot of time and money designing a studio with an even reverberation time/frequency characteristic if you are going to fill the studio up with things like fire-extinguishers, heaters, pianos and other metallic objects with long decay times at their resonant frequencies. Even steel ceiling joists should be damped.

### Practical Designs of Absorber

The porous material used in porous absorbers can be almost anything: fabric, curtain, fibreboard, glass fibre and woodwool. Acoustic tiles are simple porous absorbers. All these materials work better at low frequencies when suspended in front of an air-space. Using tables it is easy enough to design your own absorber to fit the materials you have available to you, and your own requirements. But fig 1 shows a straightforward design capable of sucking large amounts of sound out of a studio, over a wide frequency range. It uses rockwool, a dense



mineral fibre material that comes in slabs under various trade names, for instance Stillite. It is expensive, so you could replace it with glass fibre of similar density, with some loss of high frequency absorbency. High frequency absorbency is controlled by the use of optional front covers of perforated hardboard, with

different percentages of perforations giving different responses. Incidentally, ordinary pegboard has a hole density of about 17 per cent.

There are numerous types of panel absorber that are easy to construct and fairly cheap. The simplest is probably the simple

hardboard-on-batten system mentioned above. This can be improved upon by putting some low-density porous material into the space behind the hardboard. This will lower the absorber's resonance and shift the cut-off frequency downwards, as will increasing the depth of the battens. The battens should be in a square pattern about 1m across. The system is useful because its high frequency absorbency is quite low. If more hf absorbency is required, a porous absorber (for instance carpet) can be stuck to the front using a non-setting adhesive that will still allow the panelling to flex. The resulting absorber, which Spaceward have used extensively, is a combination of porous and resonance types, and absorbs across a wide range. It is especially effective at the crucial lower mid-range frequencies, and even in the upper bass, because the addition of the carpet and adhesive to the hardboard makes a very heavy membrane, which lowers the resonant frequency still further. In resonance absorbers, peak absorption comes at the resonant frequency. The resonant frequency drops as the air space gets deeper and the membrane gets heavier and floppier.

Roofing-felt is a very heavy and very floppy material and it is used in all the best membrane absorbers as built by the British Broadcasting Corporation. Figure 2 gives an example of a typical absorber of this type, which can, with the right depth of air-space, give a useful level of absorbency right down to 60Hz. The membrane is fastened across a box of blockboard and plywood with an area of between 0.84 m<sup>2</sup> and 0.56 m<sup>2</sup> (or 9 ft<sup>2</sup> and 6ft<sup>2</sup>). The smaller size is probably best, and it is preferable, though not essential, for the box to be square.

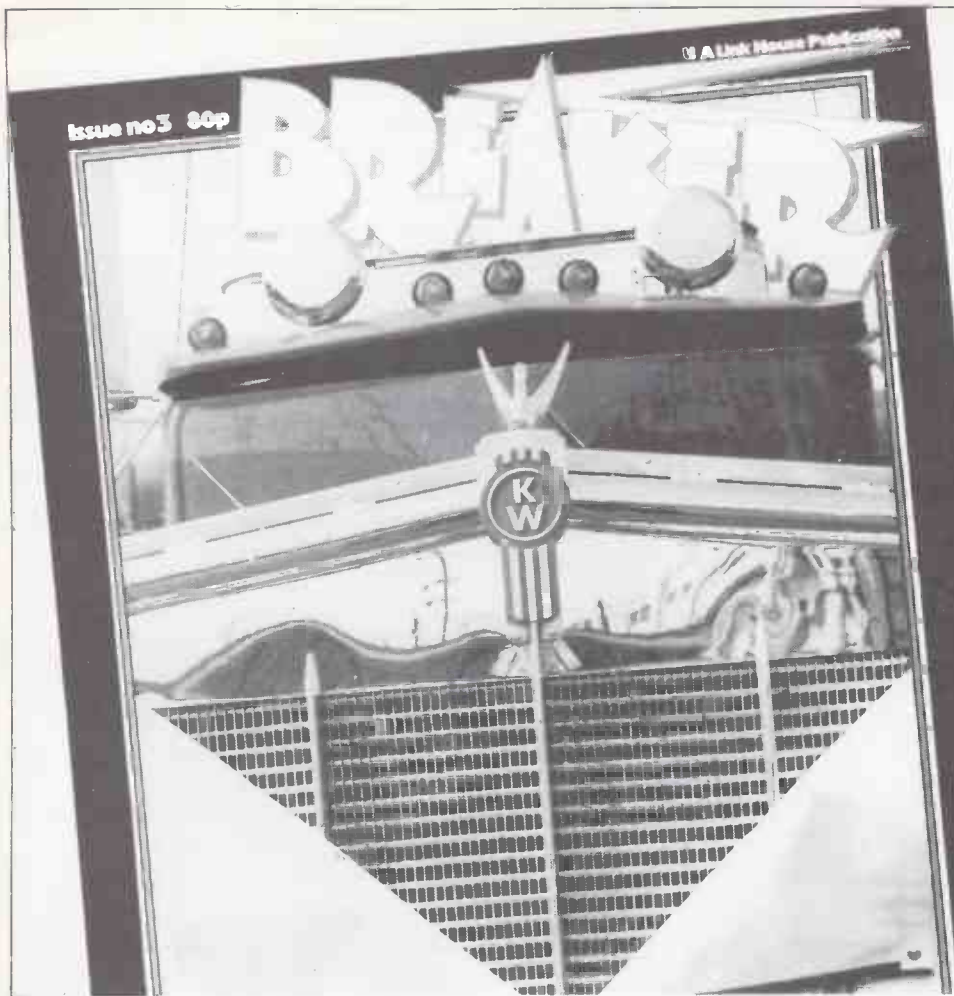
Figure 3 shows a variation of the membrane absorber, designed for robustness and ease of construction. The principle of operation is the same as in the standard membrane absorber, except that in this case the membrane is a composite made up by attaching a sheet of the usual bituminous roofing felt to the hardboard that makes up the absorber's front panel, using a non-hardening adhesive to keep the membrane flexible. The resulting membrane is heavy and has a low resonance.

Figures 4, 5 and 6 show the sort of absorption coefficient responses that can be obtained from variations on the three types of practical absorber we have been looking at. Together with the simple panel absorbers and porous absorbers, these systems should equip you to cope with most of the acoustic problems you are likely to encounter. The joy of building your own studio is that you can take as long as you like to get things right.

Next time we'll have a look at how Cave and Spaceward handled the question of acoustics, and then we'll go back to the more general problems of buildings.

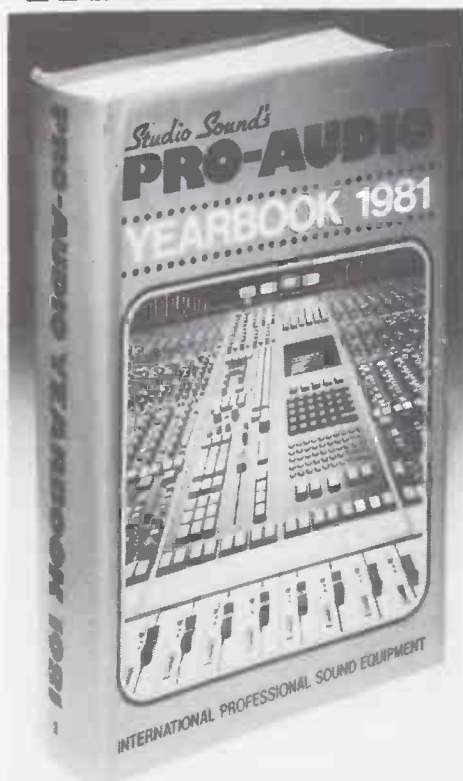
#### More reading

I've just discovered *Teach Yourself Acoustics* by Jones, Hempstock, Mulholland, and Stott. It's a bit old-fashioned, but good on the basic ideas of sound and hearing which I haven't had space to cover here. And while I'm on the subject of books, a word of warning about Gilford's *Acoustics For Radio and Television Studios* which I have recommended in the past. The book is unfortunately plagued with production errors, especially misprints. This can be misleading (for example, his version of the mode equation is unworkable due to a misprint) so if you are going to use the book, have your wits about you. ■



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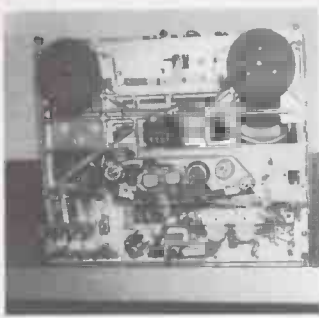


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This mammoth work lists all the items printed in *SI* in the last year – from the May 1980 issue to the April 1981 issue. You should find it easy to use: the headings are self-explanatory, and the column on the right lists issue number/issue month and year/page number.



Anti-clockwise-ish from top left: Revox (Aug '80); JHS Harmonizer (Jan '81); Chas Jankel (Jan '81); Robert Fripp (all over the place); Ibanez George Benson (Feb '81).

Pix: Roger Phillips, Dave Crombie, Peter Mills.

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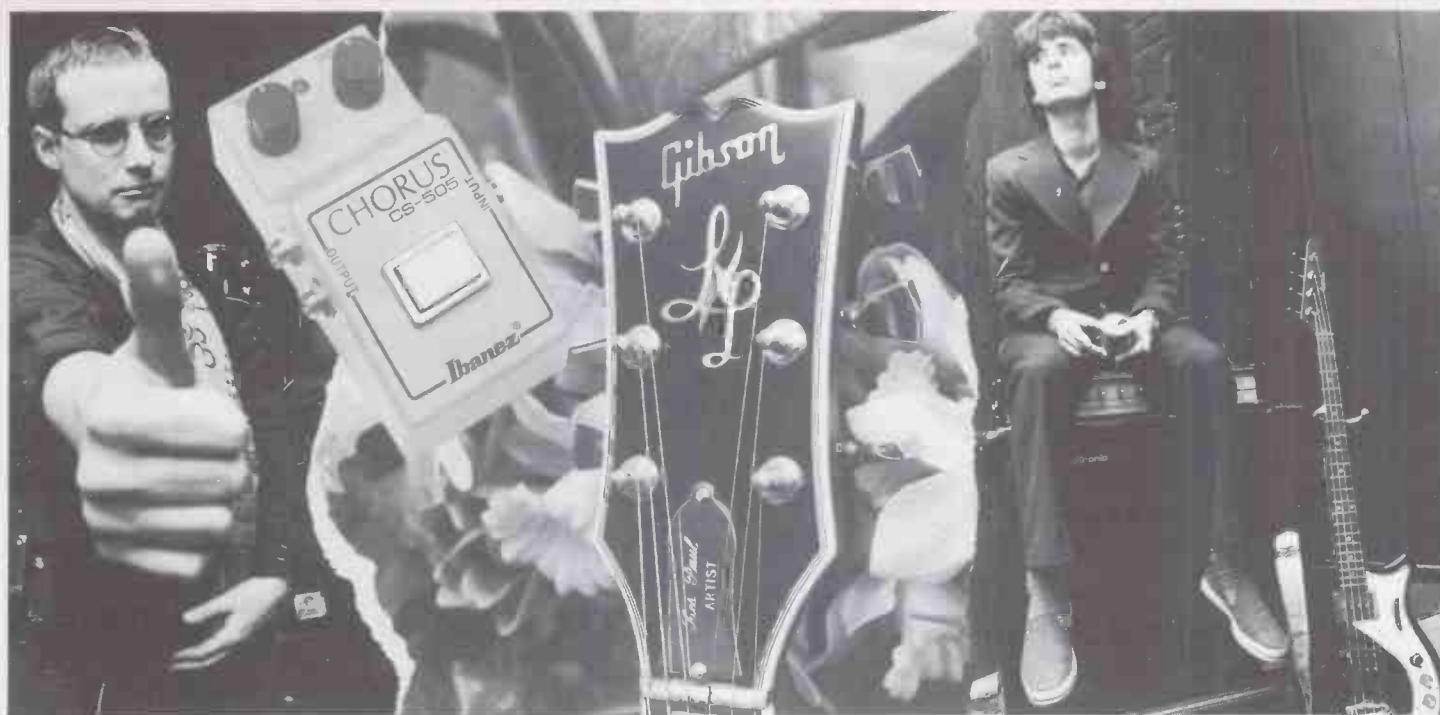
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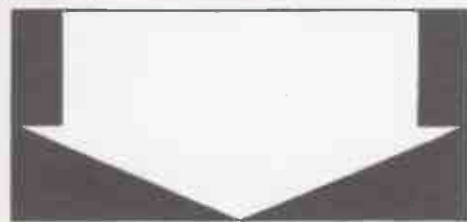
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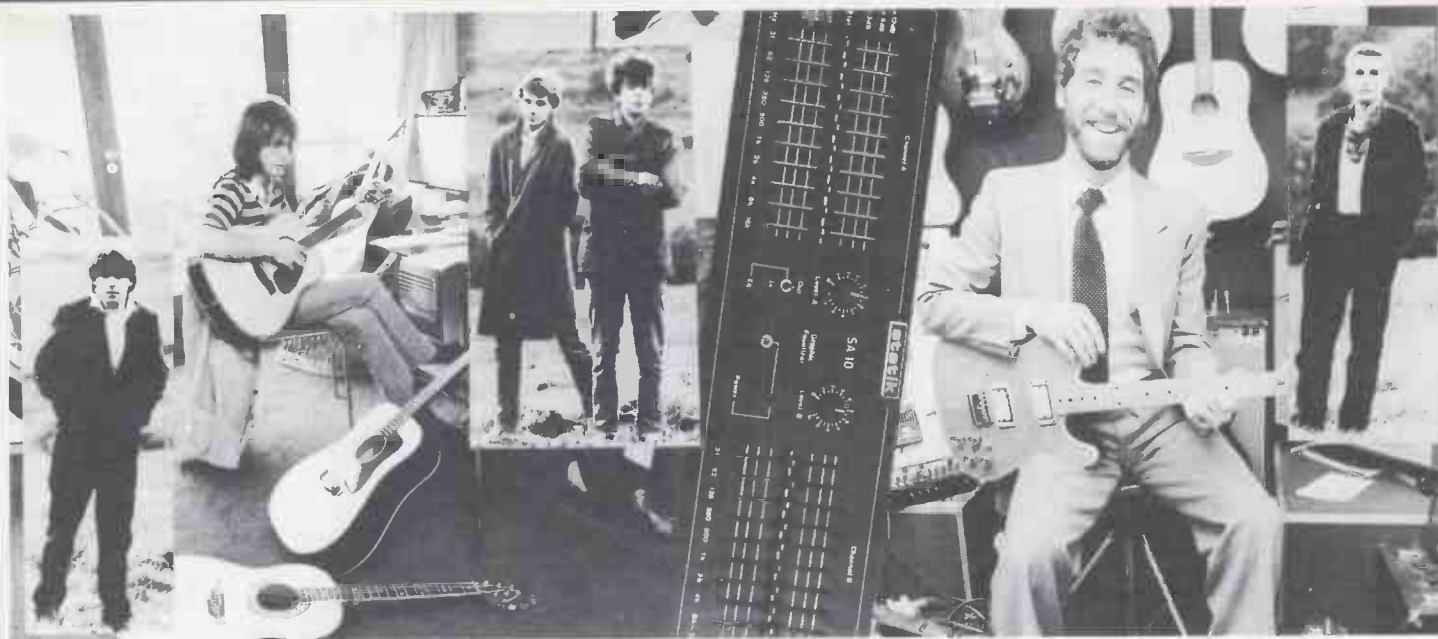


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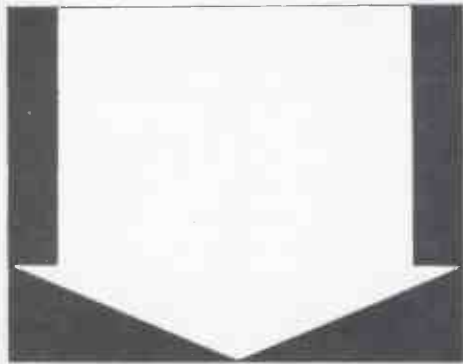


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 Normis -- the Compleat Rehearsal 29/Sep80/46  
 Complex 29/Sep80/46  
 S Pulling Singles (From The Album) 25/May80/64  
 S Squeezing Out Of Stiff Escalators 28/Aug80/92  
 S Throwaway Q-Tips 25/May80/66  
 XTC 31/Nov80/27  
 S XTC avec les Gendarmes? 30/Oct80/79
- Nelson, Terry**  
 S Jazz Washes Whiter 31/Nov80/80
- Nielsen, Rick**  
 Cheap Tricks for Expensive Guitars 33/Jan81/12
- Oakley, Nik**  
 E Slowhand's Sidekick Comes Out Of 29/Sep80/15  
 Hiding
- Phillips, Roger**  
 Effects: Analogue Echo Boxes 34/Feb81/54  
 Effects: Echo Footpedals 36/Apr81/54  
 Effects: Four Tape Echo Boxes 32/Dec80/51  
 Effects: Morley Chorus/Flanger 31/Nov80/64  
 Effects: Musicaid Clap Trap 27/Jul80/51  
 Effects: Vox pedal range 28/Aug80/88  
 Good Evening, I'm From FX: ADT and 29/Sep80/56  
 Chorus pt1  
 Good Evening, I'm From FX: ADT and 30/Oct80/17  
 Chorus pt2  
 S Tsk, Tusk 28/Aug80/92

- Pyle, Pip**  
 Drums: Simmons Electronic kit 31/Nov80/59
- Rosen, Steven**  
 E Payne Is Genius? 26/Jun80/21
- Saunders, Dave**  
 S Crazy Baldhead Time 25/May80/64
- Sinclair, David**  
 BBC's OGWT TV's answer to VTR? 30/Oct80/44  
 Drums: Constructing a Drum Riser 32/Dec80/57  
 Drums: Jack DeJohnette/Sonor drum 34/Feb81/42  
 clinic 28/Aug80/78  
 Drums: The Practice Problem 29/Sep80/67  
 S Northsea Gas 29/Sep80/79
- Skeet, Mike**  
 Binaural In Rock 26/Jun80/30
- Steward, Sue**  
 E Cajun Cookin' 36/Apr81/20  
 Shozygs, Springboards, Squeakboxes 29/Sep80/39  
 and other Musical Instruments 30/Oct80/78  
 S Siits: Typically Tropical Girls 32/Dec80/67  
 S Tapping Natural Resources
- Stewart, Dave**  
 On The Road: Bruford US Tour 32/Dec80/19
- Sweeting, Adam**  
 S The Crying Game 29/Sep80/78  
 Echo and the Bunnymen 33/Jan81/20  
 Fourplay: A Doctor Writers 36/Apr81/26  
 S Goodbye Mod... 27/Jul80/55  
 E Keep Fit With Ellen Foley 26/Jun80/17  
 Live Sound -- Nine Below Zero 27/Jul80/31  
 S Numans For Humans 33/Jan81/61  
 S Police and Thieves 25/May80/66  
 S Primal Scream 26/Jun80/17  
 Road Works: The Blades 30/Oct80/48  
 Road Works: The Spectres 28/Aug80/35  
 Road Works: The Step 29/Sep80/36  
 S Sex and the Complacent Swindle 27/Jul80/54  
 S Shadow Boxing 33/Jan81/60  
 S Still Springs Run Shallow 32/Dec80/67  
 Weller, Weller, Weller... 35/Mar81/20
- Toop, David**  
 S Beyond The Valley Of Edmundo Ros 34/Feb81/62
- Walters, John**  
 Songwriting: The Protection Rackets 33/Jan81/34
- York, Steve**  
 Bass: Fender Precision Special 34/Feb81/51  
 Bass: Mighty Mite Rock II 34/Feb81/50
- GARY COOPER'S NEWS PAGE**  
 All listings are full printed title.  
 Abandoning Socio-Sexual Mores In 29/Sep80/31  
 Stress-Inducing Road-Related 29/Sep80/23  
 Situations 32/Dec80/10
- The Beat Goes On! 28/Aug80/15  
 'Ere Guv, Do You Wanna Buy a Cheap 29/Sep80/11  
 Guitar?  
 EVs v JBLs: JBV's, OK? 26/Jun80/15  
 Frankfurt '82 - Exclusive 25/May80/9  
 It's All Lies, Honest! 35/Mar81/7  
 Musicians Sunk On The ICs 34/Feb81/7  
 New - 16-string masterbass! 36/Apr81/13  
 Oranges Are Lemons 26/Jun80/15  
 Read This Out Loud To Your Roadies 31/Nov80/17  
 Reviewers Reviewed, 27/Jul80/9  
 Speakers Corner: Arq Dirty Sounds 31/Nov80/17  
 Infinitely Baffling?  
 Speakers Corner: HFB and Tandberg 34/Feb81/7  
 Take Over  
 Stoking the Guitar-making Machinery 30/Oct80/13  
 Behind The Popular Song  
 Valves To Go Down The Tubes? 33/Jan81/7
- THE DAILY SLOG**  
 The typical day of:  
 David Betteridge, CBS Records' MD 35/Mar81/41  
 Geoff Travis, Rough Trade 36/Apr81/42
- PAUL DAY'S VINTAGE GUITAR PAGE**  
 Introduction 33/Jan81/11  
 Hagstrom 35/Mar81/15  
 Hofner 34/Feb81/11  
 Vox 36/Apr81/17
- THE DIY STUDIO**  
 By John Morrish  
 Part One: Introduction: the small 26/Jun80/22  
 business 27/Jul80/19  
 Part Two: Finance 29/Sep80/50  
 Part Three: Planning Application 32/Dec80/36  
 Part Four: Land Law 34/Feb81/32  
 Part Five: Acoustics, Insulation 36/Apr81/34  
 Part Six: Acoustic Treatment
- ETCETERA**  
 Short interviews and general items: Listed under artist for the former, under printed title for the latter.  
 Cajun Cookin' 36/Apr81/20  
 The Fabulous Thunderbirds 27/Jul80/11  
 Ellen Foley 26/Jun80/17  
 Albert Lee 29/Sep80/15  
 Bill Payne 26/Jun80/21  
 Rapid Eye Movement 31/Nov80/20  
 Genya Ravan 29/Sep80/17  
 Saydisc: Hits by word of mouth 35/Mar81/17  
 Ian Underwood 26/Jun80/19
- FEATURES**  
 All listings are full printed title.  
 BBC's OGWT TV's answer to VTR? 30/Oct80/44  
 Binaural in Rock 26/Jun80/30  
 Cheap Tricks for Expensive Guitars 33/Jan81/12  
 Dead Good Records 27/Jul80/38  
 Designing a Graphic Equaliser 26/Jun80/32  
 The Electric/Electronic Piano Test 26/Jun80/42  
 My Friend the BASTARD 35/Mar81/24  
 Golder + Houlder = Shergold 29/Sep80/31  
 The Hammond Story 29/Sep80/23  
 Hello? Does Rock Make You Deaf? 32/Dec80/31



Left to right (more or less): A Bunnyman (Jan '81); Steve Howe at the acoustic guitar test (Aug '80); Two more Bunnymen. Statik eq (Sep '80); Larry DiMarzio (Oct '80); Another Bunnyman.



A Hi-fi System with Bollocks	28/Aug80/54
Jacobacci	26/Jun80/57
Keeping Joanna In Trim	31/Nov80/47
Live Sound - the Joan Armatrading Band	28/Aug80/23
Live Sound - Nine Below Zero	27/Jul80/31
Live Sound - 10cc	27/Jul80/34
The Midas Story	25/May80/26
The Musician As Icon	26/Jun80/37
Nomis - the Compleat Rehearsal Complex	29/Sep80/46
On The Road: Bruford US Tour	32/Dec80/19
On The Road: League of Gentlemen	
European Tour	32/Dec80/13
Publishing Be Damned?	33/Jan81/29
Pianissimo	25/May80/34
The Revox Revealed	28/Aug80/67
Ron Roka	34/Feb81/40
Shozys, Springboards, Squeakboxes and other Musical Instruments	29/Sep80/39
Songwriting: The Protection Rackets	33/Jan81/34
So What Is a Recording Studio?	27/Jul80/29
So You Want To Buy a Synth?	25/May80/40
Three Keyboardists	36/Apr81/44
The Troubadour Today	33/Jan81/44
The Troubadour Today 2	35/Mar81/36
Video: an Encyclopedeo	30/Oct80/22
The Wrong Side Of The Tracks?	33/Jan81/16
1NE, 2WO, 3HREE, 4OUR...	35/Mar81/38

**INTERVIEWS**

*Alphabetically by artist's surname or group title. See also ETCETERA for shorter interviews.*

Joan Armatrading	28/Aug80/19
The Beat	34/Feb81/19
Kate Bush	29/Sep80/26
The Cure	36/Apr81/22
Echo and the Bunnymen	33/Jan81/20
Gang Of Four	36/Apr81/26
Eddy Grant	28/Aug80/31
Debbie Harry, Chris Stein	30/Oct80/30
Allan Holdsworth	34/Feb81/24
The Human League	30/Oct80/50
The Joe Jackson Band/Joe Jackson	27/Jul80/12
Chas Jankel	33/Jan81/39
Al Kooper	30/Oct80/59
Morgan-Fisher	35/Mar81/34
Gerry Rafferty	25/May80/19
Rainbow	36/Apr81/30
Jon Roseman	30/Oct80/39
Joe Sample	33/Jan81/22

Eberhard Schoener	25/May80/14
Richard Thompson	32/Dec80/26
Paul Weller	35/Mar81/20
Pete Wingfield	26/Jun80/52
Wonderlove	31/Nov80/39
XTC	31/Nov80/27

**MEL LAMBERT'S NEWS PAGE**

*All listings are full printed title.*

AES Seminar	34/Feb81/9
AKG BX5 mini-reverb	27/Jul80/7
APRS '80 report	29/Sep80/13
Around The Studios	27/Jul80/7
Around The Studios	30/Oct80/15
A Buying Time Is Guaranteed	30/Oct80/15
Buzz Mobile	31/Nov80/19
Deluxe DI	26/Jun80/13
Densim's Seminars	32/Dec80/9
Having Fun At Home	36/Apr81/15
Horses For Courses, Racks of Tracks, Deals for Reels	32/Dec80/9
Maintenance	29/Sep80/13
MM's Mighty Micro	26/Jun80/13
New Stereo Recorder From Teac	27/Jul80/7
A Postcard From AES	25/May80/13
Reel To Reel Cacophony	35/Mar81/9
Rock Flicks, Merton Parkas an' jhat	30/Oct80/15
Small Studios: Airship/Fair Deal	31/Nov80/19
Studio Maintenance	25/May80/13
Sun, Surf and AES	28/Aug80/17

**LETTERS**

*Readers letters in the following locations:*  
26/Jun80/62; 27/Jul80/41; 29/Sep80/18; 31/Nov80/34; 32/Dec80/34; 34/Feb/16; 35/Mar81/11; 36/Apr81/18.

**NEWS**

*Full printed title listed if self-explanatory - if not, full title in italics and brackets follows descriptive listing.*

John Bonham 1948-1980	31/Nov80/13
British Music Fair, Birmingham (BMF Brings Bands To Brum)	33/Jan81/5
British Music Fair dates	26/Jun80/11
British Music Fair details (Notre AMI)	27/Jul80/5
British Music Fair keyboards report	31/Nov80/13
British Music Fair report	30/Oct80/10
Casio In Calculated Keyboard	
L(a)unch	31/Nov80/13
Fender Lead Bass (New Fender Bass Launched Soon?)	29/Sep80/7
Frankfurt Feb'81 report	36/Apr81/10
Jackson's Abbey Road sale (Beatles For Sale)	32/Dec80/7
Korg Key Centres	26/Jun80/11
Lab Series 'Lab Test' competition winners	25/May80/7
NAMM Anaheim Feb'81 report	36/Apr81/9
NAMM Chicago '80, keyboard report	29/Sep80/8
NAMM Chicago '80 report (NAMM Bam Have A Nice Day, Sir)	28/Aug80/9
Peavey Gliders (Peavey announce String-gliding)	29/Sep80/7
Prosound '80 report	31/Nov80/14
Roland UK ('Roland Is Boss' Claims Washburn Man)	34/Feb81/5
Sequential Circuits Pro-One (I Wish They all...)	34/Feb81/5

Session 15.30 (Charge Your Session To Axxess)	29/Sep80/7
Soundwave Bassplace (Bass-Relief The Soundwave Way)	25/May80/7
Synclavier II (More For The Few From Syco)	29/Sep80/7
Vox Ltd...	34/Feb81/5

**NEWSNOTES**

*Collections of short news items, in the following locations:*  
25/May80/7; 26/Jun80/11; 27/Jul80/5; 31/Nov80/14; 33/Jan81/5.

**THE PRODUCERS**

Mick Glossop	35/Mar81/30
David Hentschel	34/Feb81/29
Rupert Holmes	25/May80/50

**RECORDS RECEIVED**

*Short reviews of albums - an average of 10 records each in the following locations:*  
25/May80/67; 27/Jul80/58; 29/Sep80/79; 30/Oct80/79; 31/Nov80/81; 32/Dec80/69; 33/Jan81/61; 35/Mar81/55; 36/Apr81/56.

**INSTRUMENTS & EQUIPMENT/REVIEWS & INFORMATION**

*Split into Amps; Bass; Drums; Effects; Equipment; Guitars; Keyboards; PA; Sax.*

**Amps**

Aria Loco 4102/0251 combo/speaker	31/Nov80/67
Burman Pro-501 combo	28/Aug80/86
Carlsbro Hornet combo	33/Jan81/51
FCN Satellite combo	33/Jan81/50
Fender B300 bass head	35/Mar81/48
Fruitee 200B bass head	32/Dec80/61
Lab Series L5	36/Apr81/52
Matamp V14	29/Sep80/69

**Bass**

Eko acoustic bass	35/Mar81/47
Fender Precision Special	34/Feb81/51
Mighty Mite Rock II	34/Feb81/50
Schecter	30/Oct80/64
Setting Up a New Bass pt1	28/Aug80/76
Setting Up pt2	29/Sep80/65

**Drums**

*Includes acoustic drums, plus drum machines.*  
*M=Multireview format.*

M Boss DR55	27/Jul80/24
Constructing a Drum Riser	32/Dec80/57
Jack DeJohnette: Sonor Drum Clinic	34/Feb81/43
Disembodied hi-hats	26/Jun80/69
M GR International Powerhouse rhythm machine	27/Jul80/23
M Korg Minipops 45	27/Jul80/23
M Korg Rhythm 33	27/Jul80/22
M Korg Rhythm 55	27/Jul80/22
Ludwig Carmine Appice kit	30/Oct80/69
Pearl Export kit	29/Sep80/67
The Practice Problem	28/Aug80/78
M Roland CR68	27/Jul80/25
M Roland CR78	27/Jul80/25
Simmons Electronic kit	31/Nov80/59



Background: Alphonso Johnson (Mar '81). Objects left to right: Prophet-10 (Feb '81). Vox Chorus (Oct '80). Carlsbro Chorus (Sept '80).

	Gibson Sonex Custom	36/Apr81/48
	Gordon Smith Gypsy II	33/Jan81/57
M	Guild D40NT acoustic	28/Aug80/45
	Hamer Standard	32/Dec80/43
	Ibanez George Benson	34/Feb81/52
M	Martin D19 acoustic	28/Aug80/47
M	Moridaira W617 acoustic	28/Aug80/47
M	Mugen Heritage 78 acoustic	28/Aug80/49
M	Shergold Modulator 12-string acoustic	29/Sep80/35
M	Washburn Prairie Song Custom acoustic	28/Aug80/49
M	Yamaha FG375S acoustic	28/Aug80/51
	Yamaha SG2000	28/Aug80/73

**Keyboards**

M=Multireview format.

	Casiotone 201 preset polyphonic synth	26/Jun80/63
M	Crumar Roadrunner 2 electronic piano	26/Jun80/43
	EML Poly-box	28/Aug80/80
M	Fender Rhodes 54 electric piano	26/Jun80/43
	H/H P73 electronic piano	31/Nov80/75
M	Hohner Globetrotter electronic piano	26/Jun80/47
M	Hohner Planet/Clavinet Duo	26/Jun80/45
	JHS Harmonizer preset keyboard	33/Jan81/54
	Korg CX3 organ	27/Jul80/45
	Korg Trident polyphonic synth	35/Mar81/50
	Moog Liberation hand-held synth	30/Oct80/66
	Moog Opus 3 preset keyboard	36/Apr81/50
	Octave Catsick	28/Aug80/82
	Roland Clock System	32/Dec80/47
	Roland Dimension D	28/Aug80/84
M	Roland MP600 electronic piano	26/Jun80/47
	Roland VK1 organ	27/Jul80/45
	Roland VP330+ vocoder	25/May80/55
	Sequential Circuits Model 700 Programmer	28/Aug80/80
	Sequential Circuits Prophet-10	34/Feb81/45
M	Yamaha CP10 assignable electronic piano	26/Jun80/49
M	Yamaha CP80 electric piano	26/Jun80/49
	Yamaha CS5 basic synth	33/Jan81/55

**PA**

	Introduction	33/Jan81/48
	Speakers 1	34/Feb81/58
	Speakers 2	35/Mar81/52

**Sax**

	Yamaha YSS62 soprano	31/Nov81/62
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**ROAD WORKS**

Short items on new bands.

	The Blades	30/Oct80/48
	The Spectres	28/Aug80/35
	The Step	29/Sep80/36

**SECOND-HAND INDEX**

Collation of current second-hand prices in various areas of instrumentation and allied equipment.

	Amplification	34/Feb81/15
	Bass guitars	35/Mar81/13
	Drums	36/Apr81/18
	Electric guitars	32/Dec80/65
	Keyboards	33/Jan81/59

**SOUND ADVICE**

Gary Cooper answering readers' letters requesting specific information, in the following locations:

31/Nov80/22; 32/Dec80/40; 34/Feb81/12; 35/Mar81/12; 36/Apr81/19.

**SOUND REVIEWS**

Split into Books: Films: Gigs: Miscellaneous: Records.

**Books**

Ian C Bishop	The Gibson Guitar From 1950 Volume 2	27/Jul80/56
Lawrence Canty	Electric Bass Guitar - A Complete Guide	34/Feb81/60
John Collis (ed)	The Rock Primer	26/Jun80/76
Peter Guralnick	Lost Highway: Journeys and Arrivals of American Musicians	29/Sep80/60
Tony Mitchell	The Sounds Book Of The Electric Guitar	27/Jul80/56
John Storm Roberts	The Latin Tinge	34/Feb81/60

**Films**

	The Great Rock 'n Roll Swindle	27/Jul80/54
	No Maps On My Taps	32/Dec80/67
	Rude Boy	25/May80/56

**Gigs**

Cabaret Voltaire etc.	London Lyceum	36/Apr81/56
Ry Cooder, London Apollo		32/Dec80/69
Elvis Costello and the Attractions.	Yeovil Johnson Hall	26/Jun80/76
Fleetwood Mac.	London Wembley Arena	28/Aug80/92
Headline, London Marquee		25/May80/64
Janis Ian, London Drury Lane		27/Jul80/54
Junior Walker, London Dingwalls		29/Sep80/79
Last Few Days, London Wimpy Bar	Notting Hill	35/Mar81/54
Johnny Mars Seventh Son, London	The Star Broad Green	26/Jun80/78
Montreux Jazz Festival '80		31/Nov80/80
Northsea Jazz Festival, Holland		29/Sep80/79
Q-Tips, Bristol Poly		25/May80/66
Regatta d'Été (Police, XTC etc), France		30/Oct80/78
The Slits, London Brixton Ritz		30/Oct80/78
Paul Simon, London Hammersmith	Odeon	33/Jan81/60
Sniff 'n' The Tears, London Marquee		29/Sep80/78
Squeeze, Bristol Locarno		25/May80/64
Toots & The Maytals, London	Hammersmith Palais	31/Nov80/82

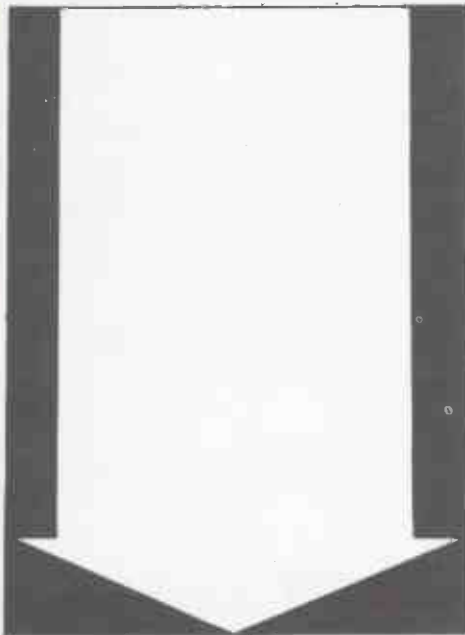
**Miscellaneous**

Bagging The Beat - BI April '71		36/Apr81/56
Beat '71 - BI March '71		35/Mar81/54
Behind The Shoulder Of The Avant-Garde - David Bowie		34/Feb81/62
World Upside-Down Drumming Record		31/Nov80/81

**Records**

See also RECORDS RECEIVED.

Art Zoyd	Generation Sans Futur	27/Jul80/55
Atomic Rooster		33/Jan81/61
Joni Mitchell	Shadows and Light	33/Jan81/60
Graham Parker and the Rumour	The Up Escalator	28/Aug80/92
Pere Ubu	The Art Of Walking	35/Mar81/54
Simple Minds	Empires and Dance	33/Jan81/61
SI's album choices for 1980		33/Jan81/63
Sniff 'n' The Tears	The Game's Up	29/Sep80/78
Bruce Springsteen	The River	32/Dec80/67
Squeeze	Argy Bargy	25/May80/64
Pete Townshend	Empty Glass	27/Jul80/55
Toots and the Maytals	Live At The Palais 29/9/80	31/Nov80/82
Whitesnake	Live In The Heart Of The City	33/Jan81/61



**Effects**

Bell Electrolabs	ADT	29/Sep80/58
Boss	CE2 Chorus	30/Oct80/17
Carlsbro	ADT	29/Sep80/58
Carlsbro	Chorus	29/Sep80/56
DOD	Analogue Echo 680	36/Apr81/54
DOD	Mini Chorus	30/Oct80/17
Echoplex	EP3 and EP4	32/Dec80/53
Electro-Harmonix	Clone Theory	30/Oct80/17
Electro-Harmonix	Full Double Tracking Effect	30/Oct80/17
Evans	Echopet EP50	34/Feb81/54
Ibanez	CS505 chorus	30/Oct80/17
Korg	SD200/SD400 signal delays	34/Feb81/56
Melos	Analogue Echo DE1	34/Feb81/54
Melos	Echo Chamber	32/Dec80/51
Morley	Chorus/Flinger	31/Nov80/64
Morley	Echo/Volume EVO-1A	36/Apr81/55
Musicaid	Clap Trap	27/Jul80/51
MXR	Stereo Chorus	29/Sep80/56
Pearl	Echo Pack EP402	32/Dec80/53
Ross	RSD3 stereo delay	36/Apr81/55
Vox	Chorus	30/Oct80/17
Vox	FX pedal range	28/Aug80/88

**Equipment**

Recording and recording-related equipment

Delta Lab	DL4	35/Mar81/45
Dominus	Stereo Disc Amplifier 3	25/May80/61
Neal/Ferroglyph	SP7 stereo tape deck	31/Nov80/69
Otan	MX5050 stereo tape deck	31/Nov80/71
Rebis	rack system	26/Jun80/71
Revox	B77 stereo tape deck	30/Oct80/75
The Statik	range	29/Sep80/73
Teac	32-2 stereo tape deck	30/Oct80/73

**Guitars**

M=Multireview format. Electric guitars unless stated.

Aria	Gerry Cott	30/Oct80/60
Electro-Harmonix	guitar synth	31/Nov80/53
El Maya	EM1500	27/Jul80/43
M	Epiphone PR735 acoustic	28/Aug80/45
	Fender The Strat	35/Mar81/42
	Gibson Les Paul Artist	29/Sep80/61



# ROCK 'N' ROLAND!

## Roland Road Show:

Ike Ueno, Adrian Lee and Alan Townsend will be demonstrating the new Roland MC4 Microcomposer, Jupiter 8, TR 808 Rhythm Composer and new Guitar/Bass Synthesizers just for you! This is a show not to be missed: less of a trade show, more of a personal demonstration: our first floor showroom will be exclusively devoted to Roland Products.

Rocky says

'Be there or be square!' . . . Sunday May 3rd 1 pm - 6 pm

HERE IS JUST A SELECTION FROM OUR MASSIVE STOCK:



**Roland:** Jupiter 8  
**Roland:** Jupiter 4  
**Roland:** Promars  
**Roland:** SH2 Synth  
**Roland:** SH09 Synth  
**Roland:** CSQ100  
**Roland:** CSQ600  
**Roland:** Vocoder Plus  
**Roland:** Paraphonic  
**Roland:** MP600 Piano  
**Roland:** EP09 Piano  
**Roland:** Organ/Strings  
**Roland:** Saturn-09  
**Roland:** 100 Modular  
**Roland:** RE201 Space Echo  
**Roland:** RE501 Chorus Echo  
**Roland:** SRE555 Rack Echo  
**Roland:** Rhythm Composer  
**Roland:** CR78 Compurhythm  
**Roland:** CR68 Rhythm Box  
**Roland:** DR55 Dr. Rhythm  
**Roland:** DB33 Dr. Beat  
**Roland:** VK1 Organ  
**Roland:** Rack  
**Roland:** Guitar Preamp  
**Roland:** Bass Preamp  
**Roland:** Vocoder  
**Roland:** Pitch/Voltage Synth  
**Roland:** Dimension D  
**Roland:** 8 Line Mixer  
**Roland:** Stereo Phaser  
**Roland:** Stereo Flanger  
**Roland:** 120W Power Amp

**Roland:** 240W Power Amp  
**Roland:** Guitar Synth  
**Roland:** Bass Gtr Synth  
**Roland:** Bolt 60  
**Roland:** Bolt 30  
**Roland:** JC200 Stack  
**Roland:** JC160  
**Roland:** JC120  
**Roland:** JC60 R +P  
**Roland:** JC50  
**Roland:** Cube 60B  
**Roland:** Cube 100  
**Roland:** Cube 60  
**Roland:** Cube 40  
**Roland:** Cube 20  
**Roland:** Micro Monitor  
**Roland:** Micro Amp  
**Roland:** PA250 Mixer/Amp  
**Roland:** PA150 Mixer/Amp  
**Roland:** DC30 Chorus Echo  
**Boss:** DM100 Chorus Echo  
**Boss:** Spring Reverb  
**Boss:** Mini-Monitor  
**Boss:** KM60 Mixer  
**Boss:** Chromatic Tuner  
**Boss:** Guitar Tuner  
**Boss:** Pedal Flanger  
**Boss:** Mono Chorus  
**Boss:** Stereo Chorus  
**Boss:** Super Overdrive  
**Boss:** Slow Gear  
**Boss:** Rocker Pedals  
**Boss:** Pedal Phaser

BEST PRICES!

## KEYBOARDS

**Moog:** Minimoog  
**Moog:** Opus 3  
**Moog:** Liberation  
**Moog:** Prodigy  
**Moog:** Micromoog  
**Hohner:** Planet 'T'  
**Hohner:** Globetrotter Piano  
**Hohner:** Clavinet E7  
**Casio:** CT 401  
**Casio:** CT 301  
**Casio:** MT 30  
**Casio:** MT 10  
**Yamaha:** CP 80 S/H  
**Yamaha:** CS 5 Synth  
**Yamaha:** CS15 Synth  
**Yamaha:** CS15D Synth

**Korg:** Trident  
**Korg:** BX3 Organ  
**Korg:** CX3 Organ  
**Korg:** Lambda  
**Korg:** Delta  
**Korg:** Sigma  
**Korg:** MS20 Synth  
**Korg:** MS10 Synth  
**Korg:** MS50 Synth

**Rhodes:** Stage 54  
**HH:** Electronic Piano  
**Yamaha:** CP10 Piano  
**Yamaha:** SK10  
**Yamaha:** SK20  
**Yamaha:** SK30

**Music Man:** 110RD50  
**Music Man:** 112RD50  
**Music Man:** 112RD65  
**Music Man:** 112RD100EV  
**Music Man:** 210 150  
**Session:** 15:30  
**Session:** 15:30 Deluxe  
**Session:** Powered Monitor  
**Carlsbro:** Cobra Lead  
**Carlsbro:** Cobra Bass  
**Carlsbro:** Stingray Bass  
**Carlsbro:** Stingray Lead  
**Carlsbro:** Multichorus  
**Roland:** Bolts  
**Aria Loco:** Combos

**Vox:** 125W Bass Stack  
**Vox:** 125W Lead Stack  
**Vox:** AC30  
**Vox:** Escort 30  
**Vox:** 'Supertwin'  
**Vox:** Escort M/B  
**Marshall:** S/H Gear  
**OHM:** 'Boxer' Lead  
**OHM:** 'Boxer' Bass  
**OHM:** Lead Combo  
**OHM:** Bass Combo  
**OHM:** Bass Head/Cab  
**OHM:** Mini Monitors  
**Roland:** Cubes  
**Starmaker:** Combos

AMPS

## GUITARS

**Hamer:** Explorer  
**Hamer:** Sunburst  
**Hamer:** Special  
**Washburn:** Eagle  
**Washburn:** Falcon  
**Washburn:** Hawk  
**Washburn:** Raven  
**Washburn:** Scavenger Bass  
**Washburn:** Stage Guitar  
**Washburn:** Stage Bass  
**Washburn:** 8-String Bass  
**Music Man:** Stingray Bass  
**Music Man:** Stingray Fretless  
**Westbury:** Standard  
**Kramer:** DMZ4001

**Aria:** 'YS' Series  
**Aria:** 'SB' Bases  
**Aria:** Cardinal Gtrs.  
**Aria:** Cardinal Bases  
**Aria:** RS600 Strat  
**Aria:** TSB350 Bass  
**Aria:** TS300 Guitar  
**Fender:** 'The Strat'  
**Fender:** Stratocaster  
**Fender:** Telecaster  
**Fender:** Precision Bass  
**Vantage:** Full Range  
**Rickenbacker:** 4001 Bass  
**Rickenbacker:** 330 Semi  
**Satellite:** Strat Copy

**Moog:** Rack Graphic  
**Carlsbro:** Profex  
**Barcus-Berry:** Pickups  
**Cry Baby:** Wah-Wahs  
**Marshall:** Mini-Mixers  
**Rotosound:** Strings  
**Dean Markley:** Strings  
**Ernie Ball:** Strings  
**Audio Technica:** Microphones  
**Aria A + F:** Microphones  
**Shure:** Microphones  
**Electro-Voice:** Microphones  
**Electro-Harmonix:** Pedals  
**DOD:** Pedals  
**Vox:** Pedals  
**MXR:** Pedals

**Rokk:** P.A. System  
**DOD:** Analog Delay  
**Roland:** Headphones  
**D.I.:** Boxes  
**Evans:** Echopet  
**Yamaha:** E1010 Echo  
**Yamaha:** E1005 Echo  
**Justina:** Guitar Tuner  
**Korg:** Guitar Tuner  
**Korg:** Chromatic Tuner  
**Whirlwind:** Leads  
**Schaller:** Pedals  
**Dimarzio:** Pickups  
**Boss:** Pedals  
**Guyatone:** Pedals  
**Aria Loco:** Pedals

EFFECTORS

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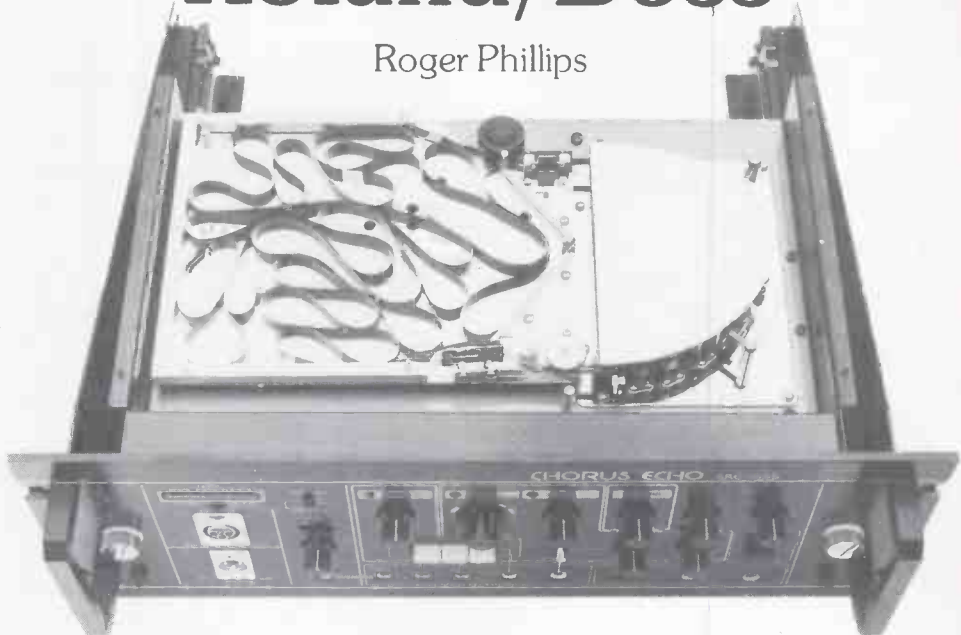
**SOUND ADVICE AT A BETTER PRICE!**



A couple of items this month from the hands of Mr Ikutaroo Kakehashi, president of the Roland Corporation of Japan, which incorporate Chorus and Echo in one package. The second of these units is the Roland *SRE-555* the latest in a long line of tape Echo Chambers that includes the legendary *Space Echo RE-201* and the now defunct *RE-301*. The *301* has supposedly been replaced by the *RE-501* (identical in every way to the *SRE-555* except that the latter is of rack mounting design, while the *RE-501* is boxed) but it seems that the newly formed Roland (UK) Ltd, who have stepped into the vacant shoes left by the bankrupt Brødr Jørgensen company, have found a shed full of *301*s somewhere and are bringing them back 'by popular demand'. The first review item, however, is the *DM-100*, a much simpler and cheaper analogue device from the Roland subsidiary, Boss.

# Roland/Boss

Roger Phillips



## Boss Delay Machine DM-100

**Price:** £221.29 Ex VAT **Size:** 13½ x 6¼ x 3½in **Weight:** 5½lb **Construction:** metal case, plastic front panel, finished in black **Distributor:** Roland (UK) Ltd, Middlesex

The *DM-100*'s owners' manual states that 'the adoption of the newly developed 4096 stage BBD and Roland's own frequency-controlled filter (FCF) makes it possible for a high quality echo sound'. While I wouldn't exactly advocate the application of the Trades Description Act against the Roland Corporation, I would like to make it clear that I found the *DM-100*'s Echo to be more of an average-to-poor analogue delay sound, with nowhere near the quality offered by the similarly priced Yamaha *E1005* (£222.26 Ex VAT) featured in our February '81 issue. In fact the *DM-100* displays a similarly poor vocal sound compared to the Korg *SD-400* featured in that same issue, but like the Korg this Boss unit comes into its own when you plug in your guitar.

The Korg *SD-400* has a mode selector that allows you to switch between four different delay effects, and a true ADT effect, all of which sound less than wonderful with vocals, but pretty good with guitar. The *DM-100* also offers a complete range of delay effects up to a maximum of

around 400mS and on top of that, it's got a two-way switch on the front panel that allows you to select between Echo and Chorus effects. That Chorus effect is up to the usual standard that Roland have managed to achieve in successive machines since they introduced the Boss *CE-1 Chorus Ensemble* to the music world. The effect can be varied by way of an Intensity control that alters the depth of the Chorus from a very subtle sound to a beautifully rich Chorus that's great with guitar and keyboards alike. If you're a guitarist who wants delay and Chorus effects, then this could be the box of tricks for you, *but* should you ever want to use those two effects together, forget it. The *DM-100* will only give you one sound at a time, so if you want a mixture of Echo and Chorus you'd be better off with separate effects boxes.

There are a couple of other minor drawbacks too. The selector switch is manual only, there's no facility for footswitch selection between the two effects, and the Chorus Intensity control is positioned on the rear panel, for some reason, making it a little inaccessible during a performance. None of the rotary controls on the front panel affect the Chorus sound in any way. The effect by-pass footswitch socket is in rather a

strange place too. Usually they're on the rear panel out of the way, or at the bottom of the front panel where the footswitch lead doesn't intrude. On the *DM-100* the Effect on/off socket is top left of the front panel and the trailing lead hangs down in front of the Peak Level warning light and the Input socket.

On the positive side, however, this machine offers three input Levels of -50, -35, and -20dB and an Input Volume which, like all the rotary controls, is marked 0-10. Two of the group of rotary Echo controls are somewhat confusingly labelled and the owner's manual does little to clarify things. The Repeat Rate actually controls the delay times from 400mS at zero to an imperceptibly short delay at 10. The Intensity control regulates the repeat period, *ie* the length of time for which the Echoes can be heard, but this is where the owner's manual is totally misleading. I quote, 'This knob controls the intensity of the returning echoes. With the control at about 2 o'clock, the level of the echoes will be higher than the original sound ...' This implies that the Intensity control is like an Echo volume, which it is not: that function is carried out by the Echo Volume control which gives no effect at zero, and equal effect/direct signals at 10. The two outputs on the right of the front panel can be used as separate Direct and Effect outputs for both Echo or Chorus, and the Direct output can be used singly for a mixture of direct and effect signals. A power on/off switch and pilot light complete the control panel layout.

In other words, the *DM-100* will tackle everything that an average analogue delay box will attempt, like double voice,





reverb effects, repeat Echoes, and 'runaway' oscillation, but with the added alternative of Chorus if you want it. However, should you fancy a machine that will give a combination of all those effects and an excellent sound to boot, then save your pennies and read on.

### Roland Chorus Echo SRE-555 and RE-501

#### SRE-555

**Price:** £607.83 ex VAT **Size:** 18½ × 6¾ × 17½in **Weight:** 23lb **Construction:** all metal finished in black

#### RE-501

**Price:** £550.93 ex VAT **Size:** 16½ × 7½ × 13in **Weight:** 23lb **Construction:** vinyl covered wooden box finished in black **Distributor:** Roland (UK) Ltd, Middlesex (both models)

Nearly every criticism I've made of the Boss *DM-100* is splendidly refuted by the *SRE-555* which, with its infinite combinations of Chorus, Echo, Sound-on-sound, and Reverb, goes to prove that Roland can really produce the business when money's no object. Roland claim that these machines (the *SRE-555* and the identical boxed version the *RE-501*) are 'the most advanced echo chambers' on the market and, but for a couple of minor points, I'm not really inclined to argue.

I had the *SRE-555* rack mounting version on test which shares exactly the same innards and front panel layout as the *501* apart from two large coin screws and two grab handles at each end of the front panel. The former are to release the unit from its chassis so that the latter can be used to pull the machine free of the confines of the rack to allow for tape changing, head cleaning, etc. Ready made Roland tape loops are available in small plastic packs which can be fitted reasonably easily and are said to last for over 300 hours, but, enough of this boring technical stuff, let's talk about the sounds for a minute. These two current machines, like the *RE-301* before them (but unlike the *RE-201 Space Echo* - see *SI Aug '79*) have noise reduction circuitry that helps keep any adverse audio effect that tape may cause down to a minimum. However, most tape echo chambers are streets ahead of analogue delay machines when it comes to the quality of the delayed signal, and this new range from Roland is no exception.

So, first to the effects governed by that tape: Echo and Sound-on-sound. Echo is controlled by a six-position Mode selector, an Intensity control that regulates the repeat period, and a Repeat Rate control that increases/decreases the delay time set by the Mode selector. Position 1 on that selector gives an estimated delay of 70mS with Repeat Rate on 10, through to 150mS with Repeat Rate on zero. Posi-

tion 2 gives an estimated 130mS-450mS, and position 3 an estimated 200mS-750mS. This gives as wide a range of delays as you're ever likely to need, allowing for a rather lengthy double voice effect, slap back Echoes, and a good selection of repeat Echo sounds. Position 4, 5, and 6 allow for the selection of more than one playback head giving a multiple Echo signal that can itself be repeated according to the Intensity and Repeat Rate controls. Position 4 uses heads one and two, position 5 heads two and three, and position 6 heads one, two and three. There's also a Volume control to the right of the Mode selector that gives no effect sounds at zero, and equal effect/direct signals at 10 for both Echo and Sound-on-Sound.

The Sound-on-Sound facility may be a bit of a disappointment to those of you familiar with the Korg *Stage Echo SE-500* (*SI Aug '79*), the Echoplex *EP-3* (*SI Dec '80*), or indeed the old Roland *RE-301*. In S-on-S mode the Korg *SE-500* will record and delay the signal for 15-30 secs, depending on the delay time setting, and then play it back whilst continuing to record whatever you play over the top. Similarly the Echoplex *EP-3* delays the recorded signal for 2½ min before playing back and accepting further layers of sound, and the *RE-301* gives a delay of 10-30 sec in S-on-S mode. The *SRE-555/RE-501* S-on-S facility is more like the Long Delay offered by the Korg, which gives an 800-1500mS delay range that can be mixed with the shorter Echo delays as well. The new Rolands offer a S-on-S delay range of 550-1800mS depending on the Repeat Rate setting, and the signal can be mixed with any of the six Echo Modes.

It could be argued that a delay of one or two seconds will create more practical S-on-S effects for live performances than the more extravagant delays of the Korg, Echoplex and *RE-301*. With these long S-on-S delays it's necessary to kick in the effect 10-30 secs, or even 2½ mins before you want it to play back, and a certain

amount of synchronisation is required to make the best of this build-up of sound. The *SRE-555*'s S-on-S effect, like the Korg's Long Delay, is a more 'instant' effect, but is still capable of creating a fair build-up of sound despite its limitations. This is the only area in which these new models fall behind the opposition and the only other criticism I would make is, again, the use of the misleading terms Intensity and Repeat Rate for the repeat period and delay time controls. However that Intensity control does have one little plus that was also offered by the old *301*. As with any Echo box, this repeat period control can be set to give a single Echo, repeat Echoes, or 'runaway' oscillation effects, but next to it there's a Repeat/Single switch that can select between those two modes whatever the status of the Intensity control. In other words you can change from multiple Echo or S-on-S repeats, to single repeats at the flick of a switch, and not only that, but under that switch there's a jack socket that allows you to carry out the same function by remote footswitch too. Neat, eh?

The Chorus section is up to the same Roland standard of sound as that offered by the Boss *DM-100*, but this time the Intensity control is situated on the front panel rather than the rear, and the range of depth offered is a little more extreme. Switching facilities for Chorus, Echo, and S-on-S are extremely comprehensive, and as with the Single/Repeat Echo selector, manual switches and remote footswitch sockets are available. The row of three pushbutton on/off switches are situated near the centre of the front panel, and each controls an LED sound status light on one of the three effects sections. These lights are also activated by the relevant footswitch socket, another little plus not found on many Echo devices. There's an overall Effects by-pass footswitch socket too that will cancel all the effects simultaneously, but does not alter the sound status lights or stop any long delay







signal that is still passing through the system. (The other switches and footswitch sockets cut off the effects immediately.) This overall footswitch socket also controls the Reverb section, which has no status light or hand switch, but does have a Volume control. There are no details about this Reverb facility in the owners' manual but a faint rattling sound from inside the box suggests that it's of the spring variety, and the sound it produces is excellent. There are Treble and Bass Tone controls to the right of the front panel that do not alter the direct signal, but do act upon all four effect signals. Each of these controls gives a flat response when turned to 5 on the dial or they can boost and cut the bass and treble content of the effect signal when turned towards 10 or zero.

All the effects proffered by the SRE-555/RE-501 can be used separately, or mixed together for the most sumptuous sounds, and the whole thing has been thought out so well that it's possible to pre-programme all the effects you want before a performance, and then select them at will with up to five remote footswitches. There's no restriction on applications either, as these machines sound great with vocals, guitars and keyboards alike, and they've got all the gubbins for connecting up with mixing desks. Blimey John, I'm beginning to sound like an advert, think I'd better get back to brass tacks for a mo and clear up all the ancillaries.

At top left there's a sequential Input Level LED Indicator, and below it are the balanced XLR Input and Output sockets for mixing desk applications. To the right of these sits a 1/4" jack input socket for mics and instruments, and this has its own

EFFECT \ OUTPUT	OUTPUT		A ONLY	BALANCE OUTPUT
	A	B		
DIRECT SOUND	●		●	●
ECHO		●	●	●
REVERBERATION	●		●	●
CHORUS	●	●	●	●
SOUND ON SOUND		●	●	●

0, -25, -50dBm Level selector switch and a rotary input Volume control. Above that there's a direct signal cut out switch that will remove said signal from both balanced and unbalanced systems. To the right of the panel below the Tone controls you'll find the push button on/off Power switch with indicator light, and below that the unbalanced output facility. Again a 0, -25, -50dBm selector switch is included along with A and B output sockets for 'stereo' effects, and the various signals supplied by the individual output sockets are shown in the accompanying diagram. I did, however, notice one or two slight anomalies and, as usual, no stone is left unturned in bringing you the facts. According to the diagram, the S-on-S and Echo effect signals appear only on output B when both outputs are used, but I found that if the Reverb Volume is turned up at the same time, you can hear the S-on-S and Echo effects signals on output A as well. Another thing not clear in the diagram is that when Reverb alone is used, the effect/direct signal appears at output A as shown, but there is absolutely no signal whatsoever on output B. The owners' manual claims that this unit produces enough power to allow the simultaneous use of all balanced and unbalanced inputs and outputs, should this be desired.

Having waxed somewhat lyrical about the various attributes of the SRE-555/RE-501, I think perhaps I should point out a few differences that exist between these machines and the old RE-301, especially as it seems that the latter is about to enjoy a renaissance in this country. The extras the two current models offer include XLR connectors, sequential Level indicator, and that somewhat shorter S-on-S delay facility. The RE-301 looks a bit old fashioned by comparison, and has a peak level light and VU meter, and no SLRs, but otherwise it offers everything that the newer models have plus a few extras. It doesn't have the shorter S-on-S delays, but it does offer long S-on-S effects of 10-30 secs. It doesn't have XLRs but it does offer three separate jack inputs each with its own volume control and three-way level switch, and lastly the 301 has an extra remote footswitch socket that can be used with an FV-2 Foot Volume Control to regulate the Repeat Rate of the Echo or S-on-S signal as you play. All these things are worth bearing in mind especially as Roland (UK) Ltd reckon to sell the RE-301 at a slightly lower price than the similarly-boxed 501. If, however, you're planning to use the Roland rack system you must be pretty rich anyway so you can afford the little extra you'll need for the SRE-555. □

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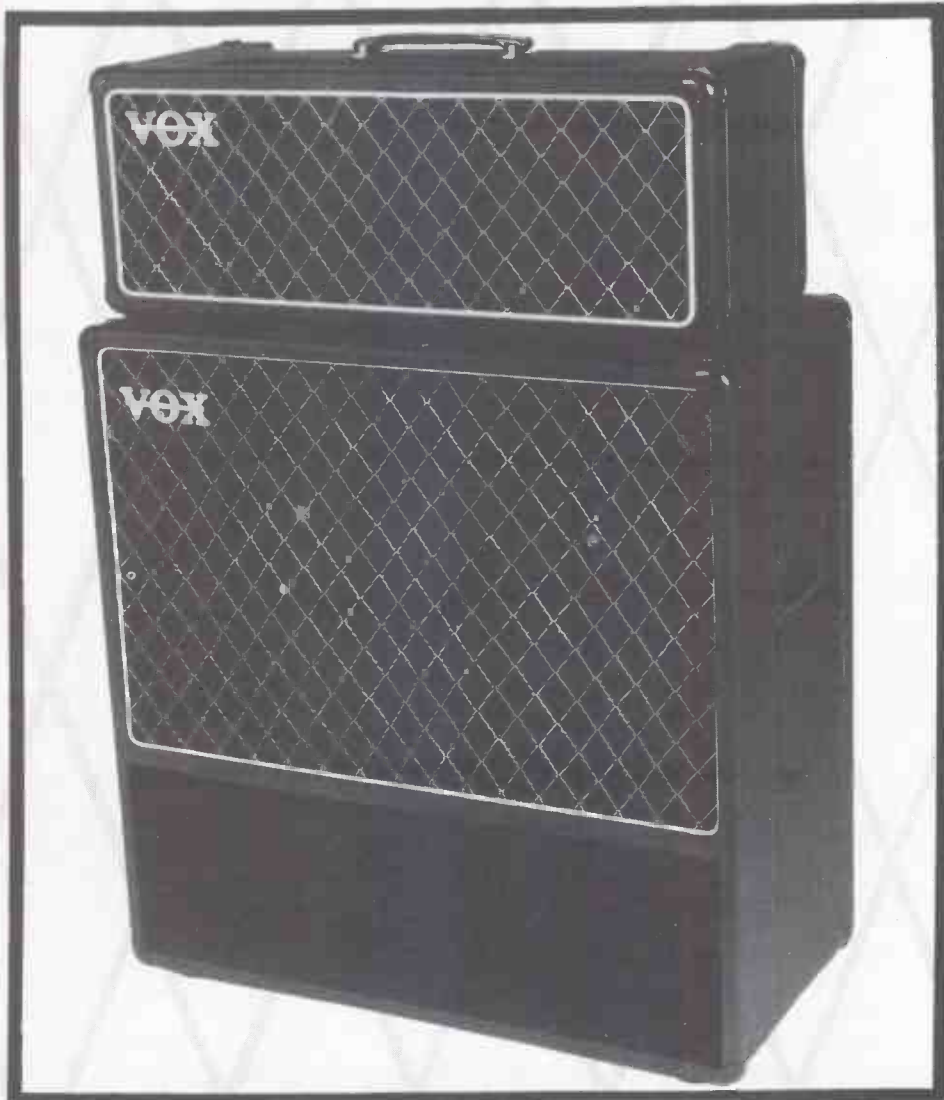
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# Vox V125 Stack

Gary Cooper



To those of you out there who are puzzled by the sudden re-emergence of the Vox brand name after many years of obscurity (and a substantial re-emergence into full publicity at that) then the answer lies in big business – very big business. It may be, as some manufacturers would have us believe, that only a very small portion of the amplifier market is either interested in or able to afford large valve amplifiers, but it is, beyond doubt, the prestige end of the market and the one which generates most endorsements by leading musicians, appearances on TV and professional stages, quotes in interviews and all the drooling over by younger musicians which goes to make a successful name, which can be expanded downmarket later, if desired.

For many years now Rose-Morris, one of the major instrument distributors in this country, have handled that doyen of British valve ranges, the Marshall series. During the past couple of years, however, relations between Marshall and Rose-Morris appear to have become somewhat

strained and rumour was rife that Marshall were about to start handling their own products direct to the shops, cutting out Rose-Morris, as soon as their current contract expired. Now why all this happened and exactly what *has* been going on is impossible to tell. The musical instrument industry as a rule does not enjoy being the subject of speculation about matters which it feels that you, its customers, should neither care nor know about. Subject any instrument maker in this country (or distributor for that matter) to a tenth of the investigative approach taken to the car industry and things start getting nasty.

To this end Rose-Morris are actually one of the better companies around, far less liable than many to get sniffy if one dares to probe into their activities and able to withstand adverse editorial comment if that arises. Nevertheless, I do not know the full background to the Marshall/Rose-Morris split and, I assume, it will be some while before I find out – like 10 years or so?

All I can say to you is that Rose-Morris, busy scouting round for a line to replace Marshall (although they denied this at the time) settled on Vox, then owned, rather curiously, by CBS Arbiter. The story was that R-M would run Vox and distribute Marshall as parallel lines. To seasoned observers of the business (ie anyone who'd been in the business more than 10 minutes) it looked very much as if the writing was on the wall – Vox was being wound-up right to take over when the split came.

Now the relationship between Vox and Marshall has always been an interesting one. It was Marshall that virtually single handedly killed-off the Vox range when the former emerged behind the mod bands of the Sixties. It was louder, better looking, better sounding and, some said, better made. The last point I would personally doubt – the former I would accept. It wasn't that Marshalls *were* badly made, just that Vox weren't either.

Vox had bad business problems too and made some awful mistakes – such as selling the Vox name in the US to Thomas organs. This didn't do a great deal for their reputation Stateside and one hears that Rose-Morris are thankfully buying the Vox name back off Thomas right now.

Anyway, the last laugh may well reside in future for Vox. Having appeared to die a thousand deaths in the Sixties and Seventies they are now owned by a tight, aggressive, wealthy company who are determined to make the brand succeed as well as it did back in the Fifties and early Sixties when it was a case of Vox, Fender or acoustic guitars only, thank you, on most professional stages.

This is the background to this month's amp review of the flagship of the revitalised Vox fleet, the V125 stack. I mention the history of the company for two reasons. Firstly because you may be interested in it and secondly, to try and show just *why* the amps are priced at £275 retail (which apparently neatly undercuts the basic Marshall 100 watt top) and why Rose-Morris are putting so much effort into getting this range right. And they are, make no mistake about that. This is the second V125 I've tried in the past 12 months or so and several changes have been made to the virtual prototype which I first had.

The changes are subtle but effective and I'll mention them when they crop up in the course of this article. I'll leave the photograph to describe what the stack looks like in single cab form – personally I like its traditional Vox appearance. Some may feel that it looks too Shea Stadium for their tastes. I *will* dictate about the quality of manufacture, though. I said earlier that Vox gear was always well made



– well so is this, very much so. Good thick woodworking is complemented by sturdy carrying straps (as per the AC50 and 100 of past fame) and the whole creation is wrapped in equally traditional Vox grained vinyl. My only quibble concerns the familiar speaker grille cloth which from my experience tends to go saggy and flabby after a few hard months' usage. I can see why Vox want to keep their diamond pattern but I wonder if they couldn't get the pattern in a better material?

Safety on the V125 is absolutely superb. The amp has a fixed mains lead and as the chassis of the amp is side mounted, all ventilation flows from below the amp and up through the grille on the top. There are no access points whatsoever at the back and that gets my 100% endorsement for safety.

Equally brilliant is the way in which service requirements have been handled. The front of the amp is Velcro'd in place and this just pulls away, given a hard enough tug. From there you have easy access to the valves and could re-valve a V125 in about three minutes without the need to undo one single screw. If you wanted access to any more major components then all you'd have to do is unfasten six screws at the back of the box and slide the whole assembly out. This is the best designed head for service ease that I've encountered. To help you even further a roughly silkscreened circuit diagram appears on the back of the removable front plate which should help repairmen who aren't familiar with the guts inside.

The V125 is bare of the features which some manufacturers of professional amps seem to feel that we need these days. There are just two jack outs on the back – 4 ohm and 8 ohm – and two fuses. No DI outs, no pre-amp outs or ins or what have you, just two speaker outs. Actually this may be the voice of experience speaking here because for all the tendency to sprinkle facilities on the backs of amps these days, many bands still just bonk a Shure in front of the speakers and make do with that. Leaving them out does help the price, of course.

Controls of the Vox are on the top of the head, two inputs marked normal and brilliant being at the far right hand end, and an array of nice looking pots running towards the far left at which end live the on/off and standby switches. In order you have a variable sensitivity, channel volume, 100 Hz cut and boost and ditto for 250, 500, 1,200 and 2,300 Hz. Finally a master volume. All neatly laid out and looking well made if slightly traditional with old fashioned radio knobs and metal switches for mains and standby (I'd prefer plastic but these at least are strong and reliable).

The overall impression is that Vox are thinking hard about the requirements of the working musician and that they have done their homework well. The beast looks as sturdy as any 100 watt head on the market and a swift dekho inside reveals that component quality and manufacturing standards are exemplary.

Before getting on to sound I'll just talk a while about the cab design. This is a weirdo in as much as it features two 12 in Fane-made speakers in a reflex housing. It looks like an AC30 speaker cab of old with a yawning space beneath to provide for the reflex design. This is odd in that reflex enclosures are more normal for bass use and by no means as popular as they once were even for bass. The reason given is that a reflex housing enables the amp's quite exceptional bass lift characteristics to be handled by the cab and will also, no doubt, give the twin 12ers some chance of handling something like the full potential of the amp's power without busting a gut in the process.

Originally Vox were fitting some metal domed 12 in Fanes in these housings and I, for one, felt that this was tending to emphasise an inherent harshness in the break-up sound which was originating in the amp itself. Vox now seem to have heeded this point and have gone on to a more normal speaker – with beneficial results as we shall see.

Final words on the cab are that I would recommend using two of them if I had any serious attempts to use the amp at full tilt for long but as they only cost £150 retail each this is no hardship. Another argument for using two cabs is that the low down positioning of your speakers makes you underestimate the power you're pumping out. Stand back a way and you can hear a tremendous increase in power. I would anticipate problems here if you were playing in a band and whilst unable to hear yourself found the front three rows of your audience slowly expiring from acoustic overkill – no small possibility with this amp as we shall see.

The first point is that the tonal potential of the V125 is in quite a different league from that of many other valve 100s. The tone controls need some familiarisation to get the best out of but they work well and enable you to be very precise about what you're dishing out. You want a very small tweak in the low mid? No problem. Assuming that you like the basic sound of the V125 you can get almost any sound you want from it but I would here draw a very distinct difference between sound and tone – if you're a guitar player you'll know what I mean.

The V125 seems a bit schizoid in its basic sound to me. The normal input is far more different in sound from the brilliant than one normally finds. In fact, I normally

use brilliant channels on any amp but with the Vox the basic nature of the beast strikes me as a little on the harsh side and I found myself using the normal channel from preference. As I was mainly using a Fender this may have helped overcome its natural bassiness and I would have liked more top on the normal channel and a bit less on the brilliant – a matter of taste, especially bearing in mind that Vox claim to have done a lot of field testing on this head and to have got a sound which younger players like.

The V125 is a rock amp. There are no two ways about it, this beast is designed for knocking down walls and assaulting people with ungentlemanly intentions towards their cerebral cortices. The recently altered variable sensitivity is a boon in so far as it enables you to match the lowest and the highest powered axes to the head, and the provision of a master volume pot just extends that variability further so that a ballsy dynamic rock guitar sound should be attainable from anything from a '58 Les Paul to a '62 Woolworths Winfield Special DeLuxe or whatever. Certainly, having tried it with my gutless Fender and an aggressive Ibanez I got just what I wanted from both guitars. It's loud too. The specs claim to offer 125 watts and I'd believe it. The speakers in a single cab set-up were straining by eight on the dial and there was a bit more left to come. I'd say that its claim of 125 is fair and that it is noticeably louder than a few other 100 watters I've tried.

There is no doubt in my mind that Rose-Morris will succeed in getting these Vox stacks off the ground. Even a beginner should be able to get a killer sound out of one of these and the prices will help too. For the jazz guitarist or the older player, like me, who is yearning for the sweetness of tone that you can get from a Matamp or a Burman or suchlike well, you pays your money and takes your choice. But the player whose tastes lean towards the new wavier end of things or the heavy metal market would almost certainly not find anything better, certainly not on the other side of the Atlantic, that's for sure.

This is an amp for playing on those days when the rent man comes to call, your spouse tells you mother is coming to stay and you find that you've got 50p in your pocket and an empty tank in your car. It's an amp for shaking foundations with when the only thing you want to do is hit something – your guitar for one – very, very hard. That makes the V125 perfect for a lot of players and a lot of bands. If you feel like hitting someone go and try one. If your band has designs on Poland use this. It may be too rough for some but there are times when an edginess and rawness are all you want. It's here – oh yes, it's here all right! But it's a little too much for me. □

# Roland Bass Synth

Neil Murray

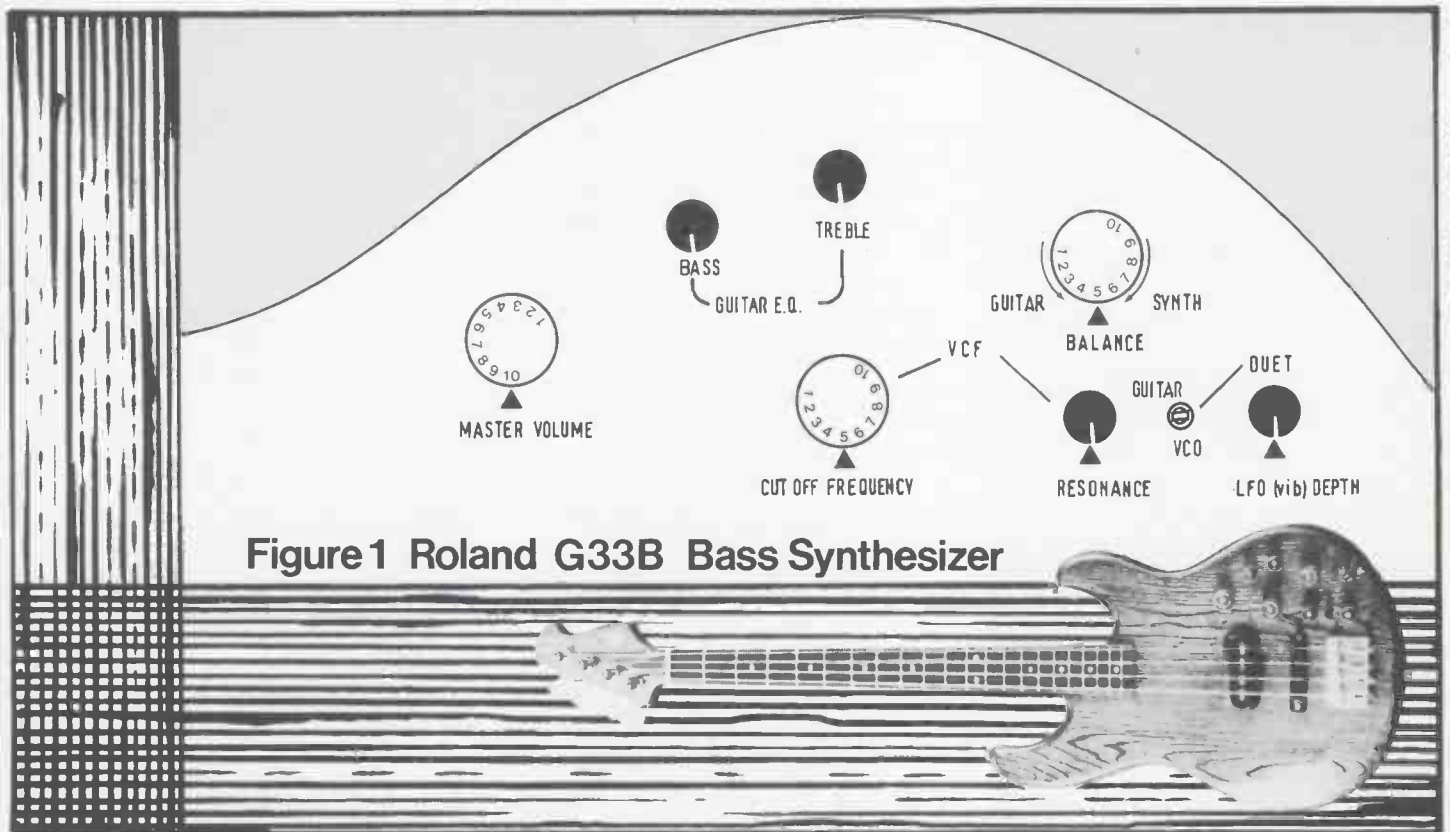


Figure 1 Roland G33B Bass Synthesizer

Most musicians became aware of the sound of a synthesiser playing the bassline to a tune when Stevie Wonder brought out *Music Of My Mind* in 1972. Since then, many keyboard players have replaced the bass guitar with a synthesiser, either by playing the bass notes themselves, often multitracking so that one person plays all the instruments, or getting another keyboard player to substitute for the poor bassist, which is more practical for live performances.

As well as Stevie Wonder, Gary Wright, Gino Vanelli, Jan Hammer and others pioneered the use of synth bass, but recently the floodgates have opened and countless modern bands and albums feature synth bass lines, sometimes in addition to regular, old-fashioned bass guitar.

Many different areas of music have made use of electronically-created sounds but up till now, bass guitarists have had to be content with the modest variations in sound that can be produced from different combinations of strings, pickups, amplifiers and effects which still relate closely to the original plunking of a piece of wire with one's finger or pick. The most interesting innovation for bass players has been the funk style of popping and slapping originated by Sly Stone and Larry Graham, which has made the bassist able to be as percussive and rhythmic as a drummer. One

of the prime exponents of this is Louis Johnson of the Brothers Johnson, and very good he is too, but when he wanted to play a synthesised bassline on some of the tracks of Michael Jackson's *Off The Wall* (hands up anyone who's never heard any of that album!) and the latest Brothers Johnson album, he had to use an ordinary keyboard synth to do it.

Perhaps the Roland bass guitar synthesiser is what he (and you?) needs.

I have been involved in putting together my own bass guitar synth over the last year, using a pitch-to-voltage converter, synthesiser module and programmer, so I've had to learn a lot of new and confusing technology, which most keyboard players are used to (just look at Dave Crombie's synthesiser reviews in these pages). But more bass players might be put off by having to wade through acres of technical descriptions which don't explain what the end result sounds like, so I'll try to combine the two types of description and then our aspiring Bruce Foxtons will know if they want to emulate Gary Numan - at the same time.

The Roland bass synth consists of a long-scale bass guitar (in two versions and made by Ibanez) which connects to a synthesiser module (the *GR33B*) which sits on the floor and houses most of the electronics as well as footswitches and knobs for altering various aspects of the final sound. You can either have the *G33* guitar with a fixed, separate neck and less decorative features, or the *G88* guitar which is the version I tried, which is a bit more

expensive but has an all-in-one laminated maple and walnut neck which extends through the body, giving more sustain. The *G88* also has gold-plated fittings instead of the *G33*'s chrome, but apart from that I think they are virtually the same. By the way, anyone who is familiar with the Roland *GR300* guitar synthesiser will realise that this is a bass version of that, but with certain electronic differences.

The bass itself is very similar to the Ibanez *Blazer* bass, being fitted with one single-coil pickup with eight polepieces, two aside each string, which produces a clear, clean sound, evenly balanced between bass and treble. The added ingredient is the inclusion of active bass and treble controls which allow one to boost or cut to enhance the normal bass guitar sound dramatically. The bass is easy to play with a wide, not-too-deep neck and both the machine heads and bridge are very satisfactory and easy to adjust.

In fact, without the synthesiser being plugged in the *G88* will function as a first-class bass guitar in its own right. I don't have the space to describe the bass in great detail, but suffice it to say that it performs admirably, though I will discuss a few points later.

Instead of the usual two or three knobs one usually finds on a bass, this one has seven, plus a three-way miniswitch, and though it may seem a little daunting at first, having the extra controls which relate to various synthesiser functions on the guitar itself makes it far easier to make quick changes in sounds. After all, you

need both hands to play the bass, and the bass player usually has very little time to fiddle with knobs and switches, unlike lead instruments.

Referring to fig 1 you can see that, starting on the left, there is a master volume which controls the overall level of the normal bass guitar sound and the basic synth sound, which is marked from 1 to 10, as are the cut-off frequency and balance knobs. To the right there are the bass and treble boost and cut knobs, notched in the centre flat position, and to the right of those we find a balance control for the guitar and synth sounds, with both being about equal volume at the number 5 position, depending on the synth sound chosen. This leads us to the two VCF (Voltage-Controlled Filter) knobs, cut-off frequency and resonance, and finally the LFO (vibrato) depth knob.

Of course this is beginners' stuff to most synth players, but skip on to the review of the \$80,000 Quasi-Nuclear *Digital Keyboard And Tea Maker* which Rod Argent's should be getting any day now, if you're bored. Basically, kids, synthesisers work by generating a raw tone from a Voltage-Controlled Oscillator or Oscillators (VCOs) and then shaping that sound to make it more pleasant and interesting. A VCF is like a very sophisticated tone control, and on the GR33B it can take as little or as much of the harmonics as are present in the VCO waveform (in this case a square wave, which produces a fuzzy, brassy sound) and smooth the sound to a very soft, bassy boom from a vulgar, rasping trumpet. The resonance control introduces a boost at the frequency (pitch) that the filter is set at, to the extent of producing a honking or whistling edge to the tone when it's fully turned up. Imagine turning all the treble off on your bass and amplifier, then turning the middle full up, and you have a very primitive version of the same thing.

Therefore if you want a harsh, brassy tone, turn the Cut-off Frequency and Resonance up, or a smooth, deep sound with no middle or top turn both towards the minimum end of their travel. Eventually you'll cut off all the sound completely as you've progressively filtered off more of the frequencies. For a more powerful sound, it is best to have more than one oscillator and though the GR33B only has one for each string, it also extracts a fundamental pitch from the note played which can be combined with the pitch generated by the

VCO. The pitch of the VCO can be altered on the synth module by the Master Tone control and Pitch A and Pitch B controls to be exactly the same (for a unison effect) or up to an octave above or below. This allows you to produce up to three notes from each note played, and since the synth is polyphonic, playing a four-note chord on the bass could produce a 12-note chord for the pleasure (or horror) of the listening public.

A three-way switch to the right of the resonance control allows you to decide if you want just the straight guitar sound, or the 'Duet' sound of the fundamental pitch and the VCO, or the VCO on its own. This allows for quick switching from normal twangy bass to an eight-string bass sound or a high-pitched synth sound (and thousands of other combinations).

Of course, it takes a fair amount of time to find all the variations in tone and pitch that the synth is capable of, and then you have to find which ones suit the music you are playing, so don't expect to turn everything up to 10 and have a great sound come out. For the synthesiser to work properly, it has to extract the pitch or pitches produced by the strings almost instantaneously and convert them to a signal which will tell the VCO which note or notes to produce. There is therefore a pickup mounted near the bridge (to lessen the confusion caused by the harmonics towards the middle of the string) which is really four pickups in one, one for each string, or quadrophonic. This makes it easier for the pitch-to-voltage converter to do its job, but it still must be very fast (it takes about one-fortieth of a second for one cycle of bottom E, so within a couple of vibrations of the string the pitch-to-voltage converter has to suss out what notes are being played and pass on the message to the VCO).

This means that the notes have to be cleanly plucked or there will be 'glitches' where the synth can't decide what note to generate or doesn't produce a note at all. Unfortunately the slapping technique doesn't trigger the synth well at all, so don't bother trying your latest funky licks, as it gets too confused by the initial pop or slap. You can get equally funky sounds just by playing conventionally and setting up the right synth sound.

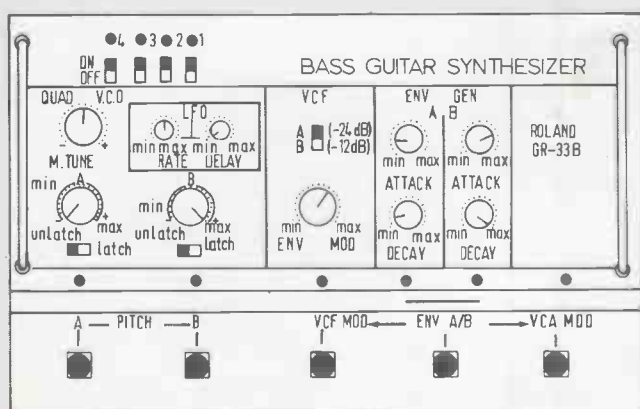
Finally, to the right on fig 1, we have the LFO Depth knob. This controls a Low Frequency Oscillator (so low you can't hear it) which in this case affects, or modulates, the VCO to pro-

duce a vibrato effect without you having to waggle your left hand on the strings. On the synth module you can set the rate or speed that you want this vibrato (ranging from about twice per second to about 10 times per second, or 2Hz-10Hz for the educated) and you can delay its onset by up to a few seconds with the LFO delay knob. The LFO depth control allows you to select a very subtle vibrato to a completely over-the-top pitch change, which at slow speeds sounds like a police siren and at fast speed sounds like a yodelling hippo! To switch on this vibrato temporarily, touch the bottom end of the quad pickup; or to 'latch' the vibrato on while you play lots of notes, touch the top end of the pickup. (To turn it off touch and release the bottom end.) Personally, I prefer a finger vibrato, but the LFO is useful on chords or for special effects.

On the floor unit, there are slide switches to select which strings you want the synth to operate on, so that you can have, for instance, normal bass guitar sound on the A, D and G strings and synth on just the bottom E, or many other combinations. It is possible to change from all four strings to fewer or even none by means of a footswitch (not included) which plugs in the rear of the unit. You can also plug in a special Roland VCF pedal which gives you foot-operation of the filter if you want to swell from a bassy to a harsher sound, for instance. Next to this are two output sockets, one for the guitar and the other for synth, or both if the guitar output is not required separately. (Though there is a guitar output socket on the bass itself which is not affected by the balance control for using the bass without the synth functions.) The guitar connects to the module by means of a 24-way cable which locks at either end to prevent embarrassing silences during your Big Moment.

As you can see from Fig 2, below the string select switches (with their LEDs which light up with varying intensity to show how strongly the synth is being triggered) we have the master tone control, which tunes the VCOs to the pitch of the strings, and the LFO rate and delay controls which I've already explained. Below these are the Pitch A and B knobs, which can be set up to an octave above and below the pitch of the strings, giving a range of five octaves to a three-octave instrument. (The bass has 21 frets, so top E can be played but the cutaway could be deeper to make it more

Figure 2 Roland G33B Bass Synthesizer





accessible.) Either Pitch A or B can be selected by its own footswitch, which in the 'latch' mode will stay on until pressed again or in the 'unlatch' mode will only be operative while it's actually being stepped on, for momentary jumps up or down in pitch.

To the right of these footswitches, we find one for bringing in modulation of the filter (VCF Mod) and one for modulation of the amplifier (VCA Mod). In between these two there is a footswitch which selects either Envelope Generator A or B to do the modulating. Normally, the amount of force used to play the guitar will decide how loud and how long the synth notes will sound (and depending which notes are played, they will sustain for a long, long time), but for delayed 'violin' effects or very staccato pops, switching VCA Mod to your choice of Envelope Generator will give a lot more variety to the shape of the notes. Whatever Env Gen settings are chosen will also be applied to the VCF if desired, producing 'ow'-type tones by electronically moving the filter frequency upwards and downwards. The amount of this effect is governed by the VCF Env Mod control, and some very Herbie-Hancock-funk sounds can be produced, or alternatively slow sweeping effects can enhance the simplest chord.

The steepness of the filter can be switched between -12dB per octave for more smooth, subtle tones and -24dB per octave for more aggressive brass sounds. Although there are few controls on the guitar and module compared to an equivalent keyboard polyphonic

synth, there are definitely enough to produce a wide range of tones and effects normally impossible to produce on a bass, but it would be even easier if one could program the sounds required into a memory bank, leaving both hands free for playing and merely footswitching between sounds instantaneously. I would imagine Roland are working on this at present, and although it would add to the cost, it would be very useful for stage and studio work, where both hands are too busy to be altering settings. I hope they produce a system with at least eight memories with a footswitch for each, as most programmers will only step 1, 2, 3 etc. instead of 1, 8, 5, 2 which might suddenly be required.

I suppose it's about time to bring in a few niggles, bottom E being the main problem. Although Roland have made the triggering very fast and glitch-free, the most useful note on the bass, bottom E, is the hardest to get to trigger cleanly and for any length of time. This may be due to the strings fitted or the way the bass was set up, but it's a severe shortcoming to have to take so much care about playing the one note that you would expect to use most of all, and for the sustained notes at that. There is also a dead spot due to wood resonance at the Bb on the G string, which most Fender owners will know about, which means that the synth doesn't trigger for very long. However, the notes cut off quickly and cleanly without squawks and screeches and some notes (particularly in the 5th to 9th fret areas) will last for ages. Another slight problem is that the

open string or 12th fret harmonic will tend to trigger when taking one's fingers off the nearby frets, which can be prevented by damping the strings after each note and picking very cleanly.

Of course it would be possible to have a much more sophisticated bass guitar synthesiser (perhaps using a polyphonic pitch-to-voltage converter with a Prophet) but for useful sounds, ease of operation and value-for-money, the Roland combination takes some beating. The two versions should be available at around £850 for the G33 bass to £950 for the G88 version, but prices will probably be discounted depending on supply and demand. Personally, I'm very interested in innovations in bass technology and I'd love to have one of these to use with Whitesnake (if you've ever heard deep synth bass filling an arena, you'll know why), but if you don't put a little effort into understanding how the sounds are produced, you won't get the most out of it. Try and get someone to demonstrate it for you, rather than give up when you can't immediately sound like Ultravox.

Since writing this review, I've had a chance to try a couple of other examples in shops and discovered a couple of things: firstly, the more expensive 'through-neck' G88 bass is better than the G33 version and secondly, correct setting-up of the action and pickup height is very important for best results, so try to get your local stockists to adjust these so that the Roland bass synth can produce the performance it's capable of before dismissing it as a pile of goat-droppings □

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## Beat Me Up, Scotty!

Stepping into our Beat time machine once again (Beat me up, Scotty!), we land ourselves at last – by virtue of having acquired a full set of early BIs – on a bright Spring day in May, 1966, where the Yardbirds are on *Ready, Steady, Go* and all's right with the world. Fifteen years ago to the month and here we are in 1981 celebrating our third anniversary. There they were in 1966 celebrating theirs. Isn't life, well, repetitious? Course, in them days, pound were pound. An annual sub to *Beat* was a mere £1.60, and more important, you could obtain your Bert Weedon 'fast action' guitar oil for just 4/-. A bill consisting of BB King, Gladys Knight & the Pips, Joe Tex, Major Lance and others was also priced at one dollar 80 cents (13/- at the prices of the time) at Chicago's Regal, according to *BI*'s R&B survey.

The musicians' names haven't changed as much in 15 years as you might suppose. Who is this fresh young guitarist with Zoot Money's band on page 14? 'A bit of a perfectionist. He seems constantly worried about his tone settings, his volume and in fact his playing in general.' His name is Andy Somers. Change the spelling a little and we find one-third of a trio who are the idols of zillions and are making pots of dosh. Moral: Be perfectionists and worry about your tone settings, boys and girls, there could be a reward for you in 1996. As you can see from the above picture where Somers is hiding behind his leader. Money's band also included a bass player, Paul Williams, who was ahead of his time, playing his Burns *Black Bison* bass with only his thumb. Eat yer heart out, Larry Graham.

A *BI* exclusive of May '66 was the Beatles' recording session for *Revolver*, wherein we find Ringo spending most of the time busily playing chess with road manager Neil Aspinall and George Martin apparently playing

all the keyboard passages. 'When I was there,' explains the reporter, 'Paul thought up a backing which needed both piano and organ. George Martin proceeded to do the impossible by playing each instrument alternately dashing the five yards between them in a race against time.'

In those days, British bands were heavily into hi-jinks, and a series called 'Those Days In Hamburg' catalogued a few. Here's one you can try next time you're holed up in the Huddersfield Hilton with not very much to do: 'Along every corridor lay a carpet and either Sounds Incorporated or the Tornados, I'm not sure which, thought it would be a good idea to roll this up, lean it up against the door of an apartment, knock and run away. The door was opened and whoever answered was flattened.'

The Small Faces were appearing with the Who and squadrons of others in the annual *NME* Poll Winners' Concert that month, and Plonk Lane told *BI* that, 'The blokes seem to like us too.' Jack Bruce, looking even younger than you, was featured with his six-stringed Fender bass ... Bob Lind had just released *Cheryl's Goin' Home*, never suspecting it would become a camp classic in the hands of old Otway once Lind had been forgotten ... Donovan discovery Dana Gillespie had just released her first single ... 17-year-old Douglas Kibblewhite of Comingham, Essex was pictured receiving his March competition prize, a trumpet from Eddie Calvert. Can you play *Oh, Mein Papa* yet, 32-year-old Douglas? ... Brian Wilson was talking to *BI* on the transatlantic phone and breaking the bad news: 'It's probably strain, all the travelling, but I found I went almost deaf after some of the concerts.' ... The Birds lead guitarist Ron Wood wrote their new single, *What Hit Me*. ... Mark Roman and the Javelins were off for a tour of Sweden with the Iveys

from Weston-super-mare ... The Power House were playing The Scotch of St James where they were 'allegedly knocking out people like John Lennon' ... Available tutors (guitar, organ, accordion) included one Larry Macari of Edgware.

## Guthrie: Sad, Triumphant and Utterly Unique

Joe Klein  
**Woody Guthrie: A Life**  
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 ISBN 0571117368

It's nearly 20 years since kids were arriving in New York from New Jersey trying to look as if they'd just blown in from the dust bowl in the mid-West and had seen more boxcars than pop singers had had hot pastrami on rye, but the Guthrie influence lingers on (at the time of writing, Dolly Parton's *9 To 5* in the US Top 20 includes Guthrie's anthem for the deprived, *Deportee*).

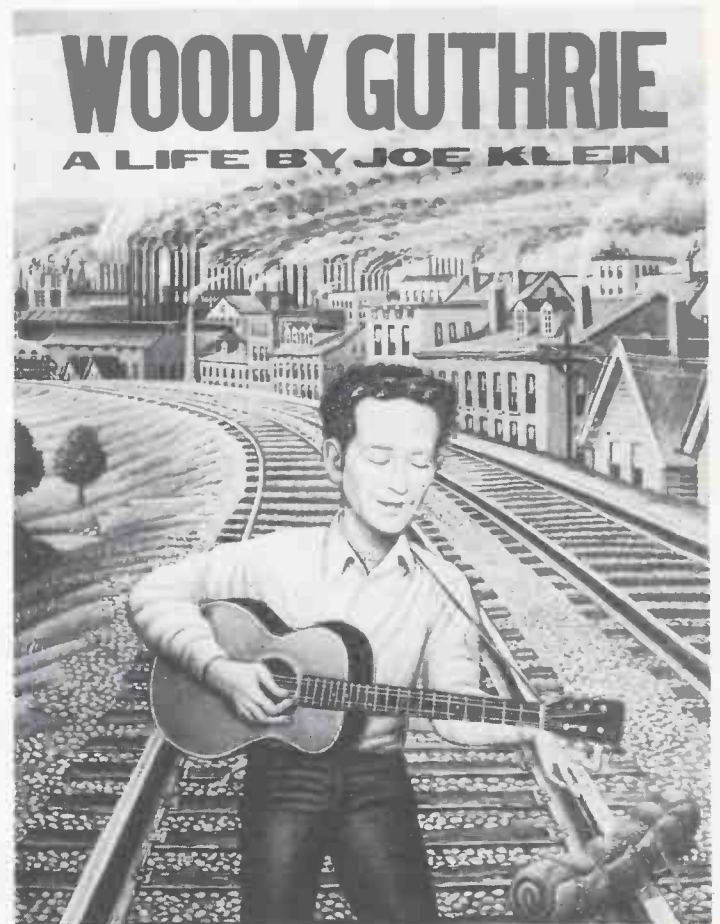
But most people have heard dozens of other versions of Guthrie songs, without ever hearing the way their creator would have done them. Accordingly, he's remained a shadowy figure among influential pre-rock myths, compared for instance, to the likes of Charlie Parker or Billie Holiday. Klein attempts to fill the gap with an exhaustive (457-page) biography of what he calls 'one life, sad and triumphant and utterly unique', and although it's a heavy bastard to lug about, I found it a compelling com-

ination of painstaking detail and careful research with a lucid, unflashy writing style.

Until Huntington's disease made him incapable in 1956, Guthrie was an obsessive letter-writer and much of the material was made available for the first time to Klein. Others had tried and failed but doubtless the family was impressed by Klein's *Rolling Stone* piece on Woody's son Arlo a few years back. Accordingly the writer has the biographer's dream – the first real chance to explore a chosen subject in depth. The man who emerges alternates violently between truculence and charm; often child-like and naive politically, he was nonetheless capable of stirring, simple songs that hold the imagination and linger there.

Klein has done an enormous amount of relevant reading as well as hours of interviews, and accordingly Guthrie is always properly in context. In addition to the Okies and Wobblies and the New York folk set, some of the sub-plots like the American Communist Party's extraordinary philosophical U-turns are worth a book to themselves. And as a lifelong dedicated rule-breaker, Guthrie's career in show business is also illuminating on the boundaries of what was allowed then. The final tragedy of Guthrie's illness eating him away while his style and subject matter are suddenly all the rage (and while disciples including Bob Dylan treat him like a shrine to be visited) is straight out of a bad movie script, but it really happened and Klein never falls for sentimentalisation. A valuable book which deserves some accompanying record company activity.

Rob Mackie







INDEPENDENCE DAY

## Neutor You

Due to the increase in independently produced records it has become difficult, with only minor press coverage, to keep track. The idea of Independence Day is to indicate some of the more interesting releases which may otherwise go unnoticed.

**23 SKIDOO: *Another Baby's Face/Ethics*** (Pineapple Products Pulp 23) The first offering from Pineapple Products is two punchy tracks from 23 Skidoo, from the jangling *Ethics* to the funk-skank *Baby's Face* this is a very effective debut for band, label and Madness' Mark Bedford who produced it. This vinyl catch, however, only marks time in the group's progression which has overtaken everyone close to the group's expectations. 23 Skidoo have been dubbed propagators of the new Eurofunk but it's just Skidoo music to me, accept no substitute.

**ORANGE DISASTER: *Something's Got to Give/Out of the Room/Hiding From Frank*** (Neutor Records ODO 1) Recorded at Spaceward, this is very mysterious, apart from the fact that they are three, one female and two males, no other information is given. *Something's Got to Give* is an effective piece of late night mood music, thoughtfully put together with simple bass, sweet guitar and lilting sax over a drum machine. Lasting 6.10 it comes and goes with relaxing simplicity. *Out of the Room* is an up-tempo piece with double-tracked sax, the combination still working well in that format as in the mid-tempo *Hiding From Frank* which features a more orthodox guitar, climaxing with more doubled sax, all in all a nice single worth searching out.

**CHROME: *IN A Dream/Danger Zone*** (Don't Fall Off the Mountain Y3 12in) A new release from Chrome is always worth a listen. This import 12 in, one of their more accessible works, is no exception. Chunky guitar holds down *In A Dream*, treated vocals, searing synthesiser and overdubbed lead, feedback and distortion tied together by solid bass and drums. *Danger Zone* is much more immediate with the synthesiser and fuzz rhythm acting as an anchor for the treated guitar overdubs, a restrained jazz middle giving contrast before the main drive returns with an acidic guitar break giving way to building synthesiser, voice-over tapes *et al*, the whole track being phased at its climax. Chrome continually produce well structured, interesting and diverse records, and deserve a much wider audience for their wares.

**MYSTERE FIVE'S: *Never Say Thankyou/Heart Rules The Head*** (Underdog/Flicknife FLS 202) I have this single as an import but I believe it is now available through IKM and, as all records mentioned, is available at the usual independent outlets. *Never Say Thankyou* is commercially structured on basic rhythms which build into an up-tempo climax, with interesting vocal effects. *Heart Rules The Head* is constructed in a more orthodox fashion, just as enticing with vocal effects again and a Certain Ratio-esque horn climax, altogether a worthwhile well packaged single.

**CABARET VOLTAIRE: *Sluggin' For Jesus/Your Agent Man*** (Crepuscule TWI018 12in) An import 12in from Belgium viewing the latest phase of Cabaret Voltaire. On side one, *Sluggin' For Jesus Part one*, no vocals, heavy rhythmic interplay, pulsating bass and floating guitar work around a tape of an evangelist priest culled from American TV, very powerful. On side two, *Your Agent Man*, similar format but sparser rhythm and a treated vocal, one of the high-spots of their recent live sets is followed by *Sluggin' For Jesus part two*, a more disjointed, may I say avant-garde version of part one. It is an impressive package nicely sealed in a Neville Brody sleeve (he of Clock D Va LP cover).

Apart from these five also worth inspecting are the Clock D Va LP *Thirst* (Fetish FR2002), singles from Minny Pops and The Names (Factory Fac 31 and Fac 29 respectively), *Another Reason* by Five or Six (Cherry Red Cherry 19), *Devils And Angels* by the Passage (Night and Day AMPM 2400) and Robert Rental's *Double Heart* (Mute 010), that lot should whet the appetite.

Dave Henderson

## 'Right-wing' Rush labelled 'non-violent'

Rush:  
*Moving Pictures*  
Mercury 6337 160

There are two sorts of under-privileged heavy rock bands – those like Budgie, veterans ignored and those like Rush, veterans scorned. Both have suffered at the hands of the press – Budgie from ignorance and Rush from much the same scourge. To write Rush off as 'heavy metal' is like calling Magritte a painter and decorator, yes their music is heavy but it is not mindless rifforama à la Gillan's appalling outfit for example.

Rush are a thinking man's band. Not musically unique, I will admit, passages from this album, for example, are reminiscent of Yes, and others (*Red Barchetta*) of the Who – but they are not imitators, they have merely continued the work which both of their forbears seem to have abandoned. *Red Barchetta*, for example, finds Rush tilting once more at restrictions on personal liberty, this time a total ban on cars. The hero sneaks away to his uncle's farm to glory in the delights of the *Red Barchetta*. Musically it is probably the best track on the album, cascading, dynamic, thrusting and musically possessing both lyrical and melodic qualities without detracting from its power.

Side one is, for me, a better half showing Rush to their best advantage. Geddy Lee's bass playing owes nothing to the modern funk/jazz style – he has grown from roots laid down by Squire and, maybe, Entwistle but he's good, Neil Peart has an excellent style and a fine dry drum sound and whilst guitar player Alex Lifeson's guitars are sometimes quite mixed back they are there and his chord work is particularly impressive.

Rush are either ignored because they are thought to be old fashioned or because they are 'right wing'. Their lack of desire to underplay and their avowedly 'progressive' music gives the lie to the first falsehood. The second is contemptible. Their lyrics show a near obsession with personal and individual freedom – here lies much care and little violence.

I can't force you to listen to Rush's latest album but if you liked the way rock was going until the late Seventies and wish that someone had bothered to take it further give them a try. Their last three or four albums are among the best that I own and *Moving Pictures* is as good as any of them. The production too shows that much has been learned from the ruins of the recent palace revolution – it's clean, crisp and clever. Rush's lyrics work best when they tell a story or send a message, they never descend to 'doo-wop baba I lurv yer', a welcome relief (in an age of nihilism and illiteracy). Their music harks back to the movements to take rock back to a more symphonic nature. That makes them 'progressive' in the original sense of the word, not the later corruption of it. Go on, live dangerously, give it a try! – you've got nothing to lose but your prejudices.

Gary Cooper



## Sing, Jack!

BLT  
Chrysalis CHR1324

Frightening, isn't it, when three of your favourite players produce a duff album? Jack Bruce, Robin Trower and that excellent American drummer Bill Lordan get together to produce an album which completely lacks the soul which all three of these players normally have in abundance. Bruce's bass is almost absent from the proceedings, Lordan's fine cymbal work is hardly there at all and Trower sounds asleep. The saving grace is Jack Bruce's voice which can never sound any less than soul-tearing and charged with painful emotions; generally, though, the album sounds tired and listless.

Gary Cooper

## A Certain Bush Skidoo

A certain Ratio, etc  
North London Poly

It was some time since A Certain Ratio had trodden the floorboards in the capital city, the hall was packed; 23 Skidoo, the transformation goes on and on. Tonight, the best set, cross rhythms from drums and percussion, scratchy guitars, a hint of sax, clarinet, pre-recorded tapes, something for everyone. A frenetic dance music which still rings in the ears this following hungover morning. Someone said, 'This is the last time we'll be able to get this close to the stage', (not that we were that close): that's probably right, 23 Skidoo, the word has spread. The Bush Tetras, however were another kettle of piranhas. Extremely professional, tight sound, choreographed stage antics, unfortunately, bland songs, no presence or passion. The Bush Tetras, I'm sure you've heard, are one of the six New York bands currently visiting our shores. The other five must be better. And so, pregnant expectancy, 'Looking for A Certain Ratio', the word is percussion, the six, (new member Tilly vocals and percussion), switch between two guitars, bass, drums, trumpets and an array of percussive aids. There are virtually no orthodox vocals save one or two of the older songs, the majority of the material being new. Tilly opts for floating harmonies which move around the layered rhythm which is highlighted alternately between guitar and trumpet. Every A Certain Ratio appearance is a showcase of their progress. Tonight suggests that they are getting close to something unique, emotive and danceable for these dark days. It is a hypnotic and personal feeling purveyed with camouflaged force, which live works well; if the forthcoming LP, on Factory, carries the effect it will be a classic, but for now the bootleg tape will suffice.

Dave Henderson

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