

INTERNATIONAL **MUSICIAN** AND RECORDING WORLD

CH 1979 50p

**The Who
are alright:**

**JOHN
ENTWISTLE
speaks**



PLUS interviews with

Robert Fripp

Roy Ayers

Pete Shelley

David Sancious

Cheap Trick

TESTS: YAMAHA YC45D ORGAN • HOFNER T2S SEMI-ACOUSTIC • ROSS PEDALS • PEAVEY CS-400 AMP • ARIA DO 5501 KIT • FENDER STUDIO BASS AMP



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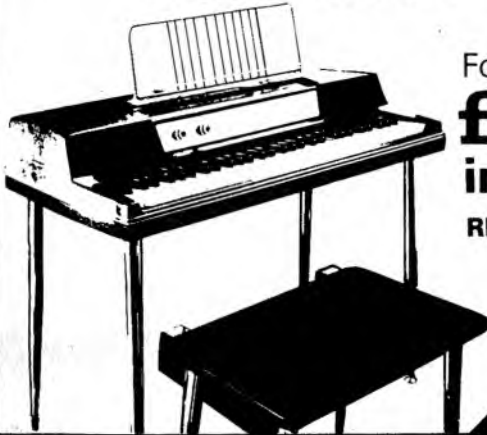
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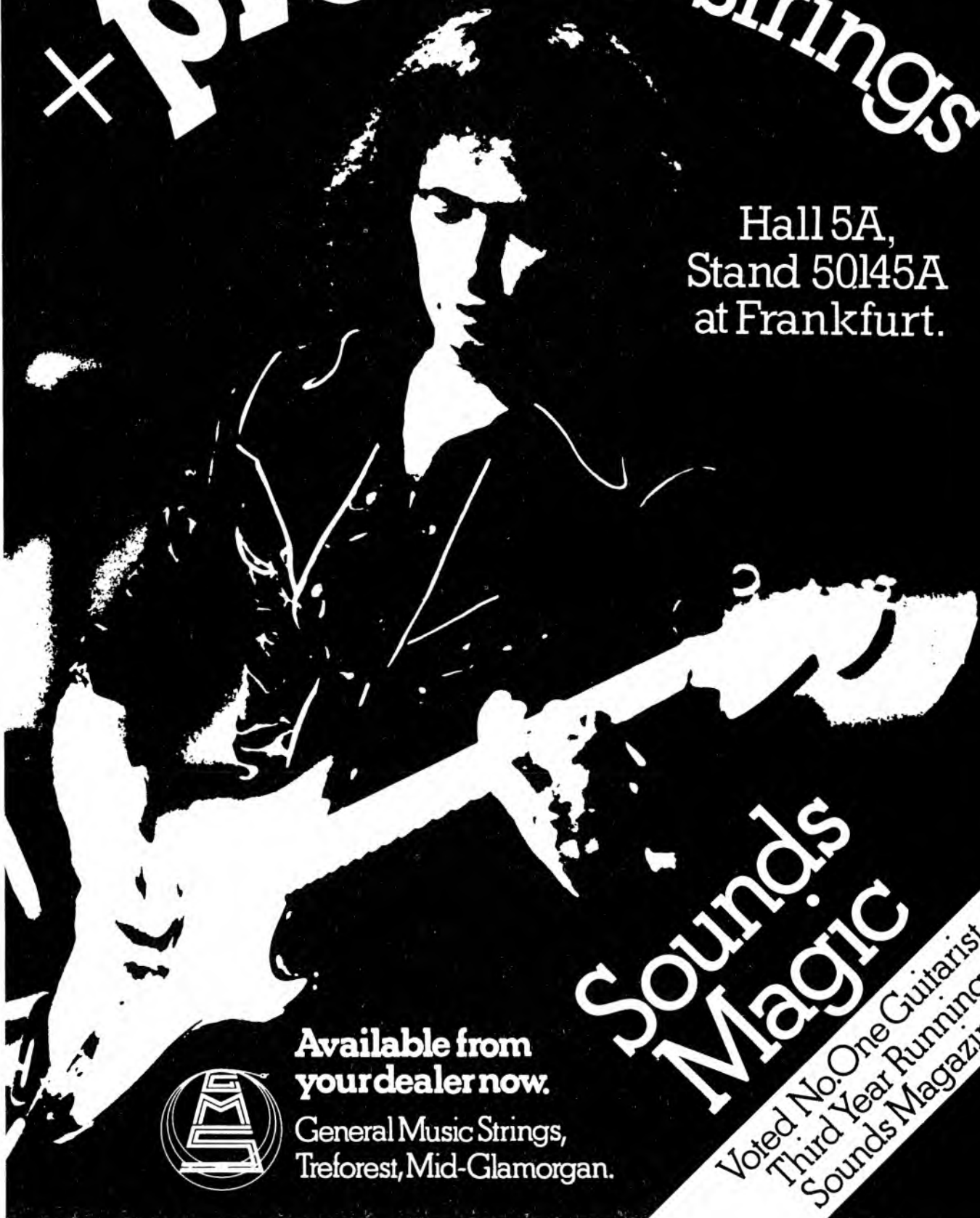
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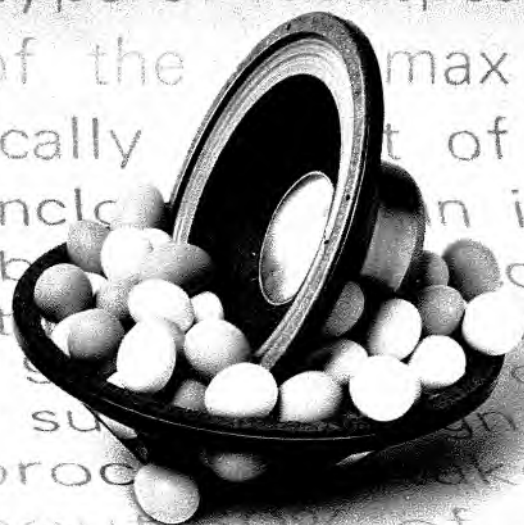
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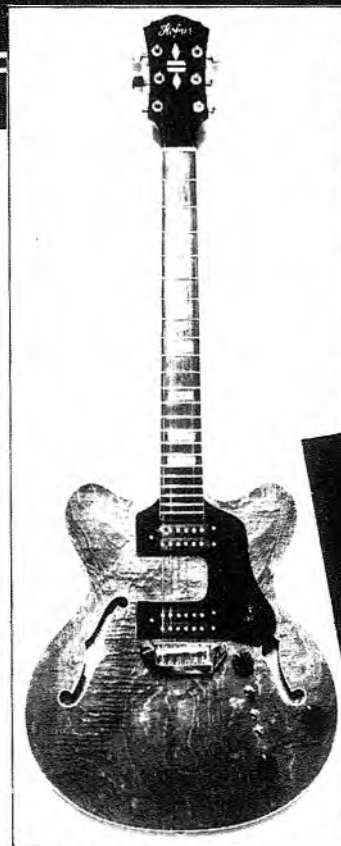
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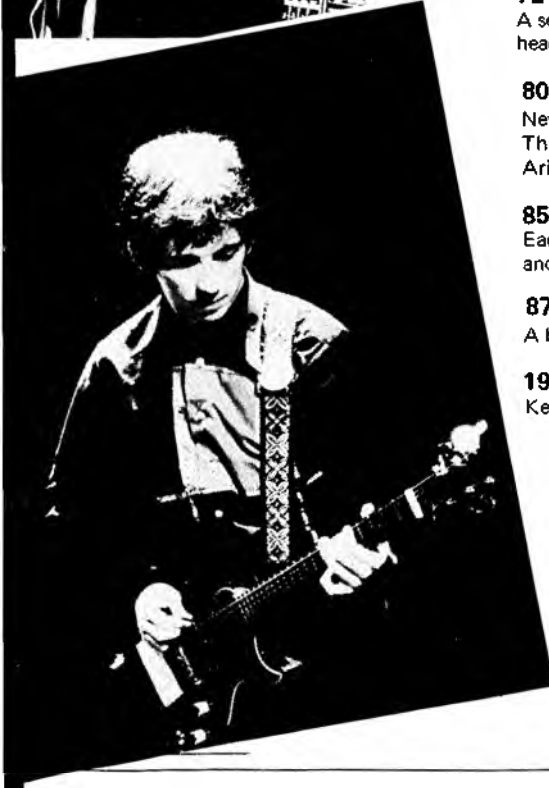
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EDITORIAL

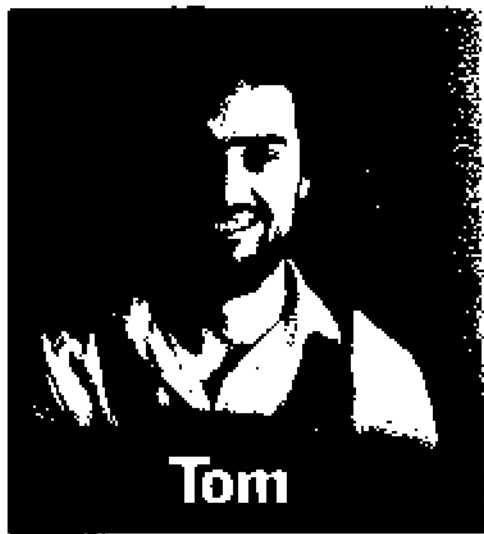
We received a letter the other day from a reader who was angry. Not about anything we'd written (though we get those sort of letters too) but about an advertiser's sticker included in last month's issue. This chap, a bass guitarist in a dance band, was incensed that the sticker dared to knock discos. His band often appears on the same bill as discos, he said, and found them co-operative, helpful and inclined to stick to the time schedules better than many bands. Good for them. The fellow was so angry about the sticker that he threatened never to read IM again, but let's hope he's cooled off a little by now (you still there, Ian?).

Anyway, quite apart from the disco v. live music controversy, it was good to receive such an angry letter. Seriously, we mean that. Music is something that's much too important to be passive about. Rock music, in particular, is fuelled by energy and passion, and a healthy music scene thrives on controversy and argument. So if you feel angry/frustrated/desperate about something, don't just sit there grumbling - write to us and get it in print. If enough people agree with what you say, you might all be able to change things.

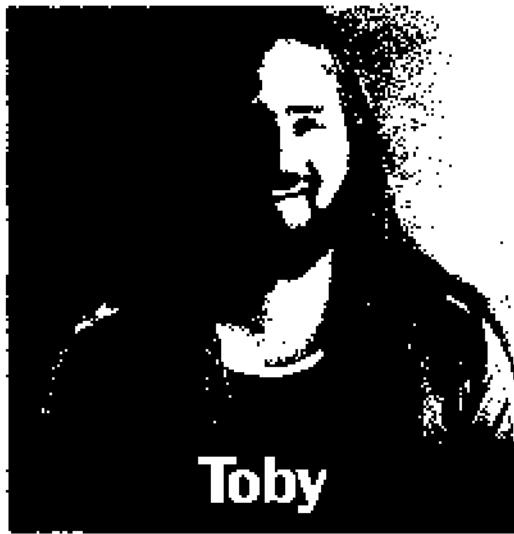
Actually, there's more chance of getting into print these days, too. Starting this month, we are reserving our Letters pages for your comments and observations, angry or otherwise. All those queries we receive about instruments, equipment, old records, new accessories and the rest are now being answered elsewhere in the magazine. If you've written for information or advice, please be patient. Our consultants try to answer every query individually but they're busy lads and it takes time. Meanwhile turn to page 157: you may find the answer there.



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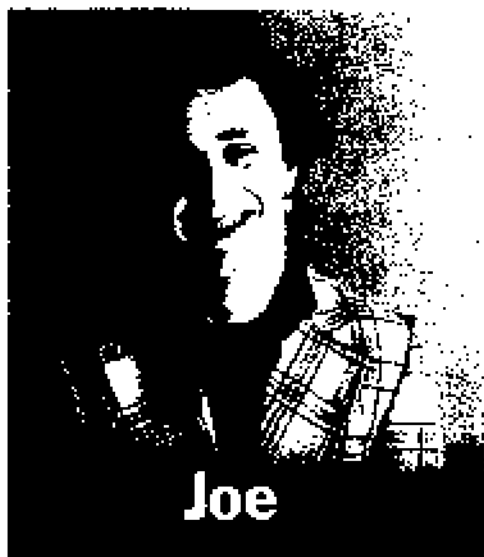
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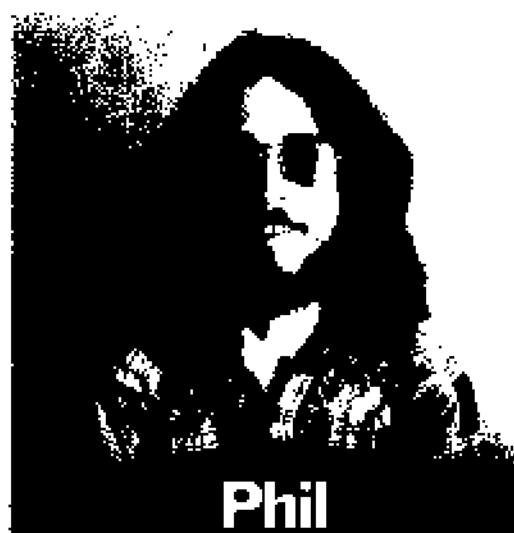
Charles



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Bill

We're proud to announce our workers are on a "go-slow."

In fact they have always been on a "go slow." Ever since the first 12" speaker was carefully lifted off the end of the assembly line.

It begins with Tom. He orders the materials slowly and carefully and passes them on to Toby who pedantically checks the consistency and tolerances of every piece.

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In fact we pay Glen to watch him.

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Charles and Sam are in charge of "Doping" and "Mounting." Doesn't sound much now but their painstaking efforts

mean your speakers will sound a lot better later.

Now you may think that Bryan and the other Phil, who run the factory, have the cosiest job of the lot.

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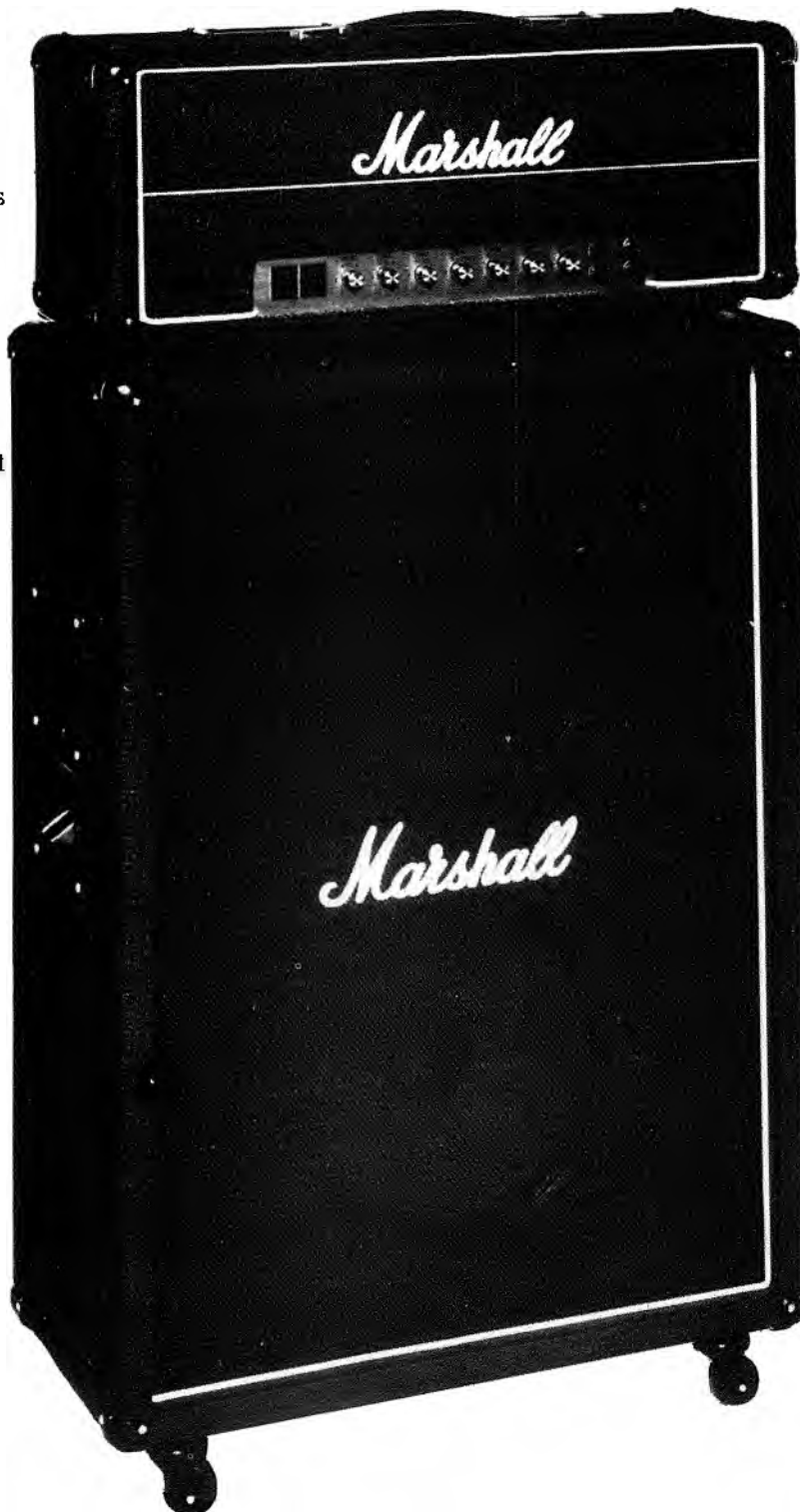
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REVERB

The Marshall 2959 Amp

Throughout the years, the Marshall 1959 valve top has become the classic rock'n' roll amp. At last that famous Marshall sound is available with added extra's - boost and reverb. The amplifier utilises the standard layout of two channels, each with separate volume control, and four inputs to facilitate cross linking. The Hammond reverb circuit provides a full, deep sound adding that big hall ambience to that raunchy Marshall tone. Double foot switch provided.



The Marshall 1981 Cabinet

This new bass cabinet heralds the use by Marshall of two special new 15" (38.10 cm) Celestion speakers. The two speakers are mounted on an infinite baffle with a sealed, pressurised design enclosure for maximum throw, and although the speakers are rated at 100W RMS each, they will handle well in excess of this rating, to produce an amazingly powerful sound when used with the new Marshall 100W Bass Amp. The cabinet is fitted with amp skid trays and two recessed handles, and comes with standard castors for ease of handling.

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Marshall get it all together.

A 200 watt P.A. system designed for your needs? With Marshall-you've got it made!

200W P.A. System

An uncomplicated, effective, and easily transportable P.A. system is a necessity for any working band, and it is with this in mind that Marshall have created the system pictured here. Designed for use in clubs and small venues, the system provides a full 200W of clear, powerful sound. The 2126 Superbass bins shown, work on the reverse mounted reflex principle with a 15" (38.10 cm) Celestion

Driver for excellent bass response. Pictured on the top of the 2126 bass bins are the upper mid and high frequency 2057 horn units. Using a specially designed driver, the multicell mouth of the horn produces a superb dispersion of sound with added presence. An alternative to the 2057 is also available in the form of the 2127 mid and high range horn and the 2128 high frequency piezo unit.

The 2125 8-channel mixer used in this system, features 8 separate groups of treble, middle, bass, reverb and volume controls, with one group per channel, and also utilises overall reverb, presence and volume controls with a separate foldback volume control. The Hammond reverb system provides a smooth, deep reverb for a full sound in smaller venues. Designed to be linked with the 2125 mixer, the 2205 solid state slave amplifier provides the extra 100W of power needed to drive the illustrated system. The variable impedance output transformer permits use of the unit to match any impedance from 4 to 16 ohms. Other units from the Marshall P.A. range include the 2056, Bass Bin, 2057 Horn and 2051 Slave Amp.

2056 Bin/2057 Horn/2051 Slave

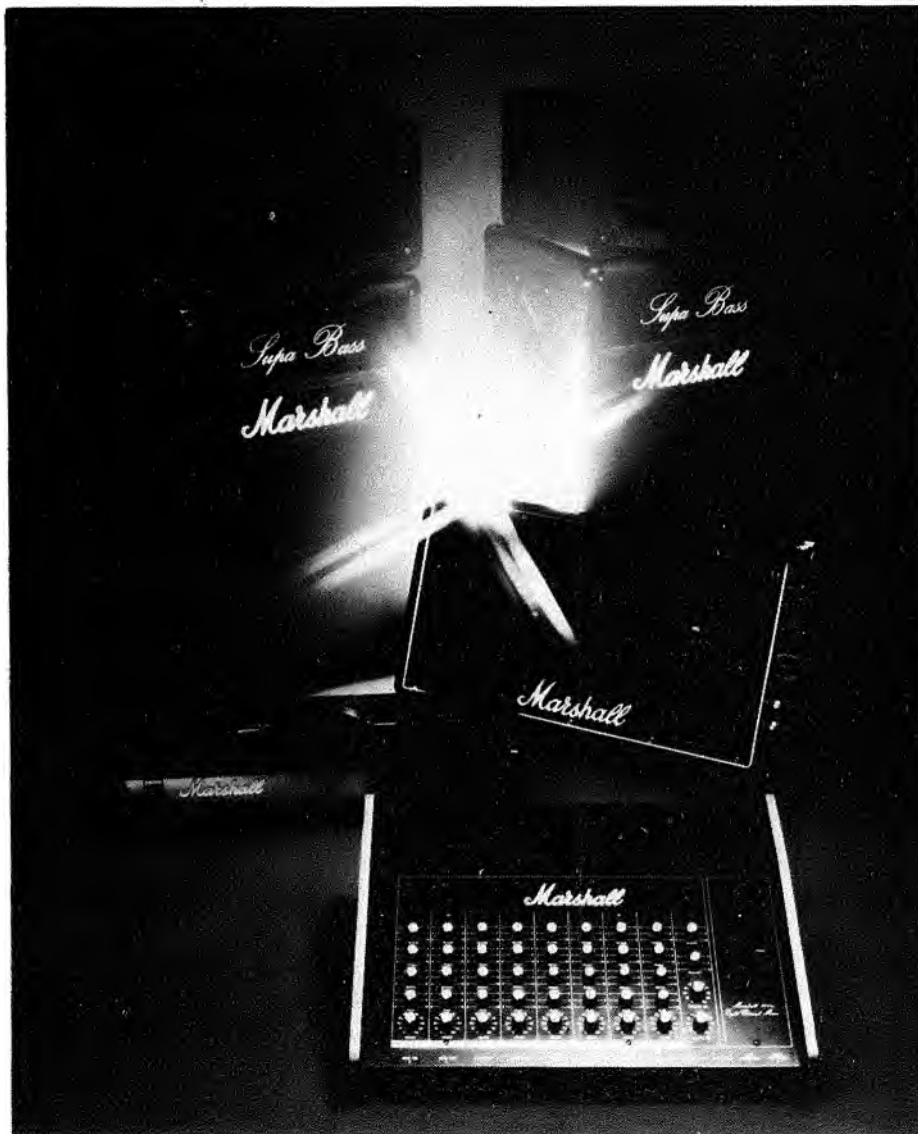
Supremely powerful and effective this Marshall bin, horn and slave combination provides 250 watts of PA sound. Designed to be used singly, or stacked for extra power, the 2051 slave has input, link to next slave and output sockets, and also features a built in safety trip, and reset switch to safeguard the amplifier. The 2056 Bass Bin is built to stand the rigours of constant use on the road; two 15" (38.10 cm) Powercel speakers, combined with a rear horn arrangement, provide excellent low frequency response. Designed to work effectively with the 2056 Bass Bin, the 2057 high frequency horn adds a crispness and presence to the treble sound frequencies, aided by the passive crossover networks of the 2057 and 2056. Normally used in pairs, this set-up provides a clear, yet powerful sound.

2121/2122/2123 Monitors

Marshall wedge monitors provide the musician with a simple but sure foldback system, with complete control over the sound. The 2121 and 2122 models feature built-in slaves, eliminating the need for external power amps. The 2121 has 2 x 12" (30.48 cm) speakers and produces 100W of foldback, whilst the 2122 produces 30W of power and has 1 x 12" (30.48 cm) speaker. Model 2123 is fitted with 1 x 12" (30.48 cm) speaker rated at 50W, and requires an external slave amp.

2071

Designed for use with a small club system, the Marshall Mini Mixer gives complete control over six inputs, each unit with separate volume, treble and bass controls. With overall volume and foldback volume controls. A V.U. meter is provided for easy elimination of overload distortion.



Please send me more information about the 2959 amp the 1981 cabinet
 P.A. systems.

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The twin-channel combo with the clean fresh sound...

The Marshall 4140 Club and Country

Two years of extensive research and development by the Marshall engineers, has produced the ultimate club and country musician's combo. The powerful, new 100W valve amplifier, driving two specially designed 12" (30.48 cm) 80W speakers, utilises two channels for a rich, smooth sound.

Channel one features reverb and boost (also controllable with footswitch provided), whilst channel two has a flatter response for microphone, or second instrument use. Finished in brown oak leathercloth, with straw coloured speaker fret.



...get right down to the basics!



The Marshall 4150 Bass Combo

Designed to complement the new country and club combos, the 4150 is an entirely new bass combo, which features an all valve 100W amplifier driving into 4 x 10" (25.40 cm) 50W Celestion speakers for a tight, punchy bass sound. Never before has the bass player had such control over his sound with treble, bass, mid-range boost, and sweepable mid-range controls, compression, and mid-high presence circuit for a really superb sound. As with all the club and country range, the 4150 is finished in brown oak leathercloth with straw coloured speaker fret.

Rich, Rangy & Raunchy.



The Marshall 4145 Combo

For the musician who wants the facilities and easy operation of the versatile 4140, with that something extra, the new Marshall 4145 is the combo. Utilising the same amp

section as the 4140, this combo has four 50W 10" (25.40 cm) Celestion speakers for a rich, but biting sound which will please the most discerning of musicians.

Marshall Rose-Morris *Marshall*

THE BABY WITH THE BIG STACK SOUND.



The Marshall 2150 Combo

Rock guitarists the world over have long searched for the last word in reliability and sound in a compact and easily manageable package. The Marshall 2150 is the answer. Built to Marshall's exacting high standards, the Rock 'n' Roll baby has an all valve amp section, producing an astounding 100W of pure power through a specially designed 12" (30.48 cm) Celestion speaker. Two channels, each with two inputs, facilitate cross linking for a really deep sound, and the master volume control enables the musician to utilise the incredible sound of the 2150 in both small and large gig conditions.



Please send me more information about Marshall Combos.

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- * Six separate modulators.
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- * Voltage processing variable speed clock.

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* Variable modulation generator. * 4 selectable waveforms. * VCF, VCA, 10 Octave VCO.

Monophonic Synthesizer M.S.20

A professional, fully variable instrument for the serious musician. Two VCO's two VCF's, two VCA's and MG(LFO) and much much more. Even an External Signal Processor Module that allows an outside instrument to 'play' the synthesizer. All this plus a large flexible patch panel and a major facility control panel in an instrument that costs less than you would pay for a separate External Signal Processor from any other manufacturer!



* Two VCO's Two EG's, Two VCF's. * Built in External Signal Processor (ESP)



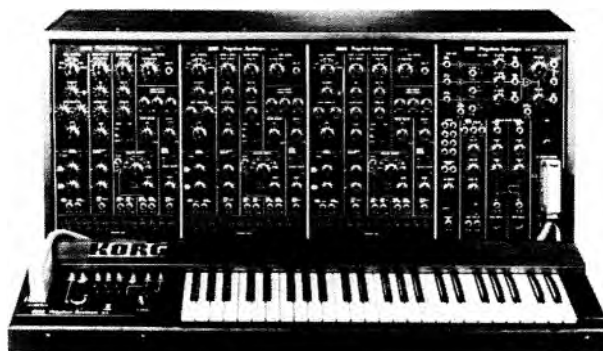
Analog Sequencer. S.Q.10

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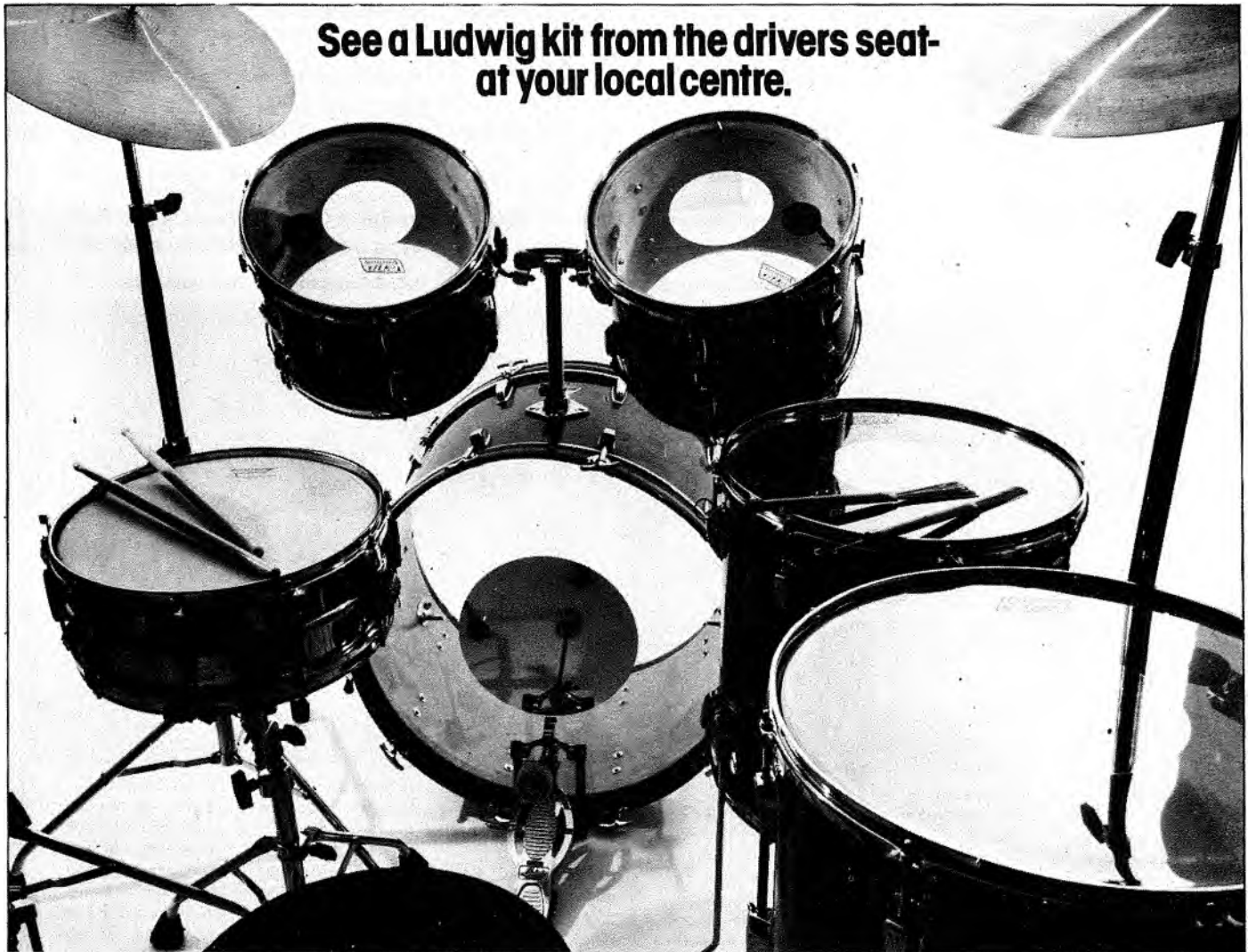
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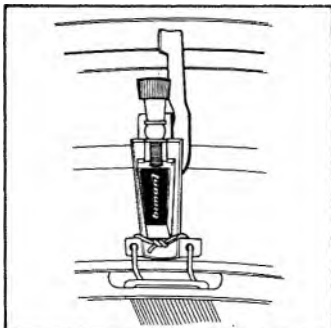
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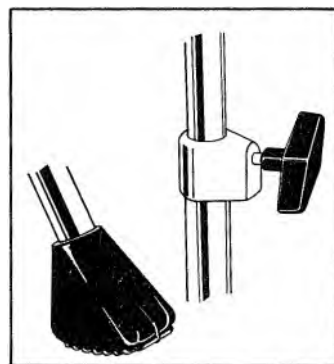


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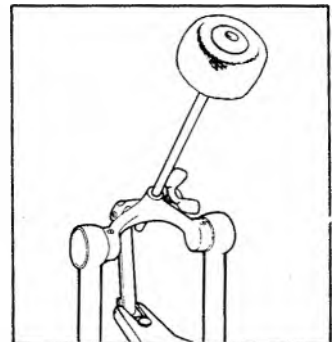


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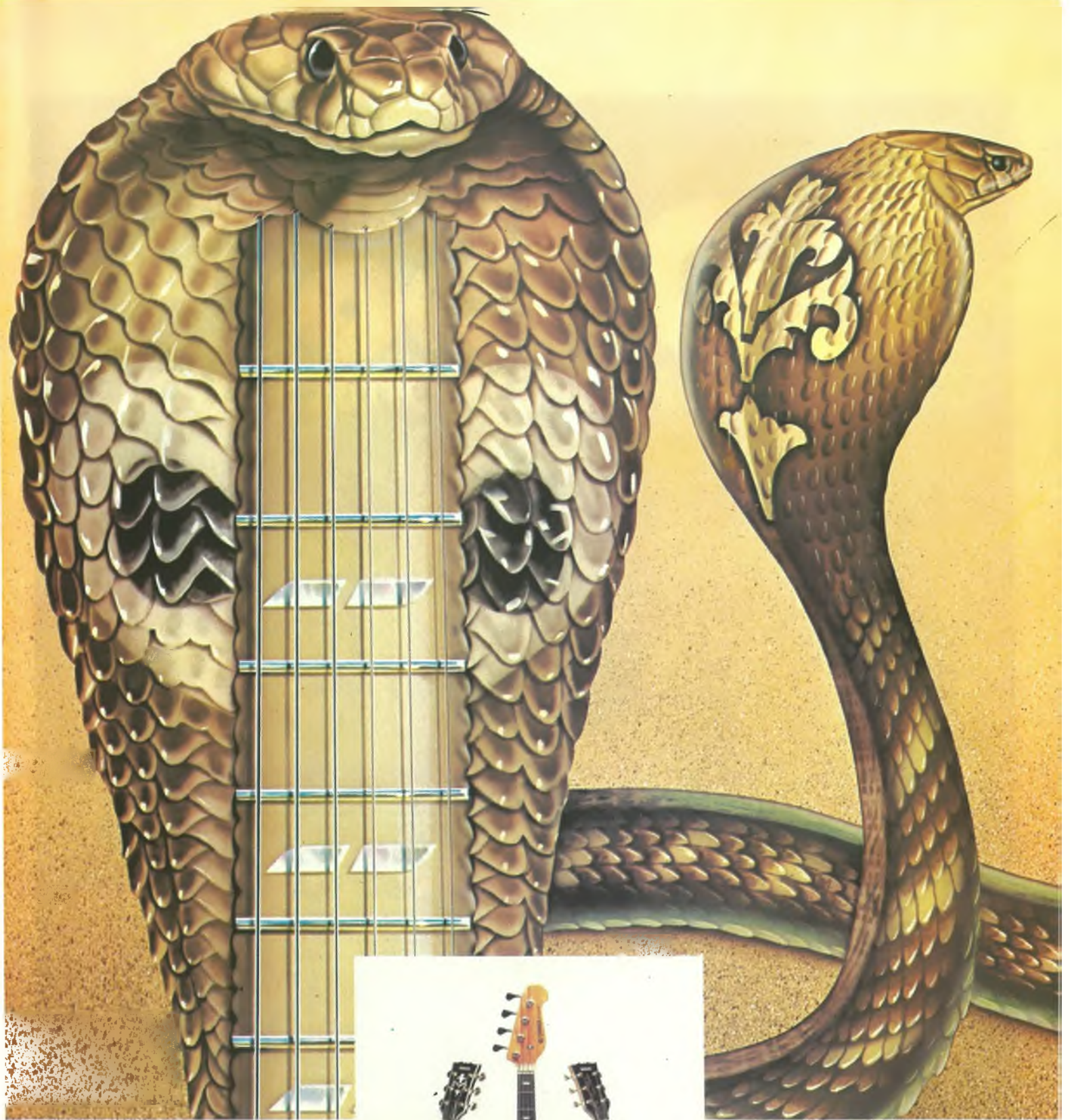
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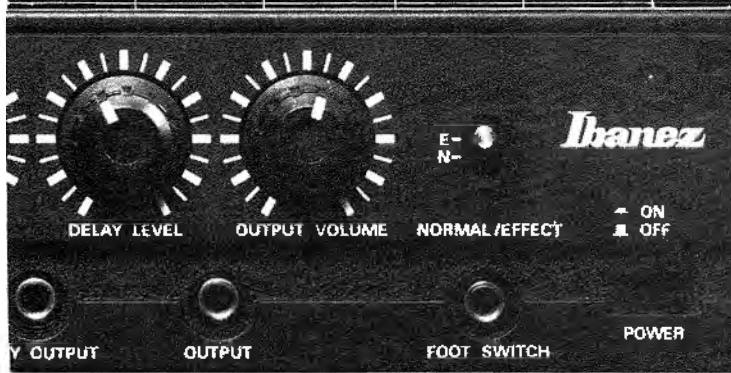


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Please send more information on the AD 150

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Ibanez

Letters

Moore v. Beck

Dear Sir: In last month's IM, Eamonn Percival reviewed the Gary Moore album *Back On The Streets* and remarked on the similarity between the playing of Moore and Jeff Beck. Now I realise that he is a fair guitarist, but really is he in the same class as Beck?

Jeff's playing shows far more originality and invention while still retaining that essential bluesy feel when he wants to. Moore is too busy being a flash speed freak to even approach the pioneering work that Jeff has done for the electric guitar. My advice to him is to stick to what he does best, i.e. playing hard rock with Lizzy, and leave the serious stuff to musicians who know what they are doing.

Gregory Farmer
Harrogate
Yorkshire

P.S. Even when it comes to being flash, Beck wins hands down!



Gary Moore

Puzzling prices

Dear Sir: I am writing to answer the questions many British and American buyers are asking about the price and quality of the instruments made in the US compared with their equivalents in the UK. I think the clearest example of all is Ken Dibble's *Speakercheck* which involves a rather interesting comparative work of a very demanding portion of the music industry. Let's look at the 12" special loudspeakers. I am amazed at the price of the American products in Great Britain. Do you know that here, a JBL K120

We welcome your comments and criticisms. Write to: Letters, International Musician, Grosvenor House, 141-143 Drury Lane, London WC2B 5TE.

costs \$120 and an Electrovoice EVM 12L is priced \$94 including the New York State sale tax? Considering that £1 is approximately \$2, it is rather strange that the EVM 12L, which I believe to be a good piece of engineering and a very nicely finished speaker, would be (without the freight costs) cheaper than the Fane Crescendo 12A. I have personally compared the two products and I am certain that the Fane is overpriced in its own country.

The Powercel 12 by Celestion would be in competition with the K120 and I am afraid that again I cannot understand why the JBL brings much better results and why so many musicians still think it is probably the best 12" on the market.

Now let's reverse the situation and look at the price of the British products in the USA. Without the various costs on the line between the two countries the ATC PA/75 would be priced \$36 over the JBL K120 and the Goodmans Audiomax 12AX \$56. Despite my respect for the last two English manufacturers, I maintain that their products are too expensive. Now take the VAT and the dealer charge off the UK price and imagine, if you can, the freight, custom, importer and dealer costs and benefits over that!

Thanks for your interesting magazine!

Francis Voignier,
Central Islip,
New York.

Calling ham musicians

Dear Sir: I would like to get in touch with any other pro musicians who also hold a radio/ham licence - any country. For potentially interesting QSOs, they should contact:

T. O'Brien
c/o 127 Abbotts Street
Walsall
Staffs.

Not so solid

Dear Sir: Having just finished constructing a solid body guitar for a design examination at school - following Stephen Delft's series - I decided to construct my own pickups,

following instructions from another magazine.

Unfortunately when I had done this and mounted the pickups on the guitar I found that the strings were picked up at unequal strengths. I have tried adding extra magnets etc. but to no avail.

So if there are any instrument repairers or musicians with any Gibson or similar type pickups they are willing to part with, I would be more than grateful.

David Hall
23 Shakespeare Avenue
Andover
Hants.

Turn-off

Dear Sir: I play in a local band around the Leighton Buzzard area. We play all the local clubs and pubs, and others in a fifty mile radius. We feel, and have been told, we are not a loud band. The reason for this letter is to complain about the orange light (noise limiter) which seems to be appearing in the clubs very frequently recently.

The complaint is that if you turn the power off for a short period and then turn in back on, it must damage band's equipment. Valves are very temperamental without being turned on and off direct without waiting for the heaters to heat up again. Also, they take a large turn-on current. The main complaint is that as they use a relay to turn back on the power, there must be contact bounce and this, I feel, will do the damage; with output valves for Fender Twin Reverbs (ETC) at £6 a go, it can be expensive. With large PA systems, ours has an HH S500D power amp and MM 12/2. With power being turned on and off, it causes loudspeaker thuds and noises that can be avoided when the system is turned on properly.

I do not really think it is necessary to instal these devices; if the band are too loud, they should be told and then turn down. If they do not, then they do not deserve to play that gig again anyway. I understand that when you are too loud it is unpleasant for the audience, but surely we can resolve the problem without these devices? It also puts the band off, to see the light come on and off - you lose quality in your performance.

These noise limiters tend to have a resonant frequency which turns them on very easily, especially to a male vocalist's vocals. I also think the halls tend to set them low to frighten the bands into being quiet.

Please groups and halls, let's sort this out without the aid of these nasty



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Letters

little orange boxes. Once you are at the right volume, there is no reason why the hall or club should not let you override these nasty devices. I would be interested to hear other people's opinions and views on this subject.

S. Grove
Leighton Buzzard, Beds.

What wattage

Dear Sir: The feature 'It's All For Hire' (I.M. January) is most informative on the current PA scene.

I was, however, amused at the comment (Page 21, last column) that a 16kW system was not loud enough at Hammersmith – "We should really have 20kW". Now 20kW compared with 16kW is a power gain of a shade under one decibel (1dB) – hardly worthwhile in sound level terms! It requires four or five decibels (wattage increase x2.5 to 3.16) for any practical improvement. To make the sound 'twice as loud' requires a sound level increase of 10dB or ten times the wattage! All this assumes the efficiency of the loudspeakers used remains the same throughout.

In the same issue Ken Dibble reviews compression drive units with sensitivities ranging from 101dB (1W@1m) to 109dB. Assuming a rig using the high sensitivity drive units requires 1kW amplifier power, a power of 6310 watts would be required to achieve the same sound level from the low sensitivity drive units.

As, after all, the important thing is the sound reaching the audience, perhaps groups should ask the PA hiring company for so many decibels of achieved sound pressure level and not merely by a wattage figure, meaningless in isolation.

Haydon Warren
Luton, Beds

Studio set-up

Dear Sir: Thank you for a great magazine, as you just cannot buy anything like it in this country. Even the equipment you have available in your country makes us Aussies green with envy. I always read your magazine from back to front as I enjoy checking out the studio facilities etc. that you lucky people have at your disposal. Within a couple of years, I will surely have to take my holidays in your "musicians' paradise", and have a personal spend-up.

The four-track studio I am setting up, although small, should prove to be a success, as I live in a population of

over 200,000 and there is not one studio in the area. Sydney is the closest, and that's 50 miles away. Not to mention the hassles of travelling, cost, accommodation, etc. Plus the fact that the amateur musician would not consider it worthwhile, considering the cost involved. I know several hundred musicians in this area have been eagerly awaiting the arrival of a studio in their own city, so I don't think it will go wrong. I have the technical knowledge plus the ability to over-dub with five different instruments, so even if all else fails, I will have my own "fun parlour", anyway.

In the meantime, keep shipping your magazine over here, and if we can't get the gear, we can at least look at it on paper. By the way, if your newest band, Dire Straits, is any indication of the quality of your groups, you've got some "dinky-di" musos. The best album I've bought for a long time. Fantastic recording quality if ever I've heard it.

Geoff Brown
Worilla, New South Wales, Australia

Nice one

Dear Sir: In your gigantic February issue of IM, you did an interview with Patrick Moraz and said he was with Yes before he joined the Moody Blues. But didn't he also play with The Nice?

Alan Spencer
Newcastle

In a manner of speaking. He teamed up with ex-Nice men Brian Davison and Lee Jackson to form a trio called Refuge, which split when Patrick joined Yes.



Patrick Moraz

Hire help

Dear Sir: I'm writing to say thanks for the article on hire companies (IM January) and also to ask for help.

For years now I've moaned about the lack of facilities for musicians especially in the Manchester area, so I've decided to start a hire company.

This is where the help is needed. I'd like to hear from anyone with ideas suggestions or requests for a new hire company. Also what would the Musician's Union like to see in this proposed service.

The magazine is great, but can we please have more bass reviews please?

Jim McDonnell
22 Letchworth Street
Rusholme
Manchester

Hopefully, in the not too distant future, Jim Rodford and Stephen Delft will be reviewing more basses.

More tolerance

Dear Sir: I have been following the battle of words following your letter from G. Henley in the January issue. The vitriolic abuse that has been lavishly hurled is quite depressing. I myself play in a successful "commercial" band in which we play everything from folk to New Wave. We work very hard indeed and as such are gigging every week of the year.

Might all of your correspondents not like to engender a little more tolerance into their viewpoints? Surely the simple criterion is – good and bad. There is bad New Wave music around, but there is also a lot of very good punk music, showing inventiveness and courage. Equally true, there are good and bad commercial bands. The band I play in is very good. We work hard, we rehearse hard, we travel long distances to gigs and we plough money back into the band for equipment. We use a stereo PA and a 12-channel mixer as well as subtleties like voice boxes and customised amplifiers. But we have slogged like everyone else. We are all MU members and regularly attend the branch meetings (not many others do!).

A musician is a musician, no matter what type of music gives him the buzz. There is only the criterion of good and bad. Let's have more tolerance and more mutual respect rather than adolescent put-downs.

Keep music live – all of it.

Ken Malone
St. Ives, Cambs.

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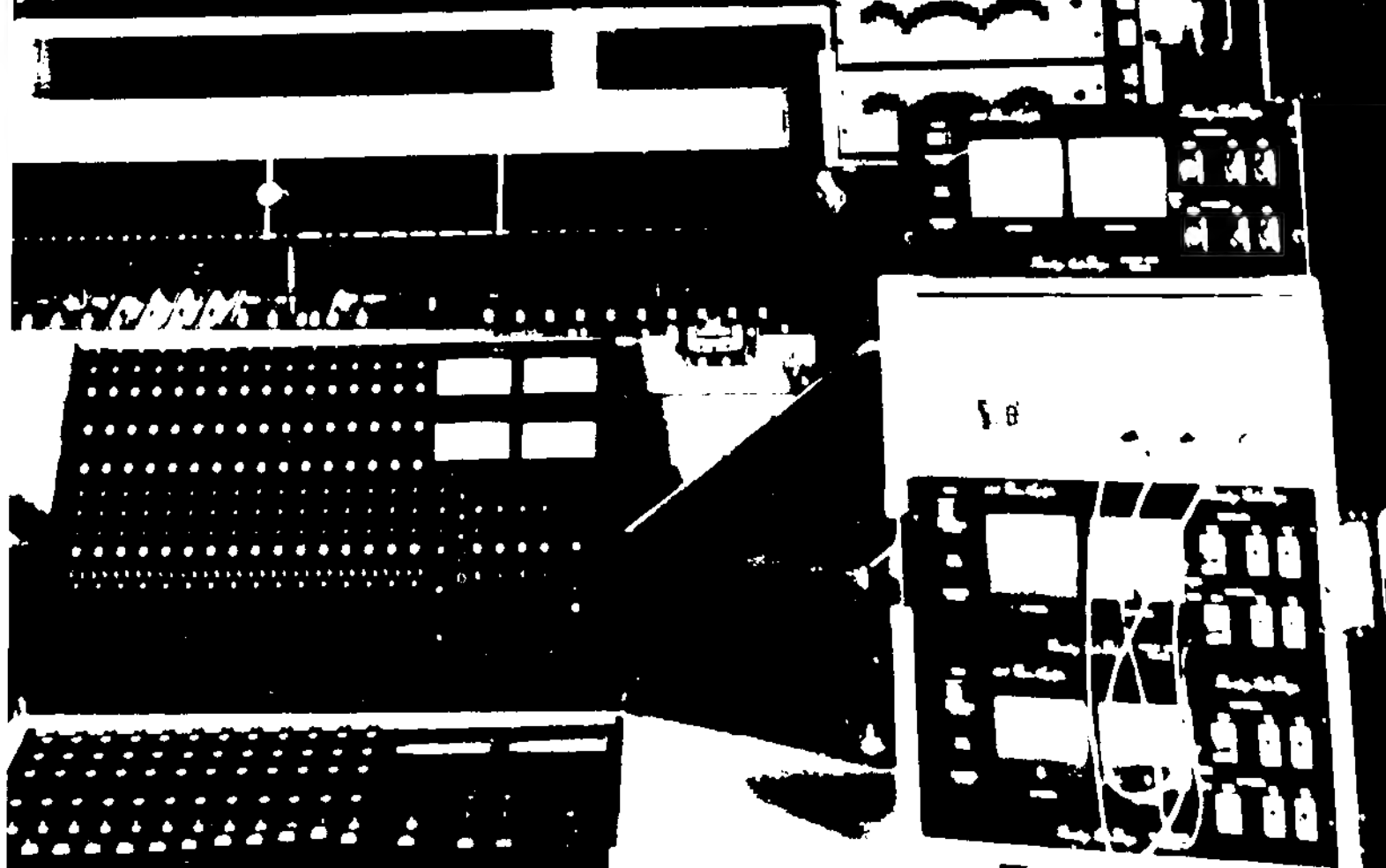
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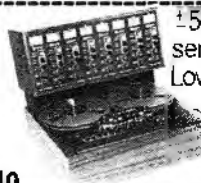
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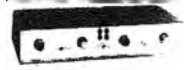


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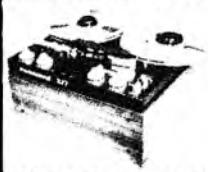


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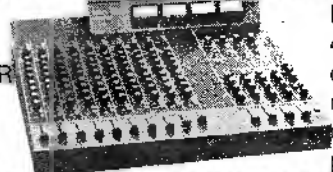


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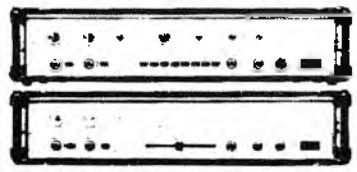


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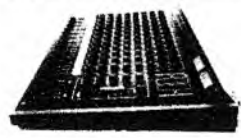


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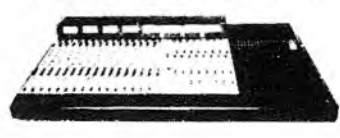
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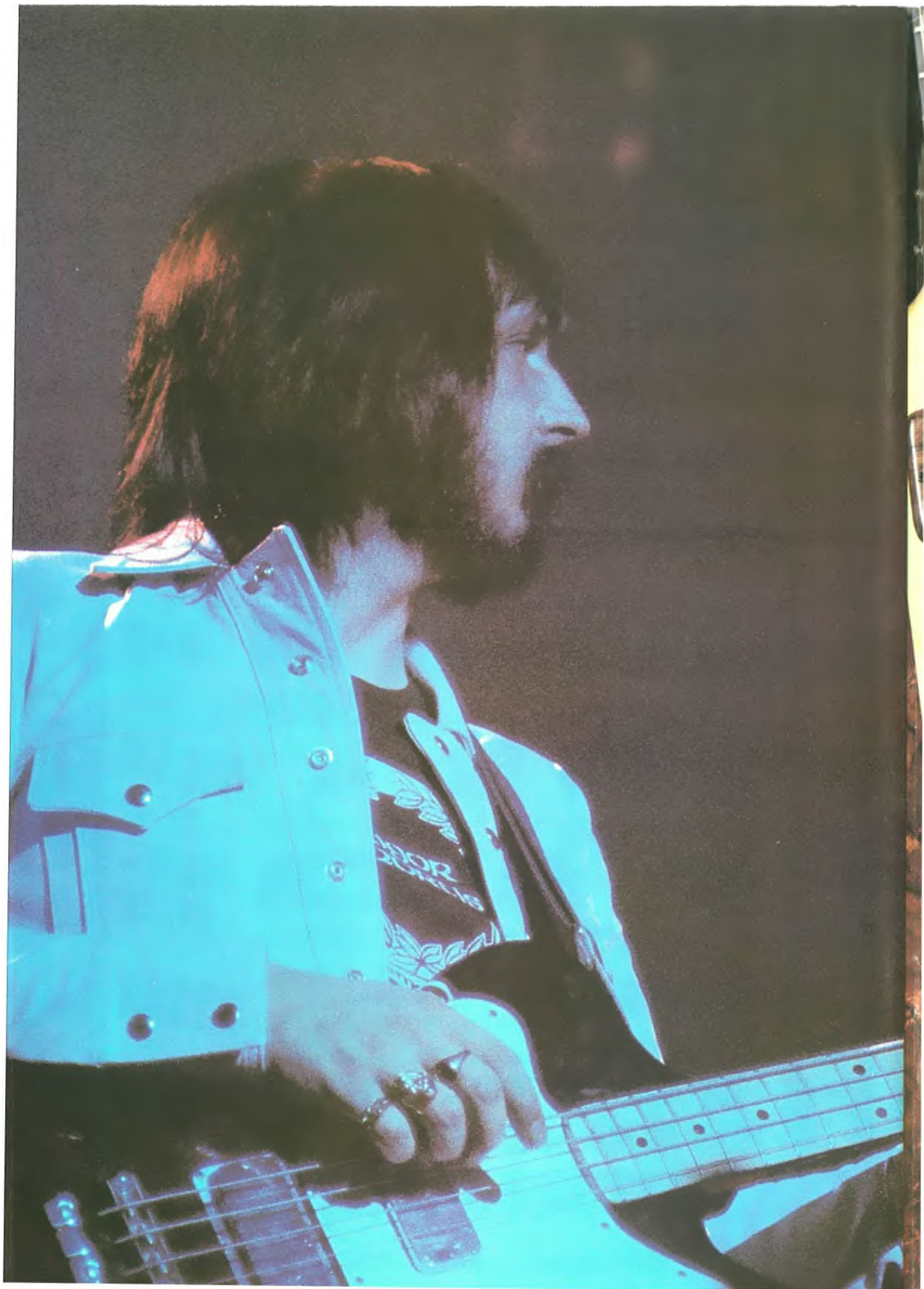
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'I'm a musician not a rock idol'

JOHN ENTWISTLE

by Eamonn Percival

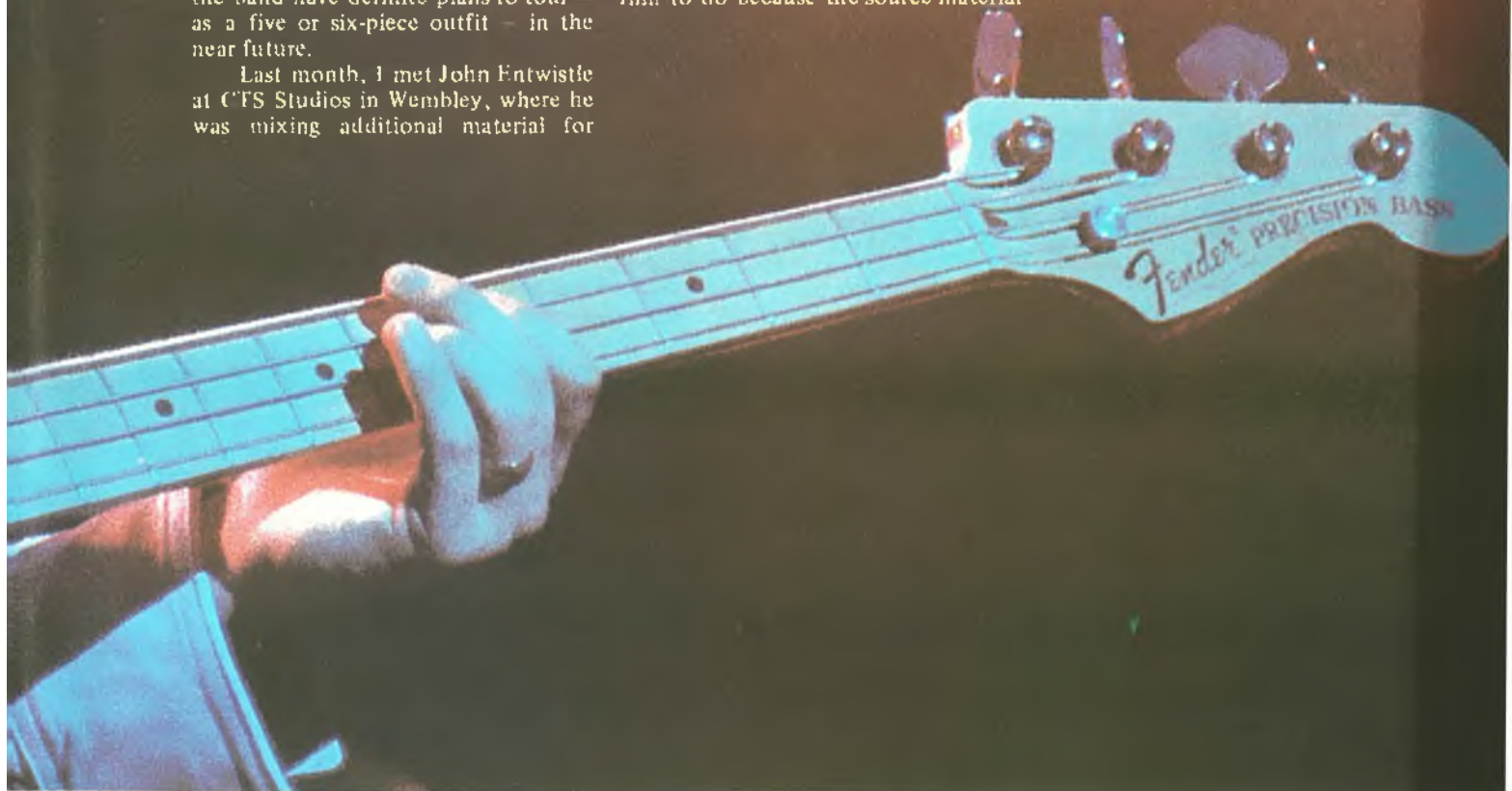
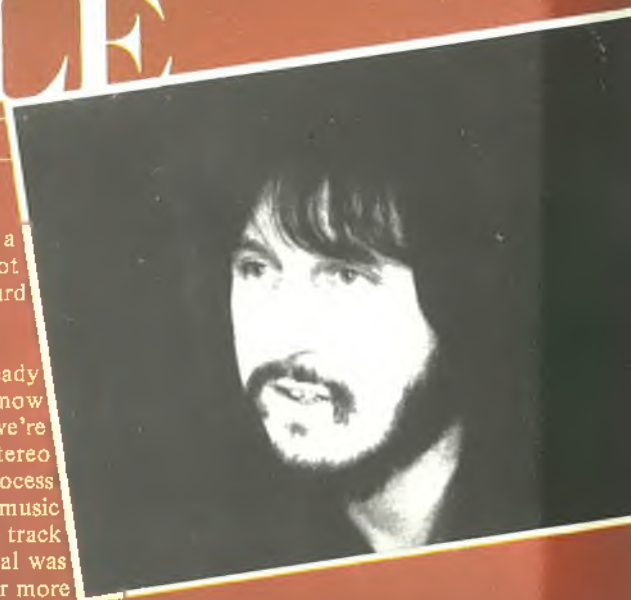
With the tragic death of Keith Moon last September, many doubts were cast over the future of the Who. Before Keith's death, the band hadn't toured for nearly two years and it looked as though this was the final nail in their coffin. However, the Who had been far from dormant. Indeed, they were working harder than ever, albeit not on stage. It had taken the best part of two years to collate and edit the material from their forthcoming film, *The Kids Are Alright*, soon to be released. They had also managed to squeeze in recording the *Who Are You* album and had begun preparations for the film version of *Quadrophenia*. In addition, they had purchased a large part of the Shepperton studios complex in Middlesex and were very involved in ambitious plans for the premises.

More recent news includes the fact that ex-Faces drummer Kenny Jones has been "filling in" in the Who's percussion department and that the band have definite plans to tour — as a five or six-piece outfit — in the near future.

Last month, I met John Entwistle at CFS Studios in Wembley, where he was mixing additional material for

Quadrophenia. Mixing for a film soundtrack involves a lot more than a straightforward album mix, as Entwistle explained.

"The *Kids* film has already been shot and cut and it's now down to the point where we're supplying the proper stereo Dolby sound for it. The process is that you actually get the music on tape, whether 24 or 16 track or whatever form the original was in then mix down to one or more triples, depending on whatever format you want it. That's mixed down to 35mm mag film, which is sprocketed tape. That tape is taken into the actual dub and transferred through several stages to stereo Dolby optical, so the sound is transferred into the film. It's hard work and it takes a long time. I mean, we started work on *The Kids Are Alright* on January 1st last year and it's only just been finished. Mind you, that was a really complicated film to do because the source material



was in so many different versions, ranging from really crappy optical sound on old film to 24-track newly-recorded stuff."

In fact, the film (*Kids*) uses material from as far back as an original promo film for *I Can't Explain* through *Ready Steady Go* versions of *Anyway, Anyhow, Anywhere* and *Substitute* to a concert at Kilburn in late '78.

Films, mixing, production apart, John is first and foremost a bass player and has a passion for playing live. Over the years he has amassed an enormous collection, which now totals over 130 instruments. Last time I spoke to Entwistle (IM, January 1977), he mentioned there were plans for a collaboration between Gibson and Moog to produce a guitar very close to John's designs. I wondered if that had resulted in the Gibson RD series.

"Yeah, that was what became the RD which, to my mind, was a complete balls-up of what I hoped they'd do. What actually happened was that they used the active electronics side to power two silly effects that you couldn't possibly use. Whereas I think guitarists on stage would be a lot happier not with effects but with a much wider tone range, which is what the Alembic does. Since I warned Gibson that active electronics would cause a revolution in basses and guitars, a lot of other firms have come up with similar ideas. In particular, Kramer are doing a two-pickup bass with active electronics to see if I like it and Ibanez are making me one to see if I like it. I really like the Kramer, though, and I think if people can't afford to buy an Alembic bass, they should try a Kramer with the active electronics.

Peter Cook, who makes and services a lot of my gear, was telling me the other day that apparently there's two ways of using active electronics. One way is before the tone controls and the other way is after them. What most people have done is to use it after the tone controls, so you have your tones and they use it just as a sort of pre-amp, a treble boost, which to my mind is pretty useless. I mean, there are a lot of sounds that you can get out of a Music Man bass, for instance, that you can't use because they're too overpowering. That's the good thing with Alembic. They've thought of things like that. When you're using high power, you can get a lot of hum and buzz and, on the Alembic, there are screws at the back of the dummy pickup that you can turn and cut down the noise.

"Getting back to Peter Cook, he's making a bass for me which will be

I didn't come into the business to wear a bowler hat and carry a briefcase!

similar to the Alembic but with simplified electronics. There's a band-sweep on it and you can boost certain frequencies. It's much easier to use than the Alembic. I've actually got a couple of RD basses. I have a prototype and a sunburst production model and they play very well. I think they're probably the best basses that Gibson actually make, playingwise and feelingwise, but I just wish they'd done what I'd said electronicswise."

When the Who return to live gigs, John intends to use an Alembic bass with a graphite neck and an eight-string bass for certain numbers.

"In some songs, I intend to use a medium-scale neck as well. I've got two of those that Alembic have made me with Bigsby tremolo arms on and they work really well for my style of bass playing. If you use harmonics and then bend them with the tremolo arm, it really sounds good. I've found it much easier to play fast bass runs on a medium-scale neck.

"It's quite easy to adjust from long-scale to medium-scale but sometimes I find I go up one fret too many! That can be quite interesting sometimes, you get ideas for different riffs like that. What also helps when I'm writing is tuning my strings to different intervals – if you play a riff that you play quite often with the strings tuned differently, you get some nice ideas. With the eight-string bass, I tune each pair of strings differently. I have the higher string of the pair tuned to a fourth – and that gave me the first idea for the riff on *Trick Of The Light*."

Although there's no possibility of John veering towards the Clarke/Pastorius school of playing, he has recently been using a fretless bass.

"I sometimes sit down and practise for half an hour on a fretless and then do a couple of hours on a fretted bass. I use a Wal fretless because somehow they've designed the neck so it's still got plastic fret marks but you don't actually have to play on the frets – you can actually play just behind, so you don't have to adjust your brain to that change from playing on the fret to just behind it."

It's fair to say that John Entwistle pioneered the "piano bass" sound in early Who days. In fact, most of the Who's recorded work is strengthened by a very clean, toppy bass sound but, it transpires, that is something that

John doesn't like.

"I've always hated my recorded sound because it's too clean. I never use a clean sound on stage – more of a raspy, dirty sound. Not exactly into fuzz, but raunchy, like overloading a small amp. I've always had problems in the studio getting that sound, but now I'm using the Alembic in stereo with the guitar full up. I use a Mesa Boogie amp for the treble side and a Music Man for a bass side, so I've got a clean bass going but with a dirty treble. My recorded sound now is a lot nearer to the stage sound than it's ever been before except that, by the time it gets on to record, it seems to be cleaned up a little so maybe I'll have to use a much dirtier sound in the studio.

Really, the only album that we did on which I was remotely satisfied with the bass sound was *Live At Leeds* because that was a stage sound. Most of the early stuff was all "click-click" where I had to dampen the strings at the bridge and play with a plectrum. Our producer in those days, Kit Lambert, wouldn't let me play with my fingers because it was unrecordable in those days. So, really, I opted to at least get a decent clean sound instead of a lousy dirty sound. Then I changed from using Fender. After *Live At Leeds* and *Tommy*, I was stuck in a rut and not breaking any new ground so I started using a Gibson Thunderbird and Sunn amps. That gave me a raunchy sound but with a lot more bass body. I found also I started playing in a different way. With the Fender, I could just tap the strings and get a twang but with the Thunderbird, if I tapped the strings, nothing happened so I started actually plucking the strings with my fingers. That changed my bass style and it also changed the recording sound – it went to a more clean, bippety-boppety bass.

"Soon after, I had Peter Cook make me up some special basses which had Fender necks, Explorer bodies and Thunderbird hardware. I went to a rehearsal and I'd just bought an Alembic bass for my collection so I took it along for Peter Cook to adjust the neck at the rehearsal. I plugged it in and started playing with it and realised that was the bass I needed. One of the reasons I stopped using Fender was that I just couldn't get enough bottom on big stages. I could get all the volume and the twang out of it but no solid bottom and the Thunderbird had given me that bottom but no twang – it was the opposite of the Fender. With the Alembic I got both. I realised that I would have to

use the Alembic on stage but I only had one, so I sent straight over to the States for three spares. The only trouble with them was that the neck would shift as I moved from state to state or country to country, but that problem's gone now because I use graphite necks."

While, at the time of going to press, it still wasn't confirmed that Kenny Jones was the new Who drummer, he has done plenty of recording and rehearsing with the band. As most rhythm sections like to think of themselves as newly-separated Siamese twins, did John have to adapt or change his style in any way?

"No, to a certain extent it's much easier because Keith was a very complicated drummer. He was probably the hardest rock drummer to play bass with. We don't really know what Kenny's going to do yet until we do another Who album or tour with him. The thing about the Who is that, to a certain extent, we try and outplay each other on stage and it's probably the first time he's been up against that. He's never played with such a 'little' band before — just two guitars. I find that I can play things with Kenny that I couldn't do with Keith — and there are things that I used to do with Keith that Kenny hasn't got into yet."

In a recent interview, Carmine Appice mentioned he hoped to form an "occasional" gigging band with various people, including one John Entwistle on bass. John appeared to know nothing of this, although he does hope to play on a forthcoming Appice solo album.

"For a start, I wouldn't play in a band that had a leader. If I played in a band, I'd expect to play the band's music that I was involved in and my own music as well. I mean, a lot of the media describe Pete as the leader of the Who, but we don't have a leader — it's all joint decisions. If the Who had had a leader, we would have only lasted about four years. I like playing with Carmine, though. I've played with him on a few occasions and I hope to be playing bass on his album later on in the year if I can.

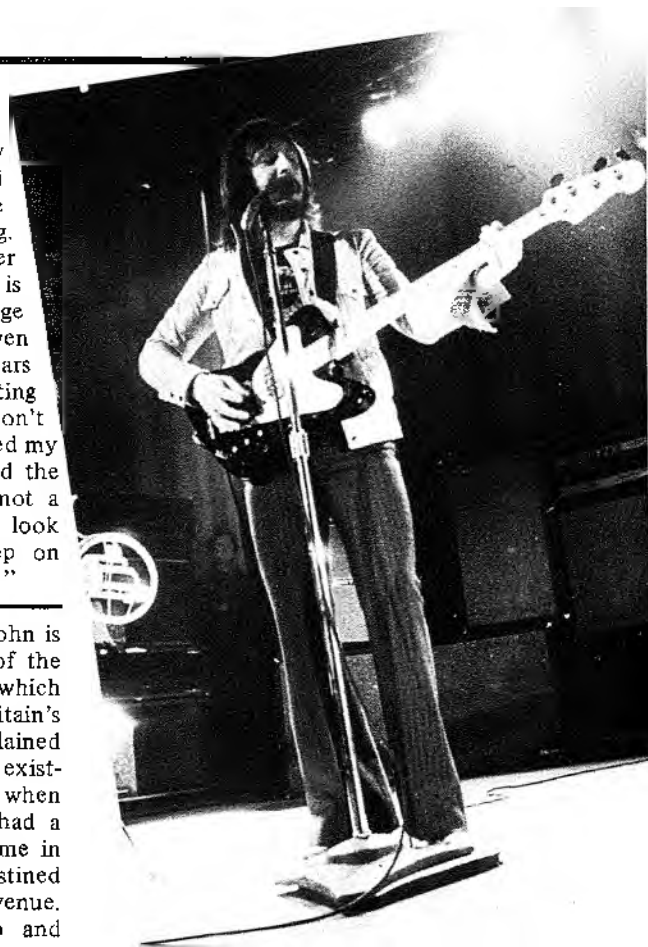
"I've had an idea for a long time to form a part-time band with Joe Walsh but, again, it depends on the Who's commitments. If the Who decided they were never going to play on stage again, then I would have to look for a permanent stage band. That's my idea of what the business is about. I mean, I do well in the studio, I've got a good ear for music and I mix the stuff very well but it's not what I went into the business for. I didn't

enter the music business to be a producer — although, financially, it's extremely rewarding. The only people I'd dream of producing would be the Who and the stuff I was doing. Primarily, I'm a bass player and what keeps my brain going is the thought of going out on stage and playing to an audience, even though I may look bored to tears on stage. That is the most exciting thing I do in my life and I don't intend to stop. I mean, I've based my image and run my career around the idea that I'm a musician and not a rock idol that's supposed to look good, so I'm planning to keep on playing even when I've gone bald."

Like the rest of the Who, John is involved in certain areas of the Shepperton venture, which includes ML Executives, one of Britain's biggest hire companies. John explained how this vast empire came into existence: "The whole thing started when the tax laws changed and we had a large amount of money that came in from the *Tommy* film that was destined for the pockets of the Inland Revenue. We'd already bought a studio and poured a lot of money into Rampart Enterprises, which is the studio in Battersea, and it was either give the money to the Inland Revenue or spend the money on tax-deductible items. We had already formed ML Executives and the roadies were using their spare time when we weren't working to earn some money for themselves. With the *Tommy* money, we bought a fleet of trucks and various other things and bought a third of Shepperton studios as a place to put everything. We formed companies like Who Films and Who Hotels — just in case we wanted to turn the big house there into a hotel — and these all come under the parent Who/Shepperton company. So if we get any more English money that's destined for the Inland Revenue, we shall extend our business interests!

"ML Executives is doing very well as a hire company at the moment because people know that if they get stuff from us, there'll be a road manager to deliver it and not just some twit who drops it off and if it doesn't work, takes it back. As far as involvement is concerned, we finance it and make most of the major decisions at board meetings. But I try to keep that whole thing at the back of my mind. I didn't come into the business to wear a bowler hat and carry a briefcase."

Away from big business and down to "street level", the Who, like many bands, have been criticised for living on past glories by many of the new



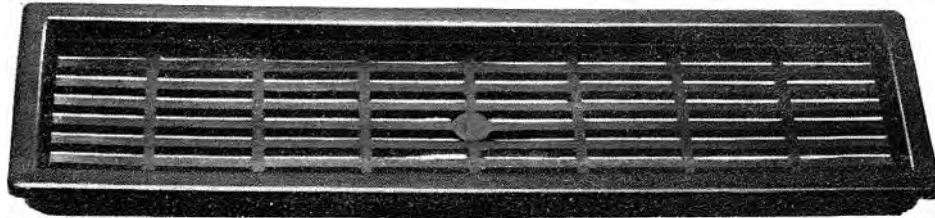
generation of bands. Entwistle has had two years to digest the influence of new wave bands and, bearing in mind the Who are probably the closest band to today's new wave groups, I wondered what observations he could make.

"There are a lot of new bands that I really like and the whole punk thing gave the opportunity to a lot of new bands that should make it. It also gave the opportunity to a lot of bands who were complete rubbish who shouldn't have made it. I think the wheat gets separated from the chaff in the long run. There have been quite a few "new waves" since we started — the skinhead thing, the glitter thing and now the punk bands — but the audiences aren't that fickle. The new waves always catch on with the new generation that comes up. The older generation stick to what they know and what they like, the same as our mothers and fathers stuck to Sinatra and Burt Bacharach. There's space for everybody but there's no space for rubbish."

I put it to John that the favourite parallel drawn between new wave bands and bands like the Who is that they were both criticised for relying on gimmicks rather than musicianship, inaccurate though that criticism is.

"The different thing when we were about," he states, "was that what we were actually doing was brand, ►►

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spanking new. When we first toured the States, we had short hair but got taken the piss out of for having 'long' hair! We had to lay all the ground for what's happening now but we had to lay it the hard way. We had to take all the digs from Americans in airports and actually think of outrageous things to do to get our names in the papers. Also, we were learning how to play. Obviously, we could look at the musicians who came before us and copy things that they did and think of something new as well. We invented the whole kind of volume upsurge and large amounts of equipment and deafening the audience. Musicians starting now are starting with an advantage because they've got the standard of musicianship previous to them to latch on to.

"Bass playing has improved tremendously over the last few years because new players have been able to copy better bass players than there were in my time. There again, if you're still playing, you've still got to keep up with everyone else as well. The thing that irritates me is that, when we were getting all our Top 10 hits, I was still learning to play. Now I'm a far better musician than I was then and I'm 34 years old — and I'm not about to give it up because someone who's learning to play wants me to.

The thing about those early days is that it was a difficult time for a musician because, at that time, I was just working on my style and trying to be different from everybody else. Most bass players were playing with a plectrum or their thumb and a couple were playing with their first and second finger. I was pioneering playing with my fingers, thinking 'Everyone's playing with picks — maybe if I use all five fingers, I'll be able to play faster and be able to play different figures.' I started using all that treble and the clicky sound and it was different.

"There were a lot of bands at that time who used to try and copy us. They could get the sound nearly the same but they couldn't understand why we sounded like that. The only band we felt threatened by was the Yardbirds because they were doing something different. The thing was, at the back of our minds, we trained ourselves to think that everyone else was below us. I never would have been able to walk out on stage if I didn't think I was the best bass player in England. We were determined we were going to make it and that we

were better than everyone else and we told each other — very often."

There were, in fact, a couple of years prior to *Tommy* when it seemed as though the Who were going through a lean time. Not so, it appears.

"That was the time we were trying to make it in the States," John explained. "We were going over there regularly for six- or eight-week tours because we realised that if we carried on just playing England and Europe, we weren't going to make enough money to keep together. We were running at a constant loss of about £150,000 because we were smashing our instruments and equipment up. We realised the only way to get that money back was to become a success somewhere where there was some money. It was make or break in America and, finally, it was *Tommy* that made us a success. In those days, the English audiences thought you didn't exist when you went to the States. Either that or they thought you were being disloyal, in the same way as Slade when they tried to make it in the States."

In the early Sixties, the bass player was always the man in the background. Players like Entwistle, Jack Bruce and Chris Squire changed all that. Early Who songs like *My Generation* and *Call Me Lightning* featured a bass, rather than a guitar, solo and many of John's own songs like *Boris the Spider* featured the bass guitar in a lead instrument role. Today, bassists like Stanley Clarke, Jaco Pastorius and Alphonso Johnson have taken bass playing a few giant steps further. Entwistle, however, doesn't wish to head in a similar direction.

"I buy the albums out of curiosity and listen to them. If there's anything on them I think I couldn't possibly play, then I'll listen a bit more closely to it. Once I can sit there with a bass and play something similar, then I don't play the record any more. It's just a matter of keeping up with different styles. If someone suggested I should listen to a certain album, I'd buy it and listen to it and digest it — but in no way would I let it change my style, because I know which direction my playing is going in. If there's anything in their playing that can help me go in my direction, which there very rarely is, then I'll use it. I'm not a Clarke or a Pastorius fan, though. The actual playing, although technically brilliant, is not for me. It might be exciting for a lot of people who like jazz but they're not doing what I want to do with a bass guitar. Larry Graham is a bit closer because, in his medium, he's doing what I want to do in mine.



He's a gutsy bass player who plays in his own style and a lot of people copy him. Unfortunately, my style is a difficult style to copy — if a bass player tried to copy my style and my sound, the rest of his band would probably turn round and say, 'Stop playing like that, you're too loud, you're messing up my lead guitar part.' I prefer to play bass on stage more like a lead guitar. I don't really play it as a bass. It supplies the bottom and a lot of times, I'll go into a straight bass style but the rest of the time, I'm actually playing melodic figures."

Future plans for the Who are still fairly nebulous. What is concrete fact is the *The Kids Are Alright* film and the accompanying double soundtrack album should be released this summer, closely followed by the film and soundtrack of *Quadrophenia*. John's own diary is full up for months with "tour, tour, tour?" pencilled in for mid-summer. But the question mark is significant. While Entwistle and Daltrey can't wait to tread the boards, Townshend has been apprehensive, although he has agreed to a series of concerts in the middle of the year.

"I think the tour will happen, but it may have to be tied in with the next Who studio album. The question mark really refers to setting up an American tour. It's quite easy to arrange concerts in Europe in between recording or whatever. Obviously a US tour takes a lot more arranging. The thing with the Who is that if any one of us didn't want to tour, we'd have to respect that decision. The Who in that case would probably exist recording-wise and myself and Roger would find other means to go onstage and play. But Pete has agreed to do these concerts so I feel sure 1979 will see the Who onstage again."



Buzz

What's happening in the music biz

Country retreat

News reaches us of an idyllic, away-from-it-all rural haven for battle-scarred musos who need to escape for a while from the hurly-burly of the biz. We're not allowed to say exactly where it is (they don't want fans gawping at the relaxing superstars), except that it's an old manor house "somewhere on Exmoor near the sea". Willie Palin, who runs the place with his wife Jan, used to be a sound man for David Bowie and when he opened Country Rehearsal 18 months ago he relied on bookings from friends he had made on the road. Since then, word has spread and numerous internationally famous names have taken time off to get their heads together in North Devon.

Willie and Jan offer accommodation for up to 14, good food, fresh air and — for those whose creative juices are set flowing by the relaxed atmosphere — two rehearsal rooms and a 30ft stage. A 24-track mobile can be laid on for recording and equipment hire can be arranged. It's even possible for bands to play gigs in the backwoods, to try out new material before going on the road.

Interested? Willie and Jan will be pleased to show you around. Contact them through their London office: Palin Music Ltd., 14 Temple Fortune Court, Temple Fortune Lane, London NW11.

Arty activities

Enterprising affairs are afoot in South London. On March 3rd, the Battersea Arts Centre is promoting a day-long (well, noon to 10pm) festival under the title New Music. There will be lectures, exhibitions, discussions, films and, best of all, demonstrations and workshops of all kinds. Pat Nicholls and Peter Dyer will be doing fascinating things with piano and computer, Carol Prior will be conducting a voice workshop, Barry Leigh will be talking about instrument-making, and there will be an improvisation workshop — personnel to be announced. Others in attendance will include Max Eastley and Paul Burwell. It only costs a quid, so if you're anywhere near Battersea, why not go along? You might learn something.

Ramblin' round Tamworth

Newcomers to the Staffordshire scene are a Tamworth-based combo called Ramblin Band. They are fronted by vocalist Janet Harrop and

the rest of the ramblers are Janet's old man, Steve, on lead and acoustic guitars, pedal steel and banjo, Graham Tom on guitars, fiddle and vocals, "Stalky" on drums and vocals and Colin ("the quiet one") on bass. As you can guess from the instrumentation, there's more than a hint of country in the band's sound. Steve tells us that they play in a variety of styles ranging from the Allman Brothers through Emmy Lou Harris to bluegrass. Interested parties should contact Steve on Tamworth 895160.



Getting it taped

Tired of spending many hours and much money in demo studios, only to find that the handful of numbers you come out with sound nothing like your band? Studio manager Derek Hanlon and his colleague Rod Anderson have come up with an idea which could offer up-and-coming bands an alternative.

Derek and Rod, who work at Anemone Sound Studios in Poland Street, London W1, are offering a package which involves taping a band live and producing low-price cassettes. They will go along to any gig, record the band's set on four-track, mix it

Leeds rock

The Mekons are not Dan Dare's green space outlaws but a bunch of very promising Leodensians (inhabitants of Leeds, dummy) who have been playing together for about 16 months. So far they have released two singles on Fast Products, *Never Been in a Riot* and *Where Were You?* Both of them sold out within days. IM caught up with the Mekons at a recent gig in London's Hope and Anchor. The celebrated cellar was jam-packed and late punters had to be turned away.

Playing fast, catchy numbers in a decisively individual way, the Mekons soon had the hypnotised floor happily pogoing as though '77 had never died. Their bulldozing, anarchic numbers are backed by a powerful machine-gun drummer, John Langford, and clear, bouncy bass riffs. Behind the bass stands Mary Jenner, who also teaches classical violin back up North. Swirling round this dynamic duo comes the guitars of Tom Greenhalgh and Kevin Lycett. Constant waves of electric riffs, giving the whole sound a speeded-up rocking-chair effect.

The terrible PA system was soon overlooked, thanks to the Mekons' ability to communicate with the crowd. The punters couldn't believe this truly refreshing ambience and screamed for more. In fact, when coming back for the third encore, Mark White, the band's main vocalist smiled over his sweat-covered mike and repeated: "I don't believe it..." Once in a while some bands, inexplicably, unconventionally, manage to turn blasé punters into fun-loving dancing human beings. Put on your plimsoles and see the Mekons.

down to stereo and produce an unlimited number of tapes.

The operation is thoroughly professional, for the studio has been involved in producing cassettes for just about every kind of market over the last couple of years. For around £190 you will get about 150 20-minute tapes which can be used to impress agents, record company executives or even be sold at gigs.

Although the idea seems particularly suited to New Wave bands who want their first taste of recording, Derek and Rod can handle any type of band or artist. For further information contact them on 01-439 9611.

Attention electro-acoustic composers

Are you a composer? Fancy winning a prize for one of your compositions? Now's your chance. Entries are invited for the Performing Right Society Prize for Electro-Acoustic Compositions 1979. You can submit your composition in the form of tape, score or any other "documentation in the electro-acoustic medium." There's one quite tricky stipulation: works submitted must have a duration of eight minutes. If you're still interested, full details and application forms are available from Denis Smalley, The Music Centre, University of East Anglia, Norwich NR4 7TJ.



Falcon Eddy

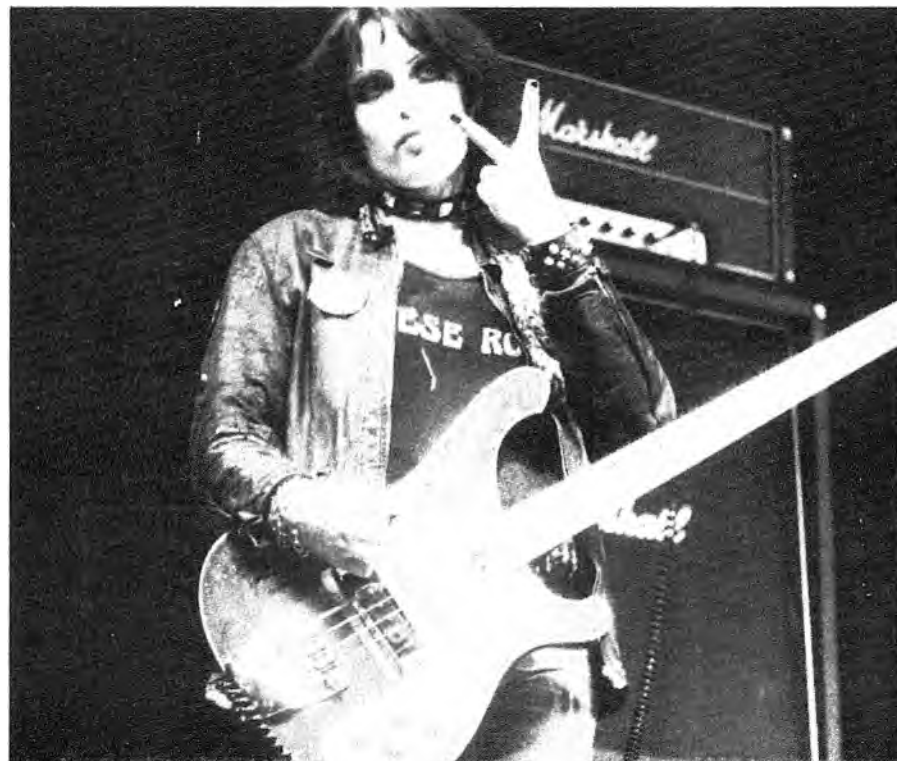
Stolen Instruments File

We recently received a heartfelt plea from the lovely Gaye Advert, of the Adverts' bass playing department. Last April, some bastard thieved her blue Rickenbacker 4001 Stereo bass from her manager's place in Fulham, south-west London. Unfortunately, no-one noted the serial number but the bass had several distinguishing features -- the usual white scratchplate had a small chip out of the top (see pic) and a metallic colour USA sticker. Although they could have been replaced by now, the machine heads at the time of the theft consisted of one

original (G) while the E, A and D were Grover slimline "Contour" machines. This modification was done without a drill, resulting in holes where the screws broke in half (the ends were still stuck in the wood) as well as the holes made by the replacement Grovers. In addition, there was no chrome cover over the back pickup. Gaye tells us she's now beginning to expect everything she's got to be stolen because it happens so often. Any musos, dealers or fences should contact Michael Dempsey on 01-385 1330.

Falcon Eddy

News from the States on a band called Falcon Eddy. They say this is one of the hottest bands in New York City that is as yet unsigned. They formed in February last year and have played extensively in the New York metropolitan area, including Max's Kansas City, Great Gildersleeves and My Father's Place. The band is Jon Dario-Hawkes (bass), Lon Monroe (drums) and D. Meinhold (guitar) and they play all original material. They also alternate on lead vocals and feature three-part harmonies. They are reportedly English-influenced along progressive lines and have been compared to "the best of the Beach Boys and the better of the New Wave bands". For any further information, Robert Whitmore or Robert Fish can be contacted in New York on 212-674 0749.



Gaye Advert

What's happening in your area? We have it on good authority that there's a lot of music happening outside London, but because we're all so dedicated to the task of bringing you IM every month, we scarcely get the chance to leave our office and hear it. You can help us fill these pages by sending us news, gossip and info on new bands in your part of the world. And don't forget the Stolen Instruments File. If you've been separated from the tool of your trade, let us know the details and we'll circulate the details. Write to "Buzz", International Musician, Grosvenor House, 141-143 Drury Lane, London WC2.

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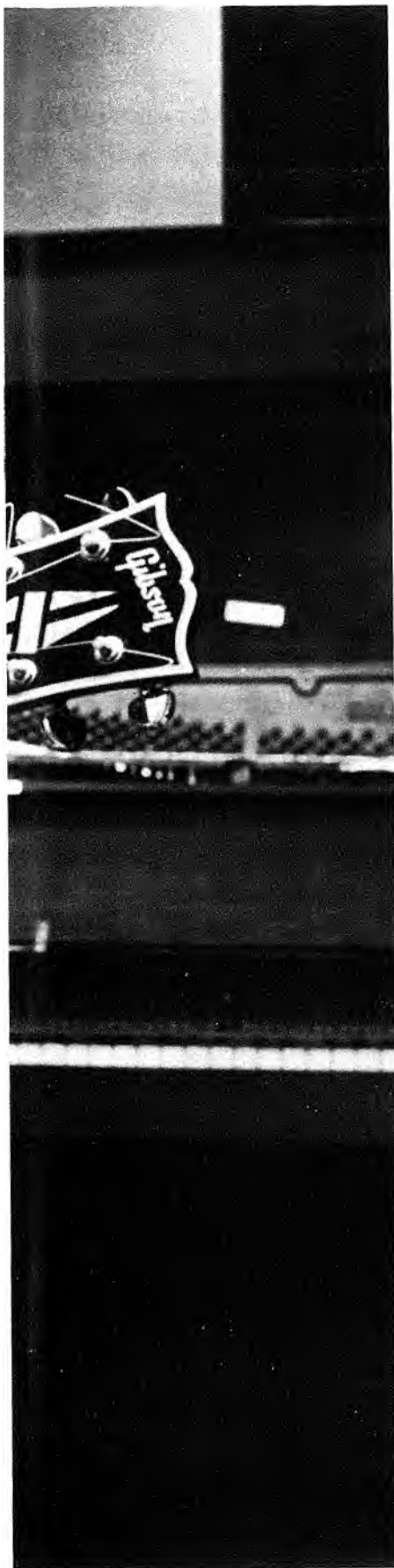
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ROBERT FRIPP



Around about 1967, pop music underwent a revolution. Until then, it had been simple, direct music played by teenage idols. Suddenly, pop music became rock music and it all became very serious.

A whole new generation of players arrived who wanted to be known as serious musicians and not just pretty faces. One band who epitomised this idea in approach, style and image was King Crimson.

Throughout the band's chequered career, the one name that remained constant was that of guitarist Robert Fripp. Fripp was as enigmatic as the band he led, a highly skilled musician, a perfectionist who constantly sought new directions. In typical fashion, in 1975 he disbanded what many believed to be the best ever Crimson line-up featuring Bill Bruford and John Wetton – something which Bruford has never forgiven him for.

Since then Fripp has dabbled in various things, including a couple of albums with Brian Eno, a two-year self-imposed "retirement", and has popped up recording with David Bowie and Blondie.

He is an interesting musician with definite and sometimes unusual theories on guitar playing – although these thoughts are often difficult to extract. The problem of being a thinking musician (and this applies to many who came up through the "underground" period of the late Sixties/early Seventies) is that often they would intellectualise not only on music, but on just about everything from politics to the meaning of life.

To someone like Fripp, playing rock music is not just about plugging in a guitar and strumming the strings; every action must be questioned and analysed. He had adopted this attitude from first picking up the guitar in his native Wimbourne, Dorset at the age of 11.

"My first guitar was quite atrocious, with

Guitar Mechanic

action which made it virtually impossible to play notes above the fifth fret and completely impossible above the seventh. Because of this I developed a very, very strong left hand and it took me a long time

before I could play in a looser fashion.

"I was tone deaf and couldn't tell the difference between a major and a minor chord. I had to examine in detail what there was in the way of music in me, and part of me always sensed, for example, guitarists that weren't musicians. Although they weren't and didn't have my facility as a player, they nevertheless had a sense of something which I can't or couldn't make contact with.

"Some players are very, very in contact with wherever music comes from and I think it is easier in rock 'n' roll for a number of reasons. Hendrix did for example, but he didn't have a very good guitar technique in my opinion, if one was talking about callisthenic guitar technique. If you listen to *Electric Ladyland* you can discover that Hendrix isn't very good at double tracking, but he had this remarkable sense of music. I met him once and he was one of the most luminous people I've ever met, but for him it was a struggle to find the way of expressing it and obviously the struggle killed him.

"Some players have both the contact and the technique. Coltrane and Charlie Parker are good examples. But there are others who can sense there is something there and discover it through the process of working towards it."

With the ideas of becoming a professional musician firmly entrenched in his mind, young Robert realised that Wimbourne was not the place where his ambition would be fulfilled. The sight of a young musician walking down a local street with a guitar under his arm would usually evoke some enlightened comment such as, "Gonna plug it into the street light

by David Lawrenson

ROBERT FRIPP

and give us a tune now, sonny?" He moved to London and joined up with brothers Mike and Pete Giles to form a band aptly named Giles, Giles and Fripp. The venture was not a success and soon Pete Giles left, Greg Lake replaced him and with Ian McDonald this band became King Crimson.

Not one of rock's great guitar collectors, Robert has been associated with just one guitar throughout his career. "The instrument I play almost exclusively is a 1959 Les Paul Black Beauty which I've had since 1968. I've just managed to get a second one, which is almost as good, so I have one for America and basically one for Europe. If one was damaged in flight, I would really be stuck.

"Generally people are either Gibson or Fender players and I've been a Gibson player. The first good guitar I had was a 1961 Gibson Stereo which is exquisite, but it wasn't appropriate for Crimson so I went to the Les Paul and stuck with it. It took me about three years to get used to the different distances between the strings for cross picking."

For most guitar players, changing their instrument is a serious business. For someone like Fripp it was a major operation. The move from the Stereo to the Les Paul meant a drastic re-appraisal of his arm position, a topic which is rarely discussed in detail by modern guitarists. Robert explains: "There was a certain amount of re-arrangement and it helped me rationalise what I was doing in terms of right hand and the different possibilities. Whether one should use the ball of the thumb pivotal method, or free hand suspended method and if so adopt the old banjo or straight wrist.

"When I was 25 and re-arranged my playing, I went from a pivotal right hand, where one rests the right hand on either the bridge or the lower strings or on the pick guard as one pulls one's hand over and makes the down/up motion from that point on the ball of the thumb. I don't like little fingers held down, I find that far too restrictive. With the pivotal method I found that

when I went from A minor to C there was no way I could play over a distance of five strings with the ball of the hand there.

"So I then adjusted my playing all the way round so that my right hand was free in the air, and I had to find some kind of centre of gravity which was physically located from my down/up. That enabled me to play a lot more smoothly, but limited the speed at which I could play down/ups and the speed at which I could do single-string work. I then compromised and now use both methods for different purposes."

For amplification, Robert uses an interesting combination of a Roland and a Marshall. "I like the new Roland amps with the Chorus effect, but I use them in a different way. I sometimes use them just as they are, but even with a good transistor amp, which it is, you don't get the valve sound. So, I've used it as part of a number of different combinations.

"I've had it as a pre-amp driving a Marshall, so that one has the Roland kicking out in its own inimitable way with an extension cabinet, plus the feed from the Roland into the Marshall amp. So you get all the sound from the Roland but all the valve of the Marshall and that makes an awful lot of noise and it's really great."

As far as effects are concerned, Fripp was one of the first to have his own board specially designed, which he calls a Frippedal board. "Its assembly occurred when I had a volume pedal which I used to use in 1970. I began using fuzz with it on stage and the roadie, Vic Vickers, said, 'I'll stick it on a piece of wood for you.' I thought it was a great idea and he also added a wah-wah. My only contribution to this was the then novel idea of a knock-off switch.

"Whenever one goes through an effect one loses gain from the guitar. Now to go through a volume pedal one loses a little gain but it's acceptable, to go through a volume pedal and a fuzz box is not acceptable - stick a wah-wah on too and you're going to lose all



*I
I'm furious with the
way people are taught to
play the guitar*

your sound. So there is a little sub-circuit where the fuzz box and wah-wah were on or off depending on whether one would switch on this little pedal.

"All the time I was playing without effects I'd simply go through the volume. If I wanted to use either wah-wah or fuzz I'd simply press the knock-off button, bringing either of them into the circuit. That was the original design which was a little clumsy but later became rationalised. Then an echo send and return was introduced so that one could bring another circuit in, so I could use an echo box with it. I then had built a separate board which consisted purely of seven knock-on/knock-off switches. So in addition to my normal simple three effects, this is virtually all I've ever used."

One of the biggest leaps in guitar technology over the last few years has been the guitar synthesizer. But it is not an area that Fripp has become too involved in. He regards these synths as being very much in their infancy at the moment and also feels that having to use a specific guitar with the synth is a major drawback.

One area of music in which he has become heavily involved is the teaching of guitar. He started teaching other guitarists when he was 13, and among the people he gave lessons to was Al Stewart - though Fripp admits that Stewart ignored everything he taught him. Robert has now developed his own system of guitar playing called "Guitar Mechanics", which he hopes to put into print in the near future.

"The early years of learning anything are quite crucial in establishing patterns. Generally speaking, I'm furious with the way people are taught to play the guitar, and all the advice of rock stars and guitar stars which I've seen printed over the years seem totally inappropriate.

"For me, Guitar Mechanics is a remarkable teaching system. I don't use musical examples. The whole thing is in two parts, and the first has nothing to do with vocabulary whatsoever. The point with the current guitar player is first of all to develop the musculature of the left hand, secondly the musculature of the

right hand and thirdly co-ordination between the two. My approach is, rather than give specific musical examples or sentences in different dialects which are very restrictive, to give so many different possibilities that one really has to struggle to find what language is appropriate to oneself. If you go through Ivor Mairants' daily exercises, you find major scales, harmonic and melodic minor scales, some whole tone scales and that's it. You have none of their modes.

"My approach is to take all the modes, the 16 or 17 main synthetic modes and their modes and look at the possibilities of investigating around 160 scales - having up to this point developed purely the physiological characteristics which enable one to play. If one starts by trying to play the scales or *Jingle Bells* or *She'll Be Coming Round The Mountain*, and going through that process of playing silly irrelevant tunes, the parts of both hands and the kind of co-ordination required between them is wholly inappropriate to a player and/or musician functioning in the 1980s.

"My first interest is how to avoid conditioning a new player with musical examples. The second is to say, 'Now you have the callisthenic ability to play music, take your choice.' Hopefully that will help some new players with a few possibilities which I didn't have when I began."

Such is his dislike of this "conditioning" that he now claims to play better when he doesn't know the chords of the song he is playing! "Once I know what the chords are, my playing deteriorates rapidly. On Bowie's album *Heroes*, I went in and made some cursory investigations about chords and keys, but not really. I was jet-lagged, my mental capacity was very feeble and I just played with what was happening. I didn't know what I was doing and I've validated this with so many things since. If all I do is listen and play, it can work.

"I personally enjoy working with musicians who are not trained as musicians because they have a lot

more invention and ideas than musicians who have been trained and know what they are doing.

Despite some of his unconventional views and ideas, Robert remains a firm believer in rock 'n' roll. He is firmly convinced, for instance, that the electric guitar is more valid today than its classical counterpart.

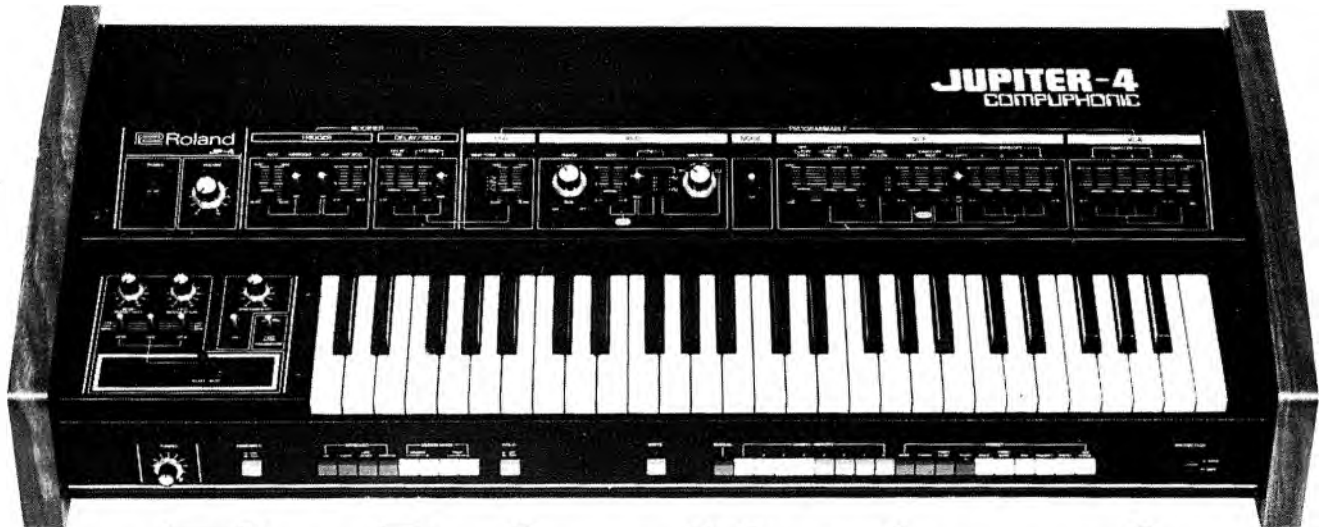
"Rock'n' roll is very direct, whereas the classical guitar is an anachronism both musically, socially and culturally. As a player I would rather be involved in a music which relates to the contemporary situation. I enjoy antiques and I enjoy some classical guitar repertoire, but in terms of a personal experience I find it unrelated to my life. It does not express, a lot of the time, what I would like to express.

"The other thing is that the very best composers who did stand outside time, like Beethoven, didn't write much work for the guitar and there are very few good composers. In playing classical guitar, one is facing what at best is second-rate music that is antiquated. I would say that the electric guitar is probably more relevant in terms of a cultural milieu. What appeals to me about rock 'n' roll is using it as a means of getting in touch, very directly, very personally, with whatever the spirit of music might be. It is a lot nearer than sitting in the Albert Hall listening to *Pomp and Circumstance*, or whatever."

Fripp is currently awaiting the release of his first solo album, *Exposure* on Polydor and has also landed an acting role in a new science fiction film *Alphaville* with Debbie Harry, thanks to his association with Blondie. Robert also hopes to be touring soon, but stresses they will be small unannounced gigs in out-of-the-way places. He will play unaccompanied, using only tape loops and his usual range of effects.

Whatever your thoughts about intellectual rock musicians and the absurd and often extravagant claims they make, there is usually a straightforward rock 'n' roller in there somewhere. It usually takes longer to shine through, that's all.

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Guitar Styles...by Mitch Holder

One of the most interesting aspects of the guitar is its ability to achieve many musical identities. You can find it in rock bands, country and country-rock bands, jazz and jazz-rock bands, blues and funk bands, symphony orchestras or all by itself in any number of musical styles. This element presents a challenge to the guitarist in that in many instances he or she may be called upon to play different styles of music.



When we talk about all of these styles, what are we really talking about? One might say we're talking about geographical, cultural and emotional elements as they relate to music. In contemporary music, different forms of, say, rock and blues emanate from different parts of the country. Different life-styles create their own styles of music. This is the way it's gone for hundreds of years throughout the world. Since we all can't live in every environment known to mankind, how does one go about getting acquainted with different styles of music? By hearing music, both recorded and live, you can expose yourself to music you may not understand, but if you study the basic rhythms and sound, you can come up with a reasonable facsimile yourself.

Guitaristically, there are many things to consider when learning styles. For instance, sounds of certain music are instantly recognisable by the type of instrument, whether it be acoustic, classical or electric. The most important thing to try to capture is the feel of a particular style, the bends, slurs, hammer-ons, hammer-offs, etc. that characterise the music.

Let's take a simple musical example and investigate the elements of style in rhythm playing. Example 1 is a short musical phrase.

Now, remembering that you're the rhythm player, the leader tells everyone that he wants to play this piece as a disco. What would you play? Disco is really nothing more than repeated patterns of sixteenth note patterns. Example 2 is an illustration of a disco rhythm pattern.

EXAMPLE 1

♩ = 80

If the bandleader wanted the tune to be a slow ballad, how might you play that? Example 3 shows the same tune as it might be played as a ballad on the classical guitar.

Are you starting to see and hear

things out is a very useful tool which you should use as much as you can. Try to be as open to as many different styles of music as you can, even if you have, or think you have, no taste for the particular style of music at all.

EXAMPLE II - DISCO

♩ = 110

what style is all about? It's a matter of inflecting a feel, a rhythm and a sound. How about a country feel? Example 4 is a down-home, hoedown country feel. It uses what has come to be known as Travis picking (after Merle Travis) with the bass line moving in roots and fifths, and muffled over the bridge with the back part of the right hand. You can play this with a flat pick, fingerpicks, pick and fingers or with just the fingers.

The main point of these examples is to have you understand that a

You'd be surprised how much you can learn from investigating the musical aspects of the music and really finding out what it's all about.

Next time, in part two of this series on styles, we will look at the same three examples and apply the same styles of music to the melody. Hopefully, you will be able to see how certain guitar techniques can be used to create melodic definition, and make the listener instantly aware of what he's listening to.

EXAMPLE III - BALLAD

♩ = 50 Classical guitar

particular style is achieved by understanding its feel. Figure out for yourself the musical and physical aspects on the guitar. In doing this you will also gain great insight into other areas of music you hadn't thought about.

Learning to use your ears to pick

Mitch Holder is a guitarist with experience covering television, recording and touring. He is much in demand as a session player having worked with top name artists such as Barry Manilow, Barbra Streisand and Billy Davis.

EXAMPLE IV - COUNTRY

♩ = 88



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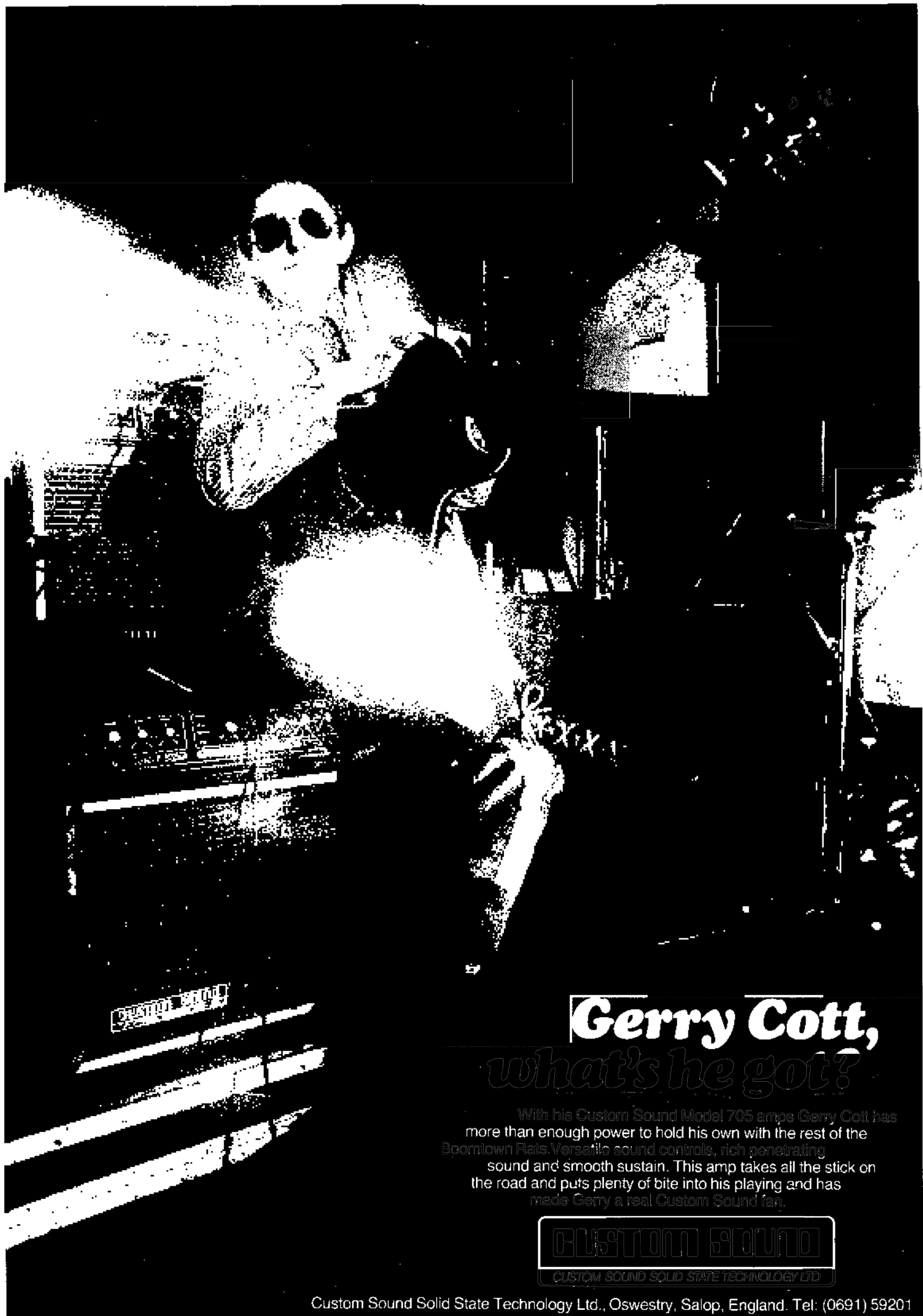
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In my last article I talked about drums in an acoustic sense and dealt in particular with live playing. I ended by saying that the unmiked drum kit would obviously sound very small on stage, in the presence of those mighty bass and guitar stacks. So this month I will tell you how I go about solving this problem.

You are going to need some form of amplification which, in most cases, will be through a PA system. This is used for the whole band, with priorities given to the vocals and to acoustic instruments like acoustic piano, acoustic guitar, drums and percussion, as these obviously are not going to be heard as well as the electric or electronic instruments. The method of amplification applied to drums is by means of microphones. The prime factor which decides how many mikes you are going to use naturally depends on the size of mixing desk there is available and also on the size of your kit. Once we know all that, we can think about how to go about miking up the kit.

Miking Techniques

As I said last time, in my opinion the first part of the kit that is going to get lost is the bass drum. This is because its frequency range is the lowest of the kit, so it will not cut through like the higher frequencies of the cymbals or the snare drum. So here is where I suggest you place the first mike. For double heads the best position for the mike is generally about four inches from the front head and right in the centre, for two reasons. First, the centre of the head is the deadest spot so the mike rarely picks up "rings" there; and secondly, because placed there it produces a nice fat thwack!

For a single head bass drum, the mike should again be placed in the centre, *inside* the shell - but not so close to the head that it tends to "pop" i.e. overload the mike. About 12 inches from the head should be fine.

So now you've miked up your foot - or feet if you're rich! What should you attack next? This depends on how many mikes you've been allocated. (A word of advice: fight for as many as you can). If you have only two more mikes to play with, I would suggest either using them as a stereo pair above the kit, or one in the centre above the kit and the other on the snare drum. However, this

Simon Phillips, one of Britain's busiest session drummers, has worked on albums by Gary Moore, David Coverdale, Gordon Giltrap, Art Garfunkel, Dave Greenslade, Roger Glover and Judas Priest, among many others. He has also toured with Phil Manzanera's 801, the Jack Bruce Band and a quartet fronted by Jeff Beck and Stanley Clarke.

really depends on the spread of your kit. If your kit is large, I would recommend using the stereo pair set low so that they pick up a good overall balance of the kit, rather than just the cymbals.

If you have three more mikes available besides that on the bass drum, I suggest the stereo pair should be set low and the extra mike positioned above the snare drum, pointing down towards the head about two inches from its surface. This mike can be angled to point either to the centre or to the edge of the head. Experimentation with this positioning will prove rewarding.

If you use a four- or five-drum kit, instead of using a stereo pair, you could use those mikes for the tom-toms, placing one on the rack tom, or between the rack toms if there are two, and the other on the floor tom or, again, between them if you have two. Use the same mike positioning technique as I have described for the snare drum, as this way the cymbals will be picked up quite well by the tom-tom mikes.

Ideally, I like to use enough mikes to cover the kit thoroughly. In other words, if I have three tom-toms I like to place a mike on each, so that together with the snare mike, bass drum mike and two overheads I would be using seven mikes in all. The hi-hat is usually picked up by the snare mike if set low, or by the overheads if set high, but if it does seem to be getting lost, miking up the hi-hat is the obvious answer - which brings the total to eight mikes.

If you use single head tom-toms, I would recommend miking them underneath, placing the mike just inside the shell, pointing upwards towards the head. This produces a fuller sound than miking a single head from the top, which can give rather a thin, topmy sound out front.

Positioning of mikes generally is very critical. Bad positioning can cause the mike to pick up sounds other than those desired. It is amazing what different types of sound you can get just by moving the mike.

The mikes I recommend using in a live context are dynamic mikes as they are less sensitive than condenser mikes. When you have guitar stacks and bass bins hammering away, condensers tend to pick all of that up, as well as your drums, thus making the sound out front very mushy. Therefore the less sensitive dynamic mikes provide a much cleaner sound out front. Dynamics also work better when miking tom-toms from underneath as condensers tend to "break up" more readily.

At this point I would like to stress the importance of tuning, as miking up can bring out problems you didn't know you had. Your kit is set up and



tuned, a whole load of mikes are positioned around it, their leads neatly coiled and taped down and everything looks pretty. Then you hit the bass drum and from the front you get, "Erm - it's a bit ringy, man." This is because a mike picks up sounds very critically. The ringy bass drum could be a sound that you have not heard before - but the mike has! This is when you really have to listen carefully to your drums when tuning them. First ensure there are no buzzes, creaks or other mechanical types of noises. Secondly, listen to the tones of each drum and the decay after striking it - i.e. listen to the pitch when the sound decays: does it stay constant or does it descend? Make sure that what takes place during the decay is exactly what you want to achieve. It is important to know exactly what your drums do when you hit them so that when you are confronted with the words "It's a bit ringy," you know your sound is together and that it is really down to personal tastes between you and the sound engineer. Thus, if the mike is picking up a sound that is not coming from the drum, it is not your problem - it is probably something to do with the equalisation of the channel in which the mike is plugged.

Sometimes the frequency of your drum can set off a howl between the mike and the PA system, but this usually depends on the acoustics of the hall. If the PA system has been well set up and tuned in the hall it is only a matter of a bit of EQ "tweaking". Because of the many complications which can occur during the process of getting the sound of the kit from the stage to the PA out front, it is great if you can have a good understanding between yourself and the guy on the board so that he knows exactly how you like your kit to sound and can produce a result satisfactory to both of you.

Now you can blast your way through the gig at a competitive volume to those maniacs either side of you. It helps!

by Simon Phillips

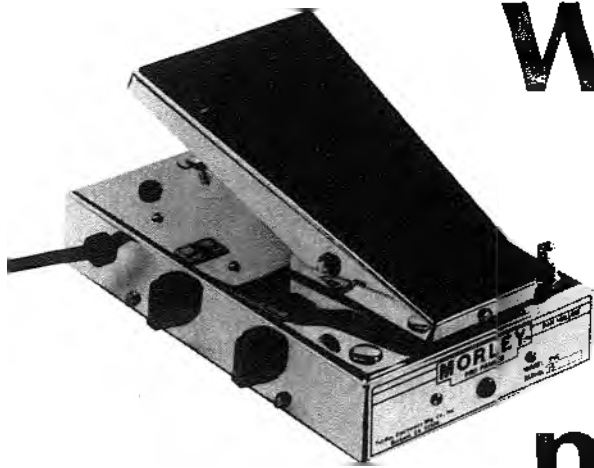
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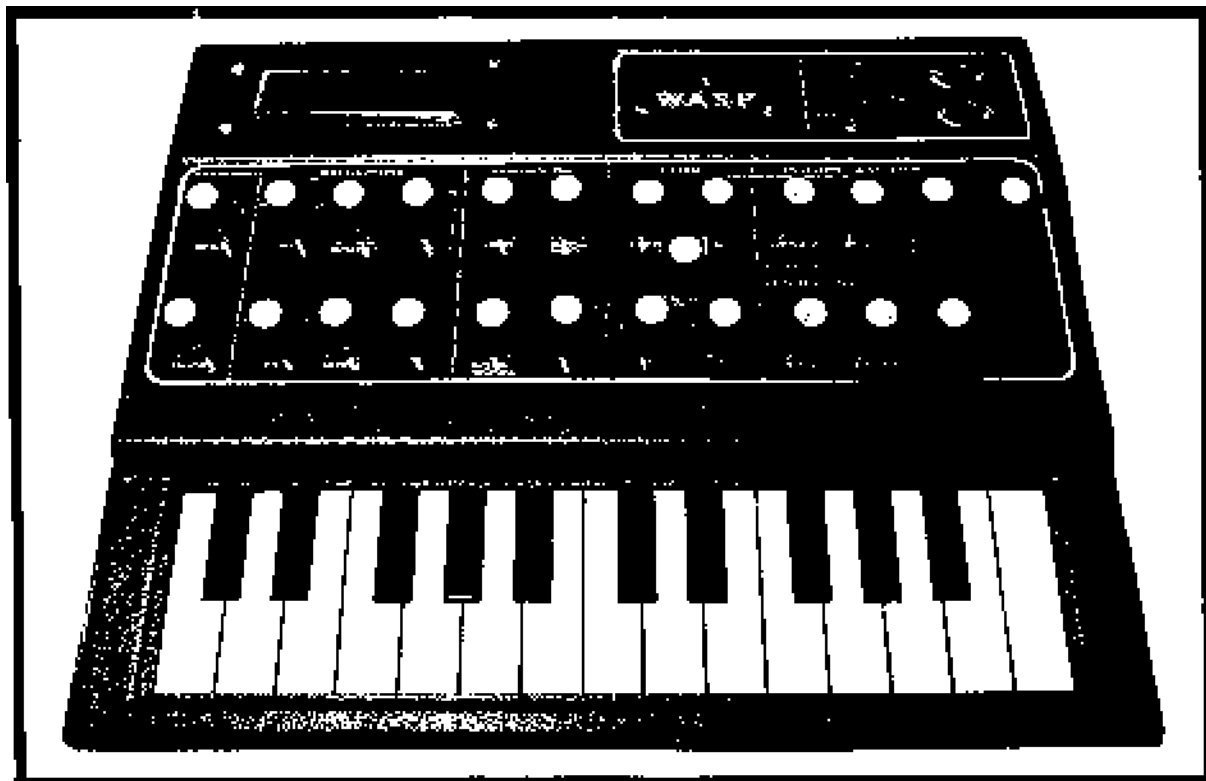
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Success and PETE SHELLEY

After a sleepless night, Buzzcock mastermind Pete Shelley was tired but far from emotional. He hadn't shaved, of course, but this didn't impair his throwaway Mancunian humour. It's Shelley we have to thank for a stream of super-charged pop songs like *Ever Fallen In Love*, *16 Again* and *Promises*. You can find the first two on the Buzzcocks' second and very wonderful album on UA, *Love Bites*, which has consolidated the Buzzcocks' early reputation and established them as an inventive and accessible band. Success, says Pete Shelley, has changed him.

"It's made me realise what success really is, what it's about, the things you've got to do to have it, and whether you want it or not."

In August 1976, the Buzzcocks appeared with the Clash and the Sex Pistols at Islington's Screen on the Green. But any similarities, musical or otherwise, were entirely coincidental.

"What we were doing with Buzzcocks didn't fit in at all with what the Clash and the Pistols were doing. It's just that we all knew each other, we were contemporaries. Just like any movement, there was no actual concerted effort to get anywhere, it was just like the passengers on the journey actually got to know each other. That's all that happened, everybody was just friends. Siouxsie and the Banshees were like best celebrity fans in the days when the audiences were just as much a part of the thing that was happening as the groups were. We did the Screen on the Green with the Clash and the Pistols, we ended up becoming famous. Rather strange."

But not as strange as Shelley's attitude to success. He admits that he's become blasé about music in all of its forms. Was success what he wanted? "It's comfortable." Did he have it in the back of his mind when he started out — or even in the front of his mind? "Yeah, it's inevitable. I think if people don't succeed they must be incredibly bad. I think there must be something wrong with them. I hate to put people down, mind. I'm sure there must be many of your readers who are really good musicians who struggle really hard but aren't gonna cut it."

Grateful for these words of encouragement, I suggest that many musicians fall into the trap of imitating their idols and end up without anything original to offer. Shelley, though, sees the main impediment to success as being lack of exposure — implication being that stars can be made and not born.

"It's all down to whether people

actually know what's there. That's the main thing about success, that people know you're there."

So how did people find out that the Buzzcocks were there?

"I've no idea. Shrewd manipulation of the press — it must have been something like that. Well, there we were stuck out in Manchester when everything was going on in London. Again, it was due to everybody knowing each other. We knew the Pistols so we got them a gig in Manchester, so they got us a gig down in London. When we played with the Pistols in Manchester, which was the second time they played there, they brought the press up with them. There was Mr. John Ingham from *Sounds*, and this mysterious lady Caroline Coon. Lots of other people too.

"They asked us questions and took details in little notebooks, you know, they were The Journalists, everybody had heard of them. And next week, it zooms out of the page at you. I bought about six copies of *Sounds* when the article on us came out, it was unbelievable, everybody in the group was going round everywhere buying them. It was one of those once-in-a-lifetime things. I've ended up getting so blasé, it's inevitable, it's lost its novelty."

The Buzzcock phenomenon which has brought Pete Shelley to his advanced state of disinterest began when he answered an ad on the noticeboard of Bolton Institute of Technology. "Musicians wanted for energetic band,"



to ADAM SWEETING



it said. The advertiser turned out to be none other than the enigmatic Howard Devoto. Pete, of course, answered the ad, and as sundry bassists and guitar players fell by the wayside he struck up a writing partnership with brainy Howard. "We just started writing songs which we thought were very nice little ditties," he ventures coyly. This was in October or November of 1975. Brotherhood of Man and their ilk ruled the airwaves, unaware that the Shelley/Devoto consortium was hatching New Pop Songs and that the Sex

Pistols were about to traumatise a slumbering populace.

The Pistols figure prominently in the early history of the Buzzcocks. Pete and Howard arranged for the Pistols to play a gig in Manchester, and in fact were due to play themselves but their drummer and bass player pulled out. Local band Solstice stood in as replacements. Meanwhile, Pete and Howard had put an ad in the *New Manchester Review* for a drummer and bass player. Malcolm McLaren had ventured north with his protégés, and while Pete Shelley manned the box-office, he drummed up business.

"He was there to see that everything was running smoothly and also to be like a circus-master. He was walking out into the street and accosting passers-by and saying, 'There's a really good group on tonight called the Sex Pistols, from London, and they're really gonna be big, come in and see them.'"

One of the people Malcolm tried to cajole Rotten-wards said he was a bass player. Knowing about the advertisement, Malcolm introduced him to Shelley. The bassist turned out to be Steve Diggle, and although he hadn't answered Pete's ad at all but someone else's, he got the job anyway. Drummer John Maher completed the original Buzzcocks line-up, which recorded the *Spiral Scratch* EP on the band's own New Hormones label before Devoto left. Pete shed a little light on his departure.

"The main story about why Howard left the group is usually that he wanted time to think about himself and music, and to reconsider. It's really strange, because I thought that was the only reason until a while back. It was only about two months ago, and I was reminiscing about those happy days — those halcyon days — and I remembered that one of the reasons why he left was that he had his finals coming up. He needed time to Devote to his studies. But it was lots of other things. He only formed the group because he wanted to find out what it was like being a singer in a rock and roll band.

"He tends to treat life like an actor, something to do with a perfect script which he has in front of him. I'm the feverish writer who's writing out the script and continually crumpling it into a little ball and throwing it away in desperation, because he can't get the pieces to hold together."

Metaphysics aside, Pete Shelley is clearly a writer with an acute idea of what he's doing and why. He's no mean guitarist, either. I read an article

which claimed that Pete is a guitar virtuoso. He isn't keen on the term.

"Guitar virtuoso? It depends what the definition is. I mean, it does seem a bit strained and intense to be a virtuoso. I enjoy playing guitar. It's been about nine years since I first held down a chord, but it's only been in the last four years or so that I've actually been doing anything with it. I'm learning more and more all the time. I mean, there's lots of things I can't do, it amazes me sometimes. There's this kid I know in Liverpool who's only 14, and he can do all the twiddly bits with his fingers that I can never do. I can do a close approximation of it, but I can't do it. I never worked by imitating Hendrix or Clapton, I stuck mainly to Marc Bolan and also Michael Karoli."

Michael Karoli?

"You don't know who Michael Karoli is? He plays with Can — brilliant guitarist, one of my heroes. I've always liked people who play through transistor amps."

Printed on the insert included with *Love Bites* is a list of equipment used by the Buzzcocks, and HH gear is much favoured by the Mancunians. Pete has tried Marshall too, among others, but much prefers the transistorised beast.

If people don't succeed they must be incredibly bad!

"I played the Marshall on *Ever Fallen In Love*. There wasn't too much sustain on, but on the other hand there wasn't enough sustain on, which made it a bit odd. With a Marshall or any valve amp, I can never get the correct amount of sustain that I need. It's almost like playing a very badly strung acoustic guitar, it just feels like that to me.

"At the time we were doing *Love Bites*, I was sending out for two amplifiers a day. It was getting ridiculous. I decided I'd try Peavey one day, so we sent out to this hire place and the guy brought this Peavey over. There was a big cabinet and a big amp, and he brought it all the way in and wired it up and I plugged in my guitar. I strummed it a couple of times and I just couldn't do anything. It was really hard. It had a distortion control on it, but you expect the distortion to be somewhat musical. And it's . . . it just adds distortion on the top. It doesn't do anything to the note, it just makes it fall apart at the edges, it doesn't do anything to the sound."

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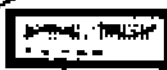
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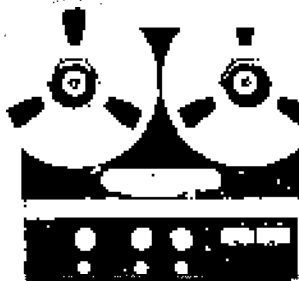


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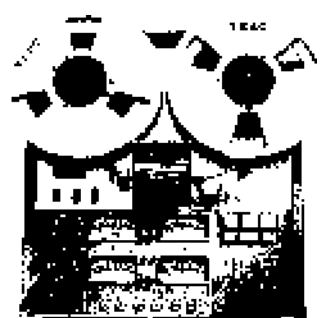
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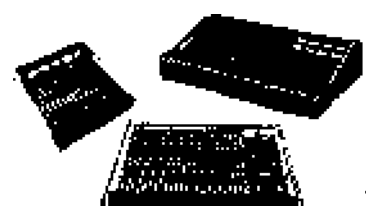
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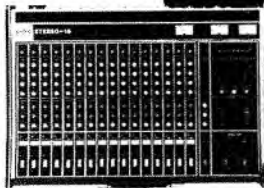
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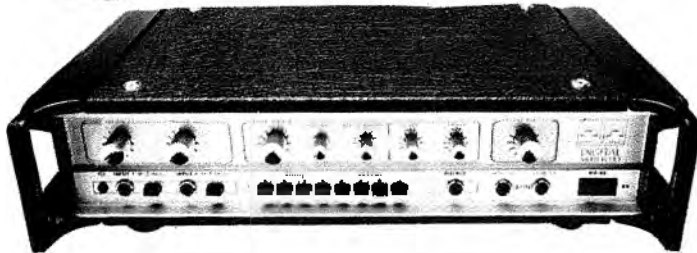
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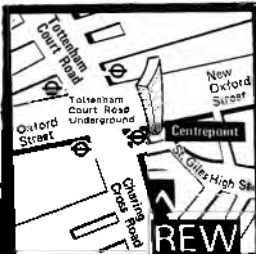
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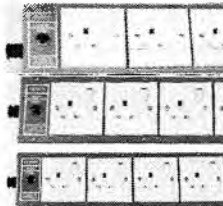
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Success and PETE SHELLEY

You can't beat an HH, eh, Pete?

"I've got an IC 100S which I just use when I'm at home. I can do anything I want with the sustain, I really like the sound of the sustain, but then as far as actually playing onstage or recording, I like the VS Musician. That's quite good."

All the Buzzcocks in fact, except drummer John Maher, use HH amplification. Pete's present guitar is a Gibson Marauder, but that's not what he had to start off with.

"Have you heard about me Starway? People said it had been sawn in half, but it hadn't. It was before our first ever gig, and I was thinking of getting another guitar because I didn't rate the Starway all that much. I just threw it on the floor in the middle of a wild ending, and it just snapped clean and the top half of the body came off. I carried on using it for about a year."

Pete also plays some keyboard, though he hasn't done so on any of the Buzzcocks' recordings. He's made a tape of himself playing organ, by the simple process of scellotaping a microphone to the organ and then plugging it into this music centre. "I liked what I played, I'm vain sometimes," he says. Other people liked it too, and Pete once played it in a record shop where someone wanted to buy it. He had the tape cleaned up by a studio who made it sound 'stereo-ish', and he hopes to release it on New Hormones. He prefers playing guitar, though.

"I find it easier to express myself on guitar. As for playing keyboards on albums, I have strange ideas about whether there should be additional things on albums. I like to keep close to the idea of the song which I have in my head, that's the most important part. If I write a song and decide it's a good song for Buzzcocks to do, then the whole way that I see that song is the way Buzzcocks can do it. Then it gets the best out of the group. It's a compromise, the best out of the group versus the best out of the song."

He's written numerous songs which he doesn't consider suitable for the band, and as a result is planning a solo album. He sees no point in the band doing two songs of a similar type, and feels that a solo album would be the best outlet for his surfeit of ideas.

"I'd be able to afford the material a different treatment, because I'd just be doing it for the sake of the songs. I'd give them my mental arrangements of how they should sound, because with Buzzcocks the song and the group have to intermingle. With them, the songs usually end up sounding like I thought they would sound — if they don't, I'm pleasantly surprised. Everything usually turns out right in the end."

It's not only Pete who's involved in projects outside the band. Steve Diggle, who wrote *Autonomy* on the first Buzzcocks album and *Love is Lies* on the second, plans to record some solo demos, while bassman Steve Garvey has similar ideas. John Maher has recorded with Patrik Fitzgerald. For the future, it looks like the Buzzcocks will busy themselves with individual projects, reforming the band from time to time.

"We've had a lay-off after last year, which was a bit hectic with three tours. In future, we'll be using Buzzcocks more as a base to do a certain kind of thing, rather than trying to incorporate everything. If we tried to get everything into the band it'd have no shape or form or any sense of continuity, which I think is a nice thing to have. Because it's possible for us to do other things it means there's no point in anyone leaving the band. It's the same as having friends: you don't see the same friends all the time, you move in different circles. You don't say to some of your friends right, that's it, I'm not going to see you again. You just say I'm going off for a while, see you when I come back, then you come back and everything's the same as when you left. It's perhaps better, because everyone's gaining more experience."

Again, this diverse activity makes sure that Pete can avoid his nightmare of getting into a nine-to-five type of routine. He's not fond of going to gigs himself, except as a social activity where he can meet people, and he finds touring something of a strain.

"It's hard performing on tours, because sometimes you don't get to bed, or don't get to bed till late. Then you wake up, you have to travel in the car and eat motorway food, then you arrive at the next gig and find there's a whole load of problems. Then you do the soundcheck and go back to the hotel. I mean, it's like nine-to-five. But it's nice meeting people on tour, people are nice to you. It takes a good audience to make a good concert. That's what a live concert is all about. The four of us can get up and play anywhere we want, but if there's nobody there it doesn't make it a live concert."

I recall John Lennon saying that he always felt that records were the really important thing, as opposed to live performance. Pete would agree with that.

"The records are the best medium. The live gigs are just social things. Unless you become a really big super-group and are really in control of everything, you'll never get the sound to be in any way as good as the record. It's not as controlled. I think gigs are

something that promoters promote, the feeling that groups should play live."

But there's no substitute for a really good live performance, surely?

"No, but it's over too soon. It's even less satisfying than a meal. At least with a meal you can get indigestion the day afterwards."

To ensure that the songs avoid the transitory nature of live gigs, they're published in sheet music form. This, too, has its problems. John Maher is the only Buzzcock who can write music to any extent, and the songs are written down by unknown transcribers after Pete tells them what the first chord is.

"As a band we don't communicate in any written way at all. Everything is contained inside our heads, which means that our sheet music is usually . . . well, I try to weed out the great inaccuracies. All the songs which I do have simple chord structures and they're all sort of easy to play, 'cos I'm not going to make things difficult for me. If I can play something in E. E flat — forget about it! Then you get the proofs of the sheet music coming to you and it's got E flat and F. I think the worst one was *Moving Away From The Pulsebeat* (from the first album, *Another Music In A Different Kitchen*), which is E like Bo Diddley — in fact, the playing instructions are Bo Diddley Diddley Doo. It's played in E, we don't play it in anything else, but this has got Fs going to E flats."

"If you're going to write down the music, it should be the music of the song rather than the supposed music of the arrangement. Because you get lots of things where the bass player plays a note which isn't quite in the sequence of notes which you can play to a certain chord, and then they invent a strange new chord which sounds like that when it's being played but you need six fingers on your left hand to be able to do it. I think that's a bit silly. I mean, the idea of sheet music is that anybody can walk into the shop, buy a copy, take it home, sit down and learn how to play it. Impress friends and influence people. I remember when I was learning I used to buy old Beatles song books. Some of those were hopeless."

It's likely that the Buzzcocks will play a few British dates towards the end of March after their European tour, starting on March 1st. Says Pete, "I just consider going abroad as like a holiday, a busman's holiday. I'm going to buy a camera so I can take lots of pictures and keep myself interested." The band signed their contract with UA the day Elvis Presley died — "The shock must have killed him" — since when there's been no looking back. "I shall become very rich with lots of tax problems," says the laconic Shelley. "I'm not looking forward to that."

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Guitarcheck

You probably all know the name Hofner. You should do, because Hofner guitars have been around for a long time. Although some old favourites will probably go on for ever, an unkind person might suggest that others of the Hofner models have been around just a little too long. Behind every innovator stalks the possibility of becoming outdated, and I think Hofner have side-stepped just in time. They have introduced, in addition to their well established models, a range of new solid-bodied guitars and basses, and a tasty semi-acoustic which seems to make a nice compromise between tradition and innovation. This is the instrument under review this month.

The Hofner T2S has, like practically all thin-body semi-acoustics, a laminated body construction. Although this may not be an ideal construction for an acoustic guitar, it is a very good way of making semi-acoustics of this type, and there could be a positive disadvantage in carving the back and front from solid wood. Even apart from the greatly increased production cost of such a guitar, it would probably have too high an acoustic sensitivity for what is primarily an amplified electric guitar, and the instrument would be liable to feedback troubles at unacceptably low levels.

In this review guitar, the outer veneers are of attractively figured maple and the inner layers are of one of the Far Eastern or Asian woods which look rather like mahogany. Both front and back have been given a curved shape during the laminating process, producing an attractive "swell front" and "swell back", somewhat similar to the body shape of the Gibson 330/335/345 series.

This Hofner semi-acoustic does not feel or sound quite like a completely solid guitar – it has its own distinct character, but I would not expect any problems with uncontrollable feedback even at fairly high playing levels on stage. This is helped greatly by the pickups fitted to this guitar, which are of hum-cancelling construction and, of their kind, relatively insensitive to handling noise, either on the pickup itself, or on the guitar body.

In guitars of this type, which appear to be optimised for electrical rather than acoustic performance, I usually expect the acoustic tone to be rather disappointing. I don't think anyone would seriously use one of these guitars as an acoustic instrument (except perhaps for a special effect in a studio) but it is useful to be able to practise on an instrument quietly, without needing to set up an amplifier. This Hofner has a rather better acoustic tone than most "semis". The bass end is a bit reedy, but the sound is well balanced between bass, middle and treble strings. The volume is sufficient for practising, and about the maximum permissible for writing a song in a thin-walled flat in the middle of the night.

The neck is slim and nicely shaped, made of figured maple and finished in the same mid-brown as the body. The fingerboard is rosewood with bound edges and a nice fretting job, if you like high frets. I prefer frets to be fairly high, but it then becomes necessary that they are very smoothly finished. These are smoothly finished, and have the useful combination of curved sides and a flat top. It is a useful combination because the curved sides do not snag your fingers, and the flat top wears down

more slowly than a completely rounded top. The flat parts on these frets are about one-third of the width of the frets. This seems about right in my experience. The fret tops are polished and strings may be bent at any position without producing scratching sounds. In fact, if you have difficulty with controlled string bending, give this guitar a try – it seems to make things easier than on some other instruments.

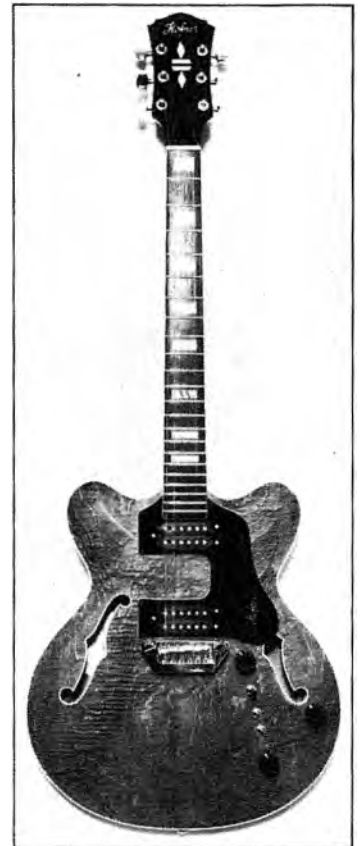
The machine heads are standard Schallers and they work well. The nut, unfortunately, does not work well at all. Five out of six strings stick in their slots, and the top three strings "creak" when tuned. This is likely to make stable tuning difficult or impossible. A bit of pencil graphite in the slots would help, but it should not be necessary, and on this sample the nut is generally less well finished than the rest of the guitar. While Hofner are considering what to do about nut adjustment and finishing, they might also consider an alternative truss rod cover for the head. It is functional but mine is ill-fitted and I am sure there must be a more graceful shape which could be used.

The bridge on this guitar looks like one of the many variations of the Badass principle, now used by Yamaha, Aria and others. It is supported on two large screwed pillars and incorporates string-end holder and adjustable bridge within one block of metal. It is distinctly different from most similar units in that it is not based on a zinc-alloy die-casting. This bridge shows every sign of having been milled and filed from a solid block of metal. It appears to be solid brass, with chrome or nickel plating, and its weight and solidity may have some bearing on the unusually even sustain produced by this guitar. Another helpful factor is the offset string groove on each of the individual string adjusters. Because these grooves are well to the side of the adjustment screws, most of the string downbearing pressure on the adjusting saddles serves to press the saddles firmly in contact with the base of the bridge. This reduces the possibility of bridge rattles – one of the common causes of poor sustain on the upper strings of otherwise good electric guitars. It is a well made and well designed bridge, and although no plating will survive contact with sweaty hands forever, this looks as though it will last many years before needing replating.

One significant benefit from a bridge which is brass (or steel) under the plating, rather than Mazac, is that when the plating finally does wear through, your steel or brass bridge is not going to crumble into a grey powder. Also, almost any commercial plating firm will re-plate steel or brass: not so with die-casting alloys such as Mazac. Most firms will not even look at it. I suppose there is an argument that by the time the plating goes through, the component is in any case worn out and due for replacement. In the case of this Hofner, I don't think the bridge is going to wear out. It may need new saddles after 10 or 20 years, but these are easily made, and the bridge itself should last almost for ever. Now I come to think of it, the whole guitar looks as though it is going to last for a very long time, given normal maintenance.

If this guitar is going to last for a long time, it is perhaps a good idea that it is capable of making some very varied sounds. The electrical

Hofner T2S
£345.16 inc VAT





HOFNER 494 £132



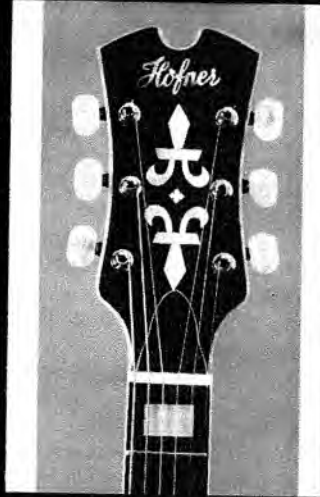
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Guitarcheck

system is unusual in that it provides for subtle variations in tone, and also for more dramatic changes. The three control knobs are not what you might expect. The one nearest the edge is a "middle" control (that's the subtle bit). Its effect may not be obvious if you go in for extreme bass or treble settings on your amp (or booster). But if you prefer a more balanced sound, you will find that the middle control will change the apparent "voicing" of the pickups to a small but useful extent.

The dramatic tone changes come from the switching system. Between the single volume and tone controls, which operate in the usual way, is a group of three switches. They are all "miniature" style switches, but they appear to be quite strongly built and I don't think they will break easily. Each switch has three positions. The one nearest the bridge and the volume control has a glued-on black knob and operates as a normal pickup selector switch. Unfortunately, the knob is not glued on well enough, and happily spins round on the switch lever. (It should make switch operation easier; actually it is more difficult because the plastic knob tends to roll away from the side of my fingers, and it is necessary to grasp it deliberately between finger and thumb. This is obviously a problem which can easily be corrected by knurling the switch lever between two files, before gluing on the knob. Nevertheless, I am surprised that it was not noticed at any stage in checking or production.)

The other two switches operate quite complex coil switching and "tapping" arrangements on each pickup, and provide three different sounds from each pickup. Unfortunately time, and the thorough screening of the electrical components on this guitar, prevents any more detailed explanation of the switching arrangements, but I would say that one of the settings is quieter than the other two for each pickup, and that most of the switching combinations appear to have useful possibilities.

Conclusion

This is a pleasant and interesting guitar. It is comfortable and versatile, and appears to be solidly made. My sample suffers from insufficient time and care on final fitting up and finishing. The nut is not right, and the second string buzzes slightly in its supporting notch in the bridge. The action can be set low enough for most reasonable (and some unreasonable) requirements, and although the switching and tone system is unusual, it has some advantages. It did not take me very long to become used to it, although you may prefer to have the selector switch in a more conventional position.

I feel that this sample is of comparable quality to similar American instruments, and you will see that its price falls somewhere between the prices of American and Japanese instruments. If you want to chop and change guitars every year, then a good secondhand instrument, bought privately will lose less money on resale. This is not specific to this Hofner guitar; it applies to any new guitar of a well established general type. It also applies *only* if you are buying a guitar which you intend to resell. If you want a guitar to keep and to play, and possibly even to earn an honest living with, I feel the resale value is of only minor importance. It is much more important

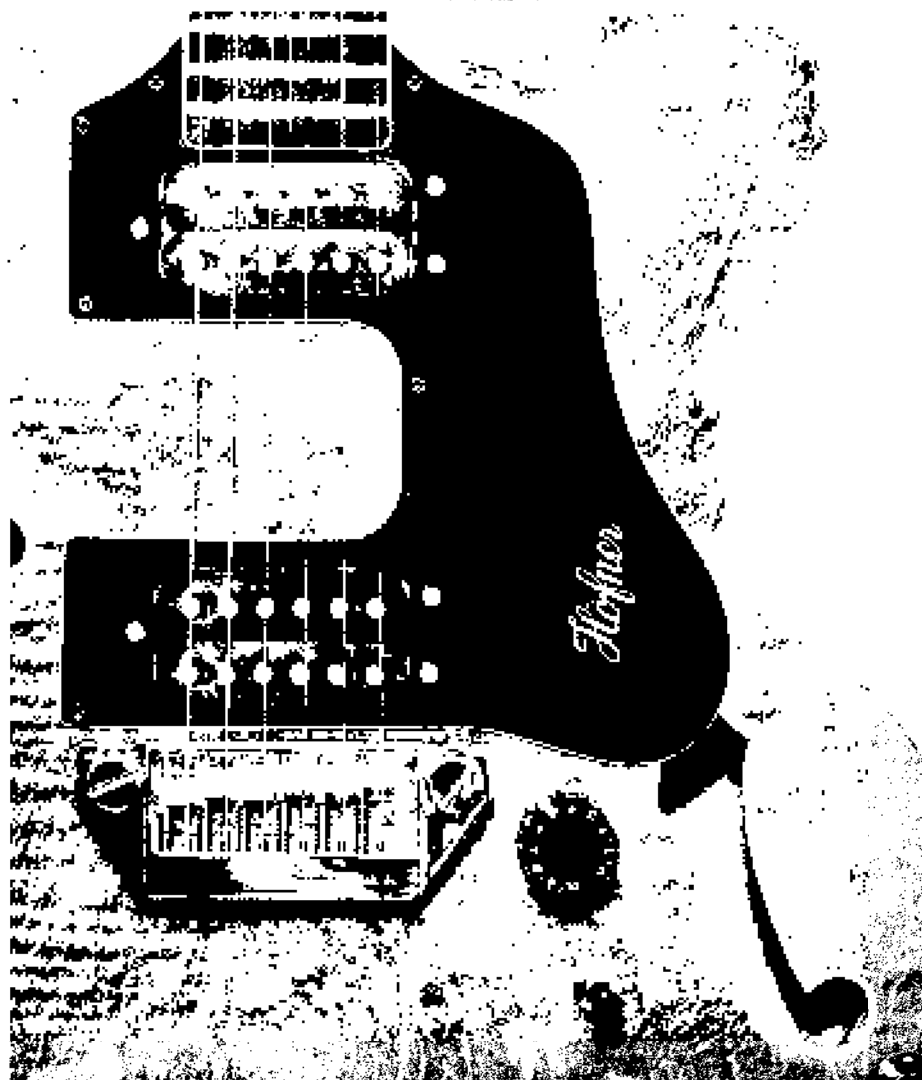
that you have a good and suitable guitar to play. If a guitar lasts 20 years (and this one probably will) and it costs £300, then its original cost is equivalent to £15 per year. Add on a bit for re-frets, etc. and it is still less than most people spend on guitar *strings*. Think about it.

The pickups on this Hofner seem to be unusually resistant to handling noise, but it is of course possible that other samples of the same pickup might be more sensitive in this respect. If you are considering purchase of one of these guitars, it might be a sensible precaution to check for the possibility of feedback troubles or of *excess* sensitivity to handling noise on the body or the scratchplate, at the normal playing levels which you intend to use.

Stephen Delft

Measurements on Hofner T2S
Scale length: 628mm
String spacing at bridge: 52mm
String spacing at nut: 36mm
Fingerboard width at nut: 43mm
Action as supplied: 1.1mm Treble/1.1mm Bass
Lowest "standard conditions" action: approx. as supplied
Depth of neck at 1st fret: 20mm
Depth of neck at 12th fret: 24mm
Depth of neck at 15th fret: 31mm (beginning of heel)
Weight of guitar: 3.9kg

Stephen Delft is a maker and repairer of guitars and other instruments, and a member of the Institute of Musical Instrument Technology. He is also a capable performer on the guitar.



Keyboardcheck

Yamaha YC45D Organ £2050 inc. VAT

Electronic organs don't generally inspire any great feeling of love with me. Grudging respect maybe, but love...? I have to tell you this right at the start so that you will know that this is a dispassionate review, unlike the last one I wrote, of an instrument that has a great deal to offer to the keyboard player who is looking for an organ that can do most of the usual things and a lot more beside. Some of the features included on the YC45D, such as Squawk and Astro portamento noises (well, you can't call them musical sounds can you?), must add to the price though they do precious little for its musical value. Forgetting such minor oddities for the moment, I will attempt a brief specification — difficult in the circumstances because there are 44 levers, eight rocker switches, six knobs, two variable preset lever banks with 14 and 20 miniature levers respectively, and the

portamento strip. There's even an on-off switch.

The appearance of the instrument is functional and tasteful and the finish is certainly superb: this one has grey leatherette surrounding the keyboard, cased in walnut, though the casing is available in black as well. The organ is mounted on a sturdy metal framework and can be tilted to suit the player's requirements — through 110 degrees according to the brochure — which will come in handy should you wish to play while suspended from the ceiling. There are two manuals, both with a generous five-octave compass (C to C⁴). The keys of the bottom octave and a fourth of the lower manual are reverse coloured. Unlike the keys of another very famous organ, this denotes that you may accommodate the bass section of the organ here if you balk at spending the extra £142 for the foot pedals.

The 44 levers run right across the breadth of the instrument. These are the tone selectors and they are progressive in effect though Yamaha have thoughtfully integrated three "feel" notches into each so that you may know where you are. They are colour-coded — black for tone control functions such as brightness, length of sustain, etc., white for the harmonic or basic tonal element, red for the brass sonorities, yellow for piano, harpsichord and strings and green for the percussive elements. The brass come in both 4' and 8' ranks, while the harmonics come in 16', 8', 5 1/3', 4', 2 2/3', 2', 1 1/3' and 1'. These harmonics are available on both manuals (a separate group for each) but the brass only appear on the upper. The percussive stops (length of decay variable) come in 16', 4', 2 2/3' and 1' and affect the upper manual harmonics only. Already you will see that the upper manual at least contains all the elements necessary for the recreation of that "very famous organ" sound mentioned earlier. Yamaha's organ demonstrator gave me a brief rundown of the instrument before I settled down to messing about with it on my own, and when asked to make Hammond-type sounds (had to say it) he produced those sounds within seconds. Judicious mixing of harmonics and perc. and a good solid sound whaps out at you. We were listening to the organ through a Yamaha RA100 cabinet which impressed with its clean powerful delivery and its rotating speakers. It will, however, set you back a further £605.

Most of the brass settings sounded a bit reedy to my ears but one stop that does have a lot of appeal is the Kinura (8' and 4'), an icy sort of sound and one of the best effects on the organ. Passing briefly over the 4' string stop, we



come to three preset sounds which will override all other settings — piano, harpsichord and vibraphone — all sounding a lot more clangorous than the instruments they are imitating. Did I mention the Marimba? An attractive sound that consists of an octave tremolo, speed variable naturally, with which, if you flick in the sustain switch to the right of the lower manual, you may perform all sorts of unlikely arabesques. By the way, the sustain is available on all the upper manual 4' and 8' stops and you can vary its length with one of the six knobs mentioned earlier.

There is an attack lever which will affect all the top manual sounds, apart from Pno, Hrps and Vbs, and this has the unusual characteristic of continually renewing itself — i.e. even if you are already holding notes down on that manual you will still hear the attack on any more notes you play. The fuzz lever, which will affect all top manual sounds apart from vibes, thickens the tone. Again, you may grade it to taste.

Fortunately, some might say, the lower manual boasts rather fewer facilities. Just the basic harmonics — 16', 8', 4', 2 2/3', 2' — and brightness control, so it is very much the accompanying partner.

The bass section which, as I mentioned before, may be played either with your feet or on the bottom part of the lower manual, consists of 16' and 8' harmonics, Tromba and Bass Guitar, this last being a particularly good sound. There is variable sustain for all these. By the way, the bass section will only sound the highest note being played.

The keyboards feel fine — just the right amount of weighting and a firm positive action. So positive, in fact, that you would never guess that the top manual is touch sensitive. I emphasise the word "positive" because the vibrato effects are obtained by lateral movement of the keys. If you pull in the Touch Vibrato lever, depress a note or a chord and move your hand from side to side, the sound will vibrate pitchwise accordingly. There is also a Touch Mute switch which, if you follow the motions described above, will give the VCF type of vib that you get on a synth. If all this were not

enough, you may have good old simple Touch Response on the upper 8' and 4' stops, which means that you have finger tip control over dynamics. It works too! Let us not forget the Attack Mute. This sounds a bit like an envelope follower. Oh yes, there's the Attack Glide switch — press the key and the note will glide up to it from about a semitone below. Personally I'd avoid that one like the plague but that's just a matter of taste. The six rotary controls just in front of the upper manual tone selectors are (from left to right) bass to manual or pedal; pitch control (plus/minus rather less than a semitone); length of sustain; bass volume; balance between manuals; master volume (remembering that there is also a volume pedal).

Last and certainly least is the Portamento strip. Select the sound you require from the following exotica: Slide Trombone (could do with a new embouchure) / Squawk (there must be some mistake) / Birds (quite pretty really) / Astro (someone going totally crazy on a Mickey Mouse Ring Modulator). Now run your finger along the seemingly innocuous felt strip. The resulting sound will follow every twitch of your palsied hand as it sweeps up and down. You can heap injury upon injury by switching in the Automute (a wah-wah vibrato) but that's quite enough of that and anyway a few gimmicks do not a musical instrument spoil.

I know I've made a few cracks about it along the way but this really is a serious instrument and I wouldn't want you to think otherwise. You can switch the preset rank 1 into the upper manual or preset 2 into both. This means that you have in effect, as the makers rightly say, a three-manual instrument. It has all the traditional electronic organ virtues and these, plus all the special sounds, make it a formidable beast indeed.

A lot of bands are using the YC45D. It is far too well made to fall apart on you. It costs a lot but it has to be worth it. I'd rush out and buy one tomorrow — it's just that electronic organs don't generally inspire any great feelings of love with me. Grudging respect maybe . . . but wait a minute, isn't this where we came in?

Tony Hymas

Tony Hymas is a keyboard player and composer with experience in rock, jazz and classical music. He has played with groups ranging from the Jack Bruce Band to the London Symphony Orchestra, and recently toured with the band fronted by Jeff Beck and Stanley Clarke.



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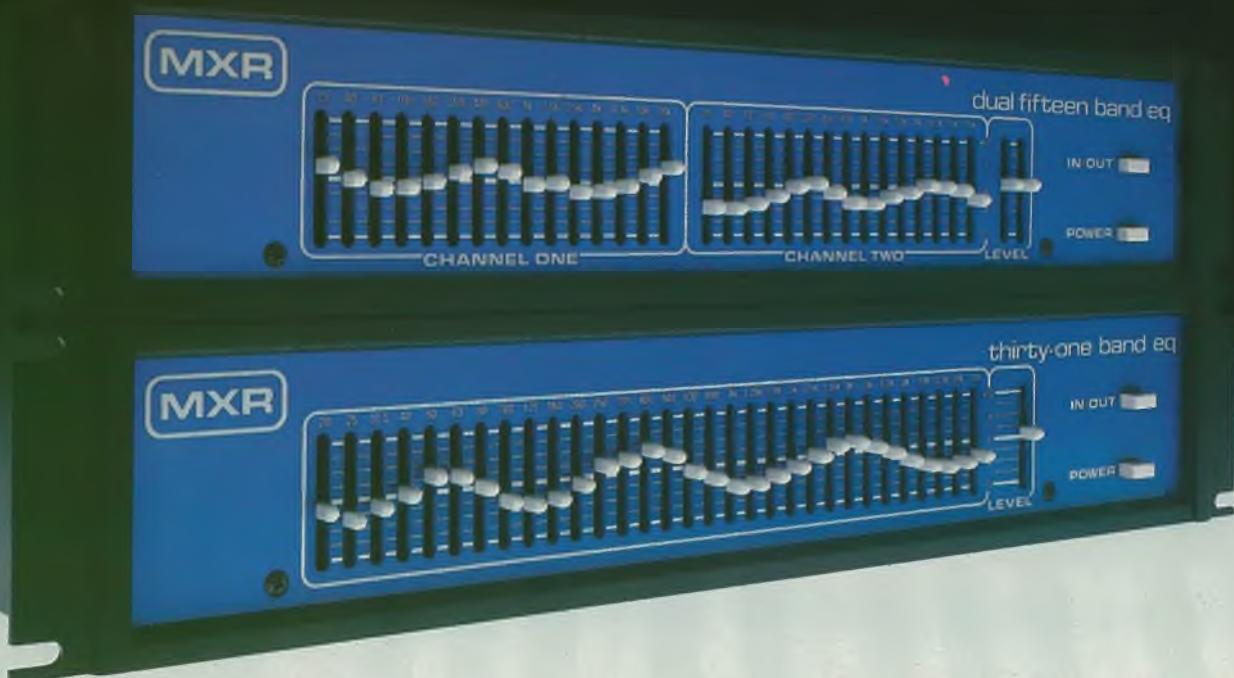
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Soundcheck:1

Peavey CS400 £360.40+VAT

The Peavey CS-400 power amplifier is in the middle of the range of commercial series slave amps which Peavey developed for professional PA and studio monitoring applications. The range consists of three amplifiers the CS-200, CS-400 and the CS-800, which were introduced into the UK in June 1977.

The CS-400, like the others in the series, is an extremely ruggedly built, dual-channel power amplifier. It is capable of delivering more than 200 watts RMS per channel into 4 ohms. The unit is designed for standard rack-mounting and has a thermostatically-controlled fan for cooling built into the cabinet.

The Peavey team have obviously considered all aspects of the sound engineer's problems with PA systems and have incorporated some unique facilities which give the CS-400 a versatility and an edge over many other power amps on the market. Plug-in modules are available which connect into octal-based sockets on the rear panel of the amp to give balanced inputs (PL2 module) and crossovers for bi-amping (PL3, PL4 and PL5). The amplifier provided for test came without PL2 input transformers or crossover modules and was fitted with plug-in jumpers that simply complete the input circuit for both the Cannon-type sockets and jack socket inputs on channels A and B.

costly procedure of getting a bi-amplified sound system very simple and relatively inexpensive. The same applies to crossovers: an electronic crossover usually needs its own power supply, chassis and mains cable. Now, with this system, all you need do is buy the proper plug-in crossover module for your power amp and speaker system and use the electronic crossover circuitry built into your CS-Series amplifier.

Construction

The cabinet is a rugged, heavy-gauge steel unit with a black stoved paint finish. The front panel and handles are of strong, die-cast aluminium and the overall appearance is one of sturdiness and reliability. The amp's dimensions are 19" wide, 5 $\frac{5}{8}$ " high and 14" deep and the makers suggest that, should the unit be mounted in the standard 19" rack, it should either be above other sensitive electronic equipment or should have a 1 $\frac{3}{4}$ " space top and bottom between the next piece of equipment. All input connections are rear panel jacks and the two jacks marked "channel inputs" are wired in parallel. Two types of output connections are provided for each channel - a pair of $\frac{1}{4}$ " jacks and a set of red/black binding posts. It is also suggested in the Operator's Guide that, in commercial or non-portable applications, the binding posts be used instead of the $\frac{1}{4}$ " jacks as these posts are industry standards. The second reason for this is the high current (greater than 7 amps) at full output. The rear panel of the CS-400 also houses a mode switch (bridge/stereo), speaker outputs, channel inputs and the crossover patch panel.

On the front panel there are level controls (calibrated 0-10), line out jack sockets and overload LED indicators which will show any type of overload or incorrect load configuration. To the right of the front panel, we find the mains switch and high temperature warning indicator.

It is also worth noting that the CS-400 output stage is built around a large gold anodised network carrying 12 SJ6357 Motorola transistors and two pairs of SJ6344 Motorolas with the fan thermostat switch mounted directly onto the heatsink. The pre-amp section's PCB's are separate in both channels and use transistors rather than op-amps. The power supply, as with most amplifiers, is an unregulated type, consisting of a large and rather bulky mains transformer, silicon bridge rectifier and two Mepco/Electra 10,000 μ F/75v DC smoothing electrolytic capacitors. All components and sub-assemblies seem to be reliable and sensibly rated and maintenance access is simple - just unscrew six 4BA self-tapped screws and remove the top cover.

Conclusion

The Peavey CS-400 is built and finished to the professional standard that one comes to expect from the Peavey Corporation. My bench tests agreed virtually with the manufacturer's published specification figures, with the exception of the power measurements which came out slightly below the manufacturer's



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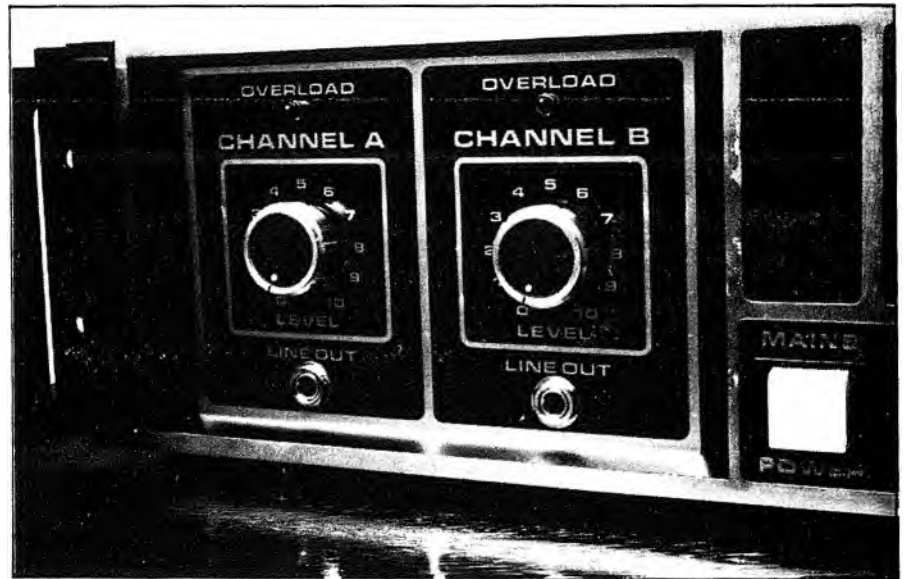
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Soundcheck: 1

figures (into 8 ohms). On the plus side, however, we measured better THD figures than claimed. The protection circuitry also works very well under all mismatch conditions which is a very important factor, particularly with power amps. Peavey also supply a first class Operator's Guide and their regular Troubleshooter chart. Incidentally, Peavey have also printed the four circuit diagrams for patch panels with balanced in input transformer and crossover modules on the top of the CS-400 - an excellent idea should your engineer lose/burn/eat the Operator's Guide.

Mark Sawicki



PARAMETER	RESULT	TEST CONDITION	COMMENTS
Specific power output A = left channel B = right channel	256.08W RMS 253.35W RMS 136.12W RMS 132.03W RMS 88.56W RMS 89.17W RMS	A 4 ohms/Ref 1KHz B 4 ohms/Ref 1KHz A 8 ohms/Ref 1KHz B 8 ohms/Ref 1KHz A 16 ohms/Ref 1KHz B 16 ohms/Ref 1KHz	Manufacturer claims power @ clipping: typically 150W RMS into 8 ohms 260W RMS into 4 ohms Ref 1% THD, 1KHz, 120V AC/60Hz line. Rated power is 200W RMS into 4 ohms when both channels driven simultaneously.
Total harmonic distortions (THD) Ref 1KHz	0.028% 0.025% 0.011% 0.012% 0.020% 0.025% 0.017% 0.035% 0.038%	@ 250W RMS @ 200W RMS @ 150W RMS @ 100W RMS @ 80W RMS @ 60W RMS @ 40W RMS @ 20W RMS @ 10W RMS	The THD levels measured into 4 ohms at 1KHz are better than specified. Manufacturer claims total harmonic distortions at less than 0.1% from 20mV to 200W RMS, 20Hz to 20KHz into 4 ohms, typically below 0.04%. All Peavey measurements are made into a 4 ohms non-inductive load with 120V AC 60Hz mains.
Intermodulation distortions	Typically 0.038%	@ 100W RMS into 4 ohms load	Very good.
Input sensitivity for 250W RMS (31.62V RMS) output signal Ref 1KHz	A - 1.086V RMS B - 1.055V RMS	Ref 1KHz, channel gain set at 10 in both left and right channels, 4 ohms dummy load applied.	Satisfactory; agrees with Peavey test report which claims 1V RMS input signal for 200W into 4 ohms at 1KHz.
Input impedance	Approx. 25K ohms		Input overload protection.
Frequency response	-1.0dB	Ref 5Hz - 30KHz @ 1W RMS into 4 ohms	Ample frequency response for most PA applications.
Hum and noise	Approx. 96dB	Below 200W RMS (20Hz/20KHz)	Although crosstalk at 1KHz is 94dB below 200W or at 10KHz is 78dB below 200W.
Slew rate	Greater than 15V per microsecond		Fast and more than adequate for all standard applications.
Damping factor	Greater than 110	Ref 1KHz into 4 ohms	Manufacturer claims also: phase shift +10° @ 20Hz -20° @ 20KHz
Capacitance load test	OK	2 microfarad non-electrolytic capacitors and 4 ohms dummy load	Satisfactory, although a small overshoot observed.
Open circuit stability test	OK	Dummy load removed, both channel gain controls set at 10	Very good stability margin.
Short circuit test	1 minute		Good output protection against short mismatch, open circuit. Voltage/current limiting instantaneous with no thumps or cutout.



which synthesizer? No. 1

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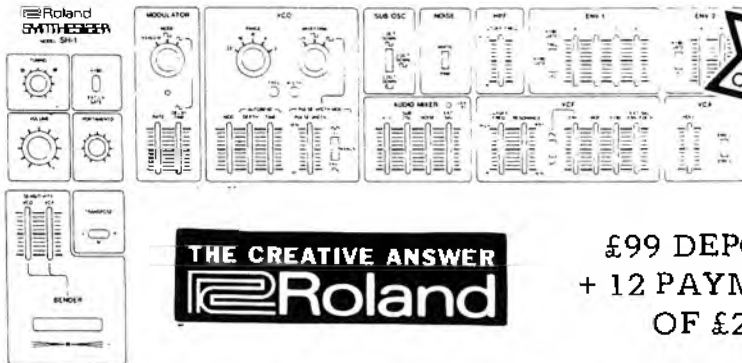
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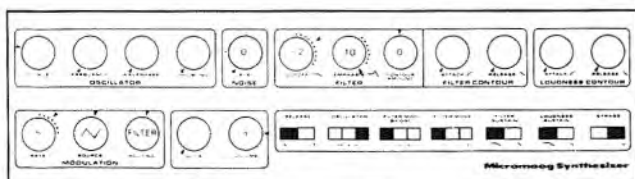
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Soundcheck:2

**Fender Studio
Bass Combo**
£492.90
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The Fender Studio Bass amplifier is the successor to the Fender Bass 300PS amp which we reviewed in February 1977. CBS/Arbiter claim that until now a bass player had to use two amps – one for studio and one for stage work because high quality “studio” amps couldn’t meet the power requirements for stage work. So the Fender Studio Bass is designed for both studios and stage. It is rated at 440 watts “peak music power” or, in more European terms, will deliver about 200 watts RMS. Both the Studio Bass and the 300PS are 100 per cent valve design and belong to the same power bracket. However, a few changes have been made on this model – most significantly, the combo configuration of this amp. Very convenient on one hand but a little heavy at 50Kg.

Electronically, both amps are similar although there are a few changes – for example, in the output stages, the popular Fender 6550 output valves are replaced by six large 6L6 GC pentodes, while the driver and pre-amplifier use one 12AU7A and three 7025 valves respectively. Another attraction of this amp is the five-band EQ network. The centre frequencies are chosen specifically for bass, i.e. 1850Hz, 1000Hz, 390Hz, 190Hz and 80Hz. The whole EQ section can be cut in or out with the EQL footswitch.

On the rotary tone control side, we have Treble, Middle, Bass and Presence and while the Presence control did its job, we found that the Middle and Bass controls were OK when the Treble control was set below halfway, but as soon as the Treble was turned towards maximum, it tended to override the Bass and Middle controls. This can be compensated for by the EQ section to some extent, but it’s certainly something to check.

There are two inputs, of practically the same sensitivity, each with its own volume control. Further there is a Master Volume, marked “Output”, and by presetting it with the input volume, you can get a nice clean “Fender” sound or a raunchy overdriven distortion. The front panel also houses the mains on/off standby switches and a large red indicator light.

On the rear panel, there are ¼” jacks for speakers and Line/Recording outputs and an output tube matching (pre-set) potentiometer, which you obviously wouldn’t need to use unless you replace any of the output tubes. Next, there’s the EQ footswitch socket and a hum balance pre-set pot which controls all 11 valves in order to minimise noise. This pot may need adjustment from time to time – certainly after valve replacement. Quite simple really: just set all tone controls at a flat position, set output at approximately 5 and volume at 8. Then, by turning right or left of centre, you should observe a significant reduction of hum. This, of course, like the output matching pot, is screw-driver-adjustable.

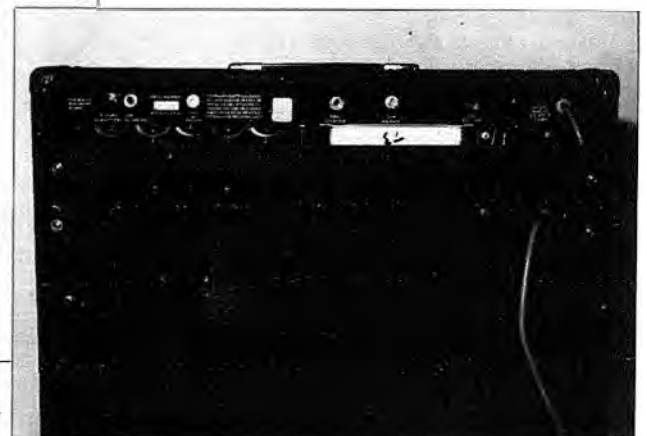
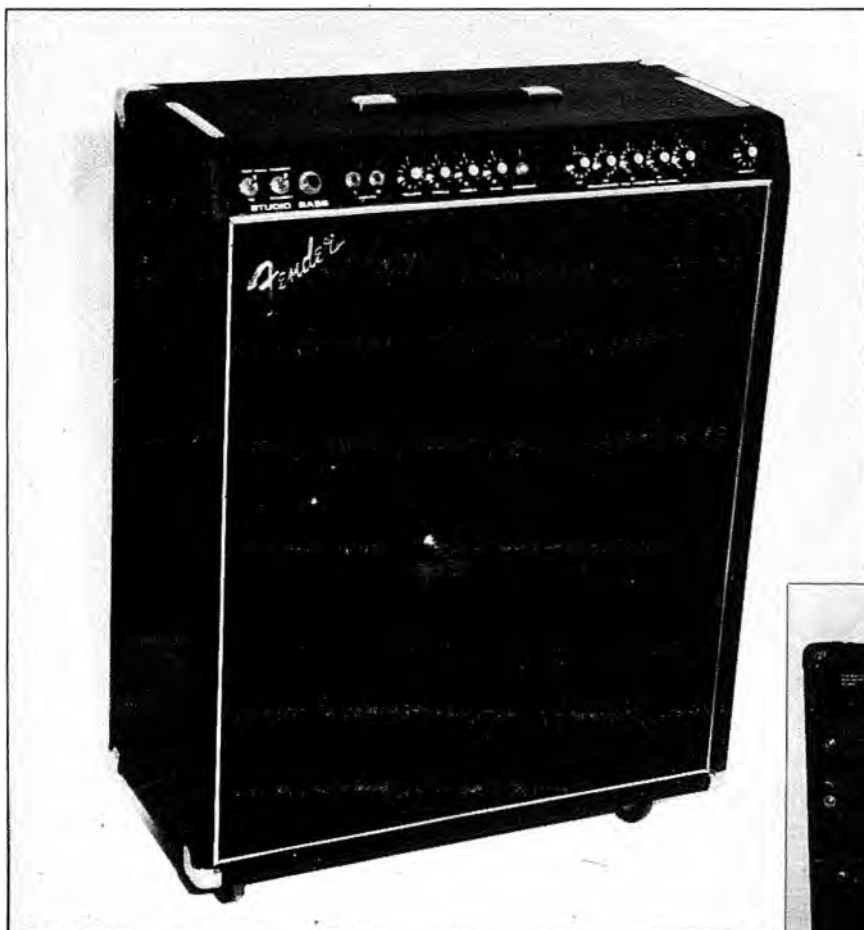
The cabinet houses a 15” heavy duty (20lb.) Electrovoice driver with an 88oz. magnet. The enclosure itself is of ¾” plywood and the speaker is mounted from the front by eight Philips screws and washers. Black, acoustically transparent Fender grille cloth covers most of the front of the amplifier, including the bass reflex section above the speaker. The rest of the cabinet is covered with heavy-duty black vinyl protected with metal corners and is fitted with removable castors. Because this combo is fairly tall and *very* heavy, I don’t see any real use for the single, flush-mounted carrying handle on the top of the unit. A combo of this size really should have two recessed side grips if you’re going to attempt to lift it.

The electronics are certainly worth mentioning: a professional series of components, sensible layout and, especially, decent soldering work.

As for the specifications, the Studio Bass certainly does what it should do and what we expect it to. The power measurements at the onset of clipping into 4 ohms gave an excess of 205 watts RMS, which is slightly better than the manufacturer’s figures (see table).

Conclusion

Value for money – certainly. I think around £500 is what you’d expect to pay for a 200 watt amp and speaker system of any configuration but with this one, you also get the name of Fender on the front *and* a five-band EQ. The Studio Bass has an EQ footswitch as standard but the vinyl cover is optional. For £500, I think it should have been included in the price. We



did not receive any kind of operator's manual, schematics, etc. this time, but I'm sure CBS/Arbiter is providing the full works to purchasers.

As far as the sound is concerned, a Fender bass amp is a Fender bass amp in the same way as a Fender is a Fender. The Studio Bass has the same deep, warm, rich sound that I used to associate with the Bassman. The best thing about it is the EQ section, which means that it really can fairly be described as a studio amp in that a very wide range of tones can be easily obtained. I was disappointed with the Middle and Bass rotary tone controls as they seemed to work against each other and the Treble control. This could be a fault in this particular sample - I really hope it's a one-off fault. On the other hand, if it's by design, I don't really get the point.

Mark Sawicki

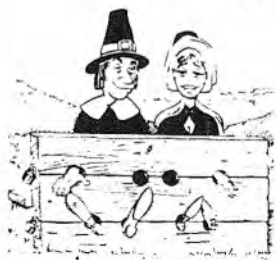


Dr. Mark A. Sawicki MSc(Eng.), PhD, is a consultant in electronics who also designs and builds all kinds of electronic equipment.

PARAMETER	RESULT	TEST CONDITIONS	COMMENTS
Specific power output, Ref. 1KHz	205.92W RMS 161.10W RMS 148.84W RMS	Onset of clipping into 4 ohms Onset of clipping into 8 ohms Onset of clipping into 16 ohms	Manufacturer claims: 200 Watts RMS output power, 440 Watts "peak music power". The power amp stage uses six 6L6GG power pentodes, specially designed for Fender amps.
Total harmonic distortions (THD) Ref. 1KHz	3.21% 3.45% 3.40% 3.28% 3.19% 3.02% 3.01%	@ 200W RMS @ 150W RMS @ 100W RMS @ 50W RMS @ 30W RMS @ 10W RMS @ 1W RMS	The THD levels are quite "equal" across the whole power range (1-200 Watts), and reasonable for a valve amplifier. Mainly second harmonic. The pre-amplifier/driver stage uses three 7025 and one 12AU7A valves.
Input sensitivity for 200W RMS (28.28V RMS) output signal, Ref. 1KHz	38.52mV RMS 41.10mV RMS	Input No. 1 } Tone controls flat, Input No. 2 } EQ flat, "Output" at 9	Slightly on the "low" side. The input sensitivity largely depends on the settings of the tone control potentiometer. Will suit most basses.
Tone controls (swing in dB)	38.21dB 9.85dB 26.70dB 14.58dB	Treble @ 6KHz; M, B, P flat Middle @ 700Hz; T, B, P flat Bass @ 50Hz; T, M, P flat Presence @ 3KHz; T, M, B flat	Both Treble and Bass controls are quite efficient. Middle control accentuates tone of the middle register and Presence control the level of higher harmonics of fundamental bass tone frequencies.
Equalisation and harmonic balance (swing in dB)	37.85dB 43.12dB 27.33dB 35.71dB 18.61dB	Band No. 1 @ 1850Hz Band No. 2 @ 1000Hz Band No. 3 @ 390Hz Band No. 4 @ 190Hz Band No. 5 @ 80Hz	Nice and symmetrical. EQ circuit with its range (80-1850Hz) is specifically designed for bass instrument applications.
Signal/noise ratio	Better than 68dB	Treble/Middle/Bass/Presence flat, equalisation and harmonic balance flat	Quite good (for valve amp) but could be better. This figure consists mainly of hum noise and probably comes from the power supply section. Hum balance control potentiometer (pre-set) provided at the rear panel.
Capacitance load test	OK	2µF non-electrolytic capacitor and 4 ohms dummy load	Capacitive loading did not show any wrong tendency to instability when tested with 1KHz and 10KHz square wave signals, however speakers load above 8 ohms is not recommended.
Open circuit stability test	OK	Dummy load removed, tone controls/ EQ max., Volume/"Output" max.	Acceptable.
Short circuit test	25 seconds	-	No ill effects. Worked when short was removed (25 secs. only). Should a fuse blow there is no spare.

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Rogers Londoner V	665	Marshall 100w M/V	345	Fender Tele, walnut	239	Farfisa Pro-Piano, S/H	225
Rogers Greater Londoner	695	Marshall 30w M/V	149	Fender Tele, custom	265	Vox electric pianos	245
Tama Imperial Star 5	595	Peavey TNT bass	195	Fender Tele, S/H	179	Crumar Roadracer pianos	295
Tama Swingstar 5	380	Peavey Deuce + phasing	335	Fender Tele, 1968	189	Elka piano, S/H	195
Fibes 5 Big Drums	585	Peavey Classic + phasing	235	Fender Strat, trem, antique	325	Elka 490 strings	325
Premier Double Kit	495	Peavey Pacer	165	Fender Strat, trem, M/N	335	Roland RS202 strings	545
Premier 5, Concert Drums	395	Peavey Backstage 30	85	Fender Strat, wine	295	Solina string synths	545
Premier 5 Drums, gold	395	Roland GB50 bass	245	Fender Strat, S/H	225	Korg MS10 synth	225
Premier 5, Resonator, S/H	325	Roland SB100 bass	475	Fender Musicmaster, 1963	115	Korg MS20 synth	375
Premier 4 drum kit, S/H	145	Roland GA60 + graphic	298	Fender Bronco, trem	125	Korg Micro pre-set	265
Olympic 5 drum kit	225	Roland JC60 + chorus	275	Kramer 450G, natural	345	Korg 770 synth	395
Pearl Powermate kit	545	Roland JC120 + chorus	475	Kramer DMZ 1000, natural	425	Roland 101 synth	475
Pearl Thunderking kit	495	Maine Musician + reverb	295	Kramer DMZ 3000, black	395	Wasp synthesizer	195
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Maxwin 705 kit, silver	245	Fender Pro-Reverb, 70w	319	Yamaha SG500, cherry	325	Top Gear guitar synth, S/H	295
Maxwin 805 kit, black	275	Fender Twin Reverb, 130w	395	Yamaha SG1000, s/burst	445	Roland RE201 echo, S/H	275
Shaftesbury 5 kit, red	295	Fender Super Reverb, 45w	285	Westbury P/U Programmer	295	New WEM Copcats	95
Gretsch 5 big drums S/H	425	Fender Champ	85	Musicman Stingray II	345	S/H Binson Baby Echo	75
Gretsch 5 drums, S/H	325	WEM Sapphire, 100w	195			S/H Concert Echo	65
Hayman 4 drums, S/H	195	WEM Dominator, 45w	145	Gibson L/P "55"	425	S/H Mehmthree Echo	69
Vox 4 kit, complete	120	Intermusic, phasing, reverb	239	Gibson L/P "55", S/H	325	S/H Newport Echo	65
Edgware 4 kit, complete	98	Intermusic + phasing	215	Gibson Pro-Deluxe	525	S/H Melos Echo	49
		Custom Sound, 150 + reverb	245	Gibson Explorer	475	S/H Colorsound Reverb	39
		Trucker 45w lead	98	Gibson ES125, 1957	195	S/H WEM pre-mixer, Reverb	39
Percussion Accessories	£	Trucker 45w bass	115	Gibson ES330, 1960	275	Roland TU60 tuner	45
Pearl congas, stand (pr)	275	Trucker 45w + reverb	129	Gretsch Broadcaster, S/H	275	Roland TU120 tuner	85
Hondo wood congas, S/H	45	Acoustic 135, S/H	285	Aria + DiMarzios, S/H	175	Korg GT6 tuner	39
Maxwin timbales & stand	70	Vox AC30, S/H	125	Epiphone Scroll, natural	195	Korg tuning standard	85
Pearl 6½" snare drum	59	Orange 80w graphic, S/H	195	Arbiter 6+4 Double, S/H	159	Roland Boss Phaser	49
Pearl 5" snare S/H	32	Roost 50w M/V, S/H	145	Hayman 2020 H, S/H	135	Roland Boss Graphic	52
Ludwig 6½" Supraphonic	110	Arbiter 50/100 reverb, S/H	120	CSL LGS copy, S/H	125	Roland Boss Overdrive	39
Ludwig 5" Supraphonic	95	H/H VS Musician, S/H	195	Kimbara Strat + trem, S/H	110	Roland Boss Distortion	36
Rogers 5" Dynasonic	89	H/H IC100 + reverb, S/H	175	Kimbara Les Paul, S/H	115	Roland Boss Touch Wah	39
Rogers 5" Superten	75			Hondo Strat + DiMarzios	99	MXR Phase 90	69
Premier 6½" 2003	98	PA amplifiers	£			MXR Graphic	59
Ludwig Vistalite 5" S/H	59	Custom Sound PA150, reverb	189	Basses	£	MXR Noise Gate	59
Hayman 5" snare S/H	35	Trucker 120w PA	115	Musicman Stingray, black	385	MXR Dyna Comp., S/H	39
Autotune snare & stand	85	Trucker 120w + reverb	139	Rickenbacker 4001, new	395	MXR Distortion +	44
Olympic 5" snare S/H	25	Roland PA60, reverb	195	Rickenbacker 4001, S/H	315	MXR Envelope Filter	55
Maxwin 5" snare	19	Maine PA200, reverb	285	Kramer DMZ 4000	475	Fender Blender	45
Synare 3 synthesizer	159	H/H MA100 reverb, S/H	165	Kramer 450B	395	Fender Phaser	55
Tama drum synth	295	Funxshun PA120w	235	Westbury Track 4	245	Fender Multi Effects, S/H	75
Staccato concert toms, S/H	295	MX500 PA120w	109	Fender Jazz, as new, S/H	275	Bell ADT unit	85
Paiste 36" gong S/H	295	Vox PA50	75	Fender Jazz, M/N, S/H	249	Bell Mother unit	25
Paiste 22" tam tam S/H	75	Traynor PA120, reverb	125	Fender Precision, M/N	295	Bell Phaser	58
		Shield PA100, S/H	69	Fender Precision, black	275	Bell Flanger	57
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The London Synthesiser Centre
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Mr Amrik Singh Luther

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Chase Musicians have ensured that the opening of the London Synthesiser Centre in Manchester will be a unique event. Many well-known keyboard personalities will be present, as well as the complete expert sales team assembled to run the Manchester store. Every guest at the party will be presented with a free London Synthesiser Centre T-shirt. Refreshments will be available.

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Drumcheck

**Aria
DO 5501 kit
£475.50
inc.VAT**

Aria have recently entered the drum world with a mid-price, five-drum kit. Their guitars and accessories have a good reputation – acquired with the help of their importers, Gigsville – and when the inevitable minor production alterations have been carried out, the drums look like carving out a niche for themselves in the middle section of the market.

In the Sixties, I was always aware of the marked similarity between a lot of American manufactured drum hardware. This seems to pale into insignificance compared to today's Japanese sets. This kit, good as it is, is close to having no identity of its own. "Hoshipearltamax" would have been a clumsier but more appropriate brand name.

The sizes are 22 x 14 bass drum, 12 x 8, 13 x 9 and 16 x 16 toms and a 14 x 5 metal snare drum. Besides tom legs, holders and bass drum spurs, a bass drum pedal, hi-hat, snare stand, one boom cymbal stand and one regular cymbal stand are included. (Although a concert tom set is planned, Aria only have one other set available at present. It comprises a 6½" metal snare, 24" bass drum, 13 x 9, 14 x 10, 16 x 16 and 18 x 16 toms and a complete set of hardware, and retails at approximately £750 including VAT.)

Sound

The tone of the kit is good, helped no doubt by the Remo Ambassador heads fitted throughout. The toms all had a solid, thick

sound that I liked, and tuned up or down, retained an authoritative, positive feel – loud and without undesired overtones. The bass drum was OK, if a little clanky, even after tuning. Some bass drums sound good with both heads on, but this one benefited from the removal of the front head. (Personally, for "live" work and in some recording situations I prefer both heads on the bass drum, but I have found that a satisfactory sound is most difficult to achieve when both drum and drum heads are brand new. The few times I've purchased a new kit, I've always taken the "played in" heads off the departing set.) From the sound of the drum played single-headed, it was plain that a little more time and care spent over tuning both heads would result in a more than acceptable noise.

I felt the snare drum to be the weakest link in the chain. It wasn't that the drum sounded bad, just that I'm not keen on that (almost) brittle-sounding tone which seems popular today. I found the drum lacked warmth, unlike the rest of the kit – and that *isn't* a comment on metal versus wood shell snare drums. To its credit, it was responsive and fitted in with the other drums volume-wise.

Shells

The Aria shells are nine-ply birch and as far as I could make out are cross-plyed, the plies running alternately up and down and all around each drum. This seems an opportune time to point out something I discovered some time ago. Quite simply, it's not the number of plies that determines the quality and sound of a drum (Get new Thumpo drums with the new 53-ply shells!) but the wood itself and how the plies are joined. It's no exaggeration to say that a Gretsch 18" bass drum (six-ply) shell made in the late Fifties weighs a lot more than a new Gretsch 22" (six-ply) shell. I'd be loath to join the "old is better" brigade if it wasn't so patently true, certainly of the shells if not the hardware. Anyway, enough BOF spouting, on with the Aria shells.

They naturally have a substantial feel to them – although the wood used isn't the greatest – but a couple of points let them down. One is the almost complete lack of inverse flange (the shell almost "stops" at each end) and there is therefore a rough, round bearing edge. The other is the poor finish inside. Where the shells have been drilled for holders and the like, splinters protrude. However, neither of these two points is too detrimental to the drums since they sound good anyway. If you are the sort of drummer who works on his equipment, the sound will improve with a little sanding and tidying up here and there. One other point: the plastic covering material is cut back from the edge of the shell to about ½" down to accommodate the heads – and they still fit fairly tight. All the shells have one air hole.

Snare drum

The 14 x 5 snare has a light gauge shell with a 45-degree inverse flange, and three slight indentations (or ribs) in the middle for strengthening. Triple flange hoops and square-headed tension rods are fitted; the 10 double-



ended lugs are spring-loaded but have no padding; and the damper is the common, spring steel screw-up type.

The snare strainer and butt are both made from pressed steel and have a cheap look to them. The cam-action strainer works away and toward the drum (rather than the side-to-side type) and the tension on the 20-strand snare is adjustable by a knob underneath the on/off lever. Incidentally, the on/off lever itself is a mite too long and almost protrudes above the counter-hoop when in the "on" position. Despite the gripe about its appearance, as basic as it is, it does work OK.

Tom-toms

All three toms have 16 lugs — eight per head, rather unusual on 12" and 13" diameter drums. Also common to the three toms were triple flange hoops, square-headed tension rods and an internal batter head screw-up damper. Regarding the style of the lugs fitted through-out — it's a little difficult to describe them accurately, but if I refer you to my earlier suggested brand name for the kit, I think you'll get the picture. The wide-angle floor tom legs are about the most substantial I've seen on a kit and these locate into three very solid eye ring/T-bolt blocks attached to the shell. Each block has a thick metal support/backing plate on the shell's inside.

Bass drum

The 10 lug per head bass drum has one felt strip, metal hoops with inlaid plastic strip (rather poorly finished with two obvious joins per hoop) and 20 T-shaped tensioners and claws which fit right round the hoop. The spurs are similar to the Pearl/Hoshino type. A cast block with a ratchet/splines set in it at an angle fits to its corresponding half attached to the tubed spur. A wing nut keeps the two sections together and for packing away, the spur fits flush to the shell. The tubed spur has a rubber foot at the end and I removed this expecting to find a metal point, but no such luck. Still, the foot should suffice on most surfaces.

The tom-tom holder at first sight is a bit of a horror. Its aesthetic appearance doesn't exactly bowl you over, but I did get used to it, and after a lot of fiddling around got both mounted toms pretty much where I wanted them. The receiving boss is in the middle of the drum and this didn't prove to be the inconvenience it normally is. The disappearing centre tube has a flat bar bolted to its top (slightly upturned at either side) and each side has an upright ball retaining cage held in place with Allen screws. Underneath each cage, a wing nut screws through the T bar and applies indirect pressure to the ball and keeps it in place. (It's yet another derivation from the Swiv-o-Matic ball and socket principle — admittedly, a little far removed.) A kind of S-shaped knurled rod protrudes from each ball (through the top end of the cage) and these fit into eye ring/T-bolt brackets mounted on each tom. Because the knurled rod emerging from the ball isn't straight but semi S-shaped, the toms can each be offset toward the front of the bass drum. This enables you to have the toms close together but without hanging right

over the bass drum pedal. Definitely a weird and wonderful holder.

Stands/Pedals

The bass drum pedal is another case of "Son of Hoshipearl". It has twin posts, a stroke adjustment mechanism, single expansion spring, cast split footplate and top-stop and a thick fibre-type strap. The beater height is adjustable and the pedal clamps to the bass drum hoop via a wing nut underneath the footplate. Twin spurs are set into the base. I was less than enamoured with the action, but I own up to not liking the Pearl (from which this is not a million miles removed in style) and they sell by the cartload, so I reiterate this is a personal preference.

The hi-hat has a strong double-strutted base with large, thick rubber feet (like the cymbal and snare stand bases) and a centre pull action. Despite the spring tension being fixed, I thought the pedal had a really good feel to it. A single spur is fitted at the bottom of the saddle unit, and the split footplate is almost identical to the one on the bass drum pedal. The height adjustment for the large diameter upper tube is the split tube/clamp/coach bolt and T-shaped wing bolt style. This is employed on all such stages on the stands and also on the tom holder receiving block mounted on the bass drum. All the coach bolts have springs fitted between the two arms of each clamp. I didn't encounter any problems on the set with this mechanism. The upper tube of the hi-hat has the usual bottom cymbal tilter, and the top cymbal clutch is a variation on the old Walberg type which I haven't seen for ages. The main part of the clutch is similar in style to most on the market today, but at the top, instead of a large head with a wing nut through it (the most common type) there are two small, flat pieces of metal. One is attached to the main part, the other floats, and both pieces have an indentation which fits around the centre rod. A wing nut squeezes the two pieces together and they consequently keep the top cymbal in place. It's an old but effective idea.

The snare stand top is the basket arms style and these are pushed up and locked in place by a large locking nut. Although a very large T-bolt is used to lock the non-ratchet angle adjustment into place, when I did this up as tight as I could, it was still possible to move the drum.

The cymbal stand is three-tier but because such long and large diameter tube is used, the stand can extend to nearly six feet high. The split tube/clamp mechanism is used on both height stages and at the top is a large wing nut locked ratchet tilter with a long threaded rod with felt and leather washers and a wing nut. The boom cymbal stand has an identical base and first stage, but at the top of that is a very solid, smart-looking wing nut locked ratchet which determines the angle of, and holds, the boom. This part — and the boom itself — don't seem too distantly related to the top half of a Tama boom, apart from the counter-weight at the end. The ratchet holds the long rod securely and there's another wing nut locked ratchet tilter at the end for the cymbal. Both stands worked perfectly well. ▶

Drumcheck

Appearance/summary

There are only four finishes available: Metallic Bronze, Maroon, Brown and Silver (the finish on the kit I saw). I was shown pictures/samples of the others and they all looked OK, but it is hard to be really objective unless you see them on a drum, if not a whole kit. I must confess to finding most of the Japanese finishes rather ghastly – anyone for “Silky Purple”? – but, like most things, it’s a combination of fashion and personal taste. (Whatever happened to Burgundy Sparkle?) At the moment the badges on the drums are stick-on plastic, but I’m assured this will change soon to a metal one incorporating the air hole. I liked the logo painted on the bass drum head, by the way.

The overall appearance of the set is good – the heavy duty hardware looks “professional” – and although it’s all a bit too burly for my taste, Aria would seem to have their fingers firmly on what’s wanted today (thick shells and heavy hardware) and as such, the set does represent good value for money. Finally, if the people at Gigsville look after their drum-buying customers the way they seem to look after their guitar buyers, potential kit owners are going to get one of the best back-up services available.

Dave Mattacks



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Effectscheck

Pedals, pedals and more pedals – pity the poor musician today who is faced with a baffling range of effects pedals. The only safe advice anyone could give is to try as many as you can, and that in itself can be an awesome task.

This new range from Ross Inc. of Chanute, Kansas, is well-designed and includes some of the best effects I've heard. Take for instance that old favourite the distortion unit. This Ross model is mains or battery-operated and fairly straightforward in design – an on/off footswitch, rotary controls for the amount of distortion and output level plus in and out jack sockets. Simplicity apart, the "fuzz" sound obtained is excellent – even on chords, every single note can be heard clearly, without the whole thing dissolving into a mushy mess. I've always found a good test is to put as much treble as possible on the guitar and play lead lines in a high register – if they "break up", you're backing a loser. Not so with this unit. Even the toppest sound is smooth and clear. With the distortion and level controls, you can pre-set the amount of fuzz and volume required. The other nice thing is that, like the rest of the Ross range, the rotary controls are half-recessed which means that, apart from looking a whole lot better, they are well-protected.

The Phaser, along with the Compressor which I'll come to later, is the same size as the Distortion unit, i.e. small and compact. Again, there is the footswitch, jack sockets and two rotary controls – this time for Rate and Intensity. The rate varies from a slow, subtle sweep to a rotary-cabinet sound. The sweep rate is variable from 1 - 8Hz and the sweep width covers three octaves.

The Compressor really is a beautiful little unit. This time, rotary controls for Sustain and Output are provided so you can pre-set the amount of limiting required. For those interested in exact specifications, the following figures say a lot: the output level is adjustable from 0 - 200mV, the limiting threshold from 4 - 80mV and the compression from 15 - 40dB. When testing this unit, I plugged it between guitar and tape deck and, by pre-setting the limiting threshold and watching the tape deck's VU meter, all was apparent. Ideal, in fact, for home recording in this situation.

The Ross range also includes a line of slightly larger, mains-operated effects. Their 10-band Graphic Equalizer is particularly impressive. If, like me, you'd always thought of "mini-graphics" as little more than toy replicas of their big brother studio counterparts, then think again. This unit (control range ± 12 dB) has EQ centre frequencies at 31.2Hz, 62.5Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz and 16kHz. They also quote its distortion as 0.1% and its signal-to-noise ratio as greater than 85dB. Another unit that would be ideal for home recordists, this graphic's applications are virtually limitless. I only tested this unit with a mike and a guitar but was very impressed with the results. With the minimum amount of setting, it was possible to get a Kenny Burrell sound from the back pickup on a Telecaster!

The Ross Flanger is another mains-operated unit, this time with four rotary controls – Manual, Man/Auto, Rate and Recycle. The flange obtained wasn't overly impressive but the range of adjustment obtainable certainly was. The Manual control enables manual flanging and also sets the base notch spacing when the flanger is automatically flanging. The Manual/Auto control adjusts the automatic flanging width from zero to maximum. In fact, when set at zero, it is virtually in a manual mode. The Rate control (obviously) sets the

flanging rate and the Recycle knob adjusts the notch depth. There is a lot of adjustment available in delay time (from 0.5 to 15.0 msec), auto flanging rate (from 0.1 to 8Hz) and notch depth (from 20 to 40dB).

The Ross D/P Combination is a combined distortion and phase unit. There are two footswitches on this pedal – one for Phase and one for Distort – plus four rotary controls: Rate; Intensity; Distort; Output. Of these four, the first two apply to the phaser part, the latter pair to the distortion. The sounds and facilities obtainable are exactly the same as I described when I mentioned the phaser and distortion units but they can be mixed together or used separately as required. I had great fun with this unit, doing my best impersonations of Jimi Hendrix and Ernie Isley – the definitive phase/fuzz sound.

The Ross Stereo Delay is a particularly useful and effective unit. Mains-operated, its main function is that of a delay/echo unit. To this end, there is a single jack input and two outputs, each with their own Mix control. These are Remote and Local outputs. Other rotary controls are provided for Delay and Recycle. The delay control varies the signal delay time from 25 to 500 milliseconds, while the Recycle knob adjusts the echo decay (as opposed to delay) time. The Remote and Local Mix controls set the mixes of "dry" and delayed signal for their respective outputs. Turned fully counterclockwise, these controls give a dry signal, when turned clockwise, the delayed/dry signal ratio is increased. The stereo facility comes in the form of being able to connect the separate outputs to separate cabinets. In this way, the Local footswitch either bypasses the unit or runs the signal through the circuitry, while the Remote switch either runs the signal through the circuitry or shuts off completely. So, it's possible to set up two completely separate mixes and kick one or the other in for special effect. The unit is very neat, very compact and well-designed with an excellent range of delay and decay facilities.

In conclusion, a very interesting range of pedals. All are well-constructed and beautifully designed and particularly helpful is the fact that details on operation and specifications are printed on the bottom of each unit. Pick of the bunch for me would be the Stereo Delay and the Distortion units. Such pretty colours too.

Eamonn Percival

Ross Pedals

Ross effects range.

Distortion:	£32
Compressor:	£42
Phaser:	£52
10-band Graphic EQ:	£72
Flanger:	£98
D/P Combination:	£88
Stereo Delay:	£175



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Storm Effects Pedals

It seems every month brings a new range of effects units. The new Storm range originates in Japan and is distributed by ABC Music of Esher, Surrey. Before reading on, bear in mind that the prices of these pedals are very, very competitive and also remember the old maxim "you pay your money and you take your choice." The point is that these pedals are *not* up to the standard and quality of top-line units like MXR, Morley et al, but they are ideal for the player who is about to enter into the effects field.

The Storm Crossover 85 unit doesn't have anything to do with crossovers. In fact, it's a kind of automatic wah-wah which is (variably) triggered by the attack of the note you're playing. There are two controls - Intensity and Shift - and these give you a "wah" every time you pick a note above a certain intensity, controlled and pre-set by the Intensity control. Also included in the range is the Funk Box 95 which is almost exactly the same as the Crossover unit but "picks up" more on the lower frequencies. It's recommended as being particularly suitable for bass guitar, keyboards and percussion.

The Compressor 20 is another misnomer in that it's really more of a sustain unit. It has controls for Volume and Intensity and, by pre-setting the volume and deciding on the amount of intensity required, you can get some interesting effects. The "attack" as you first strike a note is compressed but then builds up in volume and levels out to a uniform sustain. This really is one of the better

units in the range and boosts the natural sustain of your instrument. It is particularly good for a guitarist playing pedal steel licks in that the compression gives a good fingerpick effect and the build-up and sustain simulates the swell of a steel.

The Phaser 50 just has one rotary control for phase speed and, as such, works well enough but the actual phase produced is barely discernable on slow sweep settings. The general impression is that of a rather shallow, half-hearted phase with no colour or richness.

It's fairly easy nowadays to put distortion units into one of two categories - good and bad. The good ones are the units that provide smooth full distortion, the bad ones are the crackly, fuzzy ones that cause chords to break up. I would place the Storm Distortion 10 pedal in the former category in that the fuzz obtained is smooth, acceptable and generally pleasing. This unfortunately is not the case with their Octaver 2 unit. Octave divider never really caught on in a big way which is a shame because, theoretically, they're a good idea. The Storm unit is designed so that whatever note is played is simultaneously duplicated two octaves below. It has controls for Volume and Blend, the

former control for pre-setting the level and the latter for mixing fundamental and contrabass notes. The problem is that *any* signal fed into the unit's input is automatically "octaved" which obviously includes the usual inherent taps, clicks, scrapes and other extraneous noises involved in playing most instruments. The overall effect is rather messy on anything other than electronic keyboards.

Incidentally, each unit's description on its box appears to have been translated literally from the original Japanese and so we find that it's possible to get a "reslie speaker" sound from the Phaser and that the Compressor has effects for "stretching" sounds without distortion" and "it is different from other sustainers, so the beautiful harmonic scale not only enables you to play the Rock music but also to perform wide range plays."

Eamonn Percival

Crossover 85:	£23.50
Compressor 20:	£22.50
Distortion 10:	£22.50
Octaver 2:	£25.00
Phaser 50:	£25.00
Funk Box 95:	£23.50

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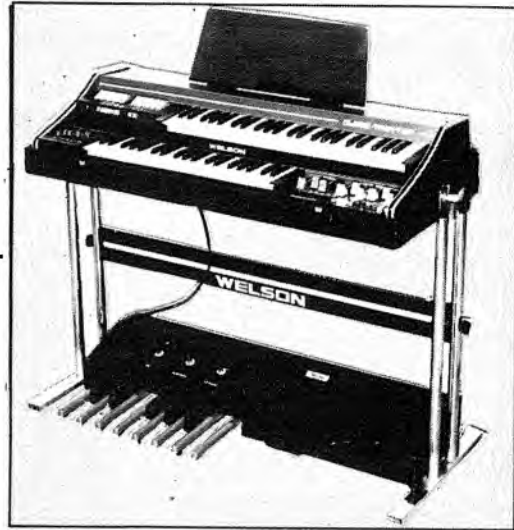


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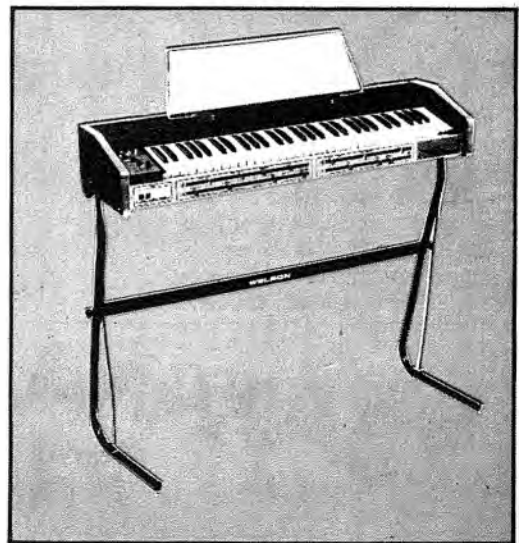
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I appreciate your help very much and I hope to hear from you.

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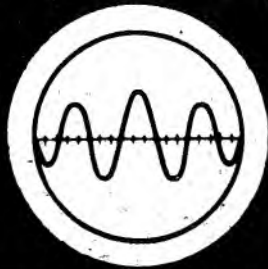
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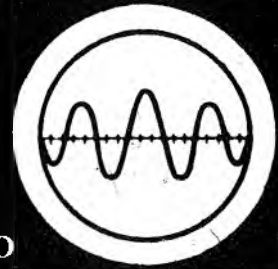
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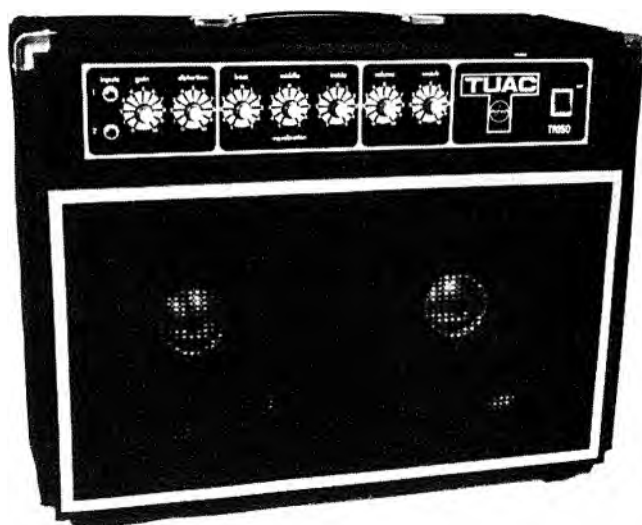


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Buying and adjusting beginners guitars: I

Unlike other workshop articles, this one is partly advice on how to select a beginner's guitar and only partly about actually working on guitars. There are two reasons for this. First, children often bring more or less unplayable guitars to my workshop. Some are beyond hope, and even those which *could* be improved would occupy more time than I could possibly spare. I feel very bad about this, and I don't mind repairing an occasional child's guitar for a very nominal charge, but I cannot manufacture more time. Secondly, in the case of faulty beginners' guitars I firmly believe that prevention is better than cure. The people who would benefit most from this article are unlikely to be readers of IM, but many beginners' guitars are bought by (or with the assistance of) more experienced players who may be uncertain what they can reasonably expect from a cheap guitar. No written guide is foolproof, and there is rarely an adequate substitute for common sense and bitter experience, but I hope the following paragraphs will help. What I am going to suggest is not perfection, but I think it represents a minimum standard for beginners' or student guitars. Anything falling much below this standard is what I would consider a "toy" guitar and not adequate for learning on.

The photograph shows a representative group of half-size, three-quarter size and full-size instruments. Beginners come in different sizes, and so do guitars. These three guitars cover a range of approximately £17 to £30. They come from different makers and importers, just to keep things fair, and they are all nylon-string instruments. There is a good reason for this particular selection. Nylon-string guitars under £15 generally include too many samples which are unplayable and unfixable. You must expect to pay much more than £30 to get a playable and reasonable sounding *steel-string* guitar. Also, steel strings hurt your fingers at first and it is easier and less painful to learn to play initially on a nylon-string instrument.

The instruments shown in the photo are among the best of the low-priced guitars available in the UK at the moment. They are usually playable when delivered, but even these sometimes benefit from careful checking and a few minor adjustments. I suppose I am soft-hearted about kids' guitars and I usually adjust them until they are easy to play. However, you really can't expect your local music shop to do £4-worth of work on a guitar which carries a profit margin of only perhaps £5. Yes, of course, if



you buy a guitar from a music shop and it doesn't work, you can complain to the shop owner and the law will probably support your case. However, if you expect a very cheap guitar to work well, you are being unreasonable. It *may* work well if you get a good one, but cheaper instruments often have great differences between one sample and the next. If everyone insisted that every cheap guitar was set up properly, music shops would find them unprofitable. Very soon, cheap guitars would only be available in toy-shops, where there is no legal obligation that any of them should work at all. I do not think this would be an improvement. I *do* think that shops should check even their cheapest instruments for serious faults, and many of the better shops do just this, but it is not reasonable to expect perfection for £19.50. One way out of this problem, is to combine advice on buying beginners' guitars with a simple do-it-yourself article on how to adjust cheap

guitars, which is how I came to write this article.

I am going to divide this into four sections. Under "things to look for when buying a guitar": (1) faults which are not usually worth fixing – don't buy the guitar; (2) faults which can be put right quite easily – many cheap guitars will have some of these; (3) faults which may take some time to put right, but which will provide excellent practice for anyone who wants to learn about this sort of work. Finally, there will be a short section on adjustment techniques and tools. I can't hope to cover every possible problem but I will try to include the more common ones.

Faults not usually worth fixing

(Unless you really want a lot of practice at guitar repairing and you can get the guitar so cheaply that it could be thrown away if you are unsuccessful).

Octaves noticeably wrong on a

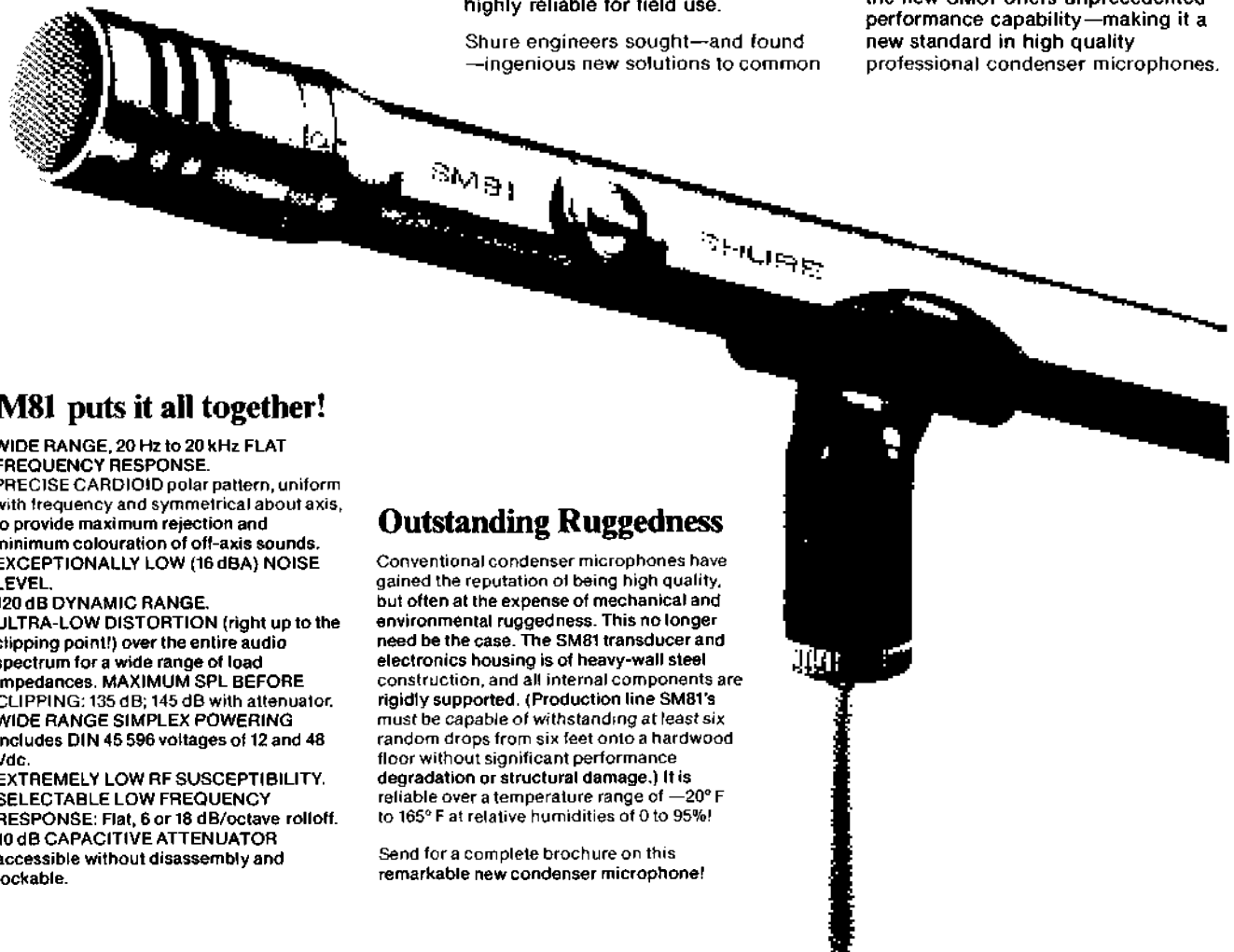
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fixed bridge guitar. Compare the 12th fret note with the harmonic over the 12th fret, or ask the salesman to demonstrate this. The notes should normally be the same on the top string, and almost the same on all other strings. If anyone says that an error here is due to poor strings, consider whether you want to buy a guitar fitted with poor strings. Alternatively, if the guitar appears otherwise to be a bargain, offer two pound notes, and ask to hear if after it has been fitted with better strings. Also insist that any guitar you buy is shown to work correctly *after* it has been tuned to correct pitch. The note at the 5th fret, on the top (thinnest) string should sound the same at an A-440 tuning fork.

Avoid guitars which have a *high string action* when the bridge saddle (the white plastic insert in the bridge) is already cut down as low as possible. It is sometimes possible to lower the strings by the lowering the bridge saddle, but if this has already been lowered and the action is still too high, there is likely to be something basically wrong with the instrument. Usually the neck is loose on the body, or set at the wrong angle, or the neck is badly warped. None of these faults is worth fixing on a "cheapie".

Frets which are obviously bent, not parallel to each other or erratically spaced. Some nice looking and nice sounding guitars appear to have their fret slots marked out with a stick of chalk and a piece of knotted string. The best protection from this is to buy instruments which carry the label of a reputable importer and wholesaler.

An unresponsive and unpleasant tone. If one string sounds bad, it may be the string; if they all sound bad it is more likely to be the guitar. If you want to try new strings, do so *before* you buy the guitar, not afterwards.

The bridge lifting on a cheap guitar may indicate rather more problems than one would expect. By all means, buy such a guitar after the shop has done a (guaranteed) repair job. Then if it should come off again it is not your problem.

A buckled guitar front, or any cracks which won't fit back together with hand pressure only, usually indicate serious trouble.

Finally don't buy guitars which have *rattles or buzzes*.

Faults which are usually easy to put right

Stiff machine heads. Place one drop of ordinary light oil on each machine head, where the gears meet. Either do this before the guitar is

tuned up, or slacken each string by a few turns of each tuning button and then re-tune to correct pitch. This should fix most stiff new machine heads and in any case should be part of regular maintenance every three months for any guitar with open gears. If any machine is still so stiff that it is difficult to turn the button, this is easily put right by asking the shop to replace it with a better one. Machine heads should turn smoothly and should adjust the pitch of the strings in an even and regular manner.

If you want to buy replacement machine heads or parts for an old guitar, take the guitar with you. There are many small variations in size and fitting. If the screw holes *must* be in different places, make proper pilot holes of the right size in the wood or the screws will split the head as they go in. As a rough rule, a pilot hole is half the width of the threaded part of the screw.

Some guitars have wooden friction pegs for tuning. Many are rubbish, or just toys, but there are a few old ones which are simple but quite nice. A violin player, who knows how to deal with wooden pegs, and wants a simple guitar for his/her own use, could get a bargain here. Guitar strings have a higher tension than violin strings. If the pegs will hold this tension at normal pitch without difficulty, there is little point in fitting machine heads. If not, it is still worth trying a little dry soap and french chalk. I would suggest that guitars with wooden tuning pegs are not suitable for children or impatient adults. They require strong hands and a delicate touch. Wooden pegs, unlike metal machine heads should *not* be oiled: it ruins them.

Faulty strings. A normal set of strings for a nylon-string guitar has three bare nylon treble strings and three wire-covered nylon bass strings. These *look* like wire covered steel strings and it is very important to use the nylon-centered variety; the others may damage the guitar. If in doubt with an old guitar, always fit nylon strings until you can get an expert to tell you what sort of strings the guitar was designed for. Little old guitars with pin bridges usually require nylon strings also. You have to tie a butterfly knot in the end of the string which goes down the pin hole. If you buy, or accept, steel strings for little old guitars with pin-type bridges, because these strings have ball ends which look suitable, you may well destroy your little guitar. If in doubt, use nylon strings.

Don't buy any guitar, old or new, on the assumption that it will be all right with a new set of strings. Don't assume

anything. Get the strings on it before you buy it. Student guitars should have a new set of strings after three months' use. Old or worn-out strings can buzz or play out of tune when there is nothing wrong with the guitar.

Strings creaking in nut. There is a problem which is related to strings and to machine heads. If the strings make creaking noises as they are tuned, they are probably sticking in the grooves in the nut. (This is the strip of bone or plastic at the head end of the fingerboard. On cheap guitars they are usually made from moulded plastic.) Even if the nut is wrong beyond reasonable adjustment, you can buy new ones in many different sizes for a few pence each. (See section 4 next month for nut adjustments.) A little pencil graphite rubbed in the slots, under the strings, will often stop them sticking. You should be able to check this in the shop before purchase.

High action. If a guitar has a high action (the strings are too far from the fingerboard) this may be fixable, if the neck is straight and the saddle insert in the bridge is high enough to allow for taking it down a bit. So how does one check whether a neck is straight? This is not difficult, but it requires two separate checks. First you should know that a guitar string, when tuned up to correct pitch, makes quite a good straight edge, so you don't need to carry half a metre of steel bar around with you when you are going to look for a guitar. Unless you are used to doing this trick single-handed, you will need someone to help you. Hold the guitar sideways so you can see the gap between the strings and the frets. Press the top (thinnest) string firmly on to the fingerboard between the nut and the first fret, and at the same time press the other end of the string firmly down between the last two frets. The string should be stretched between the first fret and the last but one fret. Look at the gap between the string and the frets. You can assume the string is straight. The neck will probably curve away from the string a little around the centre. If there is room between the string and the tops of the frets (where the gap is widest) for one or perhaps two thicknesses of ordinary postcard, that is a reasonable limit for a cheap guitar. If you can get a matchstick between the string and the frets, then either the string is not held down firmly at each end, or the guitar has problems. If there is a no gap at all in the middle, either you have an astonishingly good neck for a cheap guitar, or the neck is bent backwards and the guitar will probably buzz when played on the bass strings ►►

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somewhere between frets one and five. If you can't hold the string down firmly between the nut and the first fret, the nut is probably too high. This can be adjusted, but it needs tools and some care. (See section 4 next month).

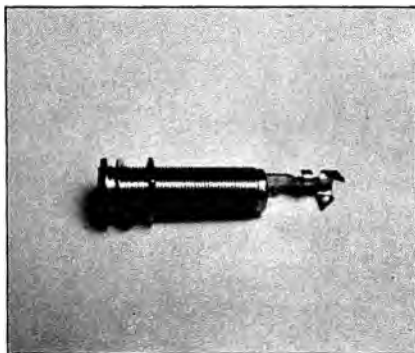
Repeat this straightness test with the lowest (thickest) string at the other edge of the fingerboard. If both sides are straight enough, look along the fingerboard from the head end and check that the fingerboard has no obvious twisting or bumps along its length. All this takes much longer to describe than to carry out. These tests are not foolproof, but they will sort out most of the really bad necks. Assuming your guitar has a fairly straight neck, if the action is too high for comfort and the bridge saddle insert has some height to spare, you can lower this saddle. Loosen the strings, slide out the saddle and rub the underside on a sharp file or on coarse sandpaper stretched over a hard flat surface. If you notice that the top edge of the saddle is very rough, you can also round it over and make it smooth at the same time with finer sandpaper. If you work out by how much you want to lower the action over the 12th fret, and take the same amount off the saddle, you will pro-

bably be under-compensating, which is better than overdoing it.

You probably will not be able to do this in the shop, and it is unwise to buy any guitar with a high action on the assumption that you will be able to lower the action later on. All sorts of strange things can go wrong when you lower the action. Usually, they were wrong all the time, but they were concealed by the high action. If you want the action lowered on a guitar from a shop, either ask for it to be lowered and then check it carefully for buzzes before parting with your money, or reach some sort of agreement with the shop that the guitar is guaranteed to work properly after you have lowered the action. Be reasonable

about this. The action measurements I shall give in section 4 next month are a fair standard for a cheap nylon string guitar. You can take the strings lower, but if, as a result, you find some buzzes on some of the notes, don't blame the music shop which sold you the guitar.

That is all I have space for this month. Next month I shall cover some of the faults which you can probably fix yourself, but which require a few tools and a bit more care and time. These include loose, rough or dented frets, loose bridge saddles which lean forwards, guitars which play slightly out of tune and strings which are too high and hard to play near to the nut.



With reference to the previous articles on converting a single pickup guitar: several readers have asked me about the long-pattern Switchcraft jack socket used in this conversion job. It is available in the UK through any helpful music shop from Stateside Electronics, Unit 8, New Road, Ridgewood, Uckfield, Sussex IN22 5SX, as part No. 151. Stateside kindly sent me a photo of the socket from their new catalogue.

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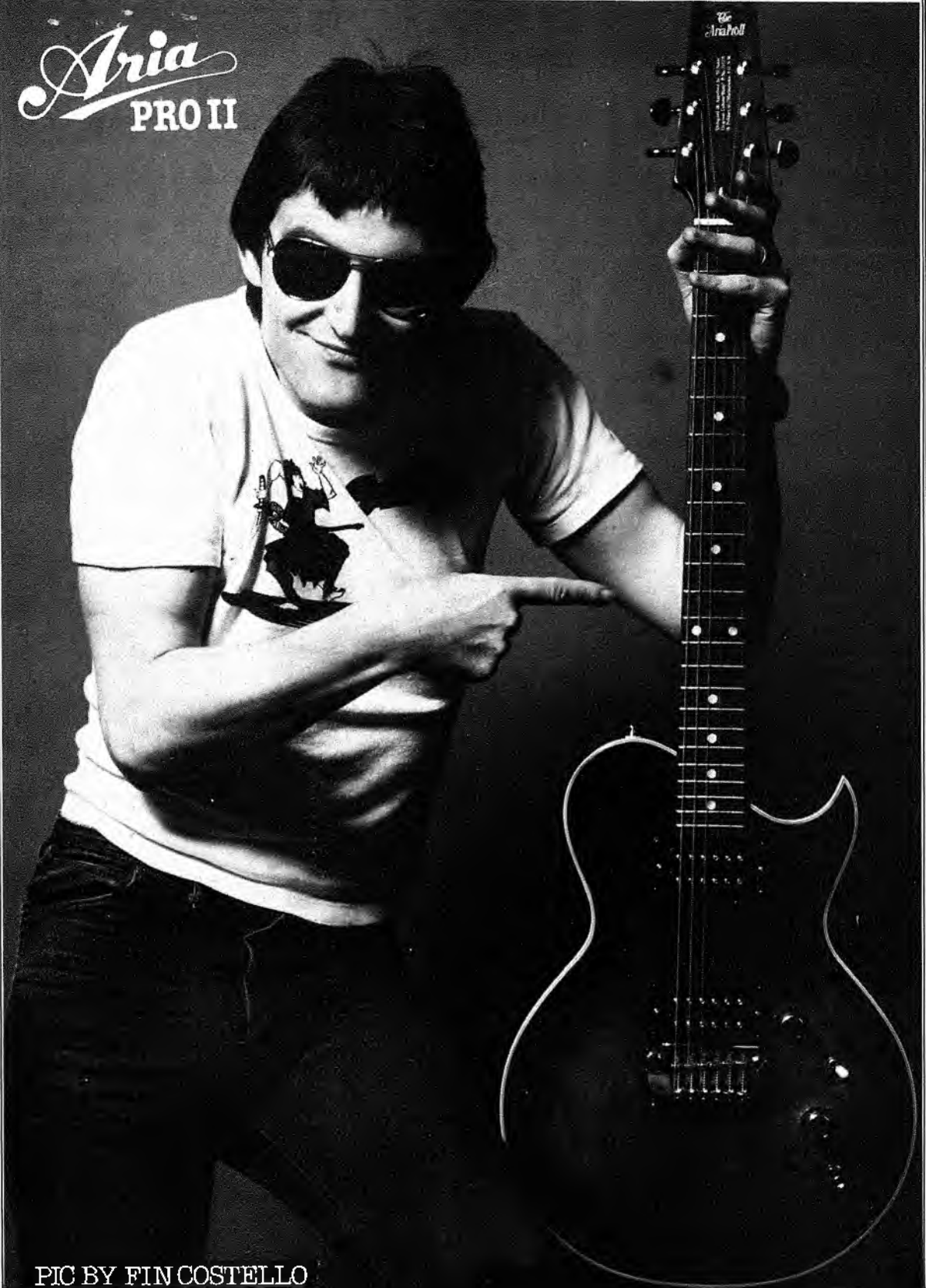
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DAVID SANCIOUS

Keyboardist David Sancious is perhaps one of the brightest rising stars on the musical scene today. Elton John called his new album, "True Stories," one of the best of 1978. Bruce Springsteen found him the consummate musician during their touring and recording time together, and audiences throughout his current solo tour (with the group Tone) have been enthusiastically responding to David's blend of driving jazz-rock, introspective impressionism and virtuoso use of synthesized and acoustic keyboards.

Onstage, not many keyboardists command the complete attention David does, but then, one immediately becomes aware that Sancious is a unique musician. Exposed to diverse musical forms at an early age (his mother played

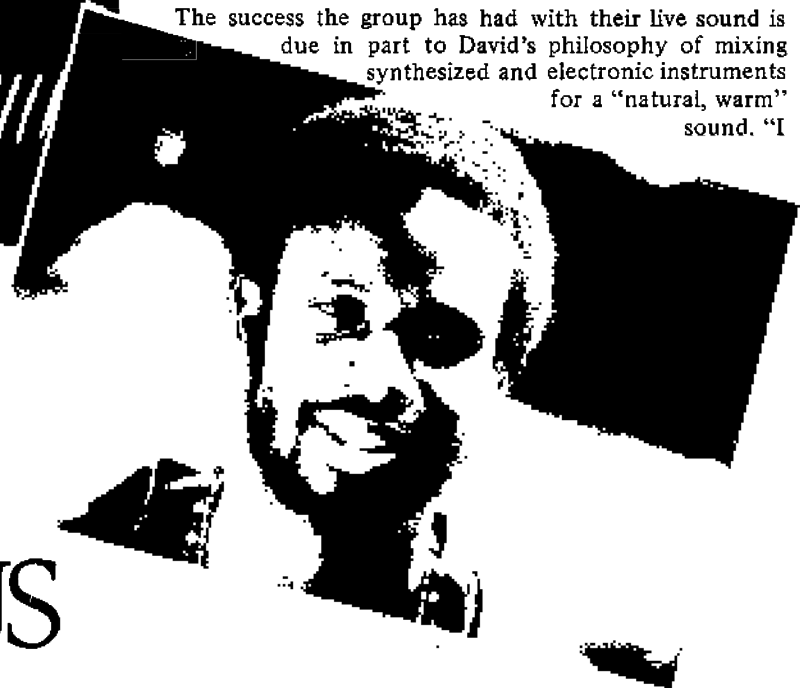
classical piano and his father was an avid listener to jazz and be-bop records), he began classical piano lessons at age seven. His dreams of a classical career took a turn to more contemporary styles when his brother introduced him to Motown, rock and jazz.

After playing in local bands between 11 and 14, Sancious met Bruce Springsteen. The two toured together and Sancious later contributed to Springsteen's recording career. He played piano and organ on *Greetings from Asbury Park, N.J.*, played a multitude of instruments and arranged strings on *The Wild, the Innocent and the E Street Shuffle*, and contributed the piano part on the single *Born to Run*. After leaving Springsteen's group in 1974, Sancious did session work with a number of jazz artists, including Narada Walden, Lenny White and Stanley Clarke.

In his present group, the lead vocals of Alex Ligertwood and background vocals of Gail Boggs and Brenda Madison have developed an entirely new dimension to the strong instrumental core of Sancious, Ernest Carter (drums) and bassist Gerald Carboy. Explains David: "The vocal harmonies are something we worked hard on for this tour and it's beginning to fall into place."

Touring with Springsteen was not such a burden on the keyboardist as fronting his own band, but Sancious has now logged a sufficient number of touring miles to feel comfortable in the situation. One thing he did learn on the present tour was the dearth of playable clubs. "It seems that most clubs were originally designed for some other purpose and were then converted into clubs or concert halls. Even the well-known ones are horrible, from the performer's point of view. For the audience it may be fine, but don't forget the performer has to deal with small, unventilated dressing-rooms, no direct access to the stage, poor monitor systems and so on. One positive part of this year's tour was the top-notch sound crew the band worked with. Eddy Offord and Rob Davis (who did the sound for the Rolling Stones' last tour). "Nobody this tour came up to me after the show and said, 'you were great but we couldn't hear the drums.'"

The success the group has had with their live sound is due in part to David's philosophy of mixing synthesized and electronic instruments for a "natural, warm" sound. "I



spend a lot of time with my instruments and with equalisation. I try to make the electric instruments not sound electric or artificial at all." Indeed, onstage, David's instruments have a noticeably warm and animated texture, particularly the electric Yamaha grand piano which, in his hands, lives up to its billing as the equal of any "miked acoustic grand."

David explains his technique: "I find electronic instruments lack bottom, and to compensate for this I add quite a bit of bass. On the other hand, they tend to have an excess of highs, so I roll the highs. If I played the instrument with a flat response, I'd get that tinny, cold sound that synthesized instruments are noted for." He then adjusts the midrange to the needs of the particular instrument and desired texture.

David also arranges his instrumentation with that "warm sound" in mind. "I use the Polymoogs for brass sounds, string sounds and pipe organ sounds. The Minimoog which I keep on top of the two Polymoogs is used as a solo instrument. The Prophet-5 is a back-up unit. I just got it before the tour and haven't had time to experiment with it." After the tour, however, he plans to have it modified by adding a foot pedal system, including a modulation pedal.

David's introduction to electric instruments came early on, in grammar school, when he picked up the electric guitar. He quickly added a Hammond B-3 organ to his repertoire which he found in the back of an organ shop. "I was just heading for the door when I spotted it. It was used and the owner had just renovated it, so I got it for a steal."

From there, he gradually added instruments, one at a time, developing his meticulous keyboard style step by step. "The first time I actually tried to use two keyboards was when I was playing with Springsteen. I added a grand piano to my Fender Rhodes. For a time, I worked with only those two. When I left Bruce, I got my first Minimoog." Then the set-up grew to the Hammond, a grand piano, the Fender Rhodes and the Minimoog. "I used that arrangement for the period I did session work. When I started my first album, "Forest of Feelings," I added another Minimoog and a Yamaha organ."

He finds his present set-up of two Polymoogs, one Minimoog, the Yamaha electric grand and the Prophet-5 sufficient. "What I play live is basically everything I own now. Except one more piece I want to add, the Crumar T-1. I find it good for getting the Hammond organ sound without having the awkwardness of carrying around the heavy organ. It is the first electronic reproduction of the tone wheel sound which is pretty true and the Crumar's percussion section is as expansive and powerful as the B-3."

For effects, David uses an MXR Flanger and MXR Digital Delay on one Polymoog. The use of effects is, again, intentionally directed toward creating a warm sound. "The Polymoog," he explains, "has a good modulation section which gives a nice phased sound. But I find that by supplementing that phase, with the MXR flanger, I get a very convincing pipe organ." David plans to add more rack-mounted effects and after the tour, will "shop around for the quietest effects."

No matter how accomplished others may feel David is, he praises the value of "creative practice exercises" which he



has used since childhood. "I was fortunate to have a really fine piano teacher. Through classical music I came to appreciate the value of good technique as a means to an end. My teacher showed me a way to practise less minutes per day and get more results."

The valuable system utilises the principle of creative thought. David explains: "In the usual practice system, if a student has difficulty, he'll be presented with a series of exercises designed to knock down the barrier through repetition of rote exercises. But a quicker way to approach the problem is to be sensitive to the source of the problem. Look inside of it. For example, if you have problems with a particular passage, instead of repetition, find out why you're having trouble. Perhaps, for example, your fourth finger is too weak. The answer

is to devise an exercise which will build up that finger. My teacher taught me to keep my eyes open and be imaginative with my solutions."

Right now Sancious finds composing the best source of practise for him. "When I write a piece, there is very little I can play of it without intensely practicing it. There are too many new inversions, new chord sequences and rhythms." On his first album, he developed a daily routine to learn the pieces. It consisted of getting up early every morning, playing scales to warm up and then spending time learning the piece. The routine had three beneficial results: "One, I gained in overall musical knowledge. Two, I became a better piano player; and three, I got my hands in better shape, stronger and more developed."

Though his compositions are more in line with jazz-rock, David draws his inspiration from his classical background and is still particularly influenced "at heart" by Beethoven. In the future, he intends to incorporate a theory of "an expanding tonal scale" as developed by Tom Stone, formerly of the California Conservatory. According to Sancious, "The system works on rediscovered ancient knowledge which utilises the vibrations of sound more effectively as a vibrational force, than does our present 12-tone scale. It is a musical sound-vibrational system. Not many people realise the responsibility a musician has, as one who controls sounds and vibrations. Especially if one realises the whole universe is built upon sound."

Though he has been winning a slow but steady mass appeal, it is not something Sancious strives toward deliberately. He says: "I can't see putting 20 years of your life into something and then compromising just because society's idea of what's good doesn't coincide with what you feel you must do. The music I play is what I believe in and I do my best for whoever is willing to listen. To me, that's the difference between an artist and an entertainer. The entertainer plays to the mass audience and follows the fashion. The artist makes art, regardless of what happens around him. Entertainment is, at best, entertaining as well."

To David, three bands in the Seventies stick out as having produced a unique sound. "Yes, through the first few albums, produced a fresh and unique sound combination. The other two are Shakti and Weather Report." Of Springsteen, he laughs and says, "Bruce is definitely an artist, but Bruce is an artist who also happens to be very entertaining."

By Gary Graifman

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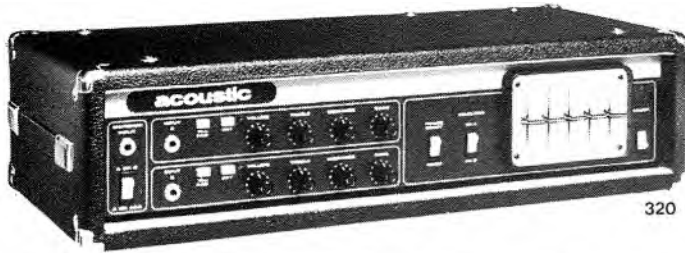
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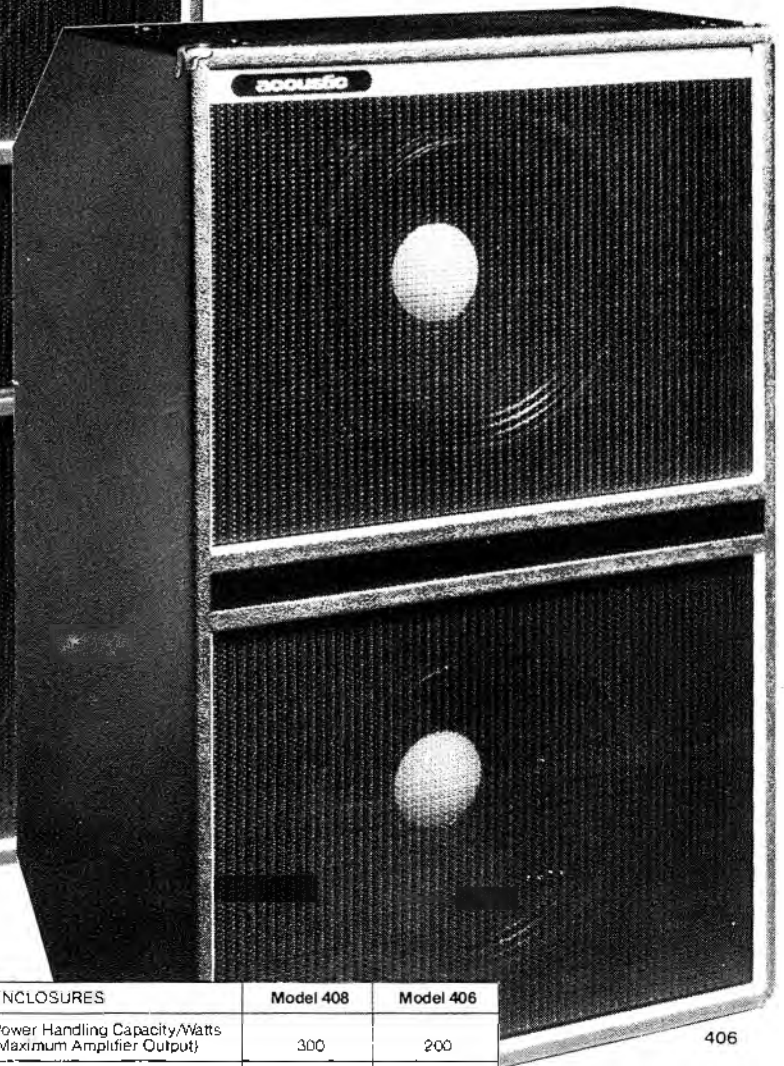
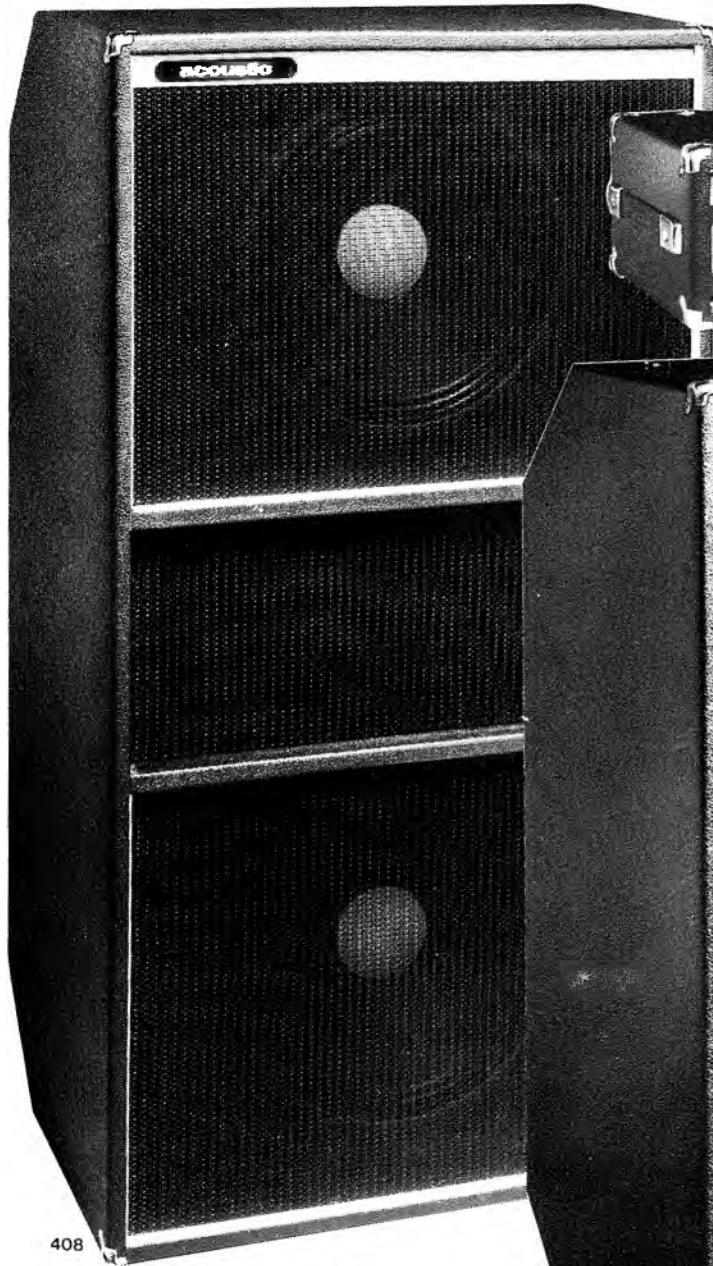
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Two & three hundred series



model 320 bass amplifier

Features: Two switchable channels with flexibility to operate separately, combined or be switched between the two. Footswitchable 5 band graphic equalizer. Six in/out preamp jacks allow patching of effects between preamp and power amp for optimum performance and give access to Channel A, Channel B or both combined. Treble, midrange, and bass controls. Input pad and bright switch on each channel. LED indicators note power, EQ and channel selection. Two section foot switch "Power Boost" switch provides punch for low gain instruments.

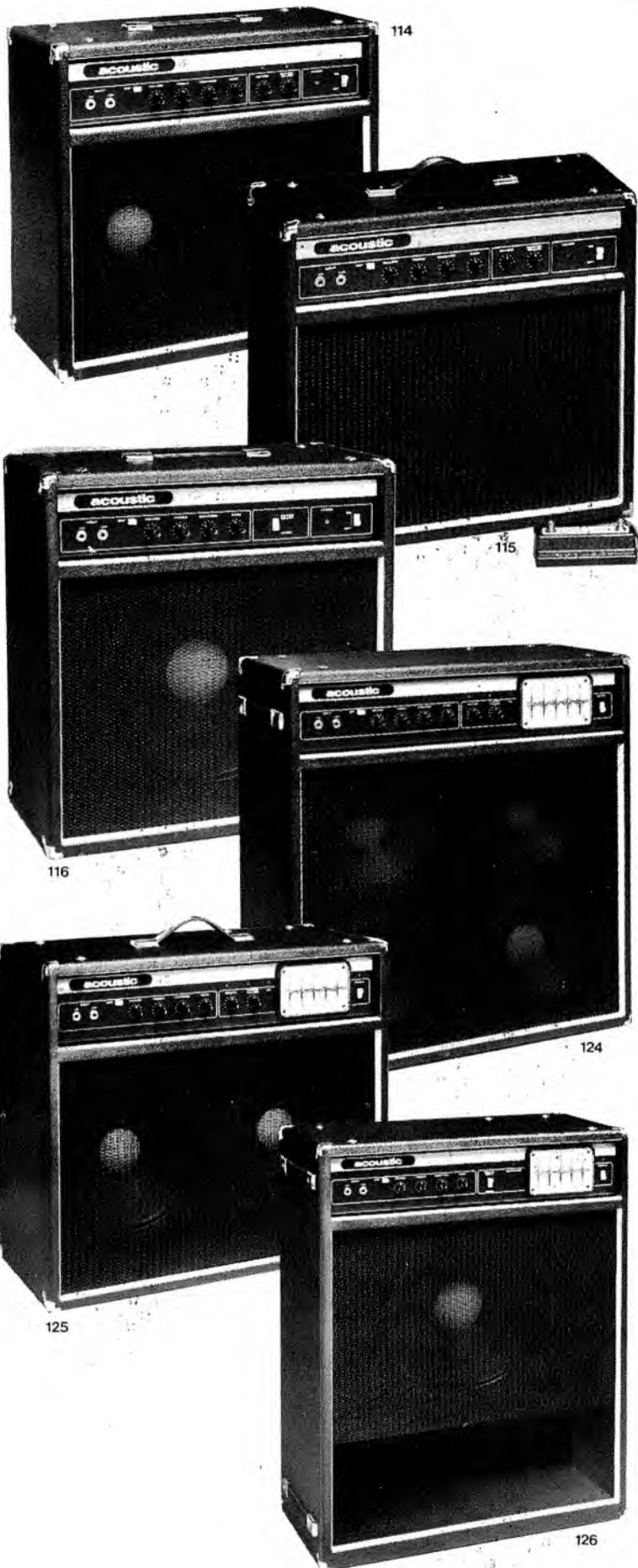


model 220 bass amplifier

160 Watts RMS @ 5% THD into 2 Ohms
125 Watts RMS @ 5% THD into 4 Ohms
¾" plywood with interlocked dado construction
Features: High and low gain input jacks, bright switch, treble, midrange and bass controls, power boost switch, and footswitchable 5 band graphic equalizer. Preamp in/out bypass jacks for internal patching of accessories. LED indicators note power, EQ and channel selection. Will accept 120 and 240 Volt supply. Dimensions: 6½"H x 11½"W x 26½"D. Shipping Weight: 35lbs.

ENCLOSURES	Model 408	Model 406
Power Handling Capacity/Watts (Maximum Amplifier Output)	300	200
Nominal Impedance/Ohms	2	4
Enclosure Type	Tuned Combination Reflex	Front Loaded Vented Baffle Tuned Reflex
Speaker Complement	4-15" Spkrs	2-15" Spkrs
Overall Size/Inches (HxWxD)	50x26½x20	43x18x24½
Shipping Weight/Pounds	142	130

One hundred series



model 114 guitar amplifier

50 Watts RMS @ 5% THD
 2-10" speakers in an open back cabinet
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 Features: High and low gain input jacks, bright switch, treble, midrange and bass controls, a footswitchable gain compensated master volume control, a footswitchable reverb control. Preamp in/out bypass jacks for internal patching of accessories. LED indicators note power, reverb, and master volume status. Will accept 120 and 240 Volt supply.
 Dimensions: 20" H x 22" W x 10" D.
 Shipping Weight: 55lbs.

model 115 guitar amplifier

50 Watts RMS @ 5% THD
 1-12" speaker in an open back cabinet
 $\frac{3}{4}$ " plywood with interlocked dado construction
 Features: High and low gain input jacks, bright switch, treble, midrange and bass controls, a footswitchable gain compensated master volume control, and a footswitchable reverb control. Preamp in/out bypass jacks for internal patching of accessories. LED indicators note power, reverb, and master volume status. Will accept 120 and 240 Volt supply.
 Dimensions: 20 $\frac{1}{2}$ " H x 22" W x 10" D.
 Shipping Weight: 55lbs.

model 116 bass amplifier

75 Watts RMS @ 5% THD
 1-15" speaker in a tuned-reflex cabinet
 $\frac{3}{4}$ " plywood with interlocked dado construction
 Features: High and low gain input jacks, bright switch, treble, midrange and bass controls, and power boost switch. Preamp in/out bypass jacks for internal patching of accessories. LED indicators note power. Will accept 120 and 240 Volt supply.
 Dimensions: 22 $\frac{1}{2}$ " H x 22" W x 11" D.
 Shipping Weight: 60lbs.

model 124 guitar amplifier

100 Watts RMS @ 5% THD
 4-10" speakers in an open back cabinet
 $\frac{3}{4}$ " plywood with interlocked dado construction
 Features: High and low gain input jacks, bright switch, treble, midrange and bass controls, a footswitchable gain compensated master volume control, a footswitchable reverb control, and footswitchable 5 band graphic equalizer. Preamp in/out bypass jacks for internal patching of accessories. LED indicators note power, reverb, EQ and master volume status. Will accept 120 and 240 Volt supply.
 Dimensions: 27 $\frac{1}{4}$ " H x 11 $\frac{1}{2}$ " W x 26 $\frac{1}{4}$ " D.
 Shipping Weight: 80lbs.

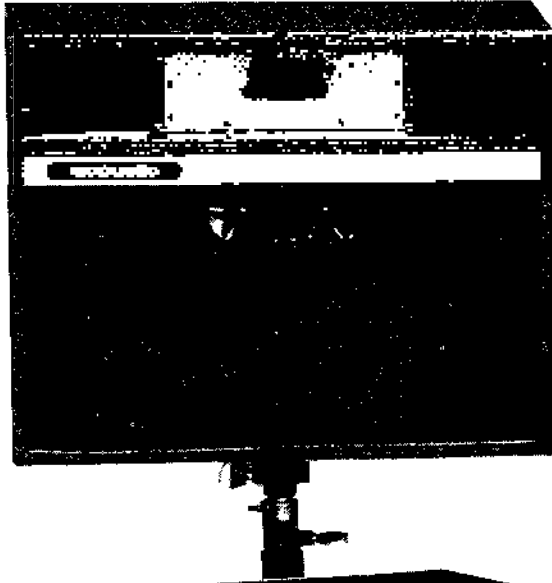
model 125 guitar amplifier

100 Watts RMS @ 5% THD
 2-12" speakers in an open back cabinet
 $\frac{3}{4}$ " plywood with interlocked dado construction
 Features: High and low gain input jacks, bright switch, treble, midrange and bass controls, a footswitchable gain compensated master volume control, a footswitchable reverb control, and footswitchable 5 band graphic equalizer. Preamp in/out bypass jacks for internal patching of accessories. LED indicators note power, reverb, EQ and master volume status. Will accept 120 and 240 Volt supply.
 Dimensions: 23 $\frac{3}{4}$ " H x 11 $\frac{1}{2}$ " W x 26 $\frac{1}{2}$ " D.
 Shipping Weight: 80lbs.

model 126 bass amplifier

100 Watts RMS @ 5% THD
 1-15" speaker in a vented baffle cabinet
 $\frac{3}{4}$ " plywood with interlocked dado construction
 Features: High and low gain input jacks, bright switch, treble, midrange and bass controls, power boost switch and footswitchable 5 band graphic equalizer. Preamp in/out bypass jacks for internal patching of accessories. LED indicators note power and EQ. Will accept 120 and 240 Volt supply.
 Dimensions: 33 $\frac{1}{4}$ " H x 12 $\frac{1}{2}$ " W x 26 $\frac{1}{4}$ " D.
 Shipping Weight: 105lbs.

802



model 833 power amplifier

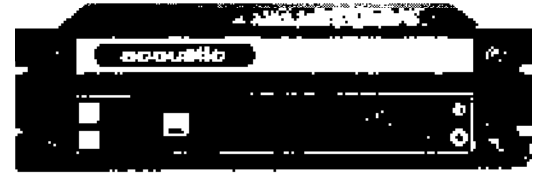
200 Watts RMS into 2 Ohms

Features: Input level control, rack mountable, ¼" standard phone jacks on front and rear for input connection, two ¼" standard phone jacks on rear panel for speaker connections. Short circuit protection without program interruption.

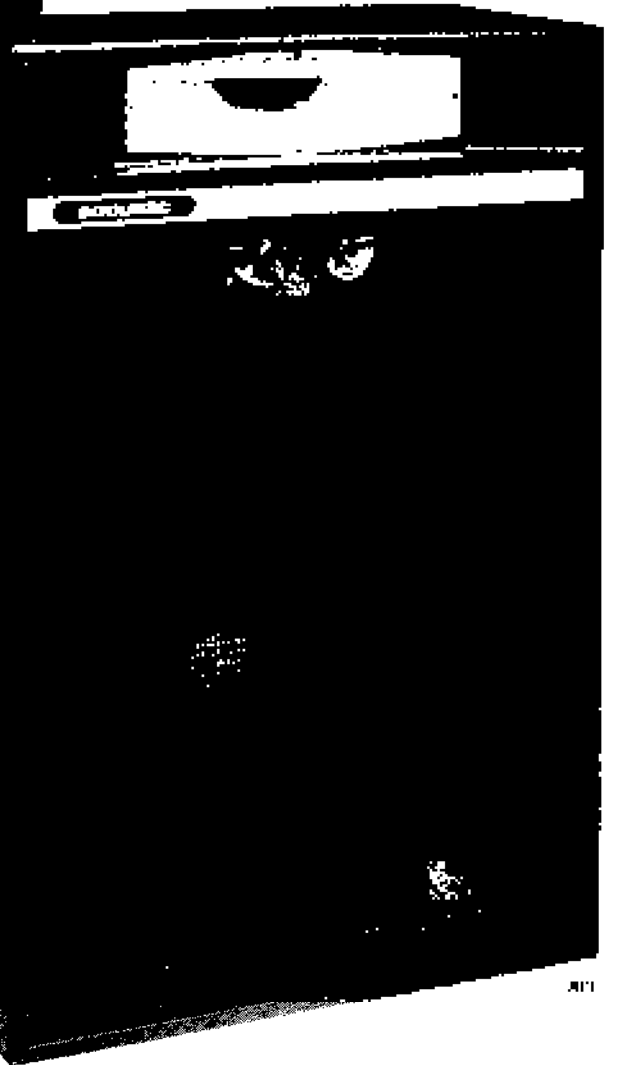
Dimensions: 5½"H x 19"W x 15½"D.

Shipping Weight: 35lbs.

816



833



816

ENCLOSURES	Model 802	Model 813	Model 816
Power Handling Capacity/Watts	125 Watts RMS	175 Watts RMS	125 Watts RMS
Nominal Impedance/ Ohms	8 Ohms	4 Ohms	8 Ohms
Enclosure Type	Front Loaded Tuned Reflex	Front Loaded Horn with Tuned Reflex	Front Loaded Tuned Reflex
Speaker Complement	1-12" Spkr/Lows 1-Horn/Mids 2-Piezos/Highs	2-15" Spkrs/Lows 1-Horn & Driver/Mids 2-Piezos/Highs	1-15" Spkrs/Lows 1-Horn & Driver/Mids 2-Piezos/High
Range	Full Range	Full Range	Full Range
Overall Size/ Inches (HxWxD)	20x24½x15½	40x26½x16	30½x24½x16
Shipping Weight/Pounds	65lbs	115lbs	65lbs

Construction: All models ¾" plywood with interlocked dado construction and hard coat finish.

model 400 stereo power amplifier

375 Watts RMS/per channel into 2 Ohms

One LED overload indicator per channel

Features: Dual power supplies, separate input level controls, separate power switches, high speed fan cooled, rack mountable, RCA pin type (phone) and 1/4" standard phone jack inputs on front and rear, banana plugs and 1/4" standard phone jack outputs. Thermal and short circuit protection without program interruption.

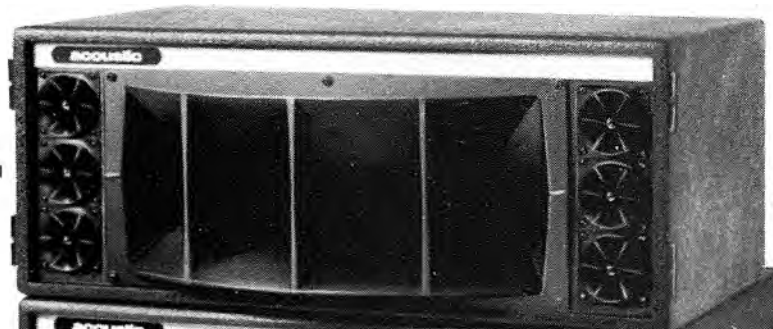
Dimensions: 8 3/4" H x 19" W x 19" D.

Shipping Weight: 67lbs.

400



811



812



model 911 powered mixer

200 Watts RMS into 4 Ohms	Built-in reverb
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Two separate output channels (master & monitor)	Eight segment light bar
Nine band graphic equalizer + 18db	Plywood/Fibreglass case and cover



911

801



ENCLOSURES	Model 801	Model 811	Model 812
Power Handling Capacity/Watts	50 Watts RMS	125 Watts RMS	400 Watts RMS
Nominal Impedance/ Ohms	16 Ohms	8 Ohms	2 Ohms
Enclosure Type	Multi Angle Monitor	Horn System	Front Loaded Tuned Reflex
Speaker Complement	1-12" Spkr/Lows 1-Horn/Mids & Highs	1-Horn & Driver/Mids 6-Piezos/Highs	4-15" Spkrs/Lows
Range	Full Range	Above 500 Hz	Switchable Full/Below 500 Hz
Overall Size/ Inches (HxWxD)	15x21 1/2 x 14 1/4	13 1/2 x 33 1/2 x 19 3/4	33x40x24
Shipping Weight/Pounds	38lbs	85lbs	175lbs

Construction All models 3/4" plywood with interlocked dado construction and hard coat finish.

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Kitchens of Leeds,
26 Queen Victoria Street,
Tel: 0532 446341.

Bedford

Mr. Music,
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Tel: 0234 50861.

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Unisound,
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Tel: 01-624 3900.

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Higham House, New Bridge St,
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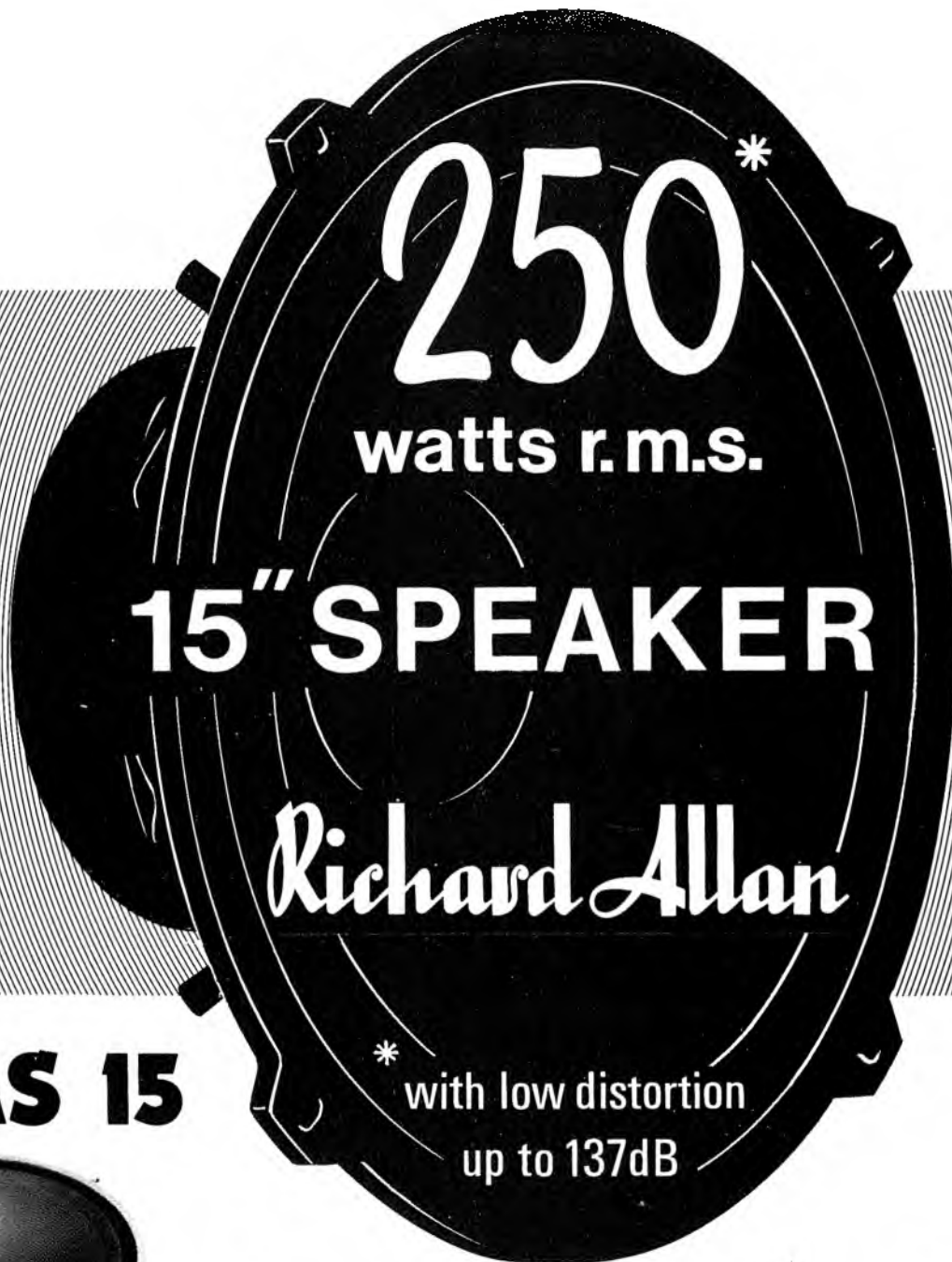
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ROY AYERS

Full of good vibes



By David Lawrenson

At a time when many top jazz stars, from Herbie Hancock to Miles Davis, are being accused of "selling out" to commercialism, it is refreshing to find one musician who admits doing it for the money.

Vibist Roy Ayers has seen too many good players fall on hard times, after giving so much of their lives to music, to be affected by criticism from so-called purists. For much of his 20 years as a professional musician he has received critical acclaim but little financial gain. Now he is beginning to redress the balance.

Roy first came to the attention of jazz fans in the Sixties through his early session work and later playing vibes with Herbie Mann. He formed his own group in 1970, but it was only in the last couple of years that he has hit on a formula which has provided him with both disco and chart success.

The vibraphone remains one of the uncommon instruments in modern music, and its best exponents can be counted on one hand. It appealed to Roy from an early age, and in fact his musical career got off to quite a start at a very early age: "When I was five years old, Lionel Hampton gave me a set of vibes mallets. My mother and father remember it and so does Lionel Hampton but I don't — and unfortunately I don't still have the mallets. Still, the instrument intrigued me considerably, and when I first saw Cal Tjader I knew what I wanted to do. I knew I was going to be a musician, and when I first heard the vibes I knew

I was going to play vibes. I had played music all through school, mainly percussion instruments, and I got my first set of vibes when I was 18. It was very difficult in those days to get lessons on the vibraphone, so most of the time I taught myself. I think I have to attribute most of my success, as far as learning how to improvise, to other musicians who played other instruments.

"At the beginning I found it very difficult to copy other vibists because of their speed and knowledge of improvisation. What I did was to take the record and slow it down. I was able to copy down, not on written paper but as far as memory was concerned, some solos by Cal Tjader and a couple by Milt Jackson, but I really got a lot out of copying down some sax solos and some piano solos."

Apart from the obvious shortage of people to teach the instrument and the so few vibists around to copy, there is also the problem of physically playing the thing. It is quite unlike any other instrument, both in structure and the way it's played, and requires

some special skills.

Roy explains: "The technical demands are extremely evident when dealing with the vibraphone. First of all, you have to have very good balance. I think it is the only instrument that you cannot feel with your hands directly — you use mallets. You have to feel it as you go along. You have to maintain a firm balance, being accurate in your delivery and watching what you are doing. After a while you have this picture of the instrument drawn. I often put towels or covers over my vibes and I can be basically accurate because you get an automatic feeling after a while."

From his own early groups on the West Coast, Roy began playing with a series of big bands in the early Sixties and eventually became a busy session player. In 1966 he won the *Downbeat* critics award in their jazz poll, the same year he received an offer to join Herbie Mann in New York. Roy admits the decision was difficult because at that time he was a much-in-demand session player, but he finally opted to join Herbie.

It was while he was with Mann that Roy began to experiment with amplifying his instrument. "The problem with playing vibes unamplified is that when you have guitars, bass, horns, etc. you can't hear. Even with mikes it is difficult to pick up the total sound of the vibes.



"I started playing electric vibes in 1969. I was talking to a guitarist about amplification and he said he could make me pickups similar to guitar pickups. We had to take the resonators out and I used them for quite a while, but the biggest problem was when you struck the note, you would get a thump as well as the note coming through the speaker. Clarity was also a problem. Eventually I found that Deagan had made a very good pickup which went right into the keys and it turned out to be the best one. It gave the clearest sound and is probably the best there is for vibes.

"As far as amplification is concerned, I use Sunn or Fender twins which give me the clearest sound. I try to get the closest sound I can to ordinary vibes and it's been working. The effects I use are a Bigg Muff fuzz and a wah-wah. I've always wanted to incorporate some form of synthesizer into my music by connecting it to the vibes. I think I will at some time, but I still love the clarity and beautiful sound of the vibes, it's very haunting."

He was with Herbie Mann until 1970, when he left to form his own band, Ubiquity, and signed with Polydor. During the ensuing years he began exploring new musical areas and in particular incorporating vocals into his music. Although this change did not endear him to the jazz critics, he felt it was necessary and it also turned out to be financially rewarding.

"You go through a stage where you're trying to find out what your sound's going to really be — and this is what I went through. In the time that you're finding that out, you're getting little pinches of some money and then all of a sudden you get a big record and get considerably more money than you have ever had in your life. You say, 'Hey, this is nice! I can do this and I can do that and also — I don't have to work so hard.'

"There was a considerable amount of criticism about me changing over from just vibes, but I had watched a lot of musicians through the years who never reaped any benefits from their contribution to the world of music. I said, 'I don't want to go down and up that way, I want to have something so I can say that I've contributed all this beautiful music and at the same time I've got a nice house and lots of other things!'

"I've got something now. I won't have to wait till I'm 50 or 60 and go around trying to get a gig for \$25 or \$30 and compete with guys of 18 and 19. I really started thinking about business, the business involved in music, because the awareness of business is extremely important to me and it's becoming more evident that it's becoming more important to a lot of other musicians."

Roy has been through the whole "cool" stage of being a jazz musician, and with Herbie Mann he began to become more of a showman. He remembers, for example, getting so

carried away during a solo that he would literally tear the keys off the vibes to give a sound like glass breaking. Although he may have just played the greatest vibes solo in the world, it was ripping off the keys which brought the audience to its feet.

He has great respect for the work of Herbie Hancock and believes he is pioneering new dimensions in music. Roy feels that musicians such as Coltrane and Eric Dolphy were criticised similarly for trying new things, only to be praised years later — often by the same critics.

With the type of music he is playing now, he feels that he is reaching a whole new audience, opening up new areas for musicians to work in and audiences to enjoy. He has become involved in production and has in fact formed his own production company in much the same way as Herbie Hancock and Donald Byrd. His new-found success also enables him to work in other fields with other musicians, and he recently completed a highly successful album with Wayne Henderson.

"In many cases when I'm interviewed by critics, they often ask me, 'Roy, aren't you selling out? Are you doing this, that and the other?' The answer I have for that is that all these musics are instilled in me and now, in some kind of way, form or fashion, they're coming out of me in vocals and instrumentals. In combining the two, I think it is really good for me. It's a total outlet."

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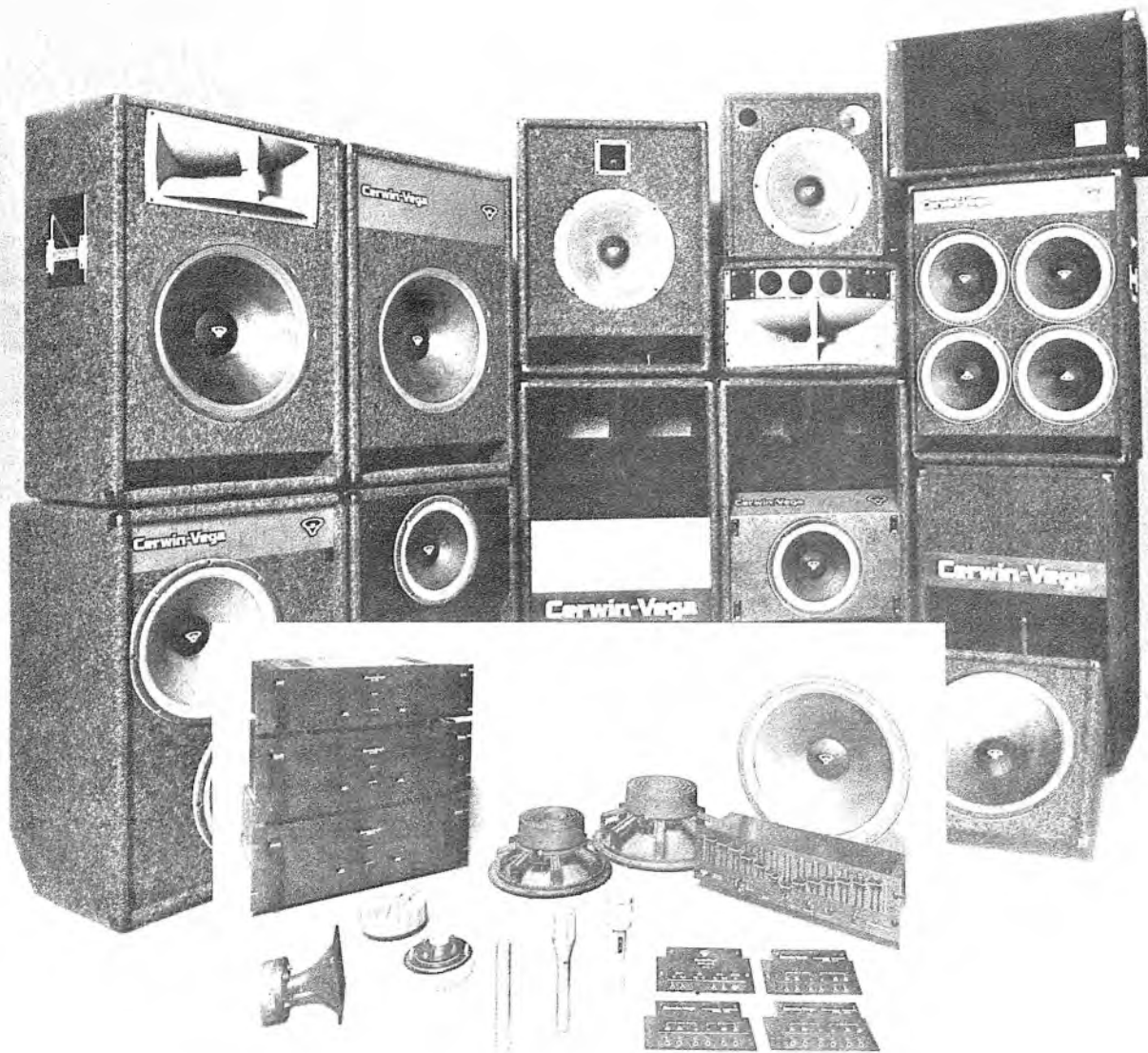
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Cheap Trick means Hard Work

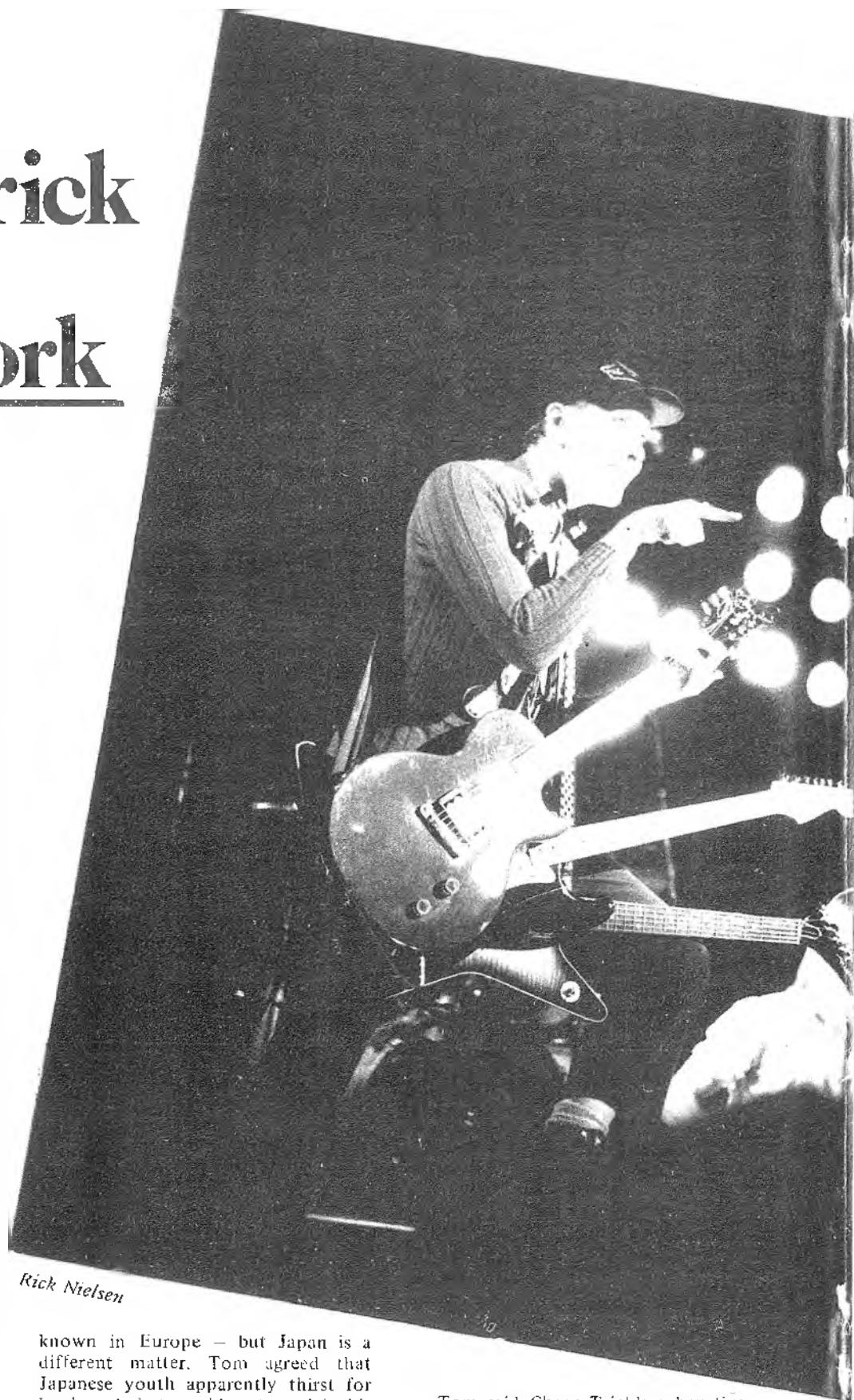
It's much wilder live. We're not cautious." The speaker is Tom Petersson, bassist for one of America's hardest rocking bands, Cheap Trick. The zany onstage antics of lead guitarists Rick Nielsen and his crazed cohorts have attracted attention to Cheap Trick, and their skeletal style of rock and roll, delivered with the utmost assurance and panache, is reeling in fans. Cheap Trick have just released their fourth album and a fifth will follow in a couple of months. They have been touring — relentlessly for five years — their capacity for work is staggering. A few UK dates last year was all they had done in Britain until this January/February, when a hectic tour took them all round the nation.

Cheap Trick is Rick's ruse. He is the band's mainman. On stage he's the clown, but he's also the careful instigator of the band and its music. Though his appearance is loony, his moves are calculated and an acute business sense sometimes shows beneath his subliminal promotion of the band. Most of all, he loves to act. He and his bass partner Petersson, along with drummer Bun E. Carlos and singer and rhythm guitarist Robin Zander, are a tightly-knit group whose motion is definitely forward.

Tom Petersson ran the gamut of his musical life in a London hotel while Japanese journalists buzzed in and out, reporting on their country's most popular rock act since Deep Purple. Some hours later, Rick Nielsen quipped across a bar table in Brighton, shocking the 3am crowd by wearing every daffy stage accessory he could find.

Rick's background is entirely musical. His parents sang opera and he was encouraged by them to overcome his slight disdain for the professional musician's life. Tom, who came from Sweden to Chicago as an infant, began playing pop in his early teens "because it seemed like fun". They have played together for more than 10 years.

Though they are well respected in the US, Cheap Trick are not well



Rick Nielsen

known in Europe — but Japan is a different matter. Tom agreed that Japanese youth apparently thirst for hard rock but could not explain his band's popularity there. "They just found us," he said. "The albums were released there and we started getting hit singles out of the blue, really.

"We are very lucky, we appeal to many age groups, we don't just go for kids. If they like us that's good, if people my age or older like us, that's great but we just play what we want to hear. We're not a big teen group in the States either, we never got for the 16-year-olds — but if it happened we wouldn't throw it away."

Tom said Cheap Trick's exhaustive years of touring were and are still a matter of their own choice. "We like to play, even if at this point we have to do it. We won't just sit around, there's no reason for it. We are in a position where we can play a lot and we do it, it's good for us. We used to work 300 nights a year in clubs, when we first played together and recorded. We worked like that until our first album was released. We kept playing but the only reason why we didn't play 300 nights any more was because we had to take time off to record."

Tom Petersson



by Sean Hogben

Rick's reasoning for hard touring is slightly more hard-headed. He said of their current schedule: "We'd like to be popular in Europe and England for sure. It would be easier for us not to come here, we're losing 100 thousand bucks on this tour. At least that. If the record company weren't putting in money it would be more. It is a financial loss but it should be good for us, even if we never make the money back. We don't expect to. We think we've got good music, a good band and there is no sense in depriving ourselves of coming, and others of hearing, if we think we have something good."

It is a true assertion. Cheap Trick in performance is an awesome spectacle. A Sussex University audience were visually affronted by the band and were left limp by their onslaught of 4/4 rock. Petersson made his eight-string Alembic fairly hum — a bass solo he played with synth pedal-accompaniment featured teeth-shattering open chords. Ben E. was not showing off, preferring to hold the beat and keep the band tight. Robin Zander looked cute but his vocals soared, despite a slight rasp. Nielsen strafed the whole lot with hot, metallic riffs, and the band played flat-out from start to finish.

It was straight-ahead hard rocking and the audience lapped it up. Rick said it was fairly typical, "less of the 'clap your hands', less of the virtuoso stuff and less of the drum solo. Less of all those terrible cliches."

Though fairly modest, Rick did admit to replacing Todd Rundgren in the Nazz. He and Tom had played together in a band called Fuse which

worked around Chicago and the US Midwest. They then joined up with Robert "Stewkey" Antoni, who played keyboards and Thom Mooney on drums and gigged through the States. In 1969, they had a band called The Sick Man of Europe. They met drummer Carlos in Germany and singer Zander soon after. Cheap Trick was formed and working in clubs

was formed and working in clubs for several years before their first album was released in 1977.

Rick has always played guitar, and briefly keyboards, while Tom switched from guitar to bass because Rick took the guitarist's spot in the first band they played in. They were both influenced by the Ventures, Stones and Beatles and Tom cites Duane Eddy as an important, early influence. They have written songs together since they met.

Tom said Rick churns out songs all the time. "He is great to bounce off, he is very creative. He likes to try almost anything so it's a lot of fun. If he did solo things it would be quite a different situation. We throw out most of his ideas and he doesn't mind. They come in an uncompleted form and often just fall together. When you are so close to the things you write you need someone else to say 'that passage is horrible.'

"We used to work out a lot of clever changes, mostly in the club days. We were a really crazy band but we knew people wanted to dance — we played all sorts of crazy times and changes that only musicians would understand. We used to play the quickest fade in the world, following a blues riff and lots of strange endings that took ages to work out how to play, but it all went over

people's heads. So we thought 'who needs it?'

"One of the first songs that we did was *Surrender* — it just never made it on an album," said Tom. "We take things and put them on tape, then we find a lot of things when we go through them. We try to learn to play as many things as possible, even the ones we don't like, because later on we might hear them and say 'hey, that isn't so bad.' We might take a phrase from a tape, or the whole thing ... it's boring sometimes, writing songs when it is your only time off."

However trying the process may be for Tom, Cheap Trick arrive at a recorded sound that fits together like a jigsaw puzzle. Rick and Tom agree that their songs are often hung on a bass or guitar riff, even if that are added after a chord pattern is devised. Cheap Trick are wont to hole up in a rehearsal studio for a week before their album sessions, write all the tracks, then go and record them in four weeks.

Their first three albums, recorded in the first year of their contract, and the LP due for April release attest to Cheap Trick's prodigious studio efforts. Tom said the recent *Live At The Budokan* album was originally only planned for Japanese release but massive imports into the US convinced them to release it worldwide. "It was to be released in Japan only because we did well there, we had hits. Live albums are like greatest hits albums and who needs those? It is actually boring for us to do a live recording, to have to sit and mix it, listen to it — and promoting it is the worst. It's all the same crap again. I would rather go and do new songs. There is no comparison." ▶▶

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Cheap Trick means Hard Work

Despite the bassman's reservations, the live album is stunning. It was recorded at one show and finished in three days.

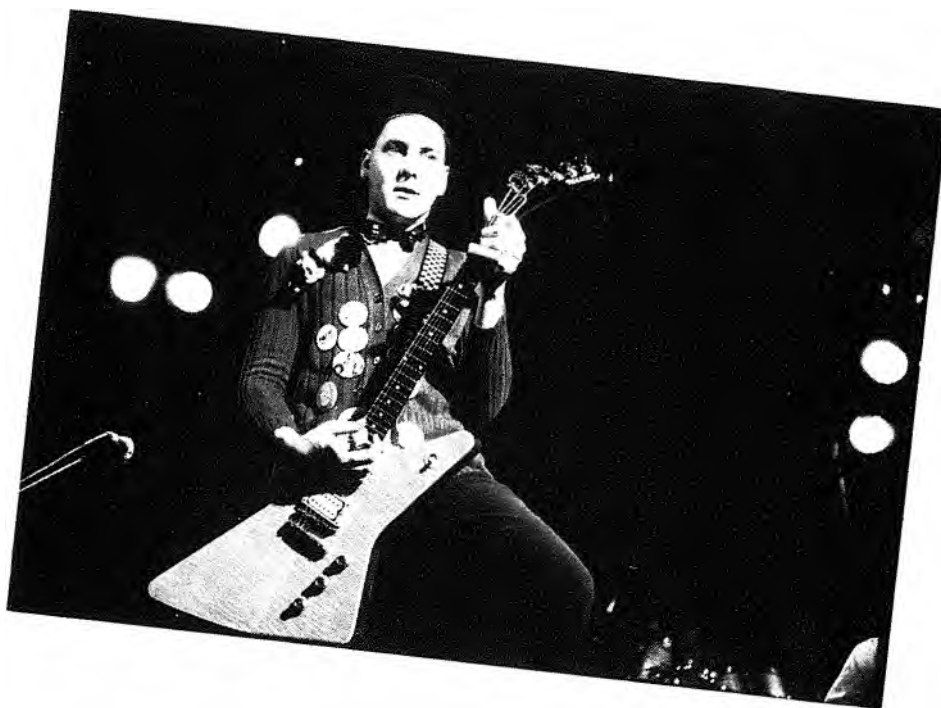
Cheap Trick owe their variegated sound to the incredible range of stringed instruments that Rick and Tom play. Tom uses 12-, 10-, eight-, five- and four-string basses made by Hamer, Alembic, Fender, Gibson, Hagstrom and Rickenbacker. He said: "I like really big sounds, lots of overtones and different instruments playing the same thing. I love to hear cellos playing guitar riffs with guitar and bass. Alembic make great eight-string basses. I'm using one of those now, it's beautiful. I had a 12-string Hamer made. I had an eight and said 'Why not make a 12?' It just takes strength to play but I'm used to it. Most people who pick it up say 'This thing's a joke.' They are used to flying all over the fretboard.

"I don't try to show off technically in a song, I like to hear one note. It's nice to hear Stanley Clarke, he's a great player. But at the same time, listen to that guy Cliff from AC/DC, he plays one note through a whole song because he knows what sounds good, I like that sort of thing sometimes too."

Rick has a stunning collection of 25 Gibsons, 23 Fenders, six Hamers, four Greco Rick Nielsen customs, 10 "copy" axes and Martin acoustics dating from 1860 and 1865. In performance he plays three guitars at once and hurls them 30 feet backstage when he's finished with them. "It's just another guitar, a couple of hundred bucks buys a new one," he explained.

One of his most striking instruments is his eight-string Hamer mandocello. It has two Cs, two Gs, two Ds and two A strings. He uses it for finales and its throaty roar has to be heard to be believed. He puts all his signals, without effects, through a bank of five Marshall 100-watt heads and six '68 Sound City cabs. "I use a Fender Deluxe aimed at me. All the heads are adjusted for either clean or dirty."

Tom knows what sound he wants from his amps. "I've got four 15-inch speakers in separate cabs, run by BGW or Crown amps, whatever is not blown up at the time. I don't know how many amps per cab or watts or whatever. I just ask the sound man what I need to get the best bottom and he arranges it. I know more about the guitar sound I can make, it is much easier to figure out. I have Fender Deluxe amps with one 12-inch speaker, a bit souped up,



heavier with a bit more output. Those things really scream. I also have a stack of Hiwatts with a 100-watt lead amp head, I use it for the middle sound. I use everything, all at once."

Rick, Tom and Robin don't use effects because, as Tom put it, "we don't have the time. It's bad enough trying to get a good amp sound. Effects always cause levels to drop and cut off the true amp sound. You just can't get it like you could plugged straight into a Fender amp."

Tom uses eight- and 12-string basses for their range. "Overtones are a nice added bonus, it drives them mad in the studio and they hate me for it. They say 'What was that and where did it come from?' I always loved the overtones on 12-strings, I loved the sound of the Byrds and I've got a lot of 12-strings that I'm always playing. They sound so good. Big G chords... put 'em through a stack of Marshalls and they sound great. I have used Rotosound string for years - John Entwistle had a really good idea there."

Rick does not admit to any particular player whose style has influenced him - except that he admires the Ventures. But Tom is a great fan of AC/DC, a copy-book hard rock band. "I like them for certain reasons. They are great live but I wouldn't suggest people dash off to see them unless they are absolute hard rock fanatics, unless you like MC5 or something. My girlfriend thinks they are horrible, that's probably why you never see girls at their concerts, just a lot of guys banging their heads against the stage. They are the kings, nobody beats them as far as straight rock goes. But they are so unidirectional, how much can you

take? I used to like the Sensational Alex Harvey Band too, they used to nearly kill themselves onstage but no one in the States seemed to get the joke. I know they did well here but critically they were murdered."

When Cheap Trick aren't sweating it out onstage they are recording. They choose their producers carefully. Said Tom: "The producer and the sound we try to record might depend on where we are doing it. We're not set on any producer's sound or methods. I would say no to producing ourselves because we like other people's input. It is much more important to get other people's opinions - anyone can come in and say 'Why don't you do this?' and if we like it we will do it. A producer is like the fifth member of a group, well like the sixth with us because our manager is very into the music. He is a good barometer for us that I'm sure a lot of people don't have. He's a player and that makes a lot of difference."

For this band, the future is oh so clear. Hard rock work will pay its dividends. Tom said: "It takes money to take time off so obviously we'll be working for some time. I'm not talking about Jimmy Page's type of time off. If we didn't play for two years everything would be completely screwed. We'd never come back to that level."

Rick's view of the future of Cheap Trick is dynamic. "For sure we're still building, are you kidding? Musically, we're still building and we're building an audience. We are building because really, we can play a lot better than we show off sometimes. We come on for impact, we come to put on a show".

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Martin guitars

The C. F. Martin Company was established in 1833 in New York City by Christian Frederick Martin, a skilled guitar maker from Mark Neukirchen, Saxony, Germany. In 1839, Martin moved his business and family to Nazareth, Pennsylvania, where the Martin Company is still located today. Although Martin guitars are produced in Nazareth from 1839 on, those made before 1867 were stamped inside the body on the centre strip of the back "C. F. Martin, New York", and those made between 1867 and 1898 were stamped "C. F. Martin & Co., New York". Today these guitars are referred to as "New York Martins". While there are many different styles of New York Martins, almost all of them are of small size, with 12 frets clear of the body, and are intended for use with gut strings.

A typical New York Martin featured rosewood back and sides, spruce top, cedar neck, slotted headstock, ivory bindings, and the so-called pyramid bridge with bridge pins. The workmanship of New York Martins is extremely fine, and despite their fragility a surprising number of them are still playable today. With proper care, competent restoration if needed, and the right strings, these guitars sound very good and can be excellent instruments to play, especially for fingerpicking styles.

Martin guitars made after 1898 are stamped "C. F. Martin & Co., Nazareth, Pa." and have a serial number stamped inside the body on the neck block. Since about 1930, the style designation as well as the serial number has been

Classic instruments from 1833 to 1979: a survey by GEORGE GRUHN

stamped on the neck block. Martin guitar serial numbers start at 8000, an estimate of the number of Martins made from 1833 to 1898. Martin guitars are numbered consecutively, so it's possible to date these instruments accurately by their serial numbers. The table shows a list of these numbers, with the last number used each year.

Martin style designations consist of two parts — a letter indicating the size of the guitar and a number indicating the type of wood and ornamentation used. Guitars of the same size designation have been made with either 12 or 14 frets clear of the body. Before 1934, most Martins were made with 12 frets clear of the body, and after that date, the larger size Martins were usually made with 14 frets clear. Twelve-fret models have a longer body than those with 14 frets. Aside from the differences between 12- and 14-fret models, all Martin guitars of the same size designation are exactly the same in size and shape. For instance, the D-18, D-21, D-28, D-35, D-41 and D-45 all have exactly the same size and shape and differ only in wood and the style of ornamentation. Conversely, a 0-18, 00-18, 000-18 and D-18 are constructed of the same kind of wood and have the same style of ornamentation.

Martin Guitar Serial Numbers

YEAR	LAST NO.	1962	187384
1900	9128	1963	193327
1905	10120	1964	199626
1910	11203	1965	207030
1915	12209	1966	217215
1920	15848	1967	230095
1925	24116	1968	241925
1930	45317	1969	256003
1935	61947	1970	271633
1940	76734	1971	294270
1945	93623	1972	313302
1950	117961	1973	333873
1955	147328	1974	353387
1960	175869	1975	371828
1961	181297	1976	388800
		1977	399625



1915 Martin 00-42 —
ory friction pegs



1918 Martin 00-45 made
by factory foreman Job
Diechman



1919 Martin 0-30



1929 Martin 00-45

tation but differ in size and shape. An O-28 is just as much as 28 as a D-28. Martin guitar sizes are as follows:

O: body width $13\frac{1}{2}$ inches, body depth $4\frac{1}{4}$ inches, scale length 24.9 inches.

OO: body width $14\frac{5}{8}$ inches, body depth $4\frac{1}{8}$ inches, scale length 24.9 inches.

OOO: body width 15 inches, body depth $4\frac{1}{8}$ inches, scale length on 14 fret models is 24.9 inches, on 12 fret models 25.4 inches.

OM: Martin's first 14-fret guitar made from 1929 till 1933. Body size and shape are the same as a 14-fret OOO; scale length 25.4 inches.

M: Same body size and shape as pre-World War II Martin style F, an arch-top acoustic. Recently introduced as a flat-top. Body width 16 inches, body depth $4\frac{1}{8}$ inches, scale length 25.4 inches.

D: Body width $15\frac{5}{8}$ inches, body depth $4\frac{7}{8}$ inches, scale length 25.4 inches.

Martin guitars have also been made in a range of smaller sizes, numbered 1 to 5, from largest to smallest. Sizes 1 to 4 were discontinued by the end of the Thirties, but the size 5 is still a current model.

Among bluegrass, country, and folk musicians today the D or dreadnought size Martins are by far the most popular — but it's worth remembering that no one size of guitar is best for every purpose. Martin certainly wouldn't have made guitars in so many different sizes if there were one size that was clearly superior. You should obviously try out guitars of several different sizes to see

what really suits your particular playing style. It's my own opinion that the Ds are by no means the most versatile of the Martin guitars. They have a rich, loud, booming bass which is well suited to rhythm playing, especially the bass run style of guitar used in bluegrass, but they often tend to be over-balanced in the bass, with not enough emphasis on the treble. Many Ds sound best played at the first five frets, and their responsiveness tends to fizzle out to some extent as one goes further up the fingerboard. Of course this varies considerably from guitar to guitar, and there's no question that the D models are good instruments which clearly have the advantage for bass run playing such as bluegrass rhythm.

For many styles of playing such as fingerpicking, blues and jazz, the smaller size guitars have a lot to offer. The OOO, one of the most versatile Martins ever produced, tends to have relatively good volume without the booming deep bass of the D and good tonal balance throughout the range of the fingerboard. It is an excellent sounding instrument for lead and solo playing as well as for vocal accompaniment. The OMs (Orchestra models) were the first 14-fret six-string guitars in the Martin line and have the same basic body measurements except for scale length as the 14-fret OOOs which succeeded them. The original OMs are extremely fine fingerpicking guitars, but they are extremely rare today since they were only produced from 1929 to 1933. Martin recently reintroduced this model, and a few have been made on a custom order basis.

The style M, introduced quite recently, is a flat-top version of the pre-World War II style F Martin F-hole guitar. It's designed to produce a sound which is more powerful than a OOO and better balanced than a D and is a very versatile guitar. The OO Martins tend to be fairly similar in response to the OOOs, with good balance of tone and a particularly fine treble. They're almost unbeatable for fingerpicking and are also reasonably decent flat-picking guitars if you don't have to play extremely loud. The Os, particularly the pre-World War II 12-fret models are also excellent fingerpicking guitars. Some of them are quite good for flatpicking as well if a lot of volume isn't required, and they usually record very well. Although there almost seems to be a "dreadnought conspiracy" among many guitar players today, it's well worth taking a look at some of the smaller size Martins. Many of them are extremely fine, versatile instruments, and they are fully equal in quality of construction and materials to the Ds.

As I mentioned previously, Martin model numbers are divided into two parts: a letter indicating the size of the guitar and a number indicating the type of wood and ornamentation used. All Martins of a particular style designation have the same type wood, binding, and inlay, regardless of their size. Here are the specifications for the most common Martin styles:

Style 15 Mahogany top, back and sides, rosewood fingerboard and bridge, no binding on edges of body. This model entered production in 1940, was discontinued 1944-47, resumed in 1948 and continued through 1961. A tenor four-string version was offered from 1960-63.

Style 17 Mahogany top, back and sides, rosewood fingerboard and bridge, no binding on edges of body. Style 17 guitars made before 1922 have spruce tops and ebony fingerboard and bridge, and those made before 1909 are of rosewood construction with spruce tops. This style was last catalogued in 1959. However Martin considered reviving the model during the sixties and made one O-17 in 1966 and six more in 1968.

Style 18 Spruce top, mahogany back and sides, fingerboard and bridge are ebony on pre-war models, rosewood on post-war models, dark binding around top and back. Style 18 guitars made before 1917 had rosewood back and sides. This style has been very popular over the years and is still in production. It has been made in most ▶▶



1930 Martin OM-45



1938 12-fret D-45 Martin —
last of three ever made

"I WORKED 22 YEARS FOR THIS GUITAR."

“Over the past twenty-two years, I have built and rebuilt many guitars. When I started playing back in 1956, I couldn't afford a “decent” guitar because they were too expensive. Today, “decent” guitars have become outrageously more expensive and, in many cases, totally out of reach of the working musician. Unfortunately for the player, prices of guitars have gone up tremendously while quality has not improved and, in some instances, has gone backward considerably.

A few years back, we at Peavey decided that if we were going to live up to our goal of “answering the needs of the working musician”, we must bring to the market a quality guitar at a fair and reasonable price. Our guitar would have to be a versatile and attractive “no nonsense” guitar with frets and playing action second to none, equipped with pickups and associated electronics equal to or better than the best on the market. Further, this instrument must be produced using the latest metal and wood-working technology. We felt we could accomplish this goal since most of us are musicians, as well as engineers and craftsmen... and especially since we do not have a bunch of “corporate sugar daddies” or investment bankers monitoring every move we make.

The T-60 Guitar and its companion, the T-40 Bass, were born from years of playing experience, combined with the production



Hartley Peavey

and guitar design “savvy” of the folks here at Peavey. Our instruments are not “flashy” or “spacey” and are not covered with “gingerbread” as are some recent models from the competition. They are, in fact, quality instruments that play, sound, and look as good or better than any, regardless of price. The tonal versatility is unmatched by anything without the “crutch” of a built-in battery powered preamp and frankly, we feel it's better than most that do have active circuitry. It's the opinion of many dealers and players that our instruments have the finest fret job of any instrument made today.

For over twenty-two years, I have been searching and this is the first guitar that has satisfied me and the other players here. Its unique variable single coil/humbucking tone circuitry gives the “biting” single coil sound, as well as the “ballsy” and guttural humbucking sound so full of punch, harmonics, and overtones. The standard 25½-inch scale length over a 12-inch radius neck enables easy string bending and massive 18% nickel-silver frets give a touch that must be played to be appreciated.

These days it's “fashionable” to bitch about high prices and the marginal quality of most “name brand” guitars, but “snob appeal” and lack of a viable alternative have enabled the “great corporate ripoff” to continue. Now, if you are a player who's interested in a unique blend of craftsmanship, caring, technology and are daring enough to actually pay less to get more of what you want, then I earnestly ask that you try our “labor of love”. We're proud of our instruments and we think you owe it to yourself to check them out.”

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Meridian, MS 39301



sizes of six-string guitars and in also in tenor guitars.

Style 21 Spruce top, rosewood back and sides, fingerboard and bridge are ebony on pre-war models, rosewood on post-war models, dark binding around top and back, wood purfling down centre seam of back, pre-war models have herring-bone purfling around soundhole and down centre seam of back. The style 21 was produced in a number of sizes through the years. The D-21 was introduced in

1956 and discontinued in 1969. Martin continued to produce 00-21s through the early Seventies.

Style 28 Spruce top, rosewood back and sides, ebony fingerboard and bridge, white binding around top and back, carved hump on back of headstock, wood purfling down centre seam of back. Pre-war models have herring-bone wood purfling around edge of top. One of Martin's most popular styles, the 28 is still in production today.

Style 35 First made in 1965 and offered in D size only. Same woods as style 28, three-piece back, white binding on fingerboard, no hump on back of headstock, multiple purfling on sides as well as top and back. Last year, Martin indicated that they would be coming out with an M-35.

Style 38 Recently introduced and offered in the M size only. Similar wood and ornamentation to style 35 but somewhat fancier with abalone trim around soundhole and black and white binding around headstock, fingerboard and body edges.

Style 41 First made in 1969 and offered in D size only. Same woods as style 28, abalone inlay around top, bound fingerboard with abalone inlay, headstock bound and inlaid with Martin name in pearl.

Style 42 Highest quality spruce top, rosewood back and sides, ebony fingerboard and bridge, abalone inlay around all edges of top, bound and inlaid fingerboard, no binding or inlay on headstock. Discontinued in 1942. No style 42 dreadnoughts were produced except for a single D-42 that was a special order.

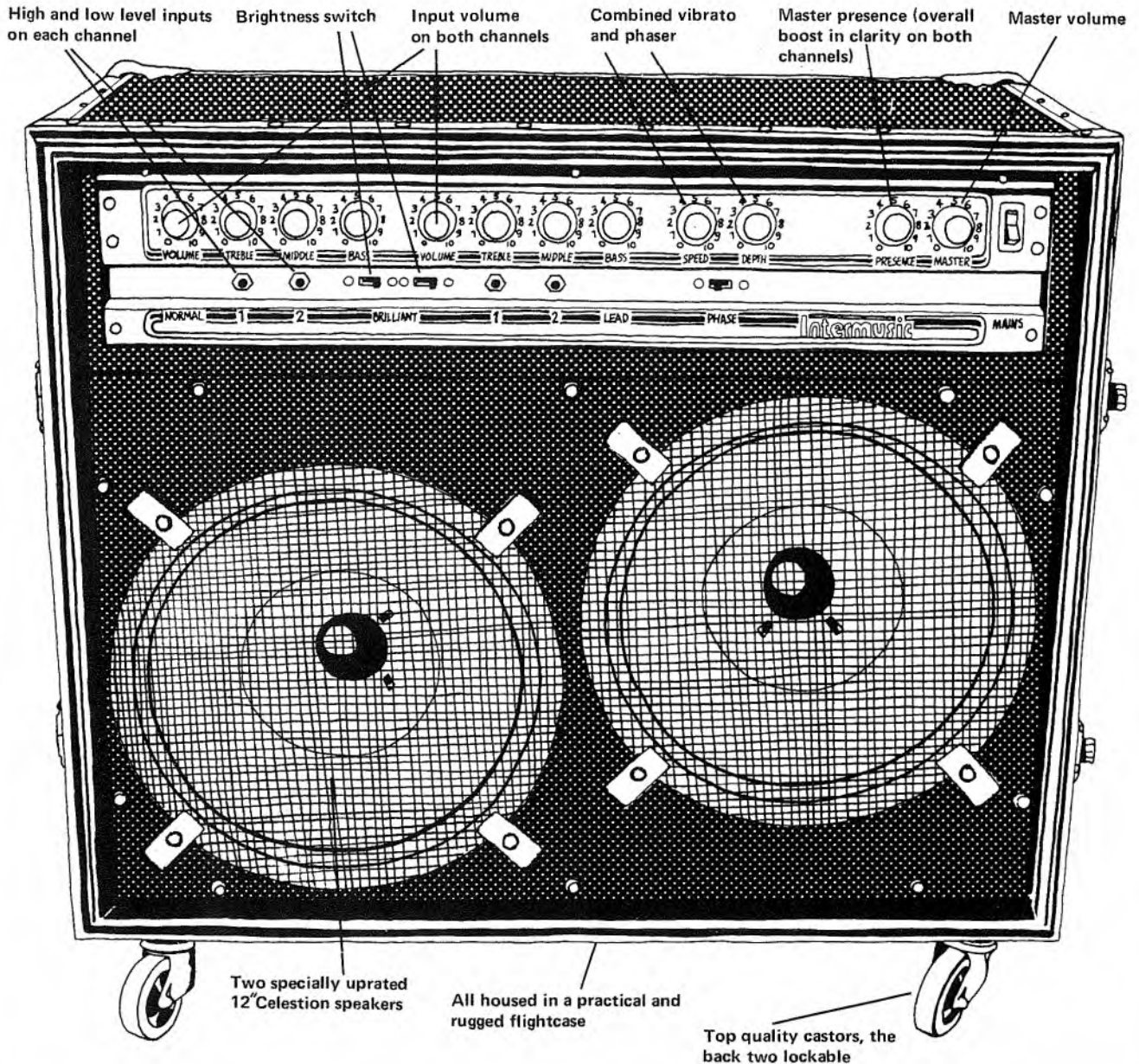
Style 45 Highest quality spruce top, rosewood back and sides, ebony fingerboard and bridge, abalone inlay around all edges of top, sides, and back, fingerboard and headstock bound and inlaid. Discontinued in 1942. The style 45 was reissued in dreadnought size in 1968 and a 12-string version, the D-12-45, was introduced in 1969. In recent years, Martin has also produced a few 00-45s and 000-45s. This style is the top of the Martin line, and pre-war 000-45s and D-45s are among the most expensive guitars on today's market.

Because D size Martins are so popular today, I'm including a list of changes which have taken place in the D-28 and D-18 over the years (left). The same changes would apply to smaller size Martins in many cases, but not all.

For further information on Martins, I highly recommend *Martin Guitars: A History* by Mike Longworth. This book presents a wealth of accurate and detailed information on the instruments produced by Martin during its long history and includes model specifications, production figures, serial number lists, etc. taken directly from Martin Company records. It is an indispensable reference for anyone interested in Martin guitars. The book has recently been revised and updated and can be obtained from the C. F. Martin Organization, Nazareth, Pennsylvania.

	D-18	D-28
1917	First dreadnoughts made by Martin for Oliver Ditson Company with Ditson name. Produced in three styles all of which had spruce top, mahogany back and sides, 12-fret neck.	
1931	First experimental dreadnoughts produced for Martin line designated D-1 (two made) which became the D-18 and D-2 (seven made) which became the D-28. Made first D-18s with C. F. Martin name.	Made first D-28s with C. F. Martin name.
1934	Changed to 14-fret neck (early '34), adopted modern style frets. Metal T bar in neck (late '34). World War II metal shortage - ebony bar in neck from March '42 to October '45.	Changed to 14-fret neck (early '34), adopted modern style frets. Metal T bar in neck (late '34). World War II metal shortage ebony bar in neck from March '42 to October '45.
1945	End of voiced braces.	End of voiced braces; dots on fingerboard replace "Snowflakes".
1946	Sitka spruce replaces Appalachian spruce. (Appalachian spruce was used on a random few in Fifties and Sixties). Large dots on fingerboard replace small dots.	Sitka spruce replaces Appalachian spruce. (Appalachian spruce was used on random few in Fifties and Sixties).
1947	Ebony fingerboard and bridge replaced with rosewood.	Modern type binding replaces "herring-bone".
1958		Grover Rotomatics replace Kluson gears.
1965	Short bridge saddle introduced.	Short bridge saddle introduced.
1967	Black pick-guard introduced. T bar in neck replaced with square steel tube.	Black pick-guard introduced. T bar in neck replaced with square steel tube.
1968	Small maple bridge plates replaced with large rosewood plates.	Small maple bridge plates replaced with large rosewood plates.
Late 1969		Indian rosewood replaces Brazilian rosewood.

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New Products

Randall's Little Guys

Three new Randall products signal their entry into the compact amplifier field. These are the RG-30-112, the RG-60-112 and the RB-60-115 units. The amplifiers offer studio quality at mid-market prices and are being used by a number of players for session work. The first two are designed for guitar, and feature high-gain FET pre-amplifiers for long sustain and tone. Each has a master sustain gain control, input gain control, bass and treble equalizers, pre-amp output jack, external speaker jack and reverb footswitch jack.



The RG-30-112 is rated at 30 watts, the RG-60-112 at 60 watts and both are equipped with full range 12"

speakers.

The RB-60-115 bass amp has all the features of the guitar units apart from the

reverb; however, it also has a middle equalizer control. It employs a 15" speaker in a sealed back cabinet.

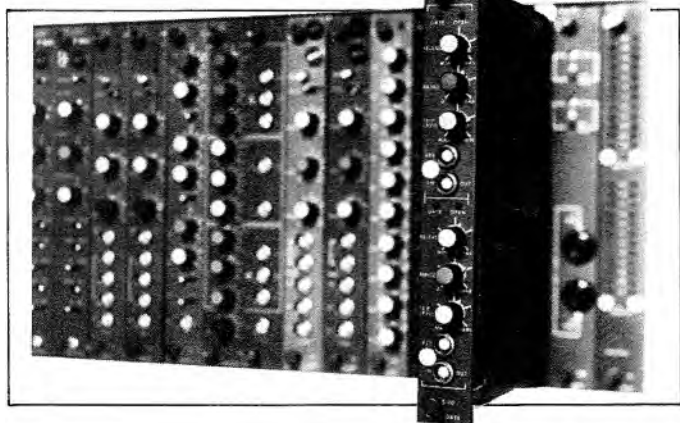
New Scamp Units

Audio & Design (Recording) Ltd., through their USA subsidiary Audio & Design Recording Inc., recently announced two new additions to the Scamp range of signal processing equipment; the SO2 Mic-Pre Amp and the S100 Dual Gate.

The SO2 Mic Pre-amp, one of the original concepts of the Scamp system, has many impressive features including low noise, 30dB pad and phase reverse switch,

high pass filter, switchable pre to post aux send, 600 ohm line amp drive on both outputs and 70dB gain with optimum modulation indicator.

The S100 Dual Gate offers the multi-track studio multi-gate facilities in a very small package. One Scamp rack, in fact, can house up to 35 such noise gates (17 x S100 Dual Gate modules) — ample, we should guess, by anyone's standards.



Emmons Steel Appeal

The Emmons Guitar Company, formed in 1963 by Buddy Emmons and Ron Ashley, recently announced what they feel is the "first major model change in 15 years" — the Emmons LeGrande Custom pedal steel guitar. Emmons and Ashley

designed this new model which features an all-pull system, split tuning and quick-change bell crank levers and pull rods. The LeGrande Custom series will be available in six models through exclusive distributors in each country.

Electro-Voice Sounds



Electro-Voice recently introduced several new products at this year's Frankfurt trade fair. The Eliminator 5 houses

a 15" driver, 6½" vented midrange driver and ST350A tweeter. It is rated at 100 watts into 8 ohms. Aluminium rails protect the vinyl-covered cabinet and recessed handles are provided to assist portability.

The S18-3 is a stage keyboard system designed for instruments with wide frequency response requirements such as synthesizers, string machines and other keyboards. It is equipped with the EVM 18B woofer, a vented midrange driver and the ST350A tweeter and is rated at 100 watts into 8 ohms. The system can easily be converted for bi-amp operation.

New Hohner Guitar Flight Cases

Hohner recently introduced a new heavy duty flight case for guitar as an accessory to their new range of Hohner International electric guitars. This heavy duty metal reinforced case features an offset carrying handle to improve the balance when the case is loaded with a guitar. It also features a very high standard of fittings including corners, catches and hinges.

The inside of the case is well-padded and lined with "plush" synthetic fur covering and the case is suitable for most standard guitar designs.



DYNACORD TAM 19 is WOT for Y



DYNACORD AND YOUR ART. Dynacord has been working with the musician for many years. As Europe's largest amplification manufacturer, Dynacord has amassed a wealth of experience which makes itself apparent in every new design. Dynacord has established a research team to continually investigate ways of improving the sound and the methods used by contemporary musicians. These two new products are examples of technology being harnessed for art.

THE TAM 19. This product is at the forefront of musical technology. It's a device for "Time Axis Manipulation" and in simple terms it uses two delay lines to create some beautiful and interesting effects.

The use of two solid state delay lines (in parallel, series or other combination) allows a whole range of effects to be instantly created. Flanging, phasing, pitch shifting, double tracking, ambience enhancement, chorus and space sound can all be had at the flick of a switch. In the TAM system the music signal is alternately expanded and compressed in time and

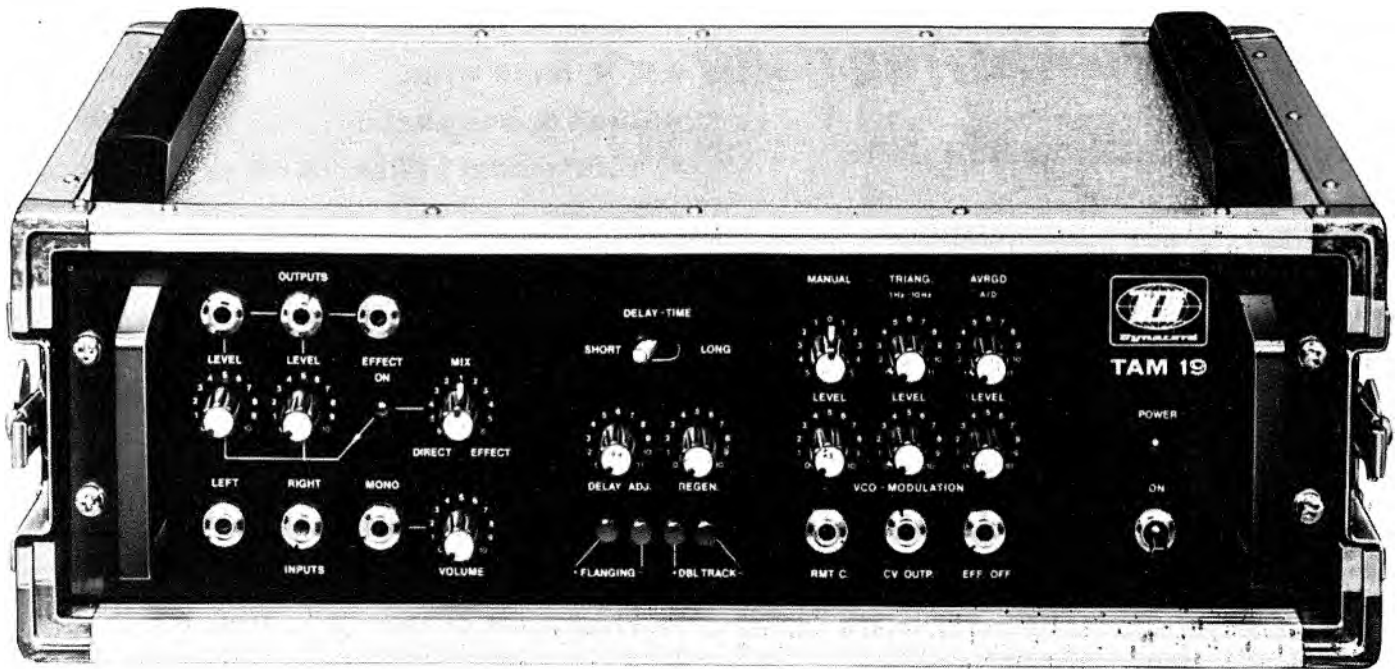
remixed in various ways with the original.

Mixing the manipulated signal with the original creates a comb-filter-like progression in the musical spectrum. Outstanding stereo effects are easily obtainable with the TAM 19 and the stereophonic design makes it possible to achieve positive and negative flanging, phasing and even pitch shifting.

The TAM 19 is equipped with three internal generators for time axis manipulation – triangle, sine and AVRGD (averaged), which can be mixed with one another in any desired combination. Of particular interest here is the AVRGD generator, which used the average value of the input signal for control of the time manipulator. Using the AVRGD generator, a drummer can, for example, control the temporal progression of the flanging by varying his technique. A foot switch makes remote control of the manipulator possible. The internal generators remain in operation, however, so that a maximum of four control signals can influence the TAM 19 simultaneously.

This is Dynacord technology working for you.

TECHNOLOGY IS WORKING FOR YOU



TECHNOLOGY IMPROVES MUSIC. Who says so? Most of the good musicians who use technological advances subtly to improve their art. No amount of technology can improve poor music, but feeling can be aided by the judicious use of the right effect. Dynacord specialise in making just the right effects. THE DRS 78. Reverberation is an underrated effect. Throughout history men have built churches and concert halls with only the reverberation time as their guideline. It has been considered so important that Cathedrals have been extended to achieve it. Today good quality reverberation comes a little easier. The Dynacord DRS 78 digital delay system provides the best answer.

Reverberation gives "body" to music without employing horrible "repeat" effects when not required. The DRS 78 converts your input signal, guitar, PA, keyboard, etc., into "digital" information. This is then delayed on a line which allows you to remix it with the original signal at whatever point you require. Thus the reverb time can be very short or lengthened

into an echo.


The DRS 78 works quietly and effectively and it's provided with all "on-stage" facilities like line-output and footswitch control. Full equalisation controls are also fitted.

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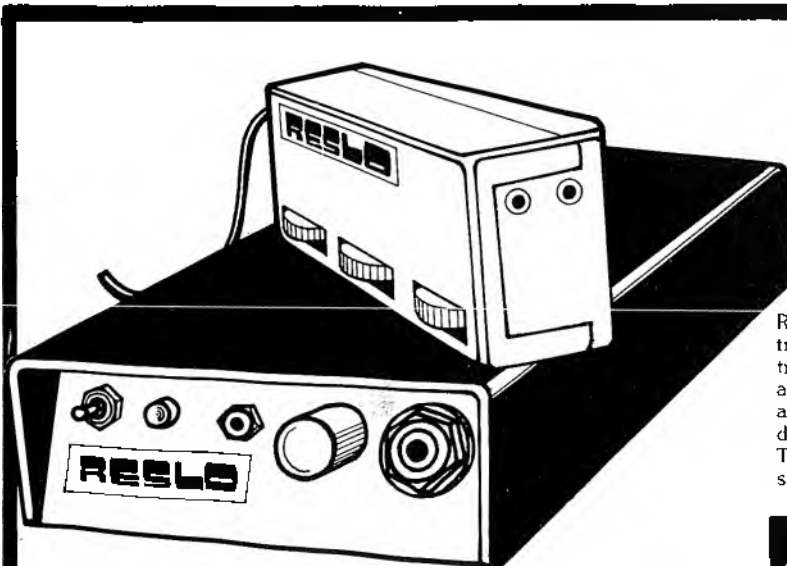
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Blanks Music Centre, 273 Kilburn High Rd, London
Braddleys Music, 69a West Regent St. Glasgow
Bris Drum Pad, 12b Mersea Rd. Colchester, Essex
Carlsbro, 182-184 Chesterfield Rd, North Mansfield, Notts.
Chingford Organs, 242 Chingford Mount Rd, London E4
Cooke's Band Instruments, 34 St. Benedicts, Norwich, Norfolk
Drumland Perc, 75, Lowfield St. Dartford, Kent
Dr and GT Centre, 4 Norfolk St. Cambridge
Fender Soundhouse, 18a Soho Sq. London W1
Peter Gray, 212A Wellingborough Rd, Northampton
Bill Greenhalgh, 125-127 Fore St. Exeter
Norman Hackett, 5 Bristol West Arcade, Reading, Berks
Hammonds, 47 Queens Rd, Watford, Herts
Harker & Howarth 26-28 Churchgate, Bolton, Lancs
Hessys, 62 Stanley St. Liverpool

Honky Tonk, 300-302 London Rd, Hadleigh, Essex
Hudsons, 5 Market Pl. Chesterfield, Derby
John King, 8 Richmond Rd. Kingston on Thames, Surrey
Simon King, 240 Tolworth Rise South, Tolworth, Surrey
Kingfisher Music, 20 Kings Rd, Fleet, Hants
R.S. Kitchens, 27-31 Queen St. Leeds
London Drum Centre, 276 Portobello Rd, London W10
Melbourne Pianos, 213 Kilburn High Rd, London NW6
Mr Music, 7 St. Johns St. Bedford
Music Ground, 245 Station Rd, Dunscroft, Doncaster
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**CONTACT STEVE FOLEY
061 226 5369**

SMILE Manchester

For all those recording enthusiasts who dream about having their own studio, but rarely make it beyond a four-track in the bedroom, Steve Foley should prove a source of inspiration. In just four years Steve has turned his Smile Recording Studios from a home basement operation into a thoroughly professional 16-track set-up.

Smile is very much a single-handed success story, and one in the eye for those who believe that a good studio can only come about through vast finances and unlimited budget. Steve began his recording venture in much the same way as hundreds of other enthusiasts.

He had played in various groups around the Manchester area, and did a bit of songwriting, so he decided to do a bit of recording too – in the basement of his home in Sale near Manchester. "I set up my own basement studios for recording demos, and the work became heavier with people wanting to come in and use the facilities. I started off on four-track and then moved up to eight-track.

"We were doing demos for local bands and also custom pressing as well, singles, EPs, LPs." As business flourished, Steve saw the need for new premises and set about looking for suitable accommodation which he found in the Chorlton area of Manchester. All he had to begin with was the shell of a building and the enthusiasm and ideas to make it work. Rather than go to one of the studio design experts, Steve felt that his ideas would be best translated by someone whom he knew and could work with. As a result he entrusted the work to a friend, Alec Colbeck, and the pair set about the task.

They visited a number of studios like Strawberry and Arrow, to get some kind of feeling for what was required and should be incorporated in the new set-up.

Alec explains: "The technical side is quite well documented. It's just getting that atmosphere that's most important. The atmosphere must reflect on the client, so it's getting to know the client and finding out exactly what he wants. They usually have a lot of ideas, but you have to sift through them and find out which ones are really viable and begin to put it together.



"A studio is a complex structure and fabrication job, difficult for an amateur to build, so all the details in our design were simple as possible. Anybody that can knock a nail in a piece of wood could do it.

"The main thing was to do it within the budget because it's quite large and going from a basement to something this big would take a disproportionate amount of finance. I had a very strict budget and had to stick to very simple materials."

So the two of them set to work and with a little help from friends, the studio steadily began to take shape. Although a few finishing touches are still being added, the studio is now complete and fully operational. In keeping with the rest of the operation, Steve didn't go out and buy a conventional desk for his studio, he once again sought out a friend.

The desk was designed by Malcolm Bugler, who used to work for Amek. Steve told him the kind of facilities he wanted and the result was a 16-into-16 which is as individual as the studio itself, but contains all the standard facilities. They have a Cadey 16-track, Revox B77 and A77, while Malcolm continues to work on improvement for the set-up.

The atmosphere at Smile is comfortable and friendly, which Steve believes is extremely important in getting the best out of the artists – particularly those who are coming into a studio for the first time. Despite this move to bigger premises, he has tried to capture the air of informality

which made his basement studio so popular and enabled him to expand.

The roomy studio also incorporates a couple of pianos, various guitars, drum kit, synth, etc. for use by the musicians, while one of the best features must be the "relaxation" room which boasts a pool table (on which the owner will demonstrate trick shots at the drop of a 10p) and a pinball machine.

Another interesting feature of the Smile operation is the deal they can offer bands who want to commit themselves to vinyl. They can have an album done which includes recording, pressing, sleeve and label, for just £1.50 a copy which can be sold at gigs or used to impress a large record company.

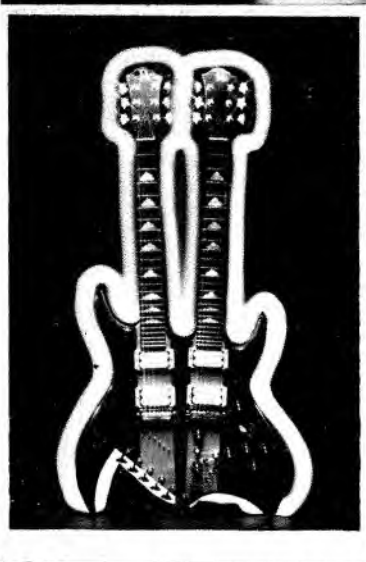
During his recording career, Steve has worked with a wide variety of acts including Alberto Y Los Trios Paranoias, the Smirks and Brian and Micahel (of *Matchstalk Men* fame) and already his new studio is attracting many old friends.

Steve Foley has shown just what can be achieved with maximum initiative and minimum finance. His success is there for all to see in the new studio – which has given Steve plenty to smile about.

STUDIO OF
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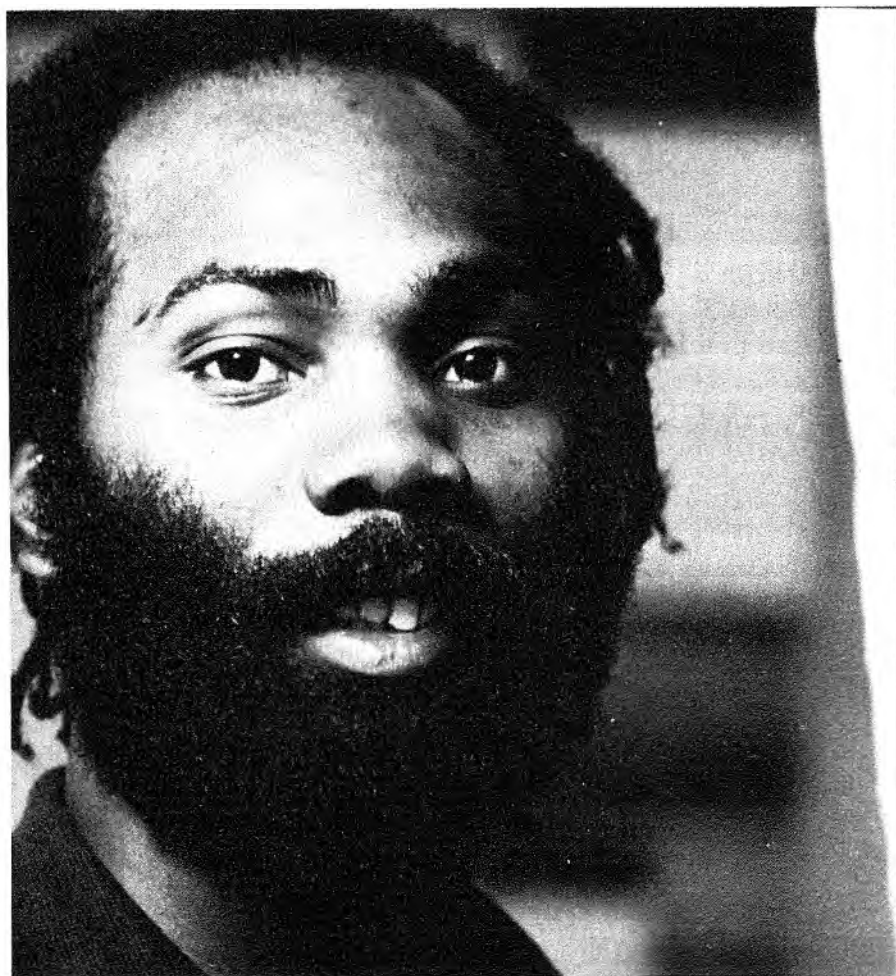
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RECORDING WORLD

Dennis Bovell: strictly ubiquitous



Dennis Bovell plays guitar with Matumbi. If that was all he did, it would still be something to be proud of, since the South London group were voted Best Band of 1978 in last month's *Black Echoes* British Reggae Awards. But that isn't all. Dennis himself was voted Best Musician for the second year running. And Matumbi's LP *Seven Seals*, produced and engineered by Dennis, won the Best Album award.

That still isn't all. The highest-voted dub album of '78 was *Strictly Dub Wize*, produced by . . . guess who? Dennis Bovell, under one of his pseudonyms, "Black Beard". And the Best 12" Single of 1978 was Errol Dunkley's *A Little Way Different*, produced by . . . yup, Dennis again. The ubiquitous Mr. Bovell is one of

the busiest reggae producers in Britain and indisputably one of the best. Any week of the year, the reggae singles chart is bound to contain one or two of his productions. And, although he claims to devote 60 per cent of his time to Matumbi, he's still to be found playing guitar, bass or keyboards on countless sessions by other artists.

His influence on the British reggae scene has been so pervasive that it's mildly surprising to learn that his musical career began in a middle-of-the-road pop group. Then he joined a rock band called Stonehenge, which featured Nicholas Bailey on keyboards. When Stonehenge split, Nicholas and

Dennis formed Matumbi, and though Nicholas soon left the band, they are still close friends and often work together on sessions.

But Black Beard's involvement with engineering stretches back to pre-Matumbi days. Back, in fact, to schooldays. He explains: "They had a recording studio at school — only a two-track thing. They had two Ferrograph tape recorders to do drama and stuff, and they had this programme they put on, a sort of pop programme, on Tuesday morning during tutorial periods. I managed to get in on that." As a budding engineer? "No, as a bully! I was such a bad kid at school, you know. I was disgusting. They would never have elected me or allowed me to be in on that — so I bullied my way in. And it changed my whole life!

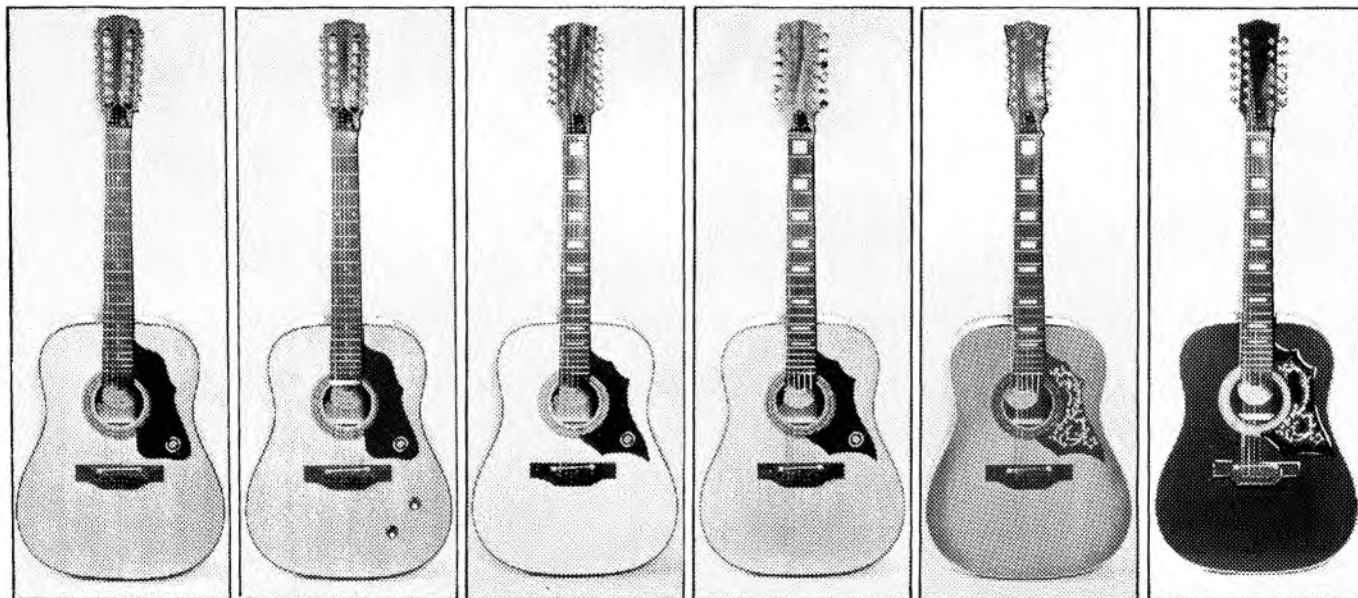
"When I left school, I wanted to get into recording as much as playing, because a couple of times we'd been into the studio and played and it didn't sound good — but not because it was being played badly. It was just that the engineer didn't have the right tone on it. You could *feel* what the tone should be but it wasn't a question of saying, Put a bit of that frequency in, because we didn't know. So I thought it would be good if I could operate the desk and find out the frequencies by twiddling the knobs. I mean, it's common sense. When you put a record on your turntable, you twiddle the knobs till it sounds good . . ."

Following these general principles, young Dennis started hanging around studios, notably TMC in nearby Tooting, "just mucking about with the desk." The Bovell-Bailey partnership led to an introduction to another studio: "I was round his house one night and we were really out of our heads. We wrote this song and we wanted to record it — *immediately*. So we phoned up three or four places until we got this studio, Gooseberry in Gerrard Street. The guy said you can come round right away if you want. So we went straight down there and laid this track down. It turned out really good. The guy who owned the studio came in and heard it, and said, Are you interested in doing some

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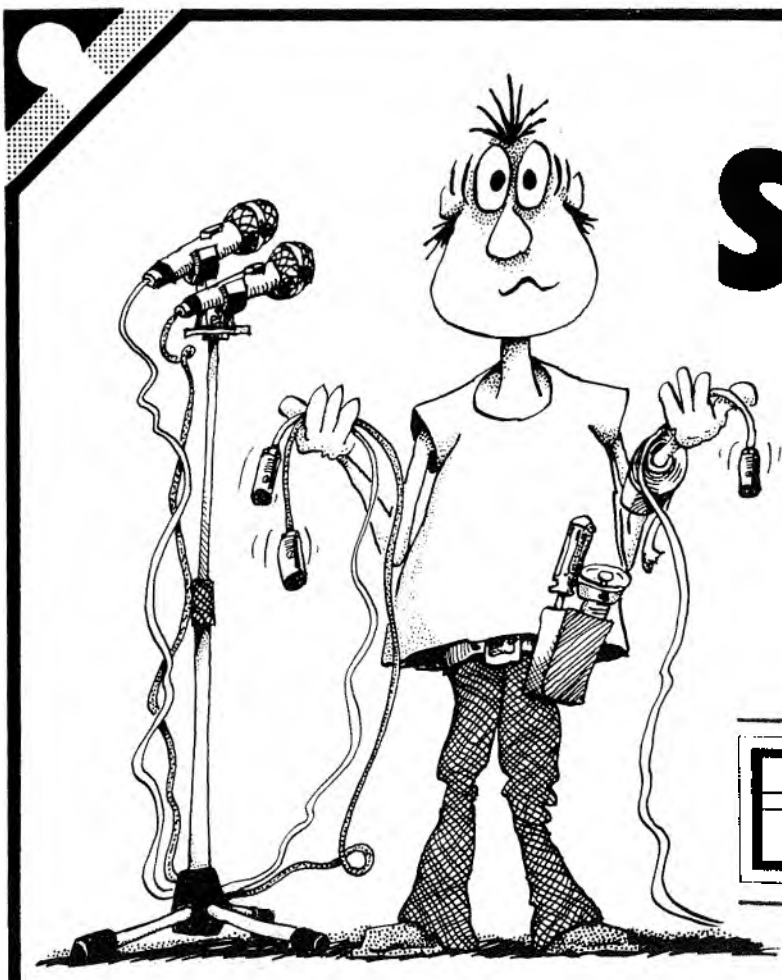
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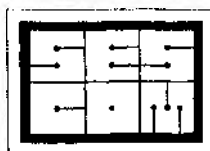
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RECORDING WORLD



Best Band of 1978: Matumbi. Guess which one's Black Beard

stuff for me? He was a songwriter."

So Dennis started going to Gooseberry regularly, writing and arranging songs, playing on demos — and dabbling with the desk. Another friend of his owned a little four-track studio in Camden Town: "I used to go up there to help them out with demos. I played guitar and keyboards and sang on songs they'd written, in exchange for free studio time." And all the time, he was learning how to record reggae.

Meanwhile, Matumbi was born, made a name for themselves on the London club circuit and signed a recording deal with Trojan. But Dennis wasn't allowed to produce their early records. In fact, Matumbi were not even allowed to record what they wanted. Instead, they were limited to reggae-style cover versions of soul hits. "That's what Trojan was into at the time, not what Matumbi was into. We had loads of tunes that we wanted to do but they were afraid that they wouldn't catch on. It's a lot easier to sell a cover version of a song; everyone's gonna groove with it because they've heard the original. That used to happen a lot in reggae but it doesn't any more. Now people get a chance to show how good they are — or how bad they are."

Matumbi weren't satisfied working within the cover version syndrome.

"We made the breakthrough by wanting to be different. On stage we used to play all these songs off pre-release records. We used to go and listen to the sound systems like Coxsone and hear all the latest things from Jamaica. One person would note down the lyric, another would take note of the chord changes, another would take note of the bass line or the horn line. Then we'd put it all together at a rehearsal. That record would not be on general release but we would be playing it on stage. That made us different from other bands, who played sort of top 20 things. When the craze first started for putting the same tune on the B-side without the vocals, just the instrumental track all the way through, we used to get them and make different tunes to the tracks. That was the beginning of us writing songs."

The beginning of Dennis Bovell as a fully-fledged producer came about after the band split from Trojan. "The guy who owned the Rama label had just built a studio. It wasn't a very good studio, just enough to get by on. For instance, the top whack on the treble was 9K, which is pretty rough, right? Things that were laid down there were OK but you couldn't lay down there and mix anywhere else. If you started there, you had to finish there. Anyway, I used to go down

there almost every day. The band was rehearsing twice a week and on the other days, what do you do? So we used to go down to the studio and just do records — cover versions, originals, anything. Just completely let ourselves go and ignore the clock."

"We" was not necessarily Matumbi. "Sometimes the band used to be there, sometimes not. It was just a cluster of musicians, just friends." With Dennis engineering, the friends turned out an amazing amount of good reggae during a spell in 1976-77. Much of it appeared on albums with cryptic Jamaican titles like *Ah who se? Go deh!* and *Leggo ah se we dis*. Much of it displayed standards of playing and production that reggae fans previously believed could be achieved only in Jamaica. But, in time, the unrealistic economics of it dawned on them.

"The studio was flooded once — it was in a basement — and because we couldn't go down there every day, we sat back and started to look at the financial side of things. We realised that the guy who owned the studio and the label was making a lot of money and we weren't. We were doing the work, we were putting the tunes together — we sometimes used to bash out an album in a night or something crazy like that. An album called *Yuh learn*, we did that in one night. And another one called *Scientific Dub Wize*. They were all done there. We did about five albums altogether — which was good experience for me. I learned a lot, being in the studio every day, because I was engineering as well as playing and that gave me a lot of knowledge."

Knowledge, in particular, of producing dub. Now dub is a style that's unique to reggae, it's an engineer's playground, where he can turn a straightforward reggae track into a fantasy world of emptiness, echo and weird effects. Dennis Bovell's eyes light up at the very mention of the word.

"Dub is . . . avant garde, ridiculous, crazy! When I first heard dub, I thought What?! Disgusting! But I liked it. I wondered what kind of mind created that kind of thing . . ."

"You get your instruments, right, and together they make a sound that is cool and tempo-wise is really moving. If you take all those instruments away and leave only one, that tempo will still be there as long as the master tape's

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Kenny Jones
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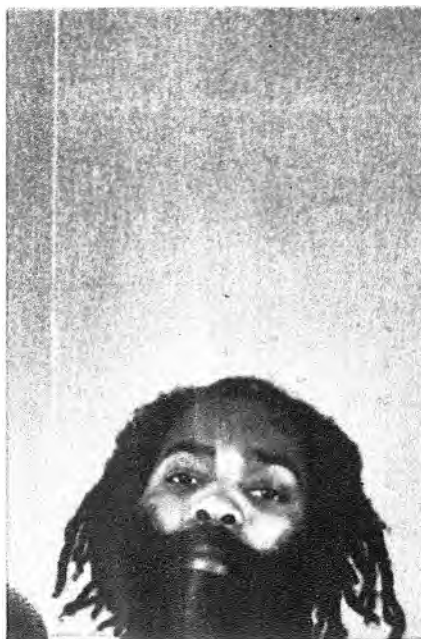
RECORDING WORLD

running, even though you imagine it. It will be so empty – yet so full in your head, because you know what's really there. You let your imagination really go.

"So the track starts and then as it gets really nice, you knock everything else out and leave the drums and the bass. But you've still got those other instruments in your mind. So just to remind you that it's still there and you're not dreaming, you bring one of them in, say the piano. But you don't just bring it in – you give it a grand entry. Most of the time, in reggae, the piano just keeps the offbeat, plunk, plunk, but instead of just bringing it in for a couple of beats – that would be boring – you slam it in loud and use repeat echo, fast, fading away. How ridiculous can you get? Dub can be anything from really sweet sounds to kkkrrrch, really destructive sounds, you know? And it can still be mellow in your mind."

Last year Dennis produced *Strictly Dub Wize*, arguably the best dub album ever made outside Jamaica. It was recorded and mixed in Gooseberry Studios, and the sleeve bears the producer's simple message: "This is a collection of my own music mixed the way that I prefer." But what way does Black Beard prefer? "I like vocal sounds but unfortunately the vocal sound I like to hear is really sweet and harmonious. If it's not, I'd rather not hear it. The trouble with a lot of reggae things in the past is that the tracks were brilliant but the vocalists were not up to the same standard. I used to DJ a sound system and that was about the time when the craze for dub started. I really got into it and loved it. So in memory of those times I did that album, to recreate some of the dub sounds I had heard and liked in the past.

"Those tracks were mine. I put them together as well as engineered them – I played all the instruments on some of them, drums, Moog, the lot. A couple of guys helped me with some of the tracks but most of them, I just spent time in the studio mucking about with this remote control. It was really exciting. For instance, I'd play the drums into the tape recorder flat, then on the playback I'd EQ it to make the drums sound the way I wanted to hear them. Then I'd re-record it with that EQ. So the line in was also the track. Then I'd play it back and put the bass on, and the keyboards, in exactly the same way. Just experimenting with tones."



The experiment was an impressive success. But does he want to do it again? "If I had the time I would, definitely. In recording there's so many things we don't know. I tell you, we're far behind in terms of dub sounds, compared with the Jamaican dub sounds. I think most of the new things we're discovering now, they discovered a long time ago. People are bringing up new recording techniques all the time . . . like that artificial head, the binaural thing. I was down at Ridge Farm for a couple of weeks producing an album with the Pop Group and we were trying to get hold of one for that, but it's a bit expensive . . ."

Wait a minute. Top reggae star producing the Pop Group? That's right, and pretty wild stuff it is, too, if the rough tapes are anything to go by. New wave meets dub and explodes your eardrums. But then, Dennis has never felt restricted in what he works on. He's also responsible for a tune which you've probably heard without realising it, a funky little instrumental called *Early Bird* (recorded at six in the morning), which the BBC uses as background music for programme news. And he has made a couple of TV programmes for schools, demonstrating how reggae tracks are put together in the studio. Open-minded is a fair description of Dennis Bovell. Which makes it all the more sad to him that reggae is not given more exposure on TV and radio.

"Most of the DJs or the people who put the shows together will only play something they understand. They're anxious to protect the public from what they themselves don't know is about. Or perhaps they do

know it's about but they're just a bit behind the times. I think if they were a bit more liberal about it it could be cool, because, OK, reggae is different from pop, but only in terms of beat – all the notes are the same, aren't they? It's not as if it's difficult to grasp, but not everybody sees it that way.

"It could be because of the dialect sometimes. It's difficult to hear what the singer's singing about. When I'm in the studio I'm very particular about that. I like to hear the words so that everyone – not just black people, white people as well – can hear what the song is about and tune in."

Dennis is in such demand as a producer and session player that he could keep busy 24 hours a day without working with Matumbi at all. But he maintains that his own band is his first commitment – even to the extent that he may withdraw from producing Matumbi just so he can play better. "We're laying down demos for a new album now in KPM, our publisher's studios. When that's finished and we've got an idea of what we want on the album we'll probably go . . . somewhere and get someone else to produce it. I'm anxious not to be on the engineering side of the band's material any more because it distracts me from musical things. Whereas if I was just there playing my guitar and I had a really capable person that I knew could reproduce the sounds that I was playing on his tape, I'd be happy.

"But as it is, there's only one other guy in England that I could sit back and let engineer a session. That's Mark Lusadi. He's good – and he learned off me! He does most of the reggae bands that I don't produce, like Tradition. There are still a couple of things that he doesn't do the way I do . . . like your snare drum sound, for instance. The sound of it for reggae has got to be able to accommodate the crack of the rim shot and the slap of the snare. But how do you do that with one microphone? You can't. It's got to be two, one above and one underneath the drum. That's a trick of the trade – don't tell anyone!"

Dennis needn't worry. He could tell all the tricks of his trade without endangering his position as leading producer. His blend of expertise, flair, tireless energy and open-ended experiment guarantees that he'll never go short of work in the studio. And listen out for that Pop Group album. A crossover star is born.

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STUDIO DIARY

Who's been recording what, where...

CBS, London

The Clash are mixing some tracks with Nicky Graham producing... Harmony disco-band Key West will revolve at 45, Steve Levine on the digits and Nicky Graham as the producer... The James Boys will, however, revolve at 33. Miki Anthony is the producer and Steve Levine the engineer... What are the New Seekers seeking with a new single produced by Nicky Graham and engineered by Simon Humphrey?... Judas Priest were in for overdubs with producer James Guthrie... The Nolan Sisters are going single with, however, Simon Humphrey engineering... Simon just doesn't stop; he's also working on Sailor's demos...

Strawberry North, Stockport

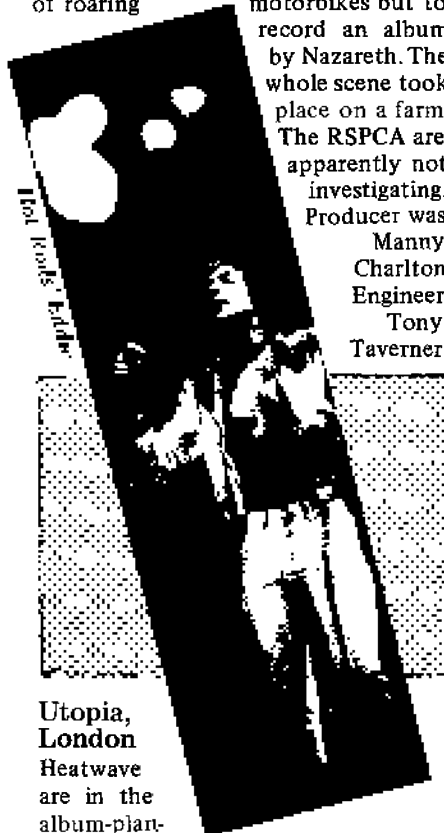
Multi-instrumentalist Tim Hart (Steeleye Span) is recording his own album engineered by Peter Tattersall... Buzzcocks have recorded two tracks with producer Martin Rushent (999, XTC, etc. See last month's feature) and engineer Chris Magle... Strawberry studio manager Peter Tattersall has engineered various theme music for ITV, as well as orchestral arrangements of hit parade stuff for American radio... Mike "Rochdale Cowboy" Harding is currently recording an album... Poet John Cooper Clarke has been laying down tracks with engineer Chris Nade...

Chalk Farm, London

Red, green and gold sound in this farm... Tapper Zukie is producing his own single with engineer Neil Richmond. Max Asher (Soul Syndicate) is the drummer on Tapper's tracks but he's also producing his own solo LP with the same engineer... Neil again for tracks with the John Potter Band... Newcomer Debbie Bishop is a singer and you'll be able to hear her on an album with two backing bands; no less than Squeeze and Rough Edge... Burning Sound Records are into ethnic reggae and people like Doctor Alimantade, Chanters and Junior English have been recording for them... According to Chalk Farm Studios funky synths are the In Thing in 1979 and a band called Seventhwave are playing just that on a new album produced and engineered by Neil Richmond...

Maison Rouge, London

Renaissance devotees will be pleased to hear that the band is working hard on an album engineered and produced by David Hentschel... Swingle II (sound of angelic voices fill the air) will have an album out soon, producer Hugh McDonald... Maison Rouge's mobile unit have been to the Isle of Man. Not to capture the sound of roaring



Utopia, London

Heatwave are in the album-planning stage with engineer Andrew Jackson and producer Phil Ramone... Producer Chris Neil and engineer Greg Walsh are working on an album with Dollar... A song for Guy wasn't enough: Elton John has been mixing some more with producer/engineer Clive Franks... Mike Batt, the man behind the Wombles is mixing some tracks with Linda Lewis... Down the corridor in the cutting room, Utopia has played host to Steve Hillage, Barry Blue, Dana and Jonathan King, this time as a producer... Other events include the recording of jingles for a Rothmans ad., Andy Jackson is the engineer for Jeff Wayne Music... Arista have employed the talents of producer Chris Neal and engineer Greg Walsh to record some tracks by a singer called Nona... Engineer John Mack-

swith is working with Roger Whittaker on an album for Tempo Records...

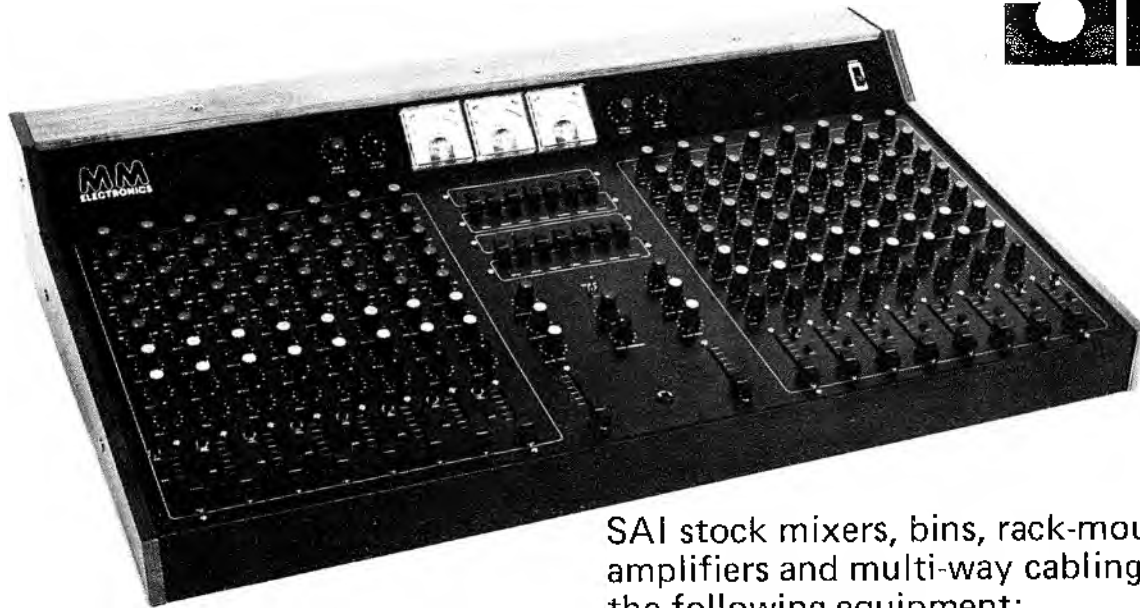
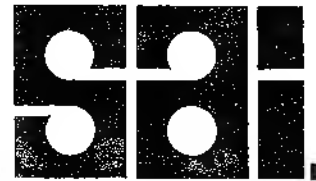
Roundhouse, London

Eddie and the Hot Rods were completing their new album with engineer Trevor Hallesy and producer Peter Ker... Trevor also practised his skills on Motorhead's forthcoming album, produced by Jimmy Miller... Vic Smith is the producer on the Jam's fourth album whose mix-down is the job of the busy Trevor Hallesy... Goldie's next LP is produced by Ken Gold (no relation) and engineered by Ashley Howe... Dick (You are awful...) Emery (... but I like you) was recording tracks with producer Bob Linfield and engineer Mark Dearnly... Baker Street sax player Raphael Ravenscroft was mixing his solo album with engineer Ashley Howe and producer Hugh Murphy... Hi Tension's producers Kofi Ayivor and Kiki Jyan were recording their own single with engineer Ashley. Kofi and Kiki used to sing with Osibisa... Germany's jazz-rock group Food Band recorded tracks for an album with producer Peter Ker and engineer Trevor Hallesy... The same team worked on some tracks by Bram Tschaikevsky... Pop band Spooky were in the middle of recording an album for Decca with producer Ken Gold and yet again Ashley Howe on the digits... Reggae Regular were due in for CBS... Roundhouse regulars Uriah Heep were also expected in the studio for some tracks for yet another album. Jerry Bron is to be the producer and Peter Gallen the engineer...

Scorpio, London

EMI recording artists Jim Mullen and Dick Morrissey (Kokomo, If, etc.) were getting an album with producer John Darnley and engineer Denis Weinreich... Chris Rainbow (also on EMI) is producing his own album with engineer Ray Hendrickson... Scorpio were recording the theme music for a new film called *The Golden Lady*, a sort of female James Bond. The producer is George Garvantz and the engineer Denis Weinreich... The Frost, who had a smash hit in most of Europe in the late Sixties with a powerful single called *Rock 'n' Roll Music* are coming back with an album. The LP is produced by French rock critic Herve Muller and engineered by Denis Weinreich...

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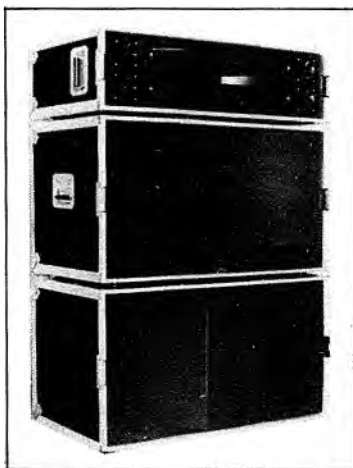
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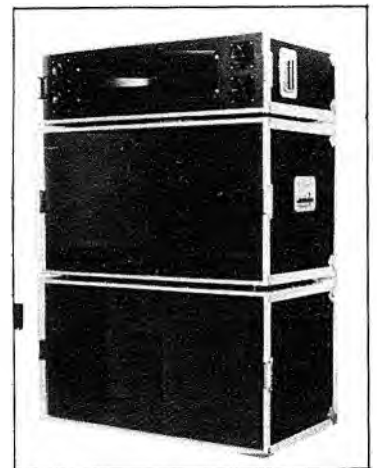
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Motorhead's Lemmie

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The ever-popular Motorhead were recording tracks for a forthcoming Bronze album engineered by Vic Maile . . . Mike Cooper was engineering on some demo sessions for a singer/songwriter called Dominic Bugatti . . . Hazel O'Connor busy recording for Albion Records, engineered and produced by a very busy Vic Maile . . . Bruce Baxter laid down some synthesizer parts for EMI band Spice. The session was produced by Rob Broughton and John Pope . . . Hireshi Kate nipped into Rickmansworth to produce and engineer some material for the Japanese market . . . John Drey, a singer/songwriter, was working on some tracks for his solo album produced by Bruce Baxter and Mike Cooper . . . Vic Maile was mixing a live tape by the Yachts for Radar Records . . .

Wessex Sound, London

A self-produced album by Dell By Dell has been recorded with engineer Bill Price, who also engineered the

recording and mixing of a single by the ever-present Clash . . . From Clash to Cash for an album produced by Robert-John Lang and engineered by Tim Friese-Greene . . . Des O'Connor is producing his own LP with the help of engineer Dave Bellotti . . . EMI will release a self-produced single by the Flys who took Gary Edwards as their engineer . . . Dave is also the engineer on Showaddywaddy's freshly recorded tracks . . . Rockabilly Swedish singer Jerry Williams is working hard on a forthcoming album produced by Sam Charters and engineered by Ted Sharp . . . Tim Friese-Greene is not only engineering but also producing an album by Scottish punk band the Zones . . . Fingerprints album tracks are being mixed down for Virgin . . . Fisher Z, a British band, are hooked to engineer Gary Edwards for the recording of a single . . . Beggars Banquet have two New-Wavish albums coming out: one by Johnny G produced by Ed Hollis and engineered by Dave Belletti; the second by Duffo engineered by Gary Edwards and produced by themselves . . .

An apology

Last month you probably wondered why we included a photograph of the Slits when they were not mentioned anywhere. Well, refer to the Abbey Road Studio Diary. The Slits, and not Reggae Regular, were recording some tracks for Decca.

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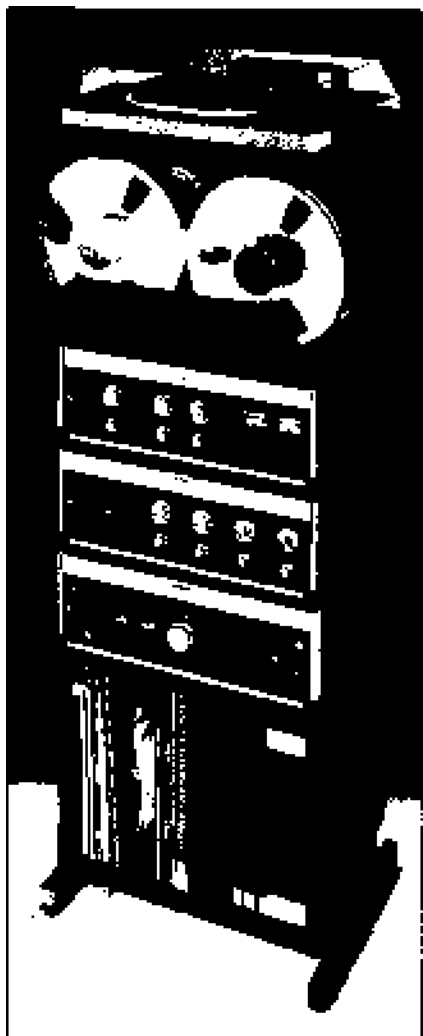
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WHAT'S NEW...

Revox Audio Rack

The new Revox Audio Rack was recently introduced and is designed to accept the B-series music system components. A spacious dark stained oak cabinet with smoke-tinted glass door and glass partitions is provided for the storage of records and tapes. All inter-connecting cables and power cables and power cords can be put out of sight by arranging them within the side supports.

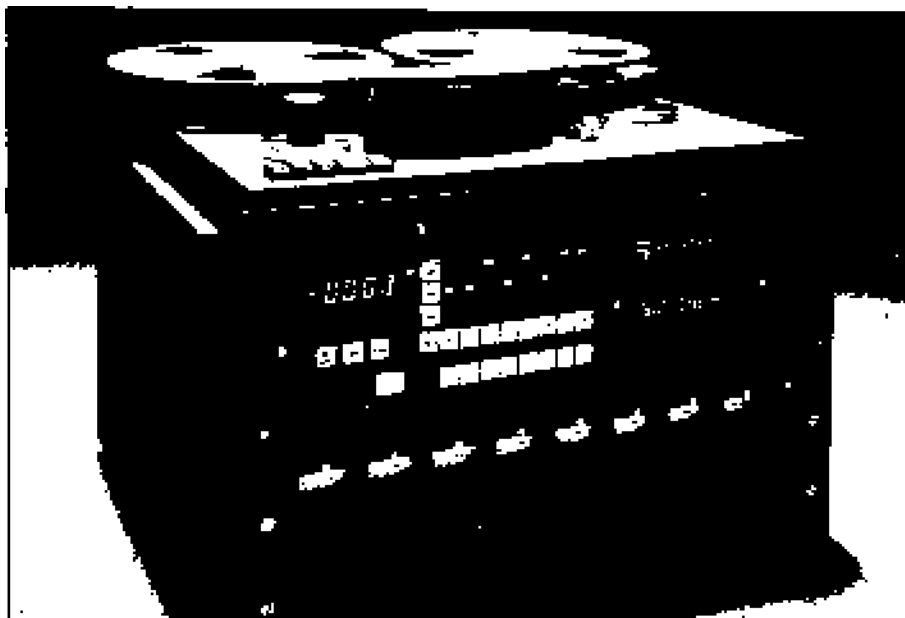


And then there were four

Following the success of three complete studio installations for Genesis, AHB has installed an 8-track package system for the group's former vocalist, Peter Gabriel.

Consisting of the new Modular 3 console and the Mini 8, the system will be used for both recording and rehearsal with the monitor mix feeding two independent amplifier set-ups — one for the control room, the other for PA.

Based in the heart of Somerset, Peter expects to use the equipment both for pre-production work and, in



New Soundcraft 8-track Recorder

Soundcraft recently announced the introduction of the first tape recorder for its Soundcraft Magnetics subsidiary — the SCM 381-8 one-inch 8-track. This entirely new design features a precision engineered transport, based on a thick cast aluminium deck plate for optimum tape path stability. A simple tape path features

the capstan shaft on the outside of the tape to avoid tape oxide wear. Wow and flutter is quoted as 0.03%.

One of the main features of the tape machine is the main control panel for all audio and transport functions which is removable and can be used as a remote control. This module also contains a tape counter reading in minutes and seconds and with a "search to zero" facility. The vari-speed control is similarly removable.

the case of the portable 8-track, on tour with the possibility of a live album. The system was installed by AHB field staff Iain Everington and Dave Whittaker, as was the Genesis equipment.

The package consists of the Mod III (16x8), Brenell Logic Mini 8, Remote Control Unit, Varispeed, Pro-Limiters and Digital Tape Counter.

SSL's new console and computer

Solid State Logic recently introduced the SL4000, designed to be the most sophisticated and flexible production console yet available, while remaining exceptionally logical and simple to use. Among many features the console includes; fully distributed logic control of all the major states, an instrument quality compressor-expander-noise gate and 4-band fully-parametric EQ on every channel; both VCA and patch free audio sub-grouping and full control of all tape machine functions, including genuine one button drop-in from the console.

The studio computer combines full mixdown automation facilities (including both static and dynamic mixes, automatic status set up, auto-

matic nulling and return to original, display of dc levels, and off-line editing of mixes); intelligent control of the tapemachine (allowing location by time, cue point or freely named section), drop-in timing and record keeping and printing of information relating to the tape.

Larking in the light

In the recording business for the past three years, Don Larking has recently opened his own shop with a special market in mind.

Don buys and sells both new and second-hand equipment with the view to furnish recording studios and bands.

The list of the available equipment is long and varies from month to month making it difficult for Don to advertise. However, you could just as well order an original early Les Paul as you could a 24-track Studer Recorder.

Big names such as Abbey Road and the Who feature among his clients. With business flourishing in this way, Don intends to inaugurate a fully equipped professional recording studio to be built next to his shop.

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Albums

Average White Band

Lenny White

Les McCann

Average White Band

Feel no Fret (RCA)

The publicity handout accompanying this album would have us believe that the AWB have entered a new phase in their development. Well, they're on a new label and this is the first album they've produced themselves, but otherwise it's the mixture as before — tight, funky rhythms, restrained horn riffs punctuating accomplished vocals by Alan Gorrie and Hamish Stuart. The latter's bluesy falsetto is one of the wonders of the age, but that's not belittle Gorrie's beefier vocal contributions. When they sing together, the wondrous blend of light and dark voices rivals Hall and Oates at their best.

Side Two is the more interesting, with the rich Bee Gees-ish *Atlantic Avenue* (which would make a good single) and two tracks enhanced by additional horns (the brothers Brecker and Lew Delgado). Though they recorded this album largely without the production and arranging skills of their long-time mentor Arif Mardin, the band have obviously learned enough from him about what's necessary. One or two tracks go on too long, but then they always did.

At the heart of every song is the crisper-than-crisp drumming of Steve Ferrone and decisive, elliptical bass playing by either Stuart or Gorrie (they take it in turns). Every rhythm section in every disco band should listen and take note.

Jeff Pike

Produced by the Average White Band and Gene Paul. Recorded at Compass Point Studios, Nassau, Bahamas. Mixed at Soundmixers, New York.

Lenny White

Streamline (Elektra)

Drummer Lenny White began his career with Miles Davis on *Bitches Brew* and was one of the founder members of Chick Corea's Return To Forever. Since then he has trodden the well-worn path of modern jazz musicians by appearing on a variety of jazz/funk albums and working with all the top players.

Inevitably thoughts turn to a solo album, and *Streamline* is his second such. It is a tremendously strong and exciting album, containing much fine playing from a variety of top musicians but never becoming over indulgent. With Larry Dunn (Earth, Wind and Fire's producer) co-producing, the album has a commercial funky edge, but it never degenerates into mindless disco material. Stand-out track is the opener *Struttin'*, which includes Beck-type guitar from Jamie Glasco, while there is an interesting treatment of *Lady Madonna* with Chaka Khan on lead vocals.

David Lawrenson



Lenny White

Les McCann

The Man (A & M)

If George Benson can do it, why not Les McCann? Do what? Crossover is one way of describing the change in approach. Sell out is another. The truth lies somewhere in between. When an accomplished and inventive jazz musician turns out a collection of disco-slanted tracks, with wet sub-soul vocals and stodgy strings swirling in the background, one can't help feeling that commercialism has played its part in the artistic process. But then again . . . compared with most of the disco jingles flooding today's market, this is classy stuff indeed. Neatly played, immaculately produced, nicely paced, tastefully arranged, yawn.

Les McCann is — or was — a robust pianist with a lusty left hand and a reliable flow of ideas. But there's not much evidence of it here, just the odd snatch of gentle tinkling on clavinet or Fender Rhodes. His voice doesn't carry much conviction either. I know he has to pay the rent and feed his wife and kids, but I still wish he'd go back to what he does best — cooking seriously with a hard-driving rhythm section — and leave this up-market muzak to lesser talents.

Jeff Pike

Produced by Paul Riser, engineered by Barney Perkins. Recorded at A & M Studios, Hollywood and Kendum Recorders, Burbank.

AWB's Alan Gorrie (right) and Hamish Stuart (below)



Joe Jackson

Look Sharp! (A & M)

An album guaranteed to restore your faith in good old basic rock 'n roll. Joe Jackson is basically a singer/songwriter who fronts his own guitar/bass/drums band. I have no doubt that he is already sick of being compared to Elvis Costello, but there are very definite similarities and Mr. C is about the nearest point of reference.

Jackson has obviously been around for a while and absorbed many influences which he moulded into his own quite definitive style. *One More Time* and *Throw It Away* are good up-tempo rockers, while *Sunday Paper* and *Fools In Love* have their roots in reggae. Throw in a Merseybeat feel, topped off with Joe's strong and distinctive voice, and you begin to realise why he is proving popular in clubs up and down the country.

The two stand-out tracks are *Is She Really Going Out With Him*, a nice piece of boy/girl blues with a catchy chorus, and the title track. Throughout the album, both the playing and production are sparse, sticking to the basic band instruments and particularly highlighting the trebly rhythm guitar of Gary Sanford. Jackson contributes some piano and harmonica but the overall sound remains simple and basic. Possibly slightly off-putting for the first few plays, but a refreshing change.

An excellent debut for an artist who is well worth catching live. He could turn out to be one of 1979's new stars.

David Lawrenson

Produced by David Kerchenbaum, engineered by "Hot" Rod Hewison. Recorded at Eden Studios, London.

J. Geils Band

Sanctuary (EMI)

Back in the satin and silver days of the early snob-rock Seventies there was a band who many liked to describe in period vocabulary as "far out". The J. Geils Band wore leathers and delivered the fastest versions of rock 'n roll oldies ever played on stage. Years went by and the band, running out of such numbers, decided to write their own. The creative elements were Peter Wolf (vocals) and Seth Justman (keyboards). This resulted in the group making the Great American Supermarket Sound (GASS).

Then their tenth album arrived, *Sanctuary*. Intrigued and nostalgic, I gave it a spin. To my amazement I discovered that the nine-track LP contained three pure rock 'n roll numbers. One of them, *Jus' Can't Stop Me*, burst through the speakers pushing me against the wall. The way this band can come at you like some great steaming locomotive is truly grand. J. Geils uses fire-cracker picking and Stephen Bladd beats his drums as if he was chopping steak. Magic Dick enlightens the set with his powerful harmonica playing and, to top it all, Peter Wolf sings like his left lung was rock and the right one roll.

But why do Wolf and Justman write so many ballads and make these classy musicians mere accompanists? They have a lot to answer for. Their songs might reflect a fresh attitude of the band but they are sacrificing a lot. An example of this turn for the worse is *Teresa*, a piano tune sung by Wolf in an emotive way which makes no use of the rest of the group. The J. Geils Band is obviously still searching for itself but I wonder which of this album's numbers will they perform on stage? *Teresa* or *Jus' Can't Stop Me*?

Hervé Corre

Produced by Joe Wissert, engineered by Dave Thoener. Recorded at Longview Farms, Record Plant, New York.

Elvis Costello

Armed Forces (Radar)

We have an exceptional talent in our midst. The lad Costello simply gets better and better. Looking askance at the world through those silly specs, he's crafted together another batch of pertinent, pointed pop songs. Apart from the chartsmash *Oliver's Army*, there are three or four other songs here which could (and probably will) make hit singles, so neatly put together are they. And yet . . . there's something about Nick Lowe's production that makes this a less than magnificent album.

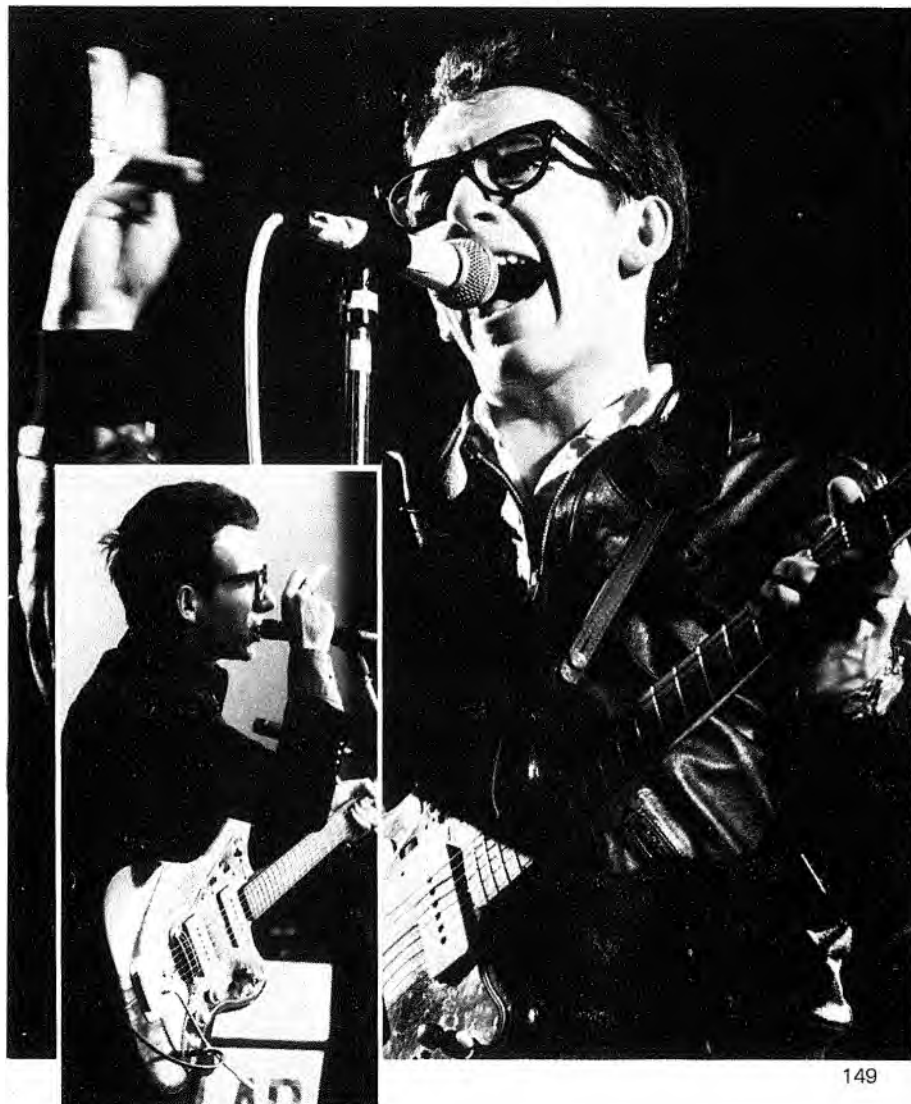
It's almost as if ace parodist/plagiarist Lowe is playing his own games and isn't listening closely enough to Elvis and the Attractions. Many tracks have a booming, Spector-ish ambience, enriched with nourishing polyphonic synth and lots of echo, which is all very clever but threatens to overwhelm EC's vocals. Lowe's answer to this is to bring that unique nasal whine way up front and give it an even reedier tone quality. But strangely enough, far from clarifying things, it makes the cynical, wry lyrics even more impenetrable. Shame.

All credit to the Attractions, though. Steve Naive's thumping piano, groaning organ and cleverly underplayed synths give most tracks their character, and the simple bass and drums of Bruce and Pete Thomas are consistently right. Even Elvis' crude guitar playing fits perfectly. But there are signs that a less assertive producer would help them create something even better.

Jeff Pike

Produced by Nick Lowe, engineered by Roger Bechirian. Recorded at Eden, London.

Elvis Costello



Albums

Bethnal

Poco

The Bee Gees

Cliff Richard & The Shadows

Bethnal

Crash Landing (Phonogram)

Bethnal's title track introduces the album at a rate of knots. Crunchy guitar riffs backed by a solid drum beat climaxing into violent vocal chorus. Mean stuff. Regretfully that gutsy intro is never repeated and the whole thing rapidly drips into pretty but flat-chested pop ballads.

This sadly dull material is played by good but too individual musicians. In fact, right through the album, drummer Pete Dowling seems to want to take the music just that bit faster but is quickly put back in place by the guitar of Nicko Michaels. He bars the way in favour of George Csapo's fiddle, which regrettably sets the pace. On tracks like *The Fiddler* this turns out to be an interesting combination but on the rest of this desolate album one is left with an irritating sense of frustration.

Hervé Corre

Produced by Jon Astley and Phil Chapman.

Poco

Legend (ABC)

This is Poco's first since Tim Schmit left the band to join the Eagles. With new bassist Charlie Harrison and a new drummer Steve Chapman, the band still come up with the goods although I feel Schmit's departure has left a little lacking in the band's vocals. The harmonies just don't sound that rich without his slow vibrato. However, *Legend* is a good step away from the sub-Eagles country rock image the band have had for a long time. Even when Rusty Young's pedal steel appears, he's playing more aggressively and the sound is closer to a bottleneck guitar. His writing, too is constantly improving. *The Last Goodbye* is a great song featuring a really dramatic chorus with very effective vocals.

Young's *Spellbound* is another very melodic track which stands out, as does *Crazy Love*, which features a nice fingerpicking guitar and good harmonies. The title track is a gutsy, powerful number, perhaps the most aggressive I've ever heard Poco. But some of the material included isn't that strong: *Boomerang*, *Heat of The Night* and *Barbados* all sound a bit half-hearted and there's a general surfeit of major sevenths that make some of the material too sweet and syrupy. It's just coincidental that these three tracks are Paul Cotton songs, but I always seem to prefer Rusty Young's writing. My feelings about *Legend* are mixed: half the album is excellent but I could live without the other half.

Eamonn Percival

Produced by Richard Sanford Orshoff, engineered by David Henson. Recorded at Crystal Studios, Hollywood and The Village Recorder, L.A.

The Bee Gees

Spirits Having Flown (RSO)

Like Abba and Boney M, the Bee Gees have discovered the recipe for success in the late Seventies: good pop music with a heavy slice of disco influence. Such is their popularity, they could make an album of nursery rhymes and still sell a million. Happily they haven't, because *Spirits Having Flown* is an excellent album.

The Bee Gees have always been good pop writers since their early *Massachusetts* days, but now their work has been coupled with a production style which probably owes more to Wagner than rock'n roll. Numbers like *Tragedy* and *Living Together* have the brothers' distinctive vocals set against the full might of their backing band, orchestra and just about anything they can lay their hands on.

The ballads also get the full treatment, turning songs like *Too Much Heaven* and *Reaching Out* into major works. A particular favourite is the title track which has a nice bossa nova rhythm and features a pleasant acoustic guitar backing. Although the *Saturday Night Fever* influence is obviously there, the high quality of the material on much of the album prevents it from becoming just another re-hash of a well worn theme.

The list of musicians is impressive. Apart from the nucleus of the Bee Gees' backing band (which includes the excellent Blue Weaver on keyboards), you will find Herbie Mann, George Terry and many more top class performers adding their skills to various tracks.

David Lawrenson

Produced by The Bee Gees, Karl Richardson and Alby Galuten. Engineered by Karl Richardson. Recorded at Criteria Recording Studios, Miami.

Cliff Richard & The Shadows

Thank You Very Much (EMI)

This album was recorded live at the London Palladium during Cliff and the Shads' recent reunion season there. Although I'd guess a bit of re-touching has cleaned it up a bit, it's one of the best sounds I've heard on a live album. Although the album is credited to Cliff and the Shadows, five tracks feature Cliff's own band, made up mostly from the players on his last four studio albums.

The Young Ones opens the set and, while I've never cared much for the song, this version is infinitely better than the original. This is true of most of the older material included here. For instance, *Do You Wanna Dance* really rocks along with superb vocal harmonies and an excellent solo from Hank Marvin. The Shadows have four instrumentals in all - *Shadoogie*, *Atlantis*, *Apache* and *Nivram*, the latter proving how underrated the Shadows are as musicians. More nostalgia comes in the form of *Move It* and *Willie And The Hand Jive* on the second side, both performed authentically. But my favourite moment occurs on *All Shook Up*, featuring just Cliff, Hank and Bruce in three-part harmony, backed by just two acoustic guitars. Halfway through the first verse, the harmonies go astray and they stop it and start again amid laughter from Cliff and applause from the audience.

Cliff and his band also perform meaty versions of *Please Don't Tease*, *Devil Woman*, *Why Should The Devil Have All The Good Music* and a brilliant *Miss You Nights*, the backing for which consists of little more than piano and bass but is more than filled out by a vocal section of Tony Rivers, Stuart Calver and John Perry. The album closes with a new song, *End Of The Show*, a slowish number with a dramatic build-up on the chorus.

A beautiful album which isn't just a trip down memory lane. It would be all too easy for the artists to just reproduce their numbers note for note but, to



their credit, they have worked, rehearsed and re-arranged most of the material here. Two things are apparent: musicians who have been playing together for over 20 years can still be musically relevant today; and Cliff Richard's voice has improved immeasurably over the years — he's got the best vib in the UK. Probably album of the year.

Eamonn Percival

Produced by Bruce Welch, engineered by Tony Clark. Recorded by RAK mobile.

Dobie Gray

Midnight Diamond (Infinity)

It seems rather ironic that a man responsible for such disco classics as *The In Crowd* should now fall under the spell of those current disco kings, the Bee Gees. Yet one can hardly fail to notice the influence on the opening track of Dobie Gray's new album, *You Can Do It*.

Still, the man is a good singer and class performer, able to do justice to standards such as *Miss You Nights* and *I Can See Clearly Now*. A pleasant easy listening album.

David Lawrenson

Produced by Rick Hall, engineered by Rick Hall and Don Daily. Recorded at Fame Recording Studios, Muscle Shoals, Alabama.



Dobie Gray

Oregon

Out of the Woods (Elektra)

It's strange, and rather sad, that Oregon aren't better known, even famous. They've been playing together for around 10 years, have made eight excellent albums, play music that nobody else even dares to try and play it well, yet . . . Oregon who?

Here's who: Ralph Towner on classical and 12-string guitar, piano and flugelhorn; Glen Moore on double bass and occasional flutes, piano and violin; Colin Walcott on star and tabla; and Paul McCandless on oboe and cor anglais. If you can't imagine what all that sounds like, it's understandable, but it's just another reason why you should listen to Oregon. They

mix rock, raga, baroque counter-point and jazz in a unique way that is never precious, never overly contrived.

Most remarkable of all, there are some wonderful tunes amid all the electric improvisation. *Dance To The Morning Star*, for instance, is a vehicle for dancing oboe solos by McCandless and frantic interplay between bass and 12-string guitar, but at the heart of it is a cute little melody that you find yourself whistling after one hearing. Clever, charming unique music. Oregon deserve to be famous.

Jeff Pike

Produced by Oregon, engineered by David Greene and Jesse Henderson. Recorded at Long View Farms, Massachusetts and Soundmixers, New York.

Neil Ardley

Harmony of the Spheres (Decca)

The concept seems altogether too contrived to be workable: "compose" a nine-note chord based on the mathematical ratios of the planets' orbit time, then build an album's worth of music out of the harmony. Only a musical brain like Neil Ardley's could make it work.

For work it does, most of the time. There are two reasons why. First, Ardley is not a keyboard virtuoso (we all know how tedious *their* albums can be) but a skilful composer who happens to use synthesizer as his instrument. Secondly, he has picked a talented crew of musicians to record the work. It includes stalwarts of the British jazz scene like Tony Coc and Barbara Thompson on various woodwind, Ian Carr on trumpet and flugelhorn, Richard Burgess and Trevor Tomkins on drums and percussion, and so on. These characters can all improvise fluently when the chance arises, but also have the discipline necessary to play strictly according to Ardley's well-judged score.

The choice of John Martyn for the electric guitar parts was inspired. He's not the slickest jazz rock guitar player in captivity, but he's an open-ended musician with a wonderful feel for sound. His solos shine on several tracks. If the idea of harmony built on mathematical/astronomical ratios is too appallingly cosmic, man, just forget the concept and listen to the music. It's atmospheric and powerful by turns — and it knocks Mike Oldfield into a cocked hat.

Jeff Pike

Produced by Neil Ardley and Martin Levan, engineered by Martin Levan and Mark Freeguard. Recorded at Morgan Studios, London.



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Above the keyboard is a 6-bus switching system. Coloured switches allow the performer to choose between two low frequency oscillators (VCLFO), two envelope

two keyboe (highest no pressure). off and sit device to v Coloured) voltages fr routed.

The main panel is divided into five coloured sections. The two red sections are the CONTROL units: envelope follower, the two voltage controlled low frequency oscillators and the two ADSR envelope generators. The centre (blue) section contains the sound SOURCES: the three waveforms from the oscillator bank, the output from the noise generator, and an external input. These sources are mixed together in any desired proportion. The two yellow right hand sections contain the TREATMENTS. One section has the voltage controlled switchable two- or four-pole filter and the voltage controlled amplifier. The other has the analogue delay line (ADL) with voltage control of delay and with

ontrol outputs ion and tches are centre- irectly below the ey relate. ndicate which busses are being

Albums

Terry Reid

The Doobie Brothers

David Sancious & Tone

Terry Reid

Rogue Waves (Capitol)

After the acoustically-orientated albums *River* and *Seeds Of Memory*, Reid is back in a more rock'n roll vein with this latest set. As far as I'm concerned, he possesses one of the most fiery, powerful voices in rock – he was initially considered for the Led Zeppelin vocal department – and this album proves without doubt that old Superlungs is back.

Out of the nine tracks, five are Reid originals and four typical Reid re-works of rock classics. His own works seem to be very rhythm-orientated, rather than lyrical. In fact, he doesn't pay a lot of attention to lyrics – his phrasing veers more towards the scat, jazzy style, albeit with more guts. In this way, he's closer to the Van Morrison school of phrasing than your Rod Stewarts and Robert Plants. He's more into the sounds of words than the meaning. Of his own numbers, *Ain't No Shadow* and *Believe In The Magic* work very well, both with layers of guitars forming complex cross-rhythms as a base for Reid's soulful vocals. His version of *Baby I Love You* features a strange, compressed guitar sound which is quite effective, although the general arrangement is a bit laboured and is only saved by Reid's leathery voice. *All I Have To Do Is Dream* is mostly acoustic guitar and vocals until the middle eight where the strings enter – as such, the song is barely recognisable and Terry Reid sounds more like Paul Simon. In this way, Reid takes it above simply a cover version – it becomes a completely different song.

Eamonn Percival

Produced by Chris Kimsey and Terry Reid, recorded at Brother Studios, Santa Monica.

David Sancious & Tone

True Stories (Arista)

Everyone should stick to what he does best. What David Sancious does best is play keyboards, which he does supremely well. Elsewhere in this magazine, he explains how he strives for a warm sound from his electronic instruments, and that couldn't be better demonstrated than it is on *Ever the same*, the long track which opens Side Two of this album. Polymoog, Minimoog and ARP Omni swirl around in orchestral patterns and textures, sounding now like a string section, now like brass, now like something organic and intestinal. Brilliant keyboards.

What David Sancious doesn't do so well is write songs. At least, the tunes are OK, but the lyrics of the five vocal numbers on this LP are embarrassing. *Ever the same* is again a good example. Woolly, quasi-mystical, would-be ethereal, dreadful words. Forget them. Back to the music.

Tone, the group, is basically a trio, Sancious, Ernest Carter on drums (very fine) and Gerald Carboy on bass (busy and punchy). Scots singer, Alex Ligertwood (remember him with Brian Auger's Oblivion Express?) does the best he can with the lyrics, but it's a lost cause. Backing vocals are by Gail Boggs (sic) and Brenda Madison. But it's the keyboard playing that counts. Sancious can play funky or he can be majestic, he can bounce and he can glide. Wonderful stuff. Eddy Offord (ELP, Yes, etc.) gives him the production he deserves.

Jeff Pike

Produced by David Sancious and Eddy Offord, engineered by Eddy Offord and Tommy Edmonds. Recorded on Woodstock at the Eddy Offord Remote Studio.

The Doobie Brothers

Minute by Minute (Warner Bros.)

With the departure of Tom Johnston, the Doobies

founder and driving force, I viewed the release of this album with some trepidation. Until *Vices*, Johnston penned all but a few of the tracks and it was his skill at producing fine rock numbers blended with country music that brought the Doobies success.

Minute by Minute is a long way from *China Grove*, *Listen to the Music* and *Rockin' Down the Highway*, and changes in personnel have influenced their move towards R'n'B and encouraged a greater group participation in writing. In a way this album is a step backwards from *Taking it to the Streets* and *Living on the Fault Line*. It still retains much of the recent jazz influences, but captures little of the solid rock favoured by Tom Johnston and Patrick Simmons.

The tracks *What a Fool Believes* and *Minute by Minute* install a belief that the Doobies could be heading down *Toulouse Street* for the second time. If, like me, you have been disillusioned with them for the last year or so, this album could be the one to revitalise your flagging interest in what is really one of the finest, tightest bands to emerge from California this side of '68.

Nik Oakley

Produced by Ted Templeton, engineered by Donn Landee and recorded at Warner Bros. Studios, North Hollywood.

SHORT CUTS

Cindy Bullens *Cindy Bullens (United Artists)*

Funky-looking backing singer (ex-Elton John, Rolling Thunder Revue, etc.) goes solo, writes nine mindless songs, sings well but characterlessly, plays feeble guitar, makes disastrous album.

JP

Starbuck *Searching For A Thrill (United Artists)*

Awful band playing awful material. A cross between low-level rock and roll and bad MOR.

EP

The Blue Max *The Blue Max (Charisma)*

I had hoped this album would be one of Max Bygraves telling dirty jokes but instead it's some band of no-hopers who sound worse than Starbuck. They make Pinkerton's Assorted Colours sound like Led Zeppelin.

EP

Starz *Coliseum Rock (Capitol)*

A moderately successful attempt at creating hard rock music for mass consumption. With none of the bite of Boston or the guts of Aerosmith, a pervasion of mediocre melodies and hackneyed riffs relegates *Coliseum Rock* to the fair/average quality class.

SH

ELO *Three Light Years (Jet)*

An excellent three-album boxed set for ELO fans, containing three of their earlier albums – *On The Third Day*, *Eldorado* and *Face The Music*. As such, it includes hit singles like *Can't Get It Out Of My Head*, *Ma-Ma-Ma Belle*, *Evil Woman* and the beautiful *One Summer Dream*, which was delegated to a B-side.

EP

The Band *Anthology (Capitol)*

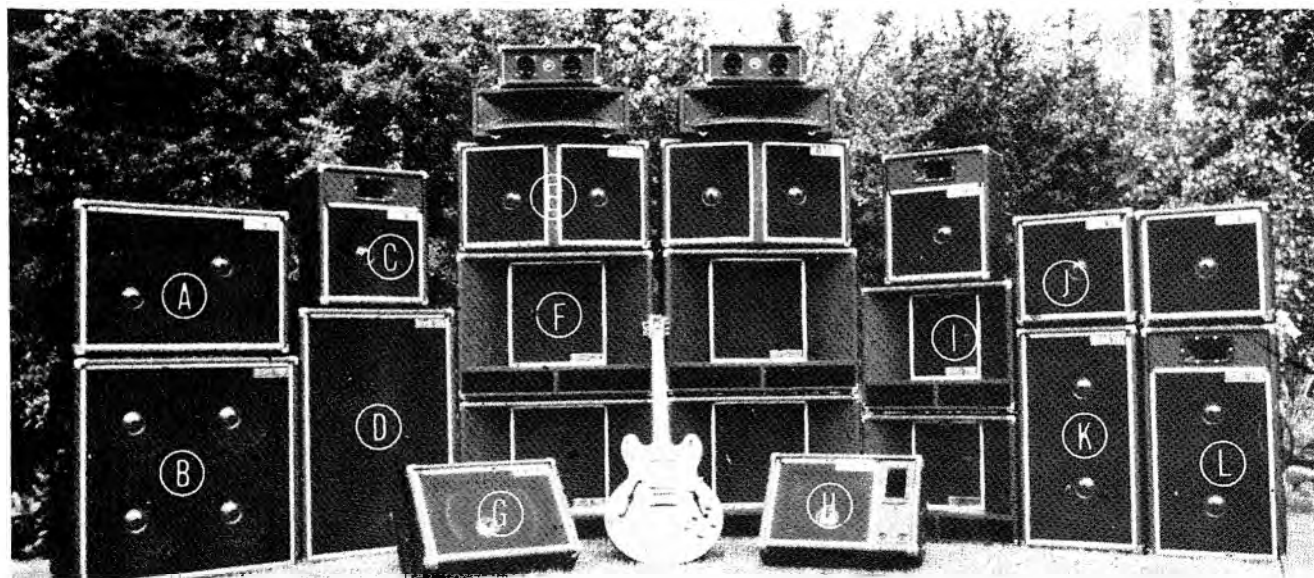
Two discs, 20 tracks and not a duff one among them. From *The Weight* (1968) to *Live in a Dream* (1977), this was a remarkably inventive and skilful quintet. Informative sleeve notes on every song, too

JP

Terry Reid



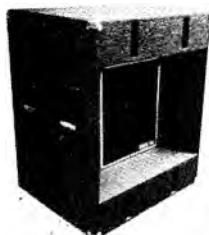
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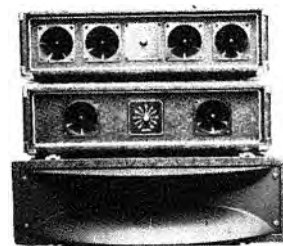


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Playing



Here is a useful exercise for increasing fluency. It is a pattern based on the pentatonic scale. It is very adaptable and can be used in solos to get from one point to the next.

It can be played very fast by the accomplished or slowly by the beginner and be of use to both of them. The phrasing can be altered as suggested in Example 3, and of course you can make up your own, such as triplets, etc.

The advanced player can extend it up into the harmonic range, which increases the difficulty considerably.

The main thing to watch for is to keep even timing, absolute smoothness and a similar tone right from the bottom to the top of the instrument.

1.



2.



3. Phrasing



Rockex 79

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Your Queries

Don't change it!

I have a 1963 Fender Esquire which has been modified by adding an extra pickup to look like a Telecaster. I am now thinking of replacing the two original pickups with DiMarzio Dual-Sound pickups or similar. How should I go about doing this with reference to wiring, spacing of strings over pole pieces, etc?

With the new pickups I would prefer to have two volume controls and two tone controls. I would also like to replace the existing bridge with a Gibson-type bridge, and would welcome your suggestions on how I might achieve this.

D.A. Davies,
Bangor,
Gwynedd.

Stephen Delft replies: If you want to swap pickups you could fit a DiMarzio SDS1 in the neck position. This is a good general purpose pickup which should fit the existing hole. Esquires in good condition are becoming increasingly scarce and I would be inclined to make as few permanent changes to your guitar as possible. I would be much happier if you kept the Esquire as it is and obtained a wrecked and not too valuable Tele for all the custom work you describe. If you are willing to do this, let me know and I will try to do a short article on the necessary conversion. Meanwhile you may find all you need in previous IM articles: "Improve a Copy Guitar" Parts 1 and 2, May/June '75 and Corrections July '75, and in this February's Guild conversion.



Horn hints

I have found great difficulty in finding publications on saxophone maintenance or advanced playing, e.g. harmonic fingering. Could you advise me on where I could obtain such information?

P. Harper,
Hale Barns,
Cheshire.

Alan Holmes replies: There are several

excellent books on harmonics and advanced playing. I would especially recommend "The Art of Saxophone" by Larry Teal and "High Tones for the Saxophone" by Eugene Rousseau. If your local music shop can't supply them, I suggest you write to Bill Lewington's Musical Instruments, 144 Shaftesbury Avenue, London WC2.

Send your questions about instruments, amplification, music and the business to **Queries**, International Musician and Recording World, Grosvenor House, 141-143 Drury Lane, London WC2. If you'd like your question answered by a particular one of our consultants, mark your envelope "Stephen Delft", "Mark Sawicki", etc.

Tuning problem

When I use the tremolo arm on my Strat, the guitar goes desperately out of tune. This never used to happen on my Japanese Strat copy. I am quite fond of using the tremolo arm but it sounds terrible when it goes out of tune in the middle of a solo. It has got to the point now where I'm afraid to use it. Help!

Steve Murtagh,
Belfast.

Stephen Delft replies: The most likely explanations are that the strings are sticking in the nut or that the pivot screws on the tremolo block need adjustment. The nut can be improved with soft pencil lead rubbed into the bottom of the string slots, but professional adjustment is advisable for the screws.

Composer's corner

I have been composing songs, lyrics and music, for some years now as a hobby. I can't read or write music but I can bash out a tune on the piano. I don't play in a band, so I have no opportunity to have my compositions performed in public. How should I go about having them published?

E.J. Conolly,
Shepherds Bush,
London.

The exploitation or promotion of any songs requires you to make a demo tape. You should sing and play your songs into a cassette recorder and send the tape or tapes to various music publishers. Their addresses can be found in the Melody Maker Year Book, and in Kemps Music & Recording Industry Year Book. Obviously, the more tapes you can make, the more quickly you can reach a number of

publishers. Tape copying facilities are available, but in your case it is probably as easy to record your songs several times over. To this end, you can buy short tapes, so you don't have to waste money on full-length cassettes. Don't send more than four songs on any tape, as music business people are far too busy to listen to anything longer. Best of luck!

Truss-worthy

Can you give me some advice on how to adjust a truss rod? Such as how much to adjust and how long to wait before making a further adjustment, and also the possible hazards. My problem, more specifically, is that the neck on my Guild S90 solid is slightly bowed inwards and the action is therefore not as good as it could be. Can I improve it by slackening off the truss rod slightly?

R. Kirchstein,
Bagshot,
Surrey.

Stephen Delft replies: It is quite easy to break a truss rod! If the neck is pulled forwards (as if by the tension of the strings) tighten the truss rod a quarter turn per week, using reasonable force from one hand only. You will need a slim 1/4AF socket spanner. If you need more than one turn to straighten the neck, if the neck goes S-shaped instead of straight or if the adjustment seems stiff, ask a good repairer.

Local rewirer

For some time I have been thinking about rewiring my Strat to give a wider range of tone possibilities, but I don't trust my own skills and I don't want to ruin the job. The trouble is, I don't know of any guitar technicians in this part of the world - and I don't want to be parted from my instrument. Does this mean I will have to go to London to have the job done, and how long will it take?

Al Wintle,
Weston-super-Mare,
Avon.

We learned recently of a firm in Backwell, Bristol, who can rewire most guitars to custom designs at a reasonable price, and can supply and/or fit replacement pickups (DiMarzio, Mighty Mite, etc.). They're called Obelec and claim to have a unique design for modifying a Strat (who hasn't?) which gives up to nine different tone settings without any change to the external appearance. Give them a call on Flax Bourton (0275 83) 2347.

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Wotcha Mate!

As a reader of International Musician, we guess that you must be a musician! (You can't fool us!!) It may be that you play at home for your own amusement, in a gigging band, or spend hours in a studio getting your thing down on tape (sounds rude, that-ed).

You may well have heard of us, (Our free 'n' easy on wheels is famous throughout the length or breadth of lower Hamrogate). The idea is that we come to your house with the gear of your choice for you to try out before you buy. This way you can be sure that anything ordered is right, before you take delivery.

Now here's the good bit - for a limited period we are able to offer readers of I.M. an amazing deal. As well as the magnificent free tee-shirt with all orders, we can offer you credit terms (subject to status) with absolutely no deposit and up to 3 years to pay.

As you may know, our stocks are large, but in most cases even if temporarily out of stock we can usually supply any musical instrument within a few days of order. Why not give us a try? Unfortunately, as we said, this offer is for a limited period only, so why not give us a ring on Aylesbury 28555 (week days) & ask for details. The lovely Margaret is waiting for your call & ready to get your gear on the road to you.

For those who live near enough, why not drop in at Hemel Hempstead, we've got the coffee machine working again (you de like tea, don't you?) - our pinball machine is working (just kick it!) and we've got masses of stocks.

Hope to see you soon,

Stuart (the lovely one), John (Aylesbury's answer to Man. Utd.)

Don (the man who made home rule for Scotland an absolute necessity)

+

Den who wants to play for Queens Park Rangers.
(he's got the socks already).

Your Queries

Pickup preference

I play a Kimbara Les Paul copy and, not being able to afford a name guitar, decided to improve my present one by buying a pair of DiMarzio pickups. The two I chose were the Dual-Sound humbucker and the Super Distortion humbucker. However, I now find that not only is the overall sound inferior to that of my original pickups but also the difference in tone between bass and treble pickups is very restricted. As well as this, the Dual-Sound pickup has a far higher output than the other one. They are both wired correctly in accordance to normal standard guitar wirings and, obviously not wanting to waste a lot of money, I would like to know what's wrong. Is it that the standard wiring is not suitable, or is one of them damaged and therefore creating a short circuit?

Mark Walters,
London SW18.

Stephen Delft replies: It is possible that you may have wired one or other pickup incorrectly - get a guitar repairman to check it. It may also be possible that you prefer the sound of the original pickups. If that's the case, simply put the originals back.

Kawai: the facts

In one of the Guitarchecks in last month's IM, Stephen Delft inaccurately described Kawai guitars as being made in Korea. We regret this inaccuracy and apologise to Rosetti (EMI) Ltd, the distributors, for any inconvenience caused.

Stephen writes: "Kawai guitars are, of course, made by the Kawai Co., one of the largest musical instrument companies in Japan. The particular instrument reviewed had a quality of finish which was well up to the standards of the better Japanese instruments and, to be fair, its price should have been compared to the prices of other instruments from the same country of origin. Compared to other Japanese instruments of roughly similar design and quality, the Kawai KS12XL is not relatively expensive: its price is about average for this type of guitar."

"I am also informed that the sample sent for review does have a three-piece neck, not a one-piece neck as stated. I must credit the Kawai Co. with two of the most accurate and invisible glue joints I have ever come across. My opinion on other aspects of this guitar still stand."

Metal mouthpieces

I am inspired to write this while listening to the beautiful sound of Gary Bart's sax playing on Donald Bird's *Stepping into Tomorrow* album. I would be very interested to know what type of alto and mouthpiece he uses.

I have a pre-war Buescher alto and two ebonite mouthpieces (I don't know what make they are) and I am interested in finding out about metal mouthpieces for alts. I would appreciate any information you could supply.

Ondre Nowakowski,
Pentraeth,
Anglesey.

Alan Holmes replies: As far as I know, Gary Bart plays a Selmer Mark VI alto, but the only way to find out exactly what mouthpieces he uses is to get in touch with him personally. I suggest you write to the record company, who will forward your letter or give you Gary's address. I wrote a series of articles on mouthpieces for IM, including one on metal mouthpieces for alto. Photocopies are available at £1 each. Leslie Evans, of 275 Colney Hatch Lane, London N11, will supply mouthpieces on seven days' trial.

Old Slowhand

Eric Clapton's work with Mayall and the Bluesbreakers is widely considered to be the seminal Les Paul/Marshall sound. In view of this importance would you be able to clear the air about what was actually being played by Clapton on the Bluesbreakers' album that contained *Have You Heard*, *All Your Love* and *Hideaway*? What model and year of Les Paul guitar and Marshall amp were used, any modifications, effects boxes, etc. that were used. Also what brand of strings (gauge) were used and what kind of pick material and weight. I am assuming from the sound that the guitar was not recorded direct into the board but that the amp was miked (what kind if possible). What songs were recorded on which dates would be of some interest too.

Did this combination stay intact through the *Fresh Cream* album? And finally, at what point did Marshall alter the circuitry from the initial design or from what Eric was playing above?

Tom Swan
Chicago, Illinois

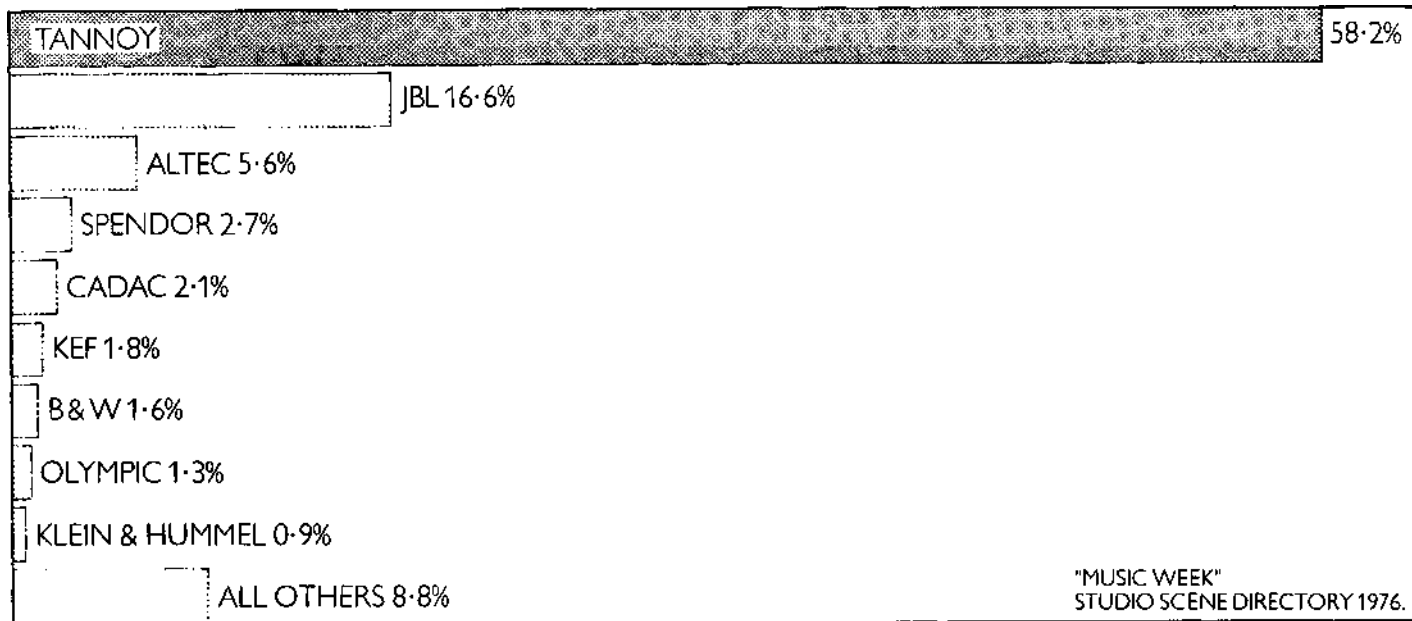
Is that all you want to know? After extensive enquiries, we're come up

with some good educated guesses, but that's the nearest we can get as nobody we spoke to could quite remember back to 1966. The guitar was undoubtedly a Les Paul Standard and a very old one at that, though we're not quite sure how old. Possibly a '58 model. The amplifier was a Marshall model 1959 combo - either an 18 watt 2x18" version or, more likely, a 50 watt 2x12". These were discontinued around 1971. It's also assumed that Clapton didn't use any special effects and the hard, gutsy sound was a natural combination of amp, pickups and Eric's own style. Regarding strings, in those days many blues and rock players used to buy regular medium gauge sets and down-gauge them, i.e. use the A for the E, the D for the A and so on, finally using a thin banjo string for the top E. This was at a time when nobody was marketing ultra-light or custom gauges in Britain.

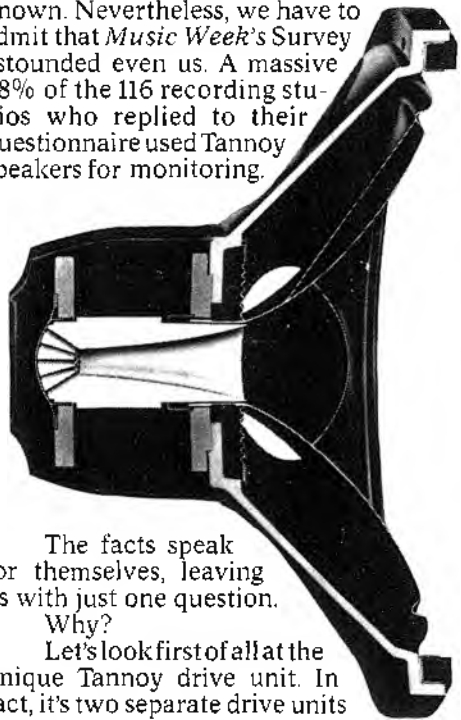
As to the type of pick, that's anybody's guess but Herco nylon picks were very much in vogue at the time. The amplifier was "miked" but nobody seems to remember which type of mike was used. By the time *Fresh Cream* was released, Clapton had gone on to use a model 1959 100 watt head with 1960 and 1960B cabinets - the definitive Marshall stack. Finally, Marshall tell us they have never altered the circuitry of their amplifiers. The only difference is that the amps are a lot quieter (signal-to-noise, not volume) than they were. The circuits and valves are exactly the same.



An independent survey of British recording studios speaks volumes for us.



Among the people who move in those exalted circles, the popularity of Tannoy speakers for studio monitoring is well known. Nevertheless, we have to admit that *Music Week's* Survey astounded even us. A massive 58% of the 116 recording studios who replied to their questionnaire used Tannoy speakers for monitoring.



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adding to its weight, enabling it to make larger excursions without break-up. Which, if you know the volume levels used in studio monitoring, is just as well.

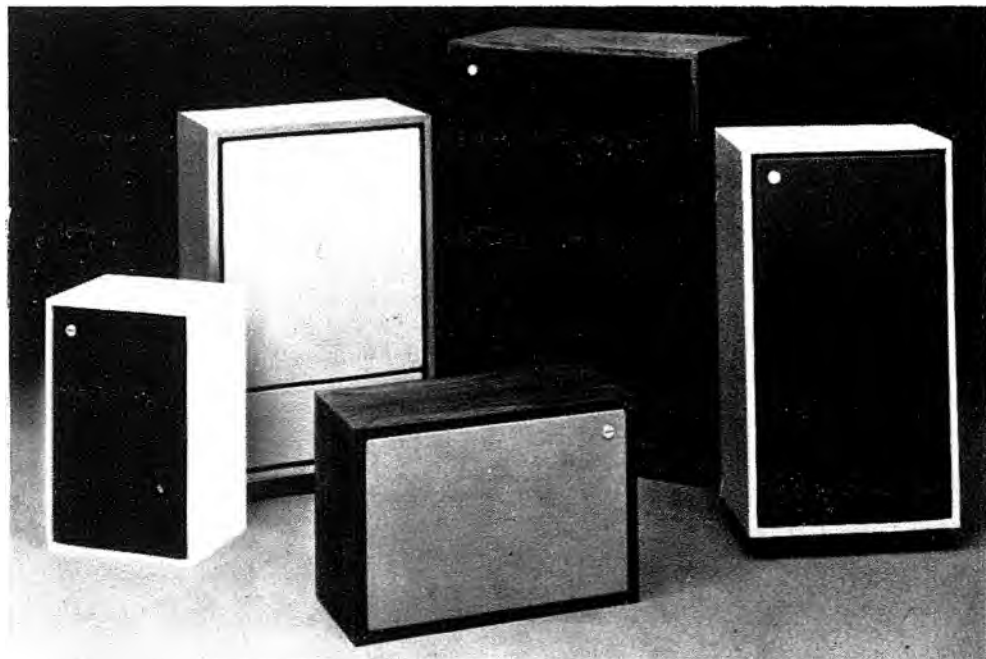
Most remarkable of all, the Tannoy drive units in your local hi-fi shop are identical to the ones in AirStudio's control room.

Although we must be honest.

Of the 58% of recording studios who monitor with Tannoys, about a third have them in professional cabinets.

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EMS presents...

Mike Beecher witnesses the launch of a new British polyphonic synth

The ideal qualities of a polyphonic synthesizer are a full range keyboard, comprehensive manipulation of sound sources, controls and treatments – through the keyboard and control panel – with some method of storing the music played. Yet it should still be a machine that is portable, with an easily understood layout for stage performances. Its sound quality should be good enough for studio use and its price tag should be within reach of as many musicians as possible.

Your answer lies in the soil – that is, in the very English ground of Oxfordshire, where a select group form the nucleus of much of this country's serious electronic music under the name of EMS (Electronic Music Studios). Since the Sixties this company has produced many synthesizers, from the smallest portable "suitcase" synth (the Synthi AKS with its own touch keyboard) to one of the world's biggest – the Synthi-100 that has full computer control. In fact, most of EMS's achievement lies in the field of digital computer music through the work of Peter Zinovieff, who has done much of the pioneering work in this special art form.

Inevitably all that experience in computers has led to the design of a new type of synthesizer. It's called the EMS Polysynthi, and it actually features all those qualities of a poly that I have suggested.

At the first glance, the Polysynthi doesn't boast many controls compared with a Yamaha C60 or Polymoog. But above the keyboard are further switching facilities that let control voltages from one device affect many of the other controls. This is a really easy instrument to use and still gives good sound quality for studio use from most of its sections. Another big advantage is that you can plug in guitar, keyboard, mike, etc. through the external input for direct treatment – and its overall volume is set by the envelope follower, which also gives a variable trigger pulse to operate the envelope generators.

There are two voltage controlled LFOs, two ADSRs and a tremendously powerful sequencer (available separately at about £500) that is really a Z80 based microprocessor with 48K memory capability. That really means you can play anything on the keyboard for up to 10 minutes and there it all is

at the end, exactly as you played, ready to burst forth at any speed, at any of the six octave pitch ranges and with two separate control voltages remembered for using on the filter for harmonic voicing or on one of the other c.v. inputs!

The two prototype machines on show at the country house of EMS had a few of the usual teething troubles – with the promise that all would be well in the marketed version from the Polysynthi's designer, Graham Hinton. This machine, with its own special sequencer, could be outstanding for its very cheapness (the Polysynthi will cost £990) and its simplicity in design. But, from my point of view, there are a few items needing attention. The LFO range is small, there is no proper carrying case at present – just a cover and a handle on the side – and the panel is almost flat. The pitch-bend wheel rotates horizontally with a spring-loaded return, rather than on a vertical axis used by most makes. Some control voltages are not big enough for my liking and the keyboard sinks slightly under pressure sensitive control of a key. Only a Low Pass filter (but with two and four pole slope) is available at present, although the option of a Low Pass or High Pass Filter may be given. There is no ring modulator effect and no portamento.

Despite these deficiencies – which are already being improved upon – EMS could have their first really commercial winner.

Schaller

machine heads

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Dean Markley have built a strong reputation in a short time on the crowded string market. Professional musicians have spread the good word by simply playing them. More and more players are swearing by Dean Markley Strings and it is easy to see why. Their guitar and bass strings are beyond compare.

Every other maker has a gimmick but few come close to the consistent, superior quality of Dean Markley strings. Dean Markley produces a comprehensive range of strings for acoustic, electric and bass guitars. Some of the world's best players are currently using Dean Markley strings exclusively.

World renowned artists like Kansas, Rick Derringer, Pat Travers, Little River Band, Bad Company and Eric Gale, to name but a few, are amongst the best exponents of guitar styles and they all use Dean Markley Strings. Derringer can pound out his hard chordal work and fiery lead lines with Dean Markley Strings and Eric Gale is able to saunter gracefully all over his fretboard with them. Prakash John of the Alice Cooper Band, Chuck Rainey of Steely Dan and Phil Lesh of the Grateful Dead are the bassists who use Dean Markley bass strings.

Phil Lesh of the Grateful Dead are the bassists who use Dean Markley bass strings. Alembic, makers of the Rolfs-Royce of bass guitars, fit them to all their new instruments.

Alloy Choice

Because different guitars vary in their response to different alloys, Dean Markley acoustic guitar strings are available in both bronze and brass, giving the acoustic player a choice of the particular sound he prefers. The bronze strings have a very warm, rich tone with a full, mellow bottom that no other string can match. Every guitarist who has played them is amazed by their extraordinary sustain and bell-like harmonics.

The light and medium light gauges were wisely chosen for today's players. The light gauge compares with other maker's extra light with the exception of the low end strings, which are slightly larger. They have a beautiful, full bass response that most extra light gauges do not have. The medium light compares with other companies light gauges but here again, the bass strings are even larger, giving a rich, powerful bottom end. They are more powerful than conventional light gauge strings and are perfect for strong chord work and finger picking. They are a well balanced set.

The new brass acoustic strings produced by Dean Markley Strings are slightly more expensive but their merits are obvious. They are louder, brighter and more brilliantly penetrating than their bronze counterparts. They don't have the usual brassy, cold sound of most brass strings. They are a pleasant surprise.

Silky Feel

The first feature noticeable about Dean Markley electric strings is their amazing silky feel. The strings tune up very quickly and have an elastic quality that allows extravagant bends to be played and then come back to exact pitch. The high end response is noticeably increased, making notes "hang" even when played above the 12th fret. Extraordinary harmonics can be produced by these strings everywhere on the neck, even at the first fret. The wound strings have very pure overtones and deep bass definition. Alembic guitars have an extra octave in the frequency range of their pickups (30-15000 cps) and are quick to show up string deficiencies. Dean Markley Strings come through the high end with flying colours.

The electric strings stay in tune even after very hard playing and the gauges—extra light, light, regular, light top heavy bottom, medium and jazz give every guitarist a perfect choice.

Elvin Bishop said this about Dean Markley electric guitar strings: "I've played a lot of strings but nothing as good as these. Their ring is fantastic and they hold their tone longer than any other strings, that's why Johnny Vernazza, Fly Brooks and I use them". Eric Gale, guitarist for Stuff and a brilliant exponent of the subtle run, was turned on to Dean Markley Strings by Paul Jackson of Herbie Hancock's Headhunters. Gale said: Paul said they were the best made and you know what?... he's right!"

Pat Travers swears by Dean Markley Strings. Pat uses a new set of strings at every performance and used to have tuning problems. But not with Dean Markley Strings. Travers said: "They have a completely different feel, it's hard to explain but they tune up easier. With these strings, I only tune up once before going on stage and maybe once half-way through. With any others I would have to tune up a lot more often than that".

Pat added: "Also, because I sweat so much during the act and get so much sweat on the strings, all other strings tend to go dead halfway through the set. But these Dean Markley Strings stay bright through it all. I really get excited sometimes when I'm onstage. I really tear into my guitar, I find that other strings of the same gauge flop around a bit. The lower strings especially will go up in pitch slightly when you hit them hard but these Markley strings don't do that. I'm really pleased with them and I've been telling everybody about them because I've just found no other strings to come close to them".

New Roundwound

For a long time bass guitarists have had to settle for either flatwound or roundwound strings, neither of which give the full range of sound reproduction needed in much of today's music. Dean Markley, with the help of Paul Jackson of Herbie Hancock's Headhunters, designed a string that encompasses the whole audio range of the bass guitar. This string, known as the Ground Round Wound bass is a roundwound string that is ground and polished, eliminating fret damaging "humps". Jackson said: "Their harmonics are fantastic... total response... they'll do anything I want them to".

The Ground Round Wound bass strings feel like a flatwound but sound like a roundwound. They are powerful and punchy, having more mass than other strings made with the same principle. They are made with a tarnish-proof outer wrap which responds perfectly to the magnetic field of the bass pickup, giving the strings more power and bite. They are an almost perfect bass string.

Dean Markley Strings also produce a roundwound bass string that is as bright and ringing as the popular Rotosound string, but seems to have more bottom end response. The polishing process Markley uses eliminates most of the fret wear that is synonymous with round wound strings.

Dean Markley Ground Round Wound and Round Wound bass strings are available in light, medium light and medium gauges. The light and medium gauges correspond with most other makers' light and medium gauges. The medium light gauge, which was designed by Prakash John, bassist of the Alice Cooper Band, is a mixture of strings from the light and medium sets. It incorporates the E and A strings from the light set with the D and G of the medium set. It makes the set perfect for "snapping" and solo work.

The Dean Markley flat wound strings have no gaps between the windings thus keeping sweat and dirt out of the core, which is the major cause of dead strings.

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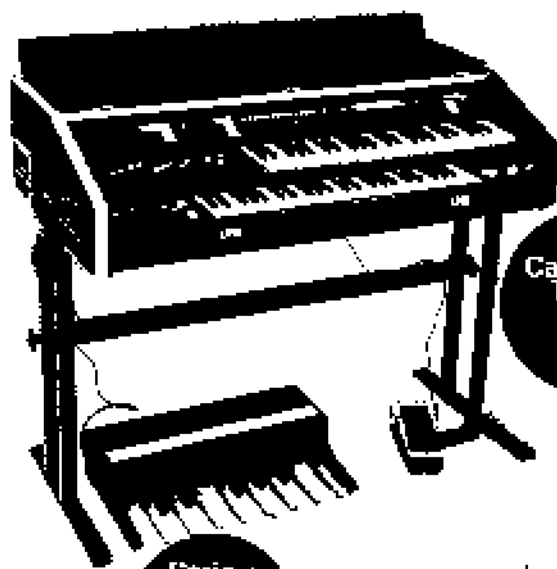
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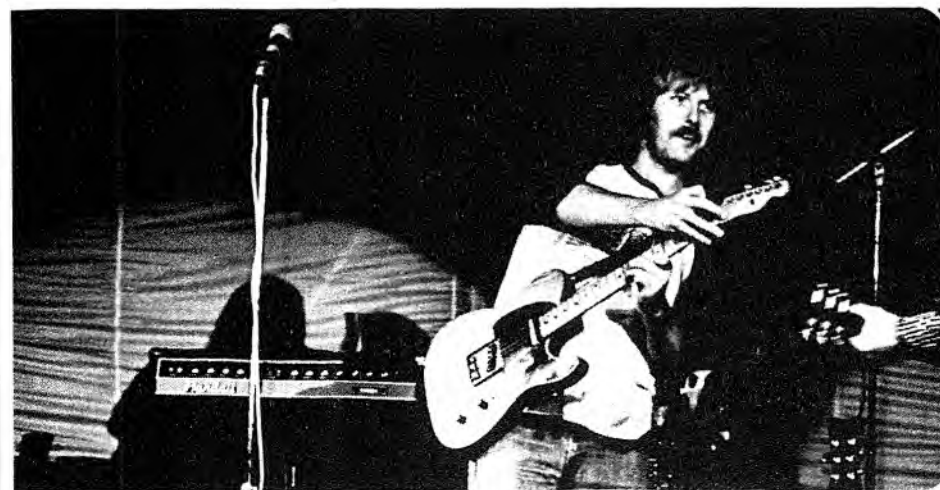
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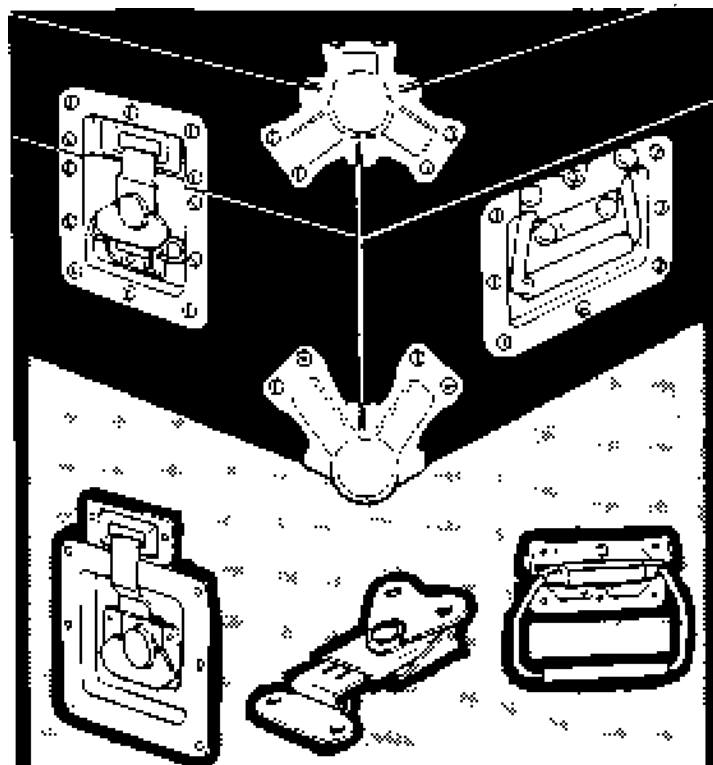
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PHASER sweep rate	Variable from .1 to 8 Hz
PHASER Sweep width	Selectable to either 4 octaves or 1.6 octaves.
PHASER recycle	Selectable to either 0% or 70%
DISTORTION available gain	40 dB
DISTORTION limiting threshold	1.5 mV peak input
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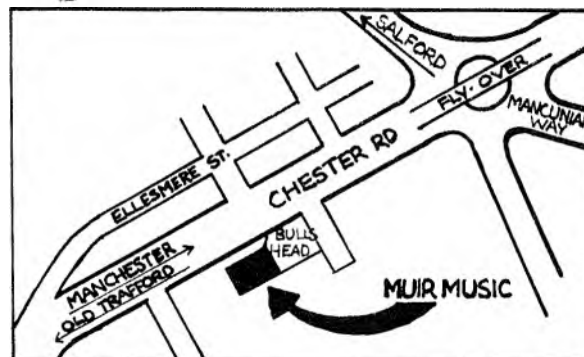
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UNDERSTANDING SYNTHESIZERS

PART 10

This month I am going to describe a typical basic synthesizer, pulling together the various synthesizer modules which I have described individually in previous articles in the series. Just as it is important to grasp how each synthesizer module functions, it is also important to be able to visualise a synthesizer as a whole. Fortunately, the front panel design is usually very helpful in presenting a clear picture of a synthesizer's modules and their various interconnections.

In this article, I have drawn the figures in the style often adopted by synthesizer manufacturers, and when linked together they could form the front panel design of a basic, single-oscillator synthesizer. So let's look systematically over this imaginary instrument in the way a player would perhaps view it for the first time, starting with the keyboard module.

Keyboard module

The keyboard module, shown in the centre of Fig. 1, has two outputs: one is the keyboard voltage, used primarily for changing the frequency of the VCO, and the other is the keyboard gate pulse, which is used to trigger the ADSR module. The keyboard voltage always corresponds to the last key pressed on the keyboard, and is held constant when the key is released by the keyboard memory. The keyboard voltage emerges from the front panel at a jack socket (CV OUT), so that it is available if required for purposes other than those built into the synthesizer. Internally the keyboard voltage is routed to

the control voltage input mixer of the VCO (as indicated by line A in Fig. 1) and also to the VCF as indicated by line B at the bottom of the diagram.

Portamento, which is a gradual rather than sudden change in pitch from one note to the next, can be introduced by slightly smoothing out the keyboard voltage changes, and the portamento *time* is adjustable by a slider.

The keyboard gate pulse is generated when a key is pressed down and disappears when no key is pressed down. This is a "logic" signal which is used to trigger the ADSR module into action. This connection is made internally and is not indicated on the panel. Like the keyboard voltage, the keyboard gate pulse is available at a jack socket (GATE OUT) for connection into another synthesizer — or perhaps even into lighting display controllers.

Low frequency oscillator (LFO)

The LFO, shown on the left in Fig. 1, produces sub-sonic oscillations — that is to say oscillations with frequencies below the lower limit of the audio band (20Hz approximately). The frequency of the LFO is *not* voltage-controlled, and is simply set with a slider. Three waveforms, sawtooth, sine and square wave, are available from this LFO. Whichever waveform is selected by the switch below the LFO block is sent to the VCO module, and also the VCF and VCA, as indicated by the line across the bottom of the diagram.

The LFO's sine waveform is best for producing vibrato (the VCO's LFO

slider would be advanced as shown) and the square waveform is used for producing trills, the pitch difference between the two notes of the trill being determined by the setting of the LFO slider.

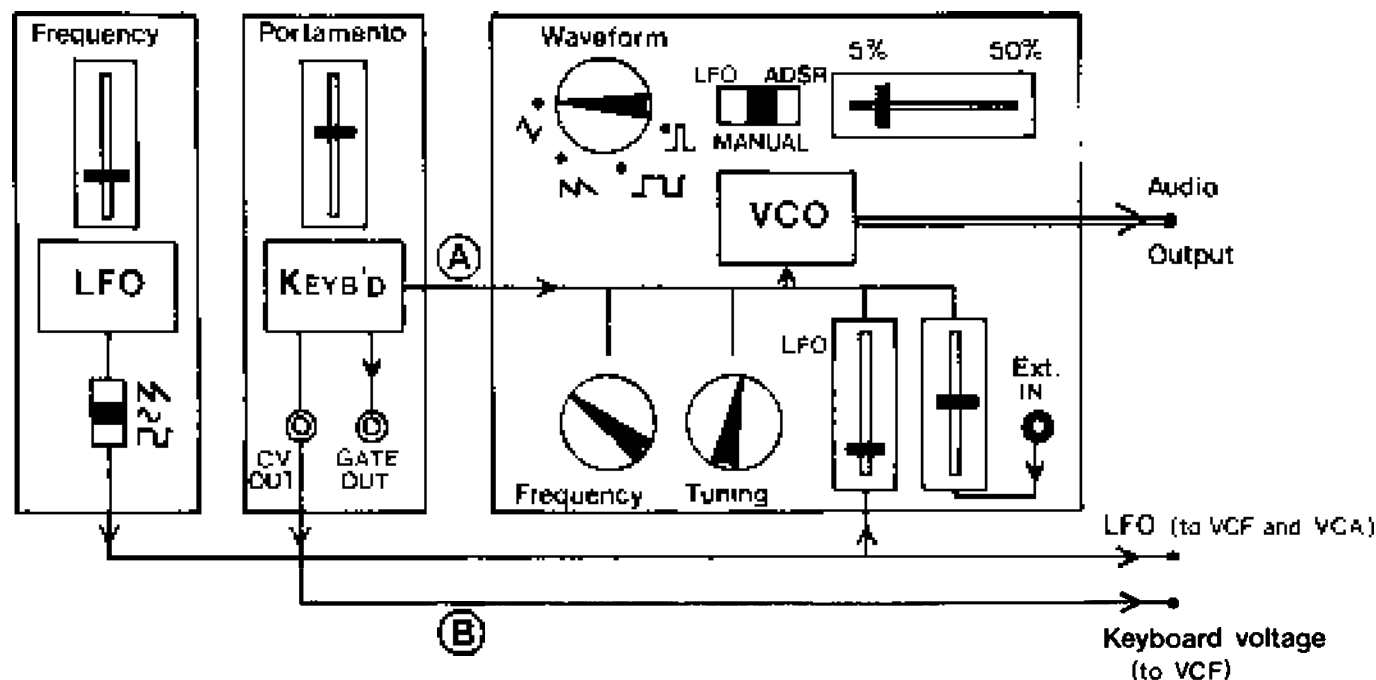
Audio mixer

This module, shown on the top left in Fig. 2, mixes together audio signals from three possible sources en route to the high-pass filter (HPF). The most important source is the VCO, and the amplitude of the VCO's signal reaching the HPF is controlled by the mixer's VCO slider. Another audio-signal source is the noise generator. This produces a hissing sound which has one of two qualities (called "white" and "pink") selectable by a switch. (I will be saying much more about the noise generator and its uses next month.) Like the VCO, the noise input to the mixer has its own level control, so any required balance between the VCO and noise signal can be obtained.

This mixer also provides an input for an external instrument (EXT. IN) so that the sounds produced say by an electric guitar could be modified by any or all of the following modules (HPF, VCF, VCA).

High-pass filter (HPF)

The high-pass filter, shown at top centre in Fig. 2, is a very simple module in terms of controls. It is used to remove low-frequency components from the waveform presented by the preceding audio mixer, and is particularly important in the synthesis of "thin" sounds (e.g. solo strings, harpsi-



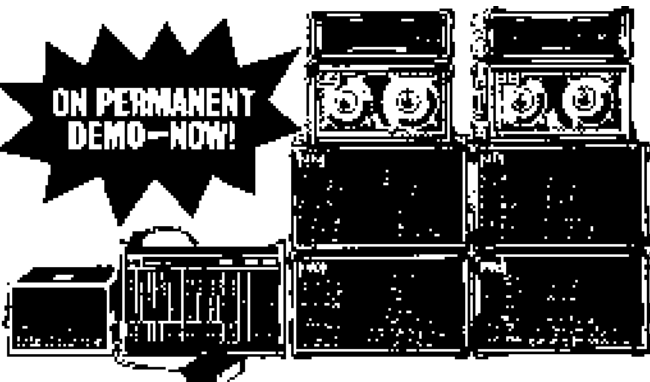
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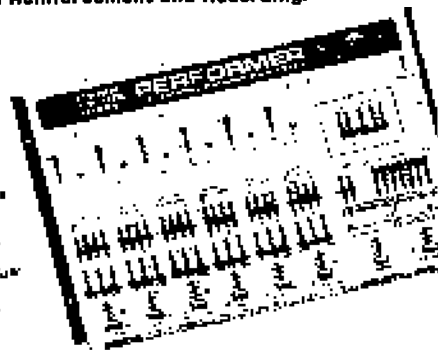
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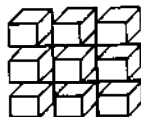


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UNDERSTANDING SYNTHESIZERS

chord). The HPF's cut-off frequency – the frequency below which virtually nothing passes through the filter – is set manually by a slider and is *not* voltage controlled.

Voltage controlled oscillator (VCO)

The VCO, shown on the right in Fig. 1, is the main sound source in the synthesizer, and produces a periodic oscillating voltage waveform which has one of four possible shapes selectable by a rotary switch. The choices of waveform are triangular, sawtooth, square and pulse, and each waveform has its own characteristic sound. With the exception of the triangular waveform (which has a smooth, quite pure sound), all the waveforms are rich in harmonics. The harmonic spectrum determines the particular sound quality, tone colour or timbre. In this VCO module, the shape (more specifically, the mark/space ratio) of the pulse wave can be varied manually using the slider marked 5% to 50% (see Fig. 1, top right). If the switch to the left of this slider is set to its centre position (MANUAL), the slider determines the mark/space ratio, which in turn determines the harmonic spectrum and therefore the tone quality of the waveform. If the switch is away from centre,

the mark/space ratio is varied either at a rate determined by the LFO frequency (which produces a pleasing "chorus" effect) or alternatively by the waveform generated by the ADSR module (see below).

The frequency of the VCO's oscillations (i.e. the pitch of the note the VCO is generating) is determined by one control voltage which is the sum of a number of voltages coming from various sources. (This summation occurs in the VCO's control voltage input mixer, which is represented by the various lines leading into the base of the VCO block.) The most important control voltage source is the keyboard module, and the keyboard voltage is permanently connected internally to the VCO as indicated by line A. For each octave jump on the keyboard, the keyboard voltage (usually) changes by one volt and in response to this one volt change the frequency of the VCO doubles, increasing the pitch by the required octave. Added to the keyboard voltage are voltages from the Frequency and Tuning controls which are jointly used to tune the VCO accurately in the required octave. An external voltage can also be added (through its own level control) so that, for example, the keyboard module of another synthesizer could control this

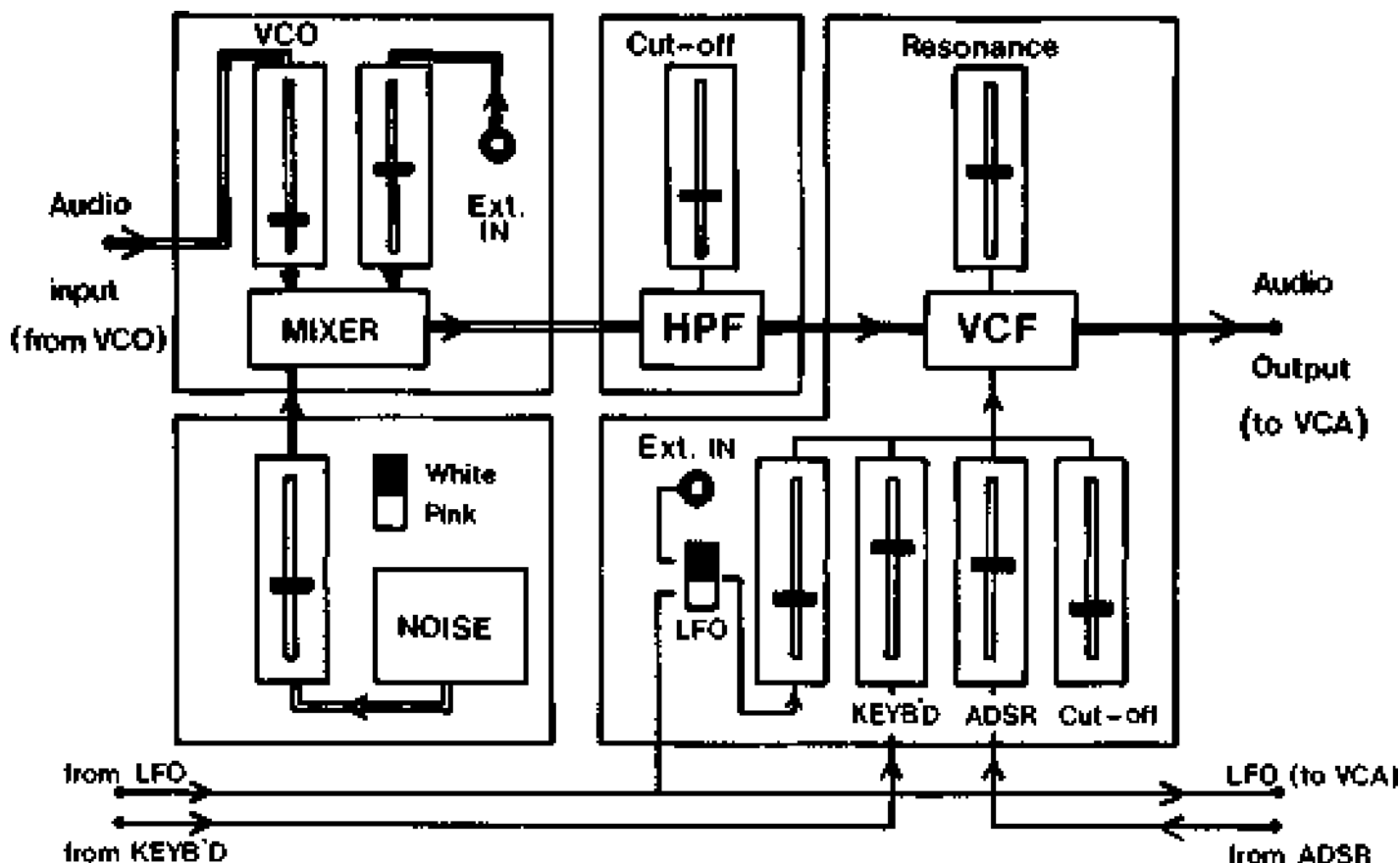
VCO if required.

The final source of control voltage for the VCO is the LFO (see below): by adding the LFO waveform to the existing control voltage, a whole variety of "frequency-modulation" effects can be produced, with the LFO slider on the VCO module controlling the intensity of these effects.

Voltage controlled filter (VCF)

The VCF, shown on the right in Fig. 2, is a low-pass filter and is used to modify the sound quality of the waveform coming out of the high-pass filter. With the important exception of the resonance control, all the VCF module's sliders are used to modify the cut-off frequency, this being the frequency above which virtually nothing passes through the filter. (In effect, lowering the cut-off frequency makes sound less harsh, because higher harmonics are removed.)

The value of the VCF's cut-off frequency is determined by a control voltage which, as in the case of the VCO, is made up of contributions from various sources. The labels on the four sliders at the bottom of the VCF module in Fig. 2 clearly indicate what the possible sources are; either the LFO module or an external input (depending on the setting of the switch



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on the left), the keyboard module and the ADSR module. The "Cut-off" control also provides a contribution to the VCF's control voltage, and if all the other sliders are set at minimum, this control alone determines the VCF's cut-off frequency.

The Resonance control modifies the filter's frequency response by *reducing* the gain of the VCF at frequencies *below* the cut-off frequency, in effect emphasising a band of frequencies near the cut-off frequency. If the Resonance control is advanced far enough, the VCF will start to oscillate at the cut-off frequency, generating a pure sine waveform.

Voltage controlled amplifier (VCA)

After the signals produced by the VCO and the noise generator have been modified by the two filters, they pass on to the voltage-controlled amplifier as shown on the left in Fig. 3. The VCA receives its control voltage in this system from three sources: either the LFO module or an external source (depending on the setting of the switch on the left), the ADSR module and also from a slider labelled HOLD. More often than not, the HOLD control would be left at minimum otherwise the synthesizer would produce a continuous sound.

The most important and essential control voltage source for the VCA is the ADSR module, for the ADSR waveform effectively turns the VCA on and

off, splitting up the sound into discrete notes corresponding to each key depression (see below). The VCA's ADSR slider effectively controls the overall volume of the synthesizer, whereas the LFO slider is used to produce the tremolo effect and other forms of amplitude depending on the choice of LFO waveform.

ADSR module

This module, shown at the top left in Fig. 3, produces the Attack-Decay-Sustain-Release waveform once and once only for each keyboard gate pulse generated by the keyboard module (assuming the GATE switch to be in the KEYB'D position). A key depression starts the attack phase, which is automatically followed by the decay phase to the sustain level; then when the key is released, the ADSR waveform falls from the sustain level to zero during the release phase. The A, D and R sliders alter the *durations* of the attack, decay and release phases; the S control sets the sustain level, which is the voltage the ADSR module will produce indefinitely as long as a key is held down.

The ADSR waveform is fed to the VCA and also to the VCF (as indicated by the line at the bottom of Fig. 3) for the synthesis of dynamic changes in amplitude and frequency spectrum during each note. Repeated triggering of the ADSR module by the LFO can be introduced by shifting the GATE switch into the LFO position.

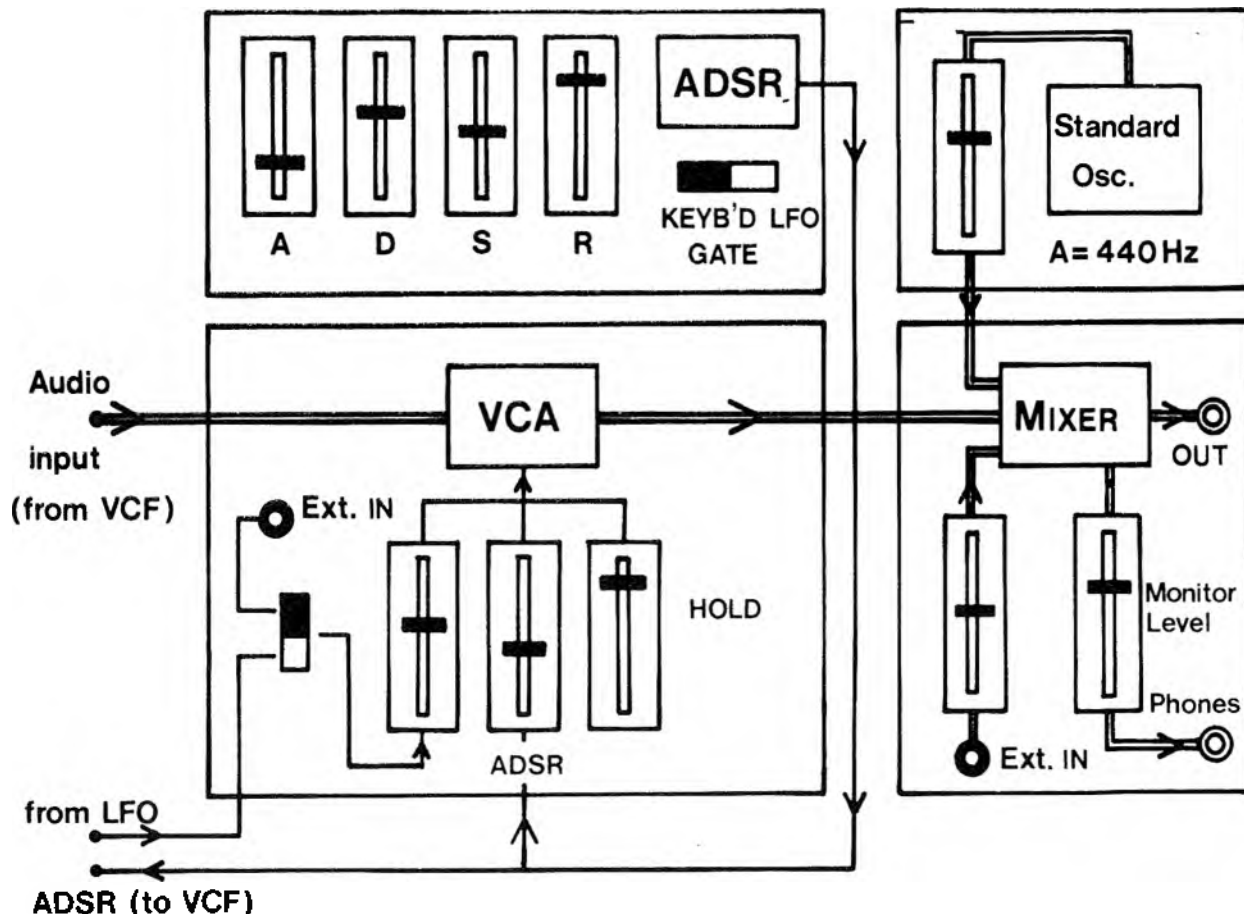
Output mixer

Before emerging into the outside world, the VCA's audio output passes through an output mixer, as shown on the right in Fig. 3. This mixer has three audio inputs: one from the VCA, one from the "Standard Oscillator" shown above, and one from an optional external source via an input level control. The standard oscillator, which has its own level control, is used for tuning the synthesizer, and provides a stable frequency of 440 Hz, the frequency of the A above middle C. (To tune the synthesizer, the A above middle C is tapped on the keyboard, the VCA's hold control and the Standard Oscillator's level control are advanced and the Frequency and Tuning controls of the VCO are adjusted until the two notes have the same frequency.)

After passing through the output mixer, the audio signal finally emerges from the synthesizer at a jack socket and would normally be fed into a power amplifier. The output mixer also provides an outlet for headphones with an adjustable monitor level.

In this article I have joined together the various synthesizer modules all of which — with one exception — I have described in detail in previous articles. The exception is the noise generator which I will be introducing next month along with two other modules called the "ring modulator" and "sample and hold".

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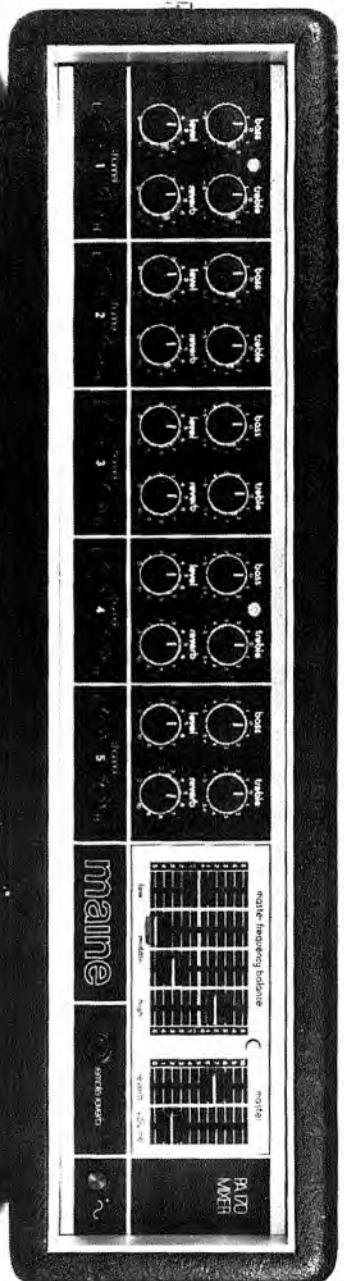
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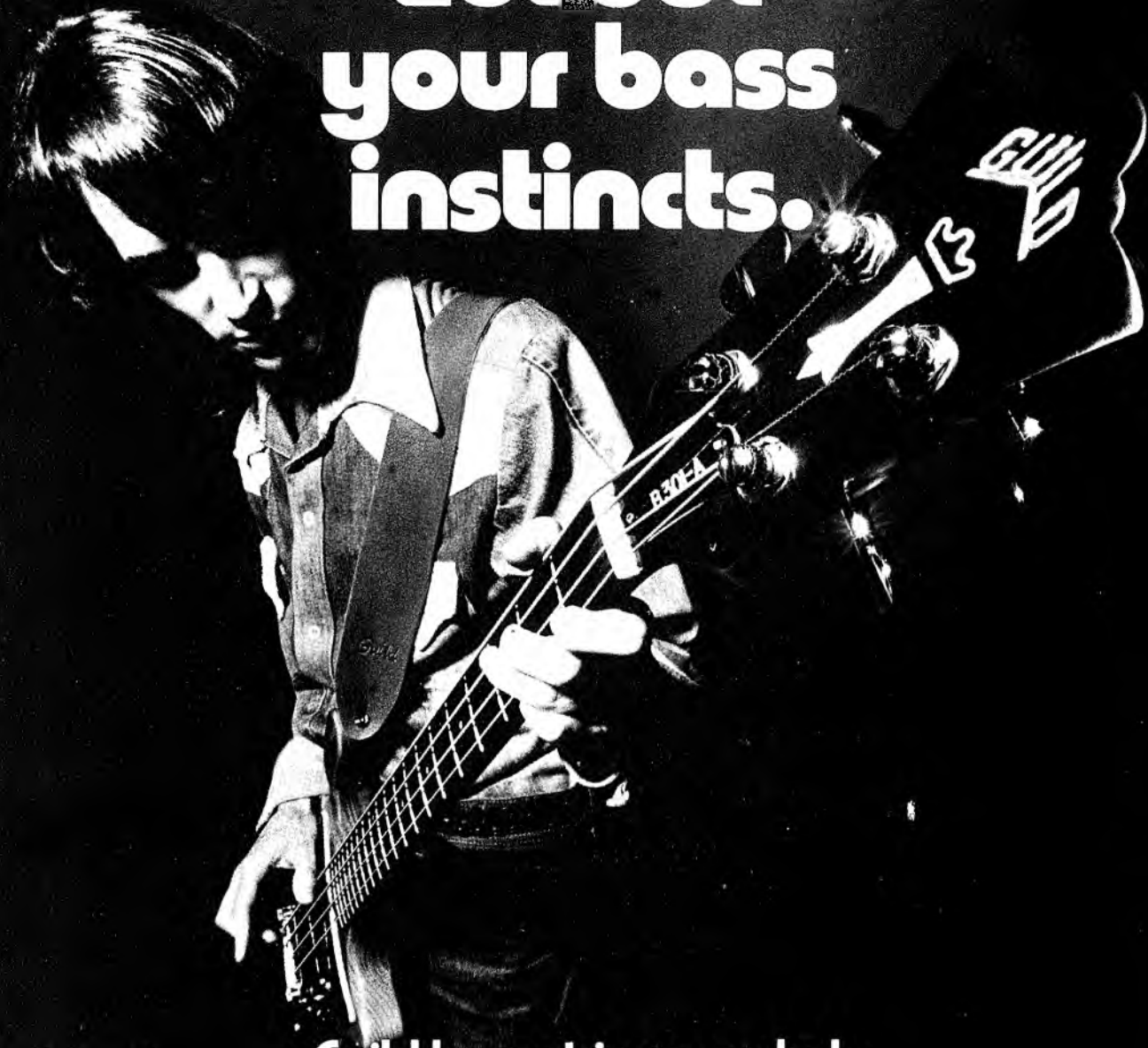
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Taking Care of Business

Did you know that, as a songwriter, you could sign a deal with a publisher whereby you are to receive 60 per cent of the royalties on your masterpieces – and wind up receiving only 12 per cent? It could happen, quite legally, if you didn't read the small print in the contract, or didn't understand what you were signing. In his second excursion into the world of contractual commitments, IM's Alan Holmes learns from a top London solicitor what to watch for when you sign with a publisher. Our legal eagle began his explanation with a parable...

It is said that a long time ago, in Biblical times, a man sat down at the side of the road and started to sing. As he sang, people who passed began to throw him money. This man was apparently the first composer. It is also said that as he was sitting by the side of the road, singing and receiving the money, another man walked down the other side of the road, sat opposite him and remained totally silent. As people passed him, they also threw him money. It is said that he was the first publisher.

In today's terms, the job of a publisher ought to be to work with the material that he acquires and to promote the recordings of those songs. If the writer is also the performer recording his own work, in this way they back up the recording company and perhaps work independently of the recording company in the sense of promoting, for example, the writer on tour, the writer in live performance. Secondly, the publisher's job is to try and get covers, get other artists to record their writers' material. There are some good publishers who will do this. Unfortunately, there are a number of publishers who really are grant licenses as and when they come up but really won't put any effort behind a work or the writer.

If a writer is recording his own material then the publisher has a guaranteed income from the writer's own records through the mechanical royalties payable by the record company.

We are grateful to a leading solicitor who specialises in music and entertainment law in London, for his help with this article.

Next month: Agency and management contracts and the vital "get-out" areas.

It isn't actually necessary for a publisher to do very much work to make money if the writer, as an artist, is successful. If you do record your own material, and you're not particularly keen on getting covers or you don't think your material is particularly suitable for other artists, then really there is no point in signing a full-blown publishing deal with the publisher unless you need advance money and the publisher you go to is prepared to pay you this. If you can possibly survive without it and you believe in your own talents, and believe that you will be successful, then it's much better to retain the publishing, perhaps through your own publishing company.

Engage somebody to administer this company for you at a royalty of perhaps 10 or 15 per cent, thus leaving you with 90 or 85 per cent as opposed, under a normal publishing deal, to your receiving a royalty of, perhaps, these days, 60 per cent. That's about the average now. It used to be 50-50 invariably, and now it's not uncommon to find 70-30 and even 75-25 or 80-20 deals. The amount of advance payable is really in inverse proportion to the amount of royalty received by the writer. If you can retain your own publishing through your own publishing company and live without the advances, then you're far better off to do so. You retain the rights for life instead of giving them away for ever. Potentially you can make much more money this way.

If you are considering signing a deal with a publisher, you must distinguish between a simple assignment of one particular song or a bunch of songs and an agreement for a fixed period of time during which the writer's services are rendered exclusively to the publisher. In the case of a simple assignment, this doesn't give the publisher any rights to the ongoing services of the writer: the writer is merely parting with the copyright in certain existing works for a specified royalty rate. But my comments as to royalties apply equally to the simple assignment. A term agreement is in many ways similar to a recording contract; it can be for a fixed number of years or for an initial period with various option periods. It's much more common to have a long fixed term because, unless there are substantial advances payable, there is no particular detriment to the publisher, whereas in a recording contract the record company has got to spend money regularly in recording costs and other matters.

When advances are payable under such agreements, they are usually of a smaller amount than are paid under recording contracts. But they are basically a question of negotiation.

The royalty rates normally payable to a writer under a term agreement vary between 50 per cent and 75 or even 80 per cent if you're a very prestigious writer. The basis on which royalties are paid is very important. Under most publishing agreements, what the writer receives is a percentage of the monies received by the publisher in the UK, if it's a UK publisher. So suppose you do a deal with your publisher whereby you receive a 60 per cent royalty based on receipts. Your publisher then sub-publishes your compositions in, say, America, to another company on a 75-25 basis. In other words, 75 per cent of all money received by the American sub-publisher comes back to the UK main publisher. All that the UK main publisher will then pay you, the writer, is 60 per cent of that 75 per cent he receives – which is in fact 45 per cent. The two publishers, the main publisher and the sub-publisher, between them will have kept 55 per cent, notwithstanding your 60 per cent deal! The only way to avoid this is to do a deal on what is called a source basis. Your royalty is based on the monies received by each local sub-publisher, so you're not concerned about how much is retained by the local sub-publisher before accounting to the main publisher. Not many companies will do this sort of deal with you. On the whole, the sort of companies that will be major world-wide companies which have their own offices in the various major territories of the world. These days it is not easy to persuade even those sorts of companies to do this sort of deal.

If you are signing a recording contract and a publishing contract with the same company, or the publishing contract is with the publishing arm of the record company, you may find that those companies try to cross-collateralise the two deals. That means that any advances which you are paid under either deal are set against royalties arising under both deals. In other words, until all those advances have been recouped out of both your recording and songwriting royalties, you don't receive royalties under either deal. This is a bad practice and you should avoid it if possible. It can best be avoided by not signing a publishing deal with the same company as you have signed the

Publishing Contracts

record deal. Hold your publishing back and do a deal with a separate company where there can be no question of cross collateralisation. It may be that certain record companies insist the only way they will do a recording deal with you is also for you to do a publishing deal with their publishing arm and to cross-collateralise it. But this should be resisted if at all possible.

It can mean, in the case of a band who sign a publishing contract as well as a recording contract, that the individual or individuals within the band who are the songwriters end up paying for the recording costs out of their publishing royalties because the record company cross-collateralise them against the publishing royalties. I should add that in the case of a band, a publisher will usually want all the members of the group under exclusive contract, even though only one or two of them may write. They will be afraid of suddenly finding that the other members of the band who have not signed suddenly start appearing as the authors or composers of the songs. If they haven't signed them up they will be free to take their songs elsewhere.

Bands make various arrangements between themselves as to how they deal with songwriting royalties. In many cases, the actual writers receive the full royalties, although they are members of a band and the songs have been exploited by the band. Other bands agree that all the members should have an interest in the songwriting royalties from a song that the band exploits, even though they didn't all write it. This is very much a question for each individual band to agree among themselves.

If you are forced to sign a publishing contract at the same time as a recording contract with the same company or with sister companies, you should always try to ensure that if one of those two contracts ends, the other one ends at the same time. It is not uncommon for you to be offered a recording contract for a guaranteed period of one year with, say, four one-year options on the part of the record company, but a publishing contract for a fixed five-year term. Thus, if a record company doesn't exercise its

option at the end of the first, second, third or fourth years, you're still under contract to the publishing company which is associated with it. As you will have only signed the publishing contract in the first place because you wanted the recording deal, you may find yourself seriously hampered in getting another recording contract because your publishing is left with the old company.

If you are a songwriter and you also write – or think you might write – music for films or stage musicals, it is a good idea to keep those particular rights out of the rights that you grant to a publisher, if you can. If you can't keep them out, you must reserve the right specifically to receive commissions from producers of stage shows or motion pictures and to be paid commissioning fees for the work you do. It may be that the producer in either case has to give away some of your publishing rights to the film distributor in the case of a film, or for some major investor in the case of a stage show, and if you are totally locked up with a publisher it may make you an unattractive proposition to a producer to engage you to write the music for his show. Also, you can

The normal royalty payable on sheet music is 10 per cent of the recommended retail selling price. In the case of performing royalties the composer is normally – and certainly should be – a member of the Performing Right Society Ltd., and he will get his percentage of performance royalties direct from the PRS, which should not be set against any advance paid to him by a publisher. He should get those royalties regardless of what advance he has received from the publisher. Some publishers try to distinguish between the general royalty rate that they will pay on such things as synchronisation fees, mechanical rights, etc. and the rate they will pay on performance fees which they put in, as a matter of course, as 50 per cent. The writer should always watch this and ensure that he gets the same rate on performance fees as on all other matters. The Performing Right Society in fact divides its royalties into twelfths and the best practice is for a contract to state that the writer receives so many twelfths. So if he is on a general 60 per cent royalty, he should receive seven-twelfths of the performance fees, which equates almost to 60 per cent.

“These days, because of a now-famous decision in the House of Lords in the case of Tony Macauley against Schroeders Publishing, publishers are very wary about making a contract too heavy against the artist.”

make a lot of money out of stage shows and motion pictures. You receive commissioning fees of several thousand or even tens of thousands of pounds for writing a film score, and in the case of a stage musical the composer usually receives a percentage of the box office receipts. If the rights are owned by the publisher, then it will be the publisher who receives this percentage and not the composer, whereas if the rights have been reserved by the composer, then he himself can receive these monies direct.

A British writer is always free to join one of the other performing right societies, such as the two American ones, ASCAP and BMI, who do in fact pay advances in some cases to writers. There is no particular benefit unless the major territory of exploitation of the writer's works is the United States, in which case they will get their royalties a bit quicker, because otherwise BMI or ASCAP will collect the royalties in the United States and will then have to account to the PRS in the UK who will then account to the writer. If the

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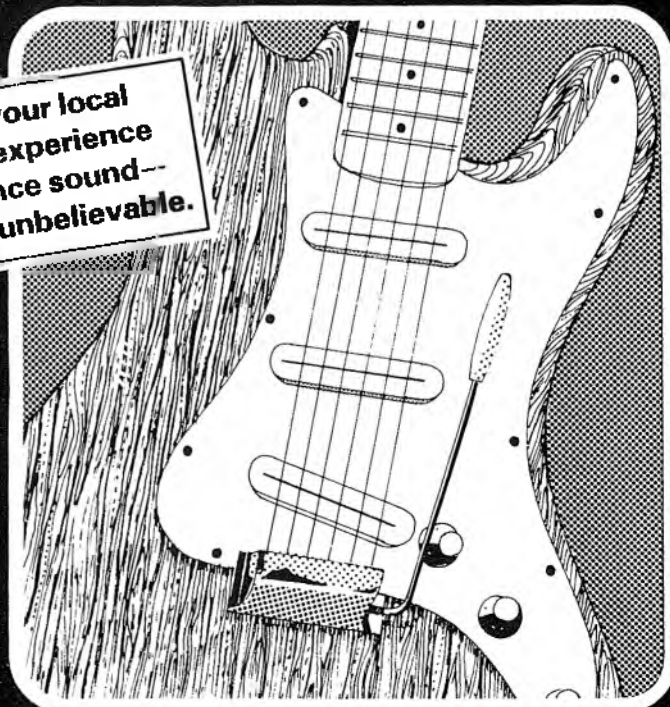
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writer is a member of BMI or ASCAP, they will account direct to the writer instead of to the PRS. It is also possible to have a split membership and to join certain societies for certain territories. While this can become overcomplicated, it is not a bad idea to join an American society direct for the territory of the United States and thus receive royalties arising in that territory direct and quicker than waiting for them to come from the PRS.

These days, because of a now famous decision of the House of Lords in the case of Tony Macauley against Schroeders Publishing, publishers are very wary about making a contract too heavy against the artist. You will usually find in the contract a reversion of copyright clause, which effectively states that unless within a period of, say, two years from delivery of a particular work the publisher has secured a recording or a synchronisation license or has printed the work or has caused it to be performed, then the copyright and the work reverts to the writer, who is free to dispose of it himself. That clause is often not in there because publishers wish to be seen to be doing their job, but to protect them against the contract being unenforceable.

There are two out of those four categories which are really meaningless. A performance really means nothing at all; it means that anybody can stand up in a public place, like a pub, and sing the song and then the publisher has fulfilled his obligation. Also, the printing of the work is fairly meaningless, as it's very easy for a publisher to run off a few copies in print of a song and thus qualify again and prevent the work reverting. If possible, those two areas should be deleted from the contract. For the publisher to retain the work, he should either have to grant a synchronisation license or have a commercial recording made of the work.

If you have no choice but to enter into a publishing contract and to receive your royalties on a receipts basis as I have outlined above, you should try to secure the agreement of the publisher, specifically in the contract, that he won't grant sub-publishing rights or licenses other than on an arm's length basis. A ridiculous example, but one which could happen in theory, would be for you to publish with X Ltd. for the world on the basis that you receive 60 per cent of all the monies that X Ltd. receives in the UK. X Ltd. could then enter into a sub-publishing contract with Y Ltd.

in Jersey. But Y Ltd. could in fact be a company owned by the same people, although you might not know that. Now, if X Ltd. grant to Y Ltd. all the rights to your songs for the world, even for the world including the UK, on the basis that Y Ltd. only has to pay to X Ltd. 20 per cent of what it receives, that clearly would not be a bona-fide contract. If it were to happen you would end up receiving only 60 per cent of 20 per cent — which is 12 per cent. In my experience, it is not the practice of publishers to do this, but legally it would be possible unless there is a clause on the lines that I have suggested.

Another way of your royalties being diminished considerably is for a chain of sub-publishing to be created. This could even be done in good faith.

“... in the case of a band, a publisher will usually want all the members of the group under exclusive contract, even though only one or two of them may write.”

For example, your main publisher grants to a publisher the sub-publishing rights for the whole continent of America. The United States sub-publisher itself then enters into a further sub-publishing agreement with a company in Brazil for the whole of South America. Even further, then the Brazilian sub-publisher enters into another agreement with a publisher in Chile for the rights in Chile itself. If each of these deals is on a 75 per cent basis, then the Chilean sub-publisher accounts to the Brazilian sub-publisher for 75 per cent, the Brazilian sub-publisher accounts to the United States sub-publisher for 75 per cent of 75 per cent — which is 56.25 per cent, and the United States sub-publisher accounts to the UK main publisher for 75 per cent of 56.25 per cent, which is 42 per cent. You, the writer, will end up with 60 per cent of that 42 per cent which has been received back in the UK — which is just over 25 per cent!

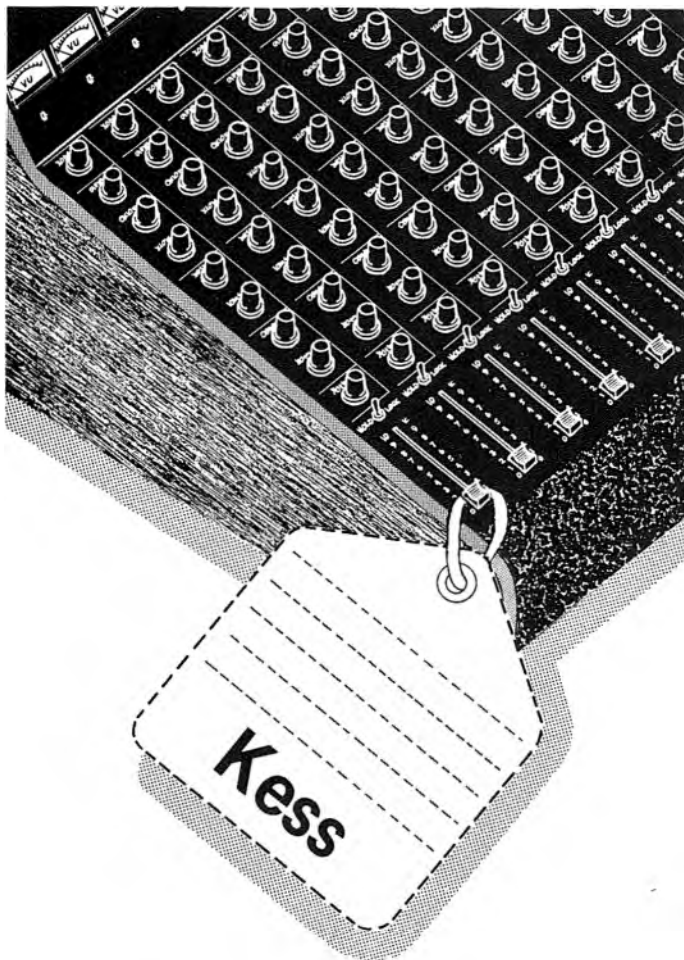
Some publishers have the habit of putting in a songwriting contract that

if you co-write a work with another writer, you have to ensure that the other writer assigns his interest in the song to your publisher. This may not always be possible because the co-writer may be signed to another publisher, and it's by no means always desirable. It's the wrong sort of pressure to put on somebody — to prevent a writer writing with somebody with whom he gets on, simply because that writer either can't or doesn't wish to assign his interest to your publisher. If that sort of clause can be taken out of the contract, it always should be. If the clause remains in the form that the writer would endeavour to obtain the co-writer to assign his rights in the song to the publisher, then that on the whole is acceptable because “endeavour” means

that you will try, but if you can't succeed; you can't succeed and there is no breach of contract. This would not preclude you from co-writing with such a person.

It is common practice for a publisher to reserve the right to adapt and arrange, to add to and take away from your works. Many writers feel that this is an infringement of their artistic integrity and again this is very much a question for each individual writer. This clause should be looked at very carefully and should be restricted as far as each individual writer feels necessary.

On the whole, the publisher should always have the right to commission translations of the lyrics of a work, but it is possible to ensure that the publisher must bear the costs of any such translation, and that those costs do not affect the royalty of the writer in any way. If you can achieve this, you should try to do so. =====



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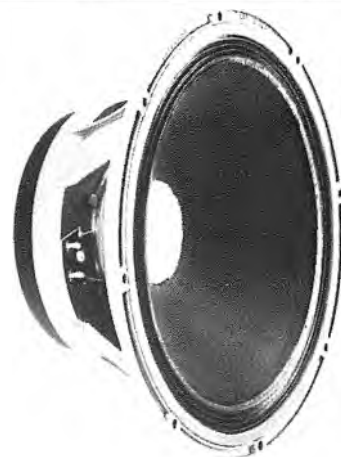
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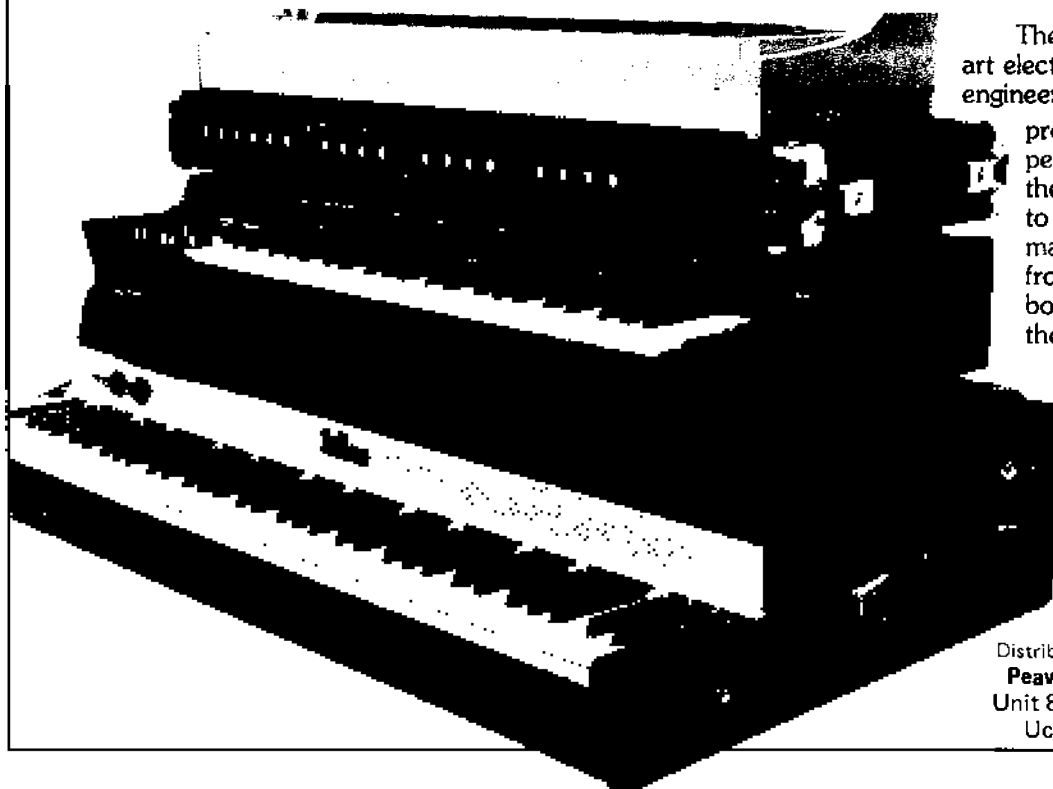
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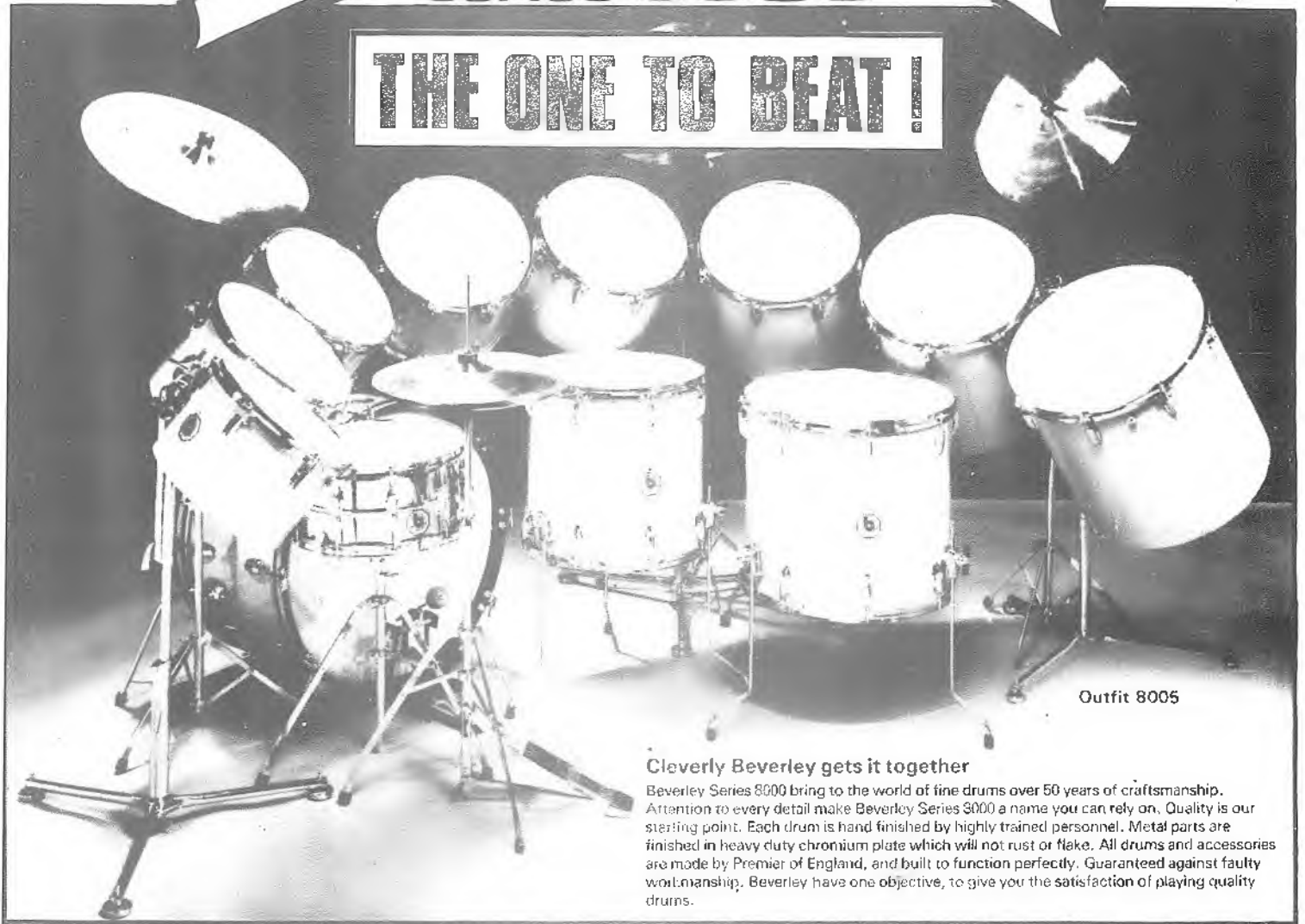
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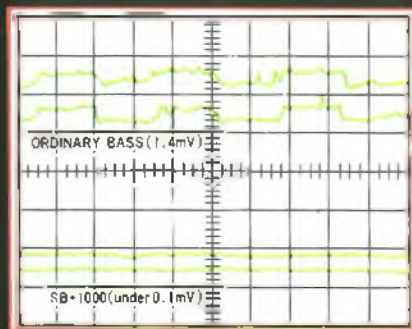
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Horn Flares

Having devoted the last two *Speakercheck* features to compression drive units, it is a logical progression to take a look at the various types of horn flares that are available, with which the compression drivers would normally be used. This month we shall concern ourselves with the smaller type of horn intended for use with compression drive units with the standard 1.362" x 18tpi throat entry, and next month we shall be looking at the larger types of horn as used in concert stacks, etc.

The selection of the right horn for a given application is a very critical aspect of the design of any sound system. In fact, along with choosing the correct crossover frequency, it probably ranks as one of the main decisions that will either make or break the system. Even so, it is surprising to find how little reliable information on the performance characteristics of each horn is given in the manufacturer's literature. This is particularly so in the case of the polar response or dispersion characteristic, where it is not uncommon to find figures which are not qualified in terms of how many dB down, or at what frequency, they apply, and which would seem to have little in common with the measured performance of the horn under test. In short, they can be totally misleading.

Another problem would seem to be that manufacturers are generally reluctant to recommend a crossover frequency, preferring instead to quote the horn cut-off frequency. Unfortunately, this is sometimes taken as the crossover frequency in the absence of any other information, and as our results show, this could have disastrous consequences in terms of blown diaphragms due to the fact that the horn no longer loads the drive unit below its cut-off frequency, and also in terms of system response. One manufacturer actually quotes a recommended crossover frequency that is below the horn cut-off anyway!

While the tests we have applied are by no means exhaustive, it is obvious that we have stumbled into an area where there is a need for tightening up on specifications and for providing the necessary information to the user, so that the product can be used to its best possible advantage. All horns have shortcomings of some sort, and it is suggested that these should be made known in literature as an aid to system designers, rather than be covered up in obscure specifications. In fact, we have reviewed some very nice horns in this month's tests and there is no need for this ambiguity. I begin to wonder if some manufacturers have even measured the actual performance of their own products in certain instances, such as the differ-

ences between what little information is given and the actual performances measured.

After a great deal of consideration and conferring, it was decided to employ a common drive unit for all tests. The selection of the drive unit to be used was based on three main factors:

- (1) The unit needed to have the 1.362" x 18tpi screw thread entry, as this can be adapted by means of standard components to match practically any other throat entry arrangement. Under no circumstances should a reverse taper be employed, and this therefore ruled out the 1" or 2" flange mounting drivers, as these could not reasonably be reduced to fit the smaller horns.
- (2) The unit needed to have a usefully wide frequency response — preferably with a certain amount of peakiness so that any tendency for a horn to "ring" would be exacerbated.
- (3) A unit with a clean impedance plot on which electrical resonances show up clearly, in order that horn cut-off frequencies can be accurately located and other resonances identified.

A careful inspection of the characteristics of the various compression drive units reviewed in the January issue revealed that the Vitavox GP-1 could have been tailor-made for our purpose, and Vitavox were also able to supply all the adaptors we would need to couple this to any of the horn flares submitted for review.

The tests we conducted are as set out below.

Frequency response

In order to obtain some idea of the way in which the horn responds, we have plotted the usual sine wave response curve at an input power of 1 watt to the GP-1 drive unit. Although the actual response measured is mainly that of the drive unit rather than of the horn, we can, by comparison with the known frequency response characteristics of the drive unit, identify any areas where the horn's response is at variance with that of the drive unit. On this occasion, we have not published the response curve because, on its own, it would be meaningless. Instead, we have interpreted the result in terms of whether or not it generally agrees with the drive unit characteristics, and if there is any deviation, we point out the details.

Sensitivity

Although the actual acoustic gain of the horn flare could be measured in quantifiable terms, the process is too involved and time-consuming to be used here. Instead, we have simply given the

average level measured on the 1 watt sine wave plot used for frequency response purposes in the usual way. Although this again has more to do with the characteristics of the drive unit than of the horn, it does show the difference between the various horns that we are interested in. For example, if a level of 102dB is given for horn X, while horn Y comes up with 105dB, then we can immediately see that horn Y is 3dB more sensitive than horn X. The figure given must not be taken to imply that the level stated will apply with other drive units — it could very well be much better or much worse, depending upon the sensitivity of the particular drive unit used in your system. The figures are included for comparison purposes only and must be regarded as such.

Horn cut-off

This is the point in the frequency scale below which the horn ceases to offer an acoustic load to the diaphragm of the compression drive unit. Under no circumstances must any appreciable level of signal be fed to the drive unit below this frequency or serious damage to the drive unit diaphragm will be certain. This does not mean that the unit can be crossed over at the cut-off frequency. As crossing over is a gradual process, there will still be considerable energy present for a whole octave and more below the crossover frequency. As a rule of thumb, the minimum crossover point should be at least double the horn cut-off frequency. This will not only avoid damage, but will also remove the harshness always present in a horn near its natural cut-off point. We have measured the cut-off frequency from the frequency response curve and looked for confirmation in the form of an electrical resonance on the impedance curve. If we are happy that the exact cut-off point has been established we categorically state its frequency. If there is doubt in the matter — for example, if a corresponding resonance cannot be found to support the suspected point — then we state that the matter is not clearly defined, and suggest a likely figure.

Polar response

This, of course, is the all-important radiation characteristic, dispersion pattern, etc. Call it what you will, it remains one of the most important factors in deciding which horn will be used where, and over what part of the frequency spectrum. Because of its importance, we have measured the dispersion in both vertical and horizontal planes at four frequencies, each one octave apart, and it is these "polar plots" as they are called which we shall publish in respect of horn ►►

SPEAKERCHECK

tests. As it is mainly the forward propagation which is of interest, we have taken the front 180° section of each plot and printed these with the vertical plot above the horizontal plot in each case. The curves show contours of equal sound pressure level at each of the four frequencies. In addition to this, we have tabulated the included angles at each frequency where sound pressure level has fallen by -6dB relative to its original level on the central forward axis of the horn.

Recommended crossover frequency

This information is included in the presentation as it is fundamental to the

proper operation of a given horn and is all too often not included at all in the manufacturer's literature. The figure is derived from both sets of polar response curves, and also from the frequency response characteristic and horn cut-off point. Crossing over below the frequency recommended will result in infringement of any or all of the following criteria: (1) crossover will be too close to the horn cut-off frequency, resulting in unloading of the drive unit diaphragm and subsequent damage; (2) crossover will be at a part of the frequency response curve where the horn has deviated from the drive unit response due to ringing or resonance; (3) crossover will be at a part of

the polar response characteristic where little or no control over horizontal and/or vertical dispersion is available. We have taken great care to ensure that all these factors are taken into account, and recommended a crossover frequency that will allow the performance capabilities of each horn to be used to best advantage.

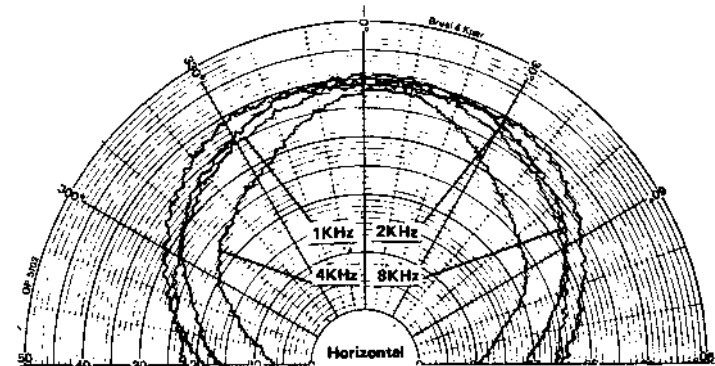
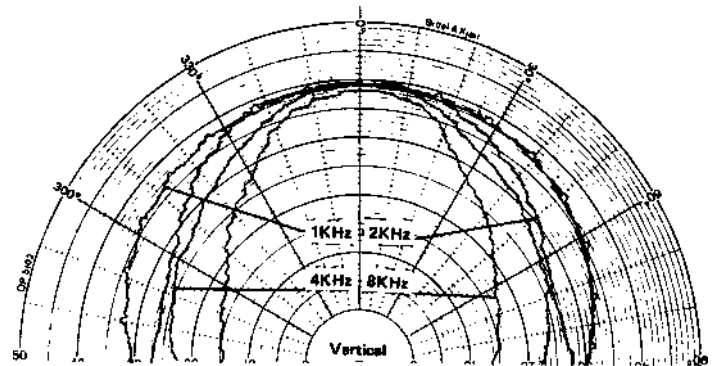
The results of these tests are set out in the following pages, and having dealt with each sample in some detail, I do not intend to elaborate further. Readers will be able to decide for themselves which product will be best suited to their individual needs and pockets from the observations made in each case.

GROVEPOWER TRF/570-NS

RRP incl. VAT
£30.85

Overall dimensions: 570mm x 177mm x 300mm depth

Parameter	Manufacturer's Rating	Test Result
Frequency response	Not stated	Essentially as drive unit to 800Hz
Sensitivity	Not stated	102dB averaged between 800Hz and 5KHz
Cut-off frequency	600Hz	600Hz
Polar response	100°H x 50°V unqualified	96°H x 150°V @ 1KHz, 120°H x 84°V @ 2KHz, 85°H x 60°V @ 4KHz, 49°H x 46°H x 46°V @ 8KHz, included angle at -6dB points.
Recommended c/o	Not stated	1.2KHz min. @ 12dB/oct. 2KHz if vertical control is important



This horn is the fore-runner of the many low-priced, moulded and/or fibreglassed flat radial type horns now available on the market. It is moulded in one piece from polyurethane foam and a machine turned, threaded steel ferrule is moulded into the neck to accommodate any compression drive unit having the 1.362 x 19tpi standard thread coupling. A similar horn, model TRF/570-1 is available for mounting to compression drive units employing the JBL 1" three-bolt entry, and a third type, model TRF/570-2, for the JBL 2" four-bolt entry. It would seem that all three types have very similar characteristics, and we have therefore reviewed the most popular version. All three are intended to be mounted by means of a front flange into a cut-out at the top of a loudspeaker enclosure or into a separate housing, although I would be loathe to mount one of the very large, heavy JBL units — such as the 2440 — on such a horn without additional rear support.

Acoustically, the polyurethane foam from which the horn is

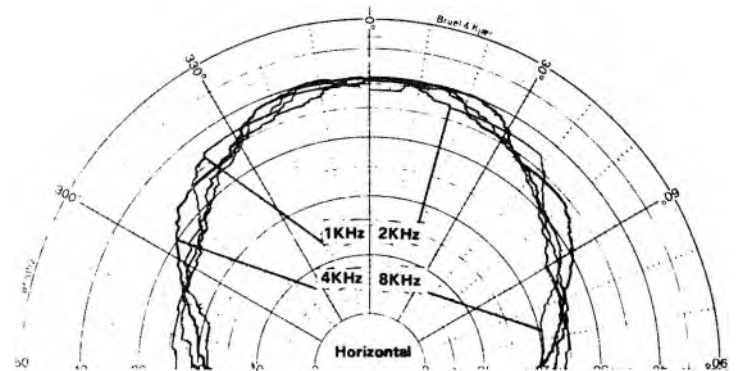
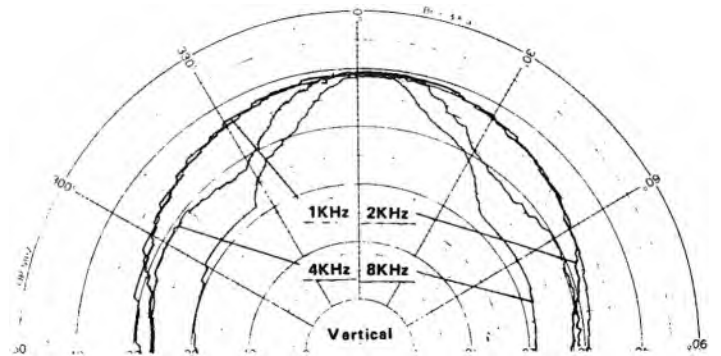
moulded is substantially dead and this probably accounts for its freedom from any serious ringing characteristics — the main exception being a small peak in response at 3KHz which coincides with a secondary resonance. Otherwise, its frequency response plot virtually followed that of the drive unit down to 800Hz where, after some deviation, it fell away rapidly below the horn's cut-off frequency of 600Hz. The polar response characteristic, although not unusual for this type of horn, exhibited a marked lack of control in the vertical plane at frequencies below about 2KHz, and in any event bears little or no relationship to the somewhat ambiguous figures given by the manufacturer in this respect. Even so, above 2KHz, the horn behaves very well indeed, with useful control in both vertical and horizontal planes. Sensitivity is about average for a small horn.

The product is nicely presented in a matt black finish and is excellent value at this price.

VITAVOX 550/311C RRP incl. VAT £183.60

Overall dimensions 387mm x 130mm x 330mm depth

Parameter	Manufacturer's Rating	Test Result
Frequency response	Not stated	Essentially as drive unit to 800Hz
Sensitivity	Not stated	104dB averaged between 800Hz and 5KHz
Cut-off frequency	550Hz	580Hz
Polar response	20° per cell unqualified	88°H x 122°V @ 1KHz, 72°H x 120°V @ 2KHz, 66°H x 50°V @ 4KHz, 68°H x 34°V @ 8KHz, included angle at -6dB points
Recommended c/o	1KHz @ 12dB/oct.	Above 1KHz @ 12dB/oct. 3.5KHz if vertical control is important

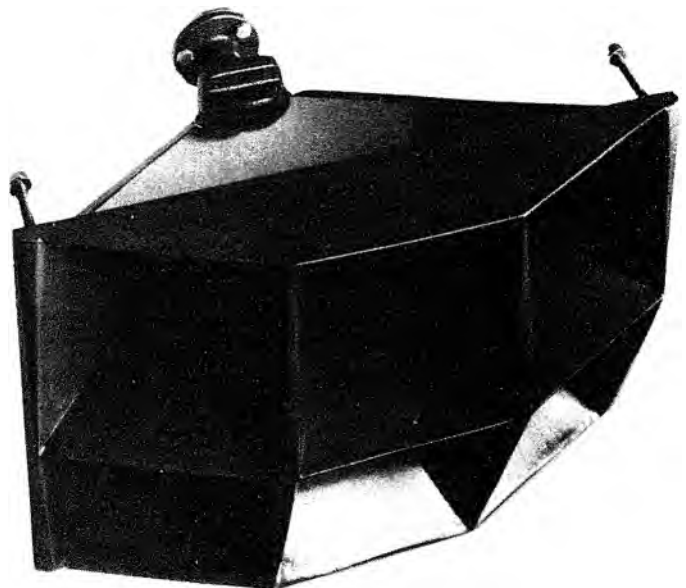


This is a superbly made miniature version of a genuine multicell horn. It consists of three separate square-section exponential horn flares combined into a common shell and fed from a common throat. The unit is fabricated from sheet metal sections soldered together, with the cavities thus formed filled with a special acoustic compound to ensure that the complete assembly is essentially non-resonant. A cast termination is employed at the throat end, and this is fitted with a threaded ferrule to accept the standard 1.362" x 18tpi thread entry. The whole assembly is hand-made and is a fine example of the tin smith's art. Unfortunately, however, this also makes such a horn a very expensive item to manufacture — as reflected by the recommended retail price. One might ask: Why bother? What are its advantages? In theory at least, a multicellular construction can be expected to offer greatly improved dispersion control and superior loading characteristics when compared to a single flare design of similar proportions and should also be less prone to self-resonance. We shall consider the results obtained here and see whether this is borne out in practice with this particular horn.

The horn is certainly free of ringing and self-resonance down to 2KHz and deviates only slightly below this — although the Grovopower TRF/570-NS is almost as good in this respect. As the results table shows, the horizontal control is exceptionally good, but so was the ASS 420, which has a similar set of figures. In the vertical plane however, there is just no comparison between the two, as the Vitavox three-cell maintains excellent control in this plane as well, while most other horns reviewed are all over the place at the all important mid-band — the notable exception being the RCF 4823, which, if anything offers better control in this respect. However, while the 4823 relies on colouration for its higher sensitivity figure, the three-cell does not, and is certainly the most sensitive of all the horns tested. What then can we make of all this by way of a summary?

Put simply, the multicell seems to combine all the better points of all the horns included in this review and suffers few, if any, of the disadvantages associated with the more usual designs. Therefore, we must agree that it works. But these benefits obtained must be weighed against the very high price — almost five times the average price of the other horns reviewed. By careful selection of crossover frequency, maybe the application of some acoustic dampening here and there, and by careful selection of the right horn for the job, an almost equal performance can be obtained using less sophisticated products. The obvious contenders in terms of overall application are the ASS 420/S or the RCF H4823 — the latter, of course, subject to treatment to dampen its self-resonances.

A beautifully made product — obviously made by skilled craftsmen — that performs very well indeed. Certainly the best product reviewed, but I fear that the price will exclude its use in all but the most special of applications.



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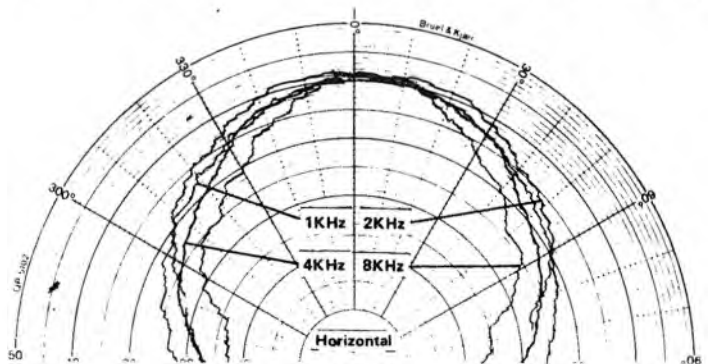
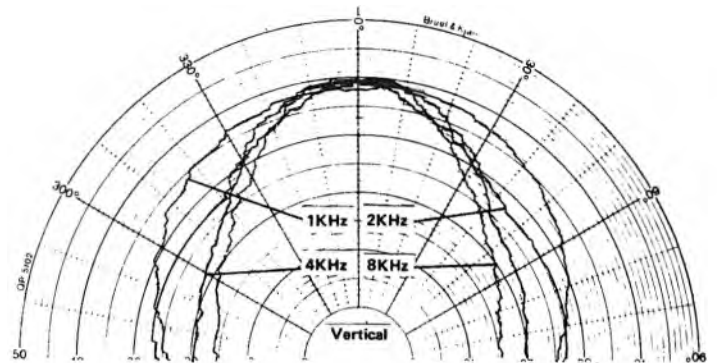
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RCF 4823

RRP incl. VAT £41.94

Overall dimensions: 460mm x 248mm x 350mm depth

Parameter	Manufacturer's Rating	Test Result
Frequency response	Not stated	Drive unit response modified by ringing
Sensitivity	Not stated	104dB averaged between 800Hz and 5KHz
Cut-off frequency	Not stated	Not clearly defined, but probably 500Hz
Polar response	90°H x 40°V unqualified	78°H x 110°V @ 1KHz, 86°H x 54°V @ 2KHz, 66°H x 46°V @ 4KHz, 50°H x 40°V @ 8KHz, including angle at -6dB points
Recommended c/o	400Hz	Above 1KHz @ 12dB/oct. -- see text



This is a nicely made cast alloy horn of the type generally known as a "sectoral" horn. This expression would seem to imply a horn of rectangular aspect which has a more rapid expansion rate in the horizontal than in the vertical plane, and fitted with a number of baffles across its mouth. Such a horn should not be confused with Multicell types, as these are quite a different animal altogether and are usually very much more expensive. In the case of the 4823, the horn flare itself is cast in a single piece, and three such baffles are fitted by means of screws from behind — which seems an odd assembly method to adopt in a product which at best will be fraught with resonance problems. The unit is designed to accept the European standard thread coupling and has a large front flange to facilitate easy cabinet mounting.

The directional control exhibited by this horn is surprisingly good. Although horizontal dispersion is not as wide as that of its competitors the control provided by the horn is far more uniform. The same applies in the vertical plane, and even at 1KHz, the almost omnidirectional lobe evident on the moulded/fibreglassed flat radial horns is considerably suppressed. Also, while manufacturers persist

in ambiguity in respect of dispersion or polar response figures, I suppose that this comes as near as can reasonably be expected to the "90°H x 40°V" figure given. Unfortunately, however, there is considerable evidence of ringing resulting in the horn exhibiting a frequency response of its own rather than reflecting that of the compression drive unit. This is particularly apparent at 3KHz — which coincides with a secondary resonance at which point a peak of some 4/5dB is produced — and below about 1.5KHz the unit deviates noticeably. This is a shame as these characteristics spoil what would otherwise be a very useful horn. It would be an interesting exercise to coat the exterior surfaces of the 4823 with bitumen or Acuplast to see whether these problems can be overcome by acoustic damping.

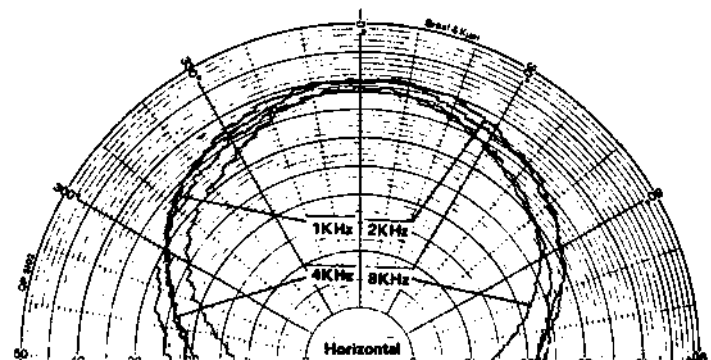
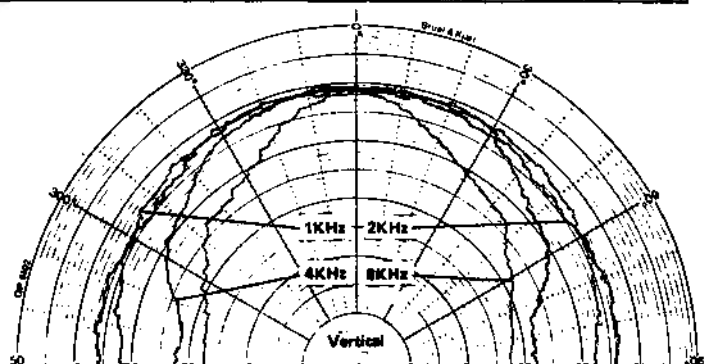
The manufacturer's recommended crossover frequency, of course, is utter nonsense, and should be totally disregarded as it is below the natural cut off frequency. For best results, it should not be crossed over below 2KHz but you would get away with 1KHz or 1.5KHz at a pinch.

ASS TRF/420-S

RRP incl. VAT £31.56

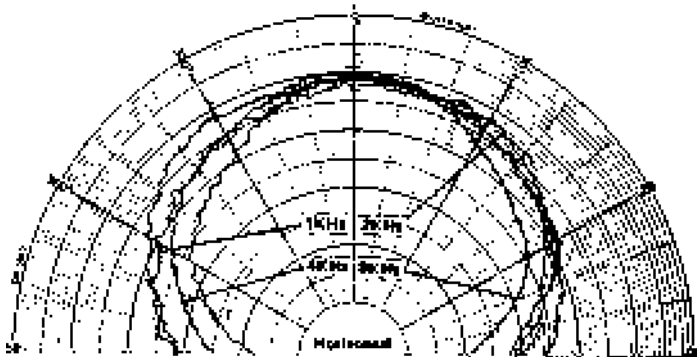
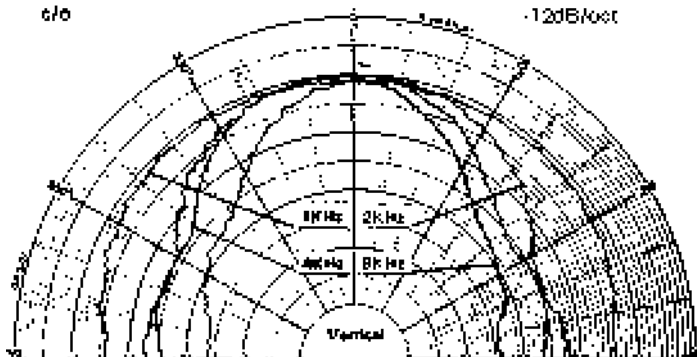
Overall dimensions: 420mm x 127mm x 200mm depth

Parameter	Manufacturer's Rating	Test Result
Frequency response		Essentially as drive unit to 1KHz
Sensitivity		101dB averaged between 2KHz and 6KHz
Cut-off frequency		800Hz
Polar response		84°H x 160°V @ 1KHz, 88°H x 234°V @ 2KHz, 88°H x 84°V @ 4KHz, 64°H x 45°V @ 8KHz, included angle at -6dB points
Recommended c/o		3.5KHz @ -12dB / oct.



ASS TRF/570-S RRP incl. VAT £43.52
 Overall dimensions: 570mm x 177mm x 300mm depth

Parameter	Manufacturer's Rating	Test Result
Frequency response	Not stated	Essentially as drive unit to 800Hz
Sensitivity	Not stated	102dB averaged between 800Hz and 5KHz
Cut-off frequency	600Hz	600Hz
Polar response	100°H x 50°V unqualified	106°H x 194°V @ 1KHz, 104°H x 81°V @ 2KHz, 88°H x 62°V @ 4KHz, 64°H x 42°V @ 8KHz.
Recommended c/o	Not stated	Above 1.5KHz @ -12dB/oct



Except that it is layered up in Fibreglass instead of being moulded in polyurethane foam, the ASS TRF/570-S is almost identical to the Grovepower horn model TRF/570-NS reviewed elsewhere in this issue, while the TRF/420-S is a scaled down replica. Both horns are nicely made, and have a substantial stiffening member down the top and bottom sections of the flare, which serves both to improve mechanical rigidity and to dampen resonances. A threaded steel sleeve is moulded into the throat entry to reinforce the coupling with the drive unit, but this is not shouldered as in the Grovepower version. This results in the threaded boss of the drive unit coupling being screwed against a Fibreglass shoulder when the unit is tightened, therefore putting stress on the Fibreglass to metal bond, whether this is a weak point or not remains to be seen, but the Grovepower method certainly seems to be a better solution from an engineering standpoint.

From a performance aspect, both horns give a good account of themselves provided that the limitations are observed. Again, there is little vertical control below about 2KHz in the case of the 570, or below 3/4KHz with the 420, but above these critical frequencies, the horns behave very well indeed, and exhibit good vertical and horizontal control. Both horns deviate slightly from the drive unit frequency response: the 570 has a dip in response of about 5dB at 1.2KHz, while the 420 has its dip at 1.6KHz. These peculiarities do not seem to be related to any resonant condition and must therefore go unexplained for the time being. In any event, best overall results in terms of frequency and polar response will be obtained with crossover points above these frequencies, and therefore these slight deviations will be of little real concern.

While the 420 would seem to have the market to itself, the 570 has a lot of competition — the Grovepower equivalent reviewed here costs some £14 less for a virtually identical product.

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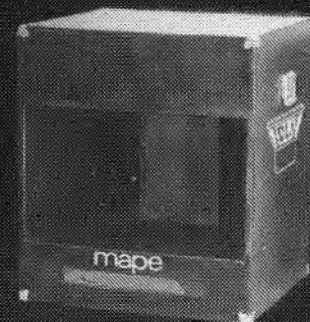
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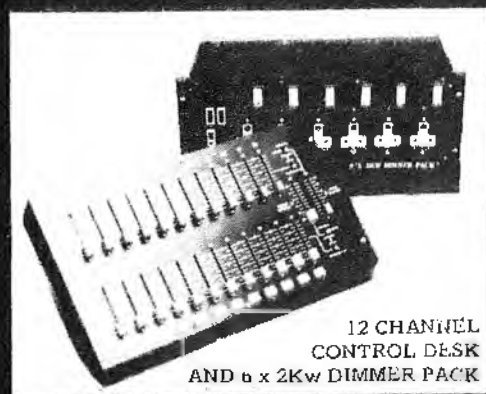
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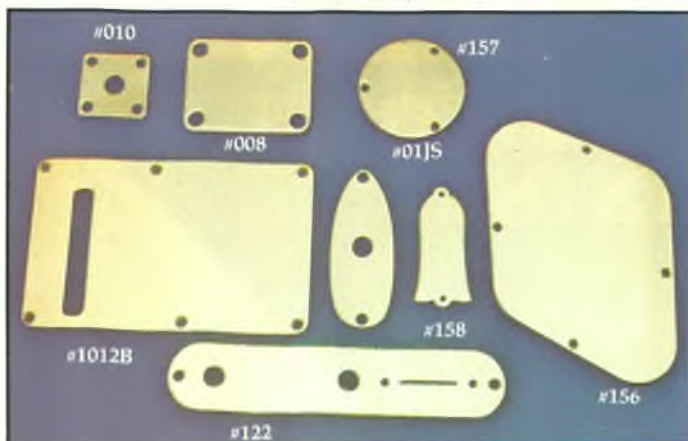
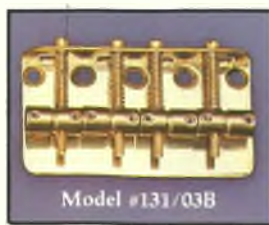
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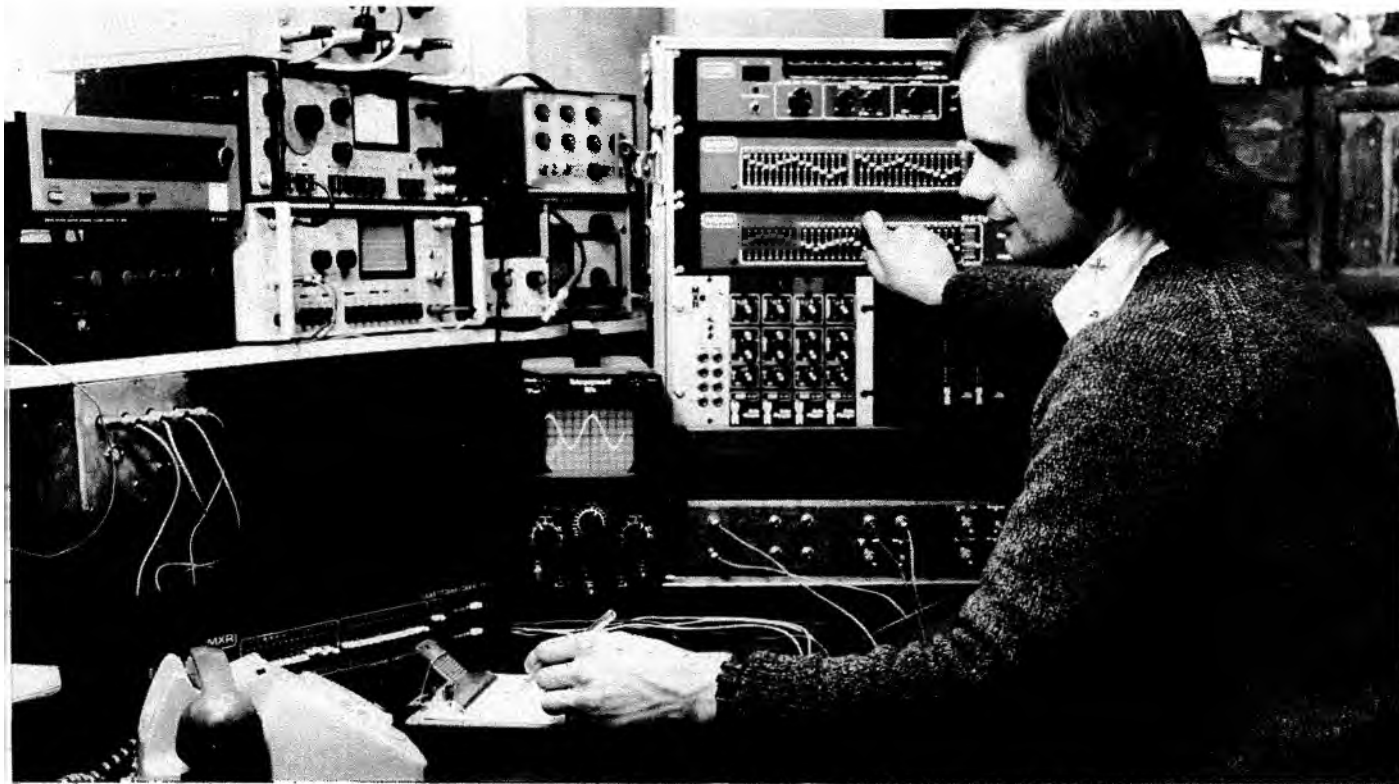


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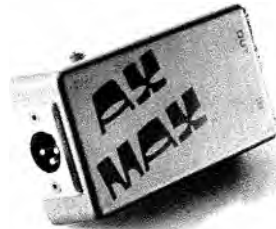
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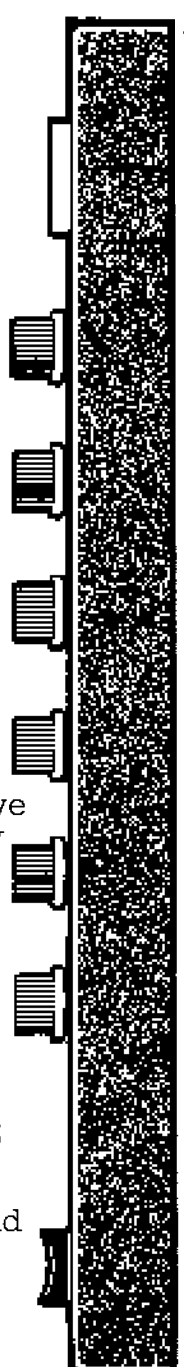
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Small Things

STEPHEN DELFT ON SOAP

Some years ago, when I was teaching guitar making at a London college, I discovered that the industrial finishing department of the same college had a supply of a marvellous hand cleaner called Centisolve, or something very like it. I often get my hands covered in glues, varnishes and solvents, in spite of wearing protective gloves whenever I can, and I long ago discovered that most of the usual "jelly" cleaners do not agree with the skin on my hands. This Centisolve paste seemed to be based on soft soap and pumice, and shifted glue and dye stains without taking the natural oils out of the skin. Of course there was a snag. There had to be. This cleaning paste could only be ordered in lots of something like three 10lb. metal drums. The financial arrangements of the college seemed to be arranged so that I needed an Act of Parliament to order three year's supply in one go, and that was the end of it.

Now you may be wondering what this had to do with guitars. It is really quite simple: I write articles on various DIY projects which appear in this magazine. From the letters I receive, it would appear that a fair proportion of our readers appreciate these articles and carry out some of the DIY work described in them. These projects are based on actual jobs which I have carried out in my own workshop. Even with reasonable care, I find that some of these jobs leave my hands looking filthy, and normal washing does little to help. I start off with the best intentions, but at some stage the job takes over, I apply some wood dye with a cotton swab and I'm left with rosewood coloured fingers.

I still haven't found any way of getting that particular cleaning paste in jam-jar sized quantities, but I have found something which does the same job. It is also great for shifting road dirt and grease off your hands if you have to repair the van on the way to a gig. You do need warm water and a towel, or something to dry your hands on, but if you have been on your back under the van, you will probably be looking for hot water and a clean towel anyway. This useful substance is called Wright's "Clens" soap and you should be able to find it in household shops and some supermarkets. I have only ever seen it advertised once, and I kept the clipping which is reproduced so that you will know what to look for. (I can't remember where this ad came from but I am sure Wright's won't object to a free mention.) Inside the wrapping, it looks like an ordinary bar of soap, and if allowed



to dry out, it starts to look (and feel) rather nasty. The trick is to soak it in hot water for a few minutes, and if possible to get some ordinary soap on your hands first.

I find that other hand cleansers eventually leave my fingertips rough, and liable to catch on the strings when they are not supposed to. This stuff, if anything, removes the rough bits from my fingers and makes for better playing. Obviously it contains pumice and it is slightly abrasive. If you rub too hard you will take all the hard skin off and you will have very sore fingers after the next gig, so don't overdo it. Apart from its advantages in keeping guitar repairers' hands presentable, it seems to keep for ever, as long as you don't mind soaking it a bit before use.

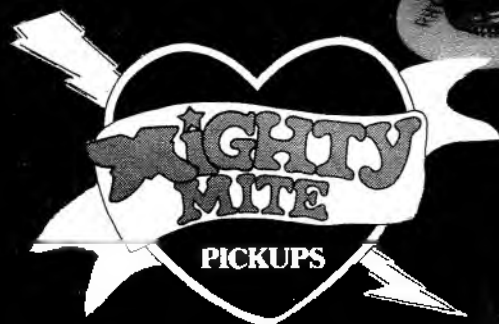
I would strongly recommend that any travelling band makes a very small capital investment of one tablet of ordinary soap, one tablet of "Clens" and a box of paper towels. Put them in a plastic bag and tie the bag under the front seat. Some day you will be grateful you did.

Ordinary soap makes an excellent lubricant for easier insertion of wood screws. If you have ever tried fitting Schaller machines to a guitar head made from hard wood, you will appreciate the benefit of this. Even with correct pilot holes, putting the small fixing screws into maple still breaks a screw head off occasionally, and a fine time you will have, removing the broken-off stub of the screw. If you make proper pilot holes and scrape a new bar of soap across the screw threads first, you will have an easier job and very few broken screws. I make the pilot hole the same size as the central core of the screw and I do not tighten the screws beyond the point where the head just comes down on to the fixing lug. The front threaded bushing does most of the job of fixing these machine heads in place.

If you rub moist soap thoroughly on to clamping blocks used for repairing instruments, glue will not stick to them, and any soap residue can be wiped off the instrument with a damp cloth. If you rub dry soap lightly on the underside of your woodwork planes, they will slide more easily (sometimes a little too easily).

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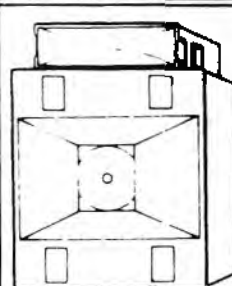
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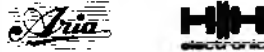
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