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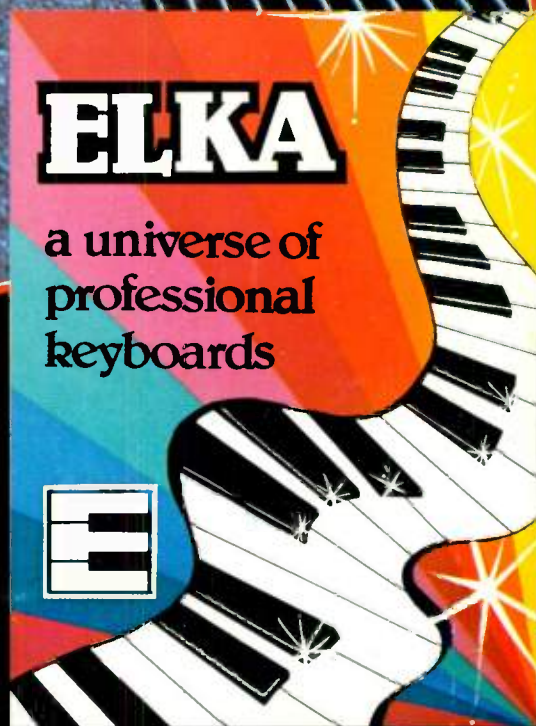
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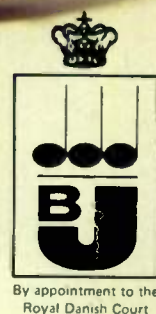
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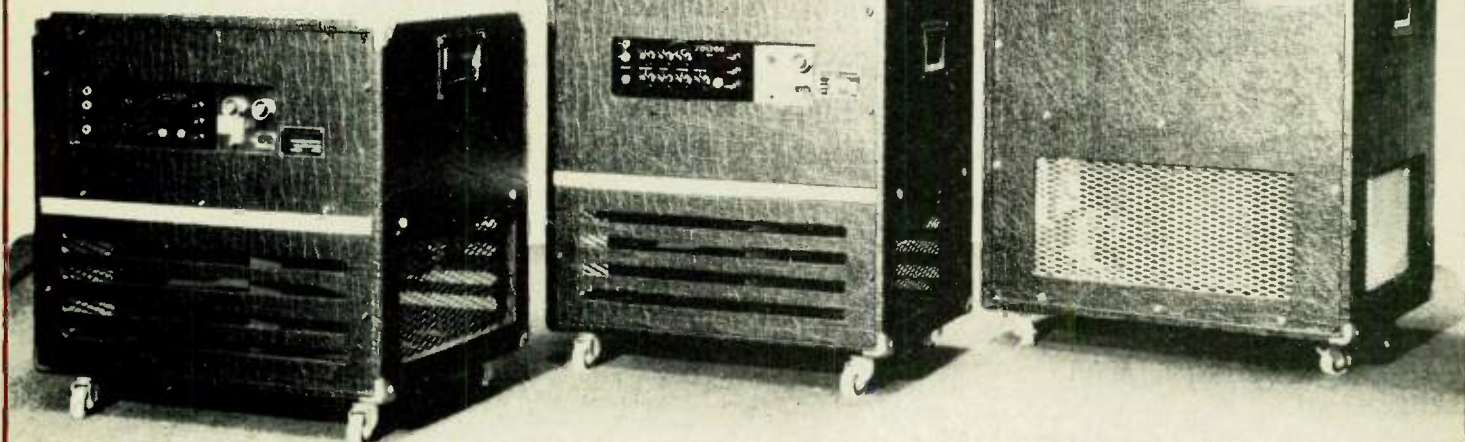
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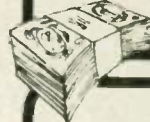
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*Peavey Session 400*

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George Thorogood is a sensational guitar player who astounded British audiences on his recent brief visit. Ian White interviewed the man who has put the rhythm back in rhythm and blues.

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## 166 The Producers — David Kershenbaum

Number three in this collection is American David Kershenbaum, producer of such artists as Elkie Brooks and the Ozark Mountain Daredevils. While in Britain scouting for new talent, he revealed some of his studio secrets to Ian White.

## 174 Meet Your Engineer

More insights into kings of the consoles.

# Editorial

So you noticed. The magazine looks and feels different. By way of experiment, we've tried a new form of binding called "perfect binding" on this giant issue in the hope that it will prove more durable.

In the last year or so, International Musician has grown to the point where conventional stapling methods couldn't prevent pages becoming detached. Hopefully we've solved that problem and produced a better issue at the same time.

About a month ago, the music industry met for a convention in Chicago and showed each other the products they're planning to give to musicians later in the year. Several important new items were on show amongst all the usual hype and re-packaged nonsense.

ARP have finally launched their polyphonic keyboard synth — the Quadra — which won't be available until quite a bit later, a new company has built a polyphonic guitar which really is a polyphonic synth and not a group of presets — it's called the Zetaphon — Roland have introduced a new keyboard capable of playing four notes at once and also has a built-in memory which allows the player to "write" up to eight of his own presets, Gibson have produced more new products than ever before with a new Gibson "Anniversary" Les Paul top of the list. There's a new simplified Polymoog, new Peavey mixers, new Marshall amps, clever things to clean your piano keyboard, a piano which plays itself, a guitar case which doubles as a stand and a new range of rotary adjustable tom-toms. We've covered just some of the things shown in our NAMM review elsewhere in the magazine.

Surprisingly new inventions do alter the form of creative musical art. The Vocoder is a typical example (there are now three versions available). ELO and Queen seem to have based a year's recording programme on that little item and undoubtedly synthesizer micro-processors will stamp their mark on "heavy" albums in the next year or so. Give me a good acoustic and a pint of beer ...



VOL. 4 NO. 8  
AUGUST 1978 (UK)  
SEPTEMBER 1978 (USA)





# LETTERS



## Speaker speculation

Dear Sirs: I am writing to congratulate and thank you for the excellent 'Dibble's Speakercheck' series, which is proving to be an invaluable aid to both professional sound engineer and user-purchaser alike.

As Ken Dibble points out in the March edition of 'Speakercheck', loudspeaker manufacturers use various methods of measurement of the parameters quoted in their specifications, and frequently omit certain parameters altogether. Harmonic distortion figures are rarely, if ever, stated (perhaps for reasons illustrated by Speakercheck!); power handling is often described in indefinite terms such as 'Watts Program' etc.; frequency response parameters are hardly ever quoted in full; all of which, coupled with the ballyhoo surrounding certain American products, make speaker selection a tricky process for the professional engineer, let alone the average musician-purchaser.

It is therefore very gratifying to see my own long-held belief confirmed, that certain European products (particularly ATC and RCF) are equal, if not superior, in performance to their American counterparts, and at very much lower prices. My only regret is that the March 'Speakercheck' made no mention of the fact that ATC manufacture many versions of the PA/75 12" unit, including a linen-surround version of the Standard unit tested, and a Bass version (also with a linen surround) featuring a longer voice coil than the Standard units.

I would like to see this Long-Coil Bass version of the PA/75 included in the 'Speakercheck' covering the 'Special' category of 15" units, in view of the fact that many P.A. engineers (myself included) are finding this speaker an excellent alternative to the more customary American 15" unit (especially in the 2 x 12" Horn-loaded format) for the bass end of P.A. and Disco systems. It would be very interesting to see how it would compare with 15" units under identical test conditions.

One further request — how about a 'Speakercheck' featuring H.F. compression drivers/horns? The relative merits of H.F. units are, if anything, more difficult to assess than those of cone loudspeakers, and with the price of some American units now in the region of FOUR TIMES that of a comparable (on paper) British or Italian unit, some clarification of the benefits obtained from the more expensive units, in return for the enormous difference in cost, would be more than welcome!

Many thanks for an excellent magazine — keep up the good work.

Dave Looker  
Sound Services (Swindon).

*Have no fear. Just turn to page 198 and all will be revealed. Glad you enjoy the series and the mag.*

## Sour grapes

Dear Sir: You're probably thinking, 'Hello, here's another letter from that Dellow bloke again'. Well, I'm afraid you're right. But I'm afraid I just can't resist replying to what must surely be the most controversial Letters page since the now famous John McFadyen first put pen to paper. Firstly I sympathise with Alan Holmes regarding the letter from Messrs. Cairns and Thompson, but since I think he answered it well enough without my help, I won't stick my paddle in. Suffice it to say that I think I probably speak for the vast majority of musi-

cians who read his series on Taking Care of Business when I say that I was very grateful for the wealth of invaluable information contained therein. Don't give up, Alan, some of us appreciate you!

What really got my blood up though, was the letter from M. Gorst regarding the comparison between English and American bands. Let me make it clear that I am NOT knocking American bands because I don't know enough about them. What I would like to do is clear up a few gross inaccuracies regarding English bands.

As I mentioned when I replied to Mr. McFadyen's invective some months ago, I have been playing in a band for some five years. When we started out we intended to make our career that of a rock band, but unfortunately unless you're rich to start with, that isn't so easy. Gear costs money and rock gigs just don't pay well enough, so we ended up playing social clubs. At the time I argued black was white that it wasn't a good idea, but the rest of the band talked me into it. I now realise that if nothing else it has given me a good apprenticeship in the business, and has paid its own way and allowed us to buy equipment which rock gigs would never have paid for. So what's my point? Well, if there's one thing I've learned in five years it's that when you play social clubs you either play what the audience want you to play or you're out on your ear. Most of it is crap, I readily agree, and given the choice I'd just as soon be playing heavy rock, but when you're playing to an audience whose average age would have to be determined by Carbon-dating, Black Sabbath and the like just isn't really on, is it?

As for only doing two-hour gigs, for Christ's sake what is the band supposed to do about that? If a guy phones you and says he wants to book you for two hours, what are you supposed to say, 'You must be joking, it's either five hours or forget it'? If British bands play mostly short gigs, don't blame the bands, blame the venue — once again, if they pay the money, they call not only the tune, but the length of the tune as well! Clubs won't pay money for rubbish, he says, that's why discos are taking over. And yet where has he seen all these rubbishy bands? Clubs of course, where else?

As for all this bull about groups having spoiled it for themselves by their general attitude to music, words almost fail me. Almost,

but not quite. The very fact that, as he states, they do GET AWAY with playing badly, surely answers his own point for him. If the clubs were more selective about who they hired to play there, the bands wouldn't get away with it and so the chaff would be weeded out (albeit slowly) and only the bands who WERE worth their salt would survive. Once again, don't blame the bands, blame the clubs. By the way, not all groups, rock, social club or any other type, are as bad as he makes them sound. As far as the groups are concerned who DO turn up late, play badly, use inferior equipment and take all night tuning up only to present a totally boring show when they do finally get around to it, I can only reiterate that as long as there are clubs willing to employ them, such bands will continue to spring up like weeds everywhere.

He says about how tough the competition is in the States. How did it get that way? My guess is that the club proprietors over there are more inclined to chuck out bad bands before they reach the stage, which is as it should be, so that the audience only ever gets to see the best. A band will tailor itself to the majority of the audience it's going to play to. Sure an average English club band might have trouble doing a four-hour set. If they spend most of their time playing one-off gigs where they're only expected to play two hours' material, what's the point in learning four hours' material? Also, purely as a matter of curiosity, I'd be interested to hear what sort of wages American bands get.

It's not going to do any good 'telling these wazzers who reckon they can play (can someone tell me what a wazzer is, by the way?) to thin out and let the men show them who's boss'. If an artist or band is genuinely that good, it's up to them to do the donkey work and get out and prove it. You can't expect the rest of the world to stand aside and say 'Cor, you're good, here, you're better than I am, you can have all my gigs!' What's more likely is that the lousy bands will say, 'OK, you're virtuosos and we're crap, but we're the ones with the gigs, sunshine, so who's the losers?' How else could punk rock ever survived more than three microseconds?

I wish him luck with his rotten fruit stall; he certainly seems to have an ample supply of sour grapes.

Keep us the great mag.

Mark Dellow  
Upminster, Essex.



*Sabbath — not for the social clubs*





# ELKA-ORLA (U.K.) LTD

## The sound that travels

For many years, portability has been a major problem for musicians. Keyboard players in particular have suffered from this sometimes seemingly insurmountable problem. The sheer size and weight of many keyboard instruments have halted the progress of many a musician.

Elka have borne this age-old problem in mind when they designed their portable range. Now it's possible to get as big a sound as you need from a single or even double-manual organ without having to worry about an enormous truck to carry it around in.

The ultra-sophisticated design of each and every Elka keyboard instrument means that the minimum of space and weight is needed to incorporate features you would only expect from a much bigger instrument, and transportation is no problem. Each instrument takes just a couple of minutes to assemble or break down so setting up anywhere is simplicity itself!

In their electronic piano range, Elka produce the Elkapiano 88, tailored for the musician who wants an authentic piano sound from a portable keyboard. It features 61 keys, from F to F to the left of which are situated four voice tabs for Piano, Jingle Piano, Clavichord, and Steel Guitar.

For a compact professional organ with a vast range of sophisticated features, look no further than the Elka X55P model! Elka have kept portability in mind with the design of this sophisticated keyboard, which features two manuals, the upper featuring 49 keys, the lower 37 notes.

There are nine drawbars on the upper manual, from 16' to 1' together with five percussion tabs from 8' to 2'. For further scope, five pre-set stops are also incorporated — Clarinet, Trumpet, Full Organ, Theatre Organ and Drawbars. Add to this the Piano, Clavichord, Jingle Piano and Sustain effect and the piano section's individual volume control, and that's only the upper manual!



Elka X-705

The Elka X-705 really is the star of the portable range. It's a double manual instrument complete with 13-note pedal-board. On the upper manual, nine flute bars provide a comprehensive selection of voicings to which seven percussion harmonics can also be added. Presets are also provided and these include Theatre, Beat, Brass One and Brass Two.

The synthesizer section features eleven amazingly realistic presets including Guitar, Clarinet, Trombone and Sax, so you can have a full orchestra sound and pick your own choice of soloist!

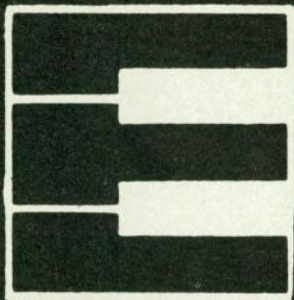
The string section features cello and string ensemble in addition to which there are also settings for piano and clavichord, broadening the scope of the Elka X-705 even further! And there's more. The most comprehensive rhythm unit ever seen on a portable is standard with the X-705. No less than sixteen different rhythms are available here at the touch of a switch. The automatic section means you can have your own combination of drums, bass, piano, guitar and brass! There is even a 'drum break' facility to further expand this

feature. Add to this all the other features you would expect like Reverb, Swell, Vibrato and Bass pedals with their own voicings and you have the ultimate portable keyboard!

The sounds of a full orchestra are at your fingertips with the amazing Elkarhapsody 490. There are voice registers for Violincello and Strings and a 49-key manual (C to C). A volume control and sustain length control add to the scope of this instrument, allowing the player ultimate control for his own personal playing style. Standard items on the Elkarhapsody 490 include a photo-electric cell expression pedal with respective cable and legs which again can be assembled in a matter of minutes.

Thanks to its compact size and limited weight, the Elkarhapsody 610 is just as easy to carry around, but this time also features two register sections both of which include Violincello, Strings, Piano and Clavichord: the first one, on the left, controls the first two octaves on the manual, while the second one, on the right, controls the remaining three octaves.





# ELKA-ORLA (U.K.) LTD

## A portable range of powerful sound

By providing a range of keyboards that are light, durable and easily portable without sacrificing professional sound quality, Elka have given the musician a long sought after combination. In their line of organs and pianos both the home organist and the professional musician are provided for. A variety of effects and sounds are available and are tailored for either general use or for a specific purpose such as stage use with a back up unit.

Regardless of your specific need, Elka have incorporated a craftsmanship that matches the sophisticated musical experience necessary for top quality keyboard instruments. Any musician will find the keyboard he desires and with the extra qualities of portable construction and light weight, it's a product that can't go wrong.

Take a look at just three of the amazing Elka line!

### Elka X55/P Portable Organ

*The X55/P is a comprehensive instrument in every way having an upper manual voicing of 49 notes, a lower manual voicing of 37 notes, upper and lower sustain, noise attack, percussion. On the pre-sets there are drawbars for theatre, full organ, trumpet and clarinet, the piano effects include clavichord, jingle piano, sustain and volume slider. The 13 note bass pedal features bourdon, flute, attack, volume control, sustain control and in addition the keyboard contains light and full vibrato, brilliance and swell pedal.*

*The organ is fully portable which makes it ideal for both home and stage use — proving yet another winner from Elka.*

### Elka X605

*The X605 is a new portable keyboard which now joins the ranks of the already famous Elka range. Equipped with six presets for a wide variety of sounds, the X605 also has the facility to become a polyphonic synthesizer at the push of a button. The X605 can give you almost any sound you want: strings, cello, piano*

*and clavichord sounds on either the upper or lower keyboard. Nine drawbars on the upper keyboard and five on the lower add to the depth of tone control you can achieve on the instrument.*

### Elkarhapsody 490

*If you are looking for that extra something to add to your organ playing, then the Elkarhapsody 490 could be just the thing. A portable keyboard with 49 keys, it gives the sounds of a violin orchestra via its violoncello and strings registers.*

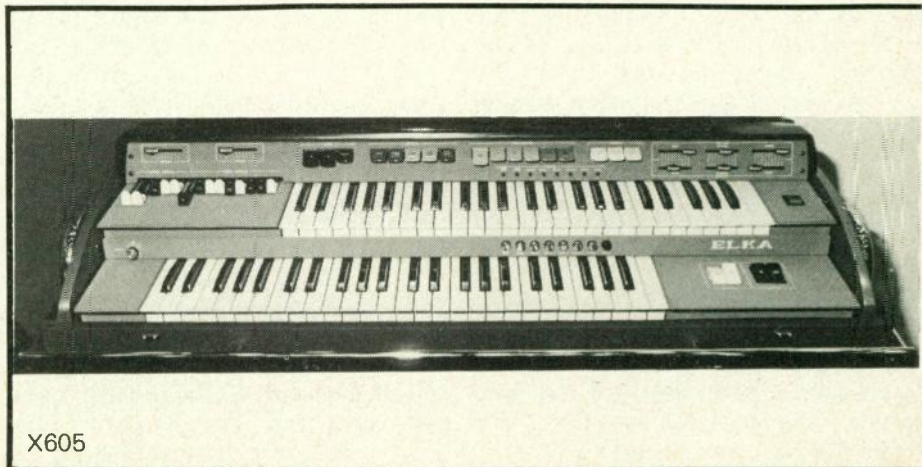
*In addition to the 49 keys and violoncello, strings voice registers, the controls include on/off switch with pilot light, volume control and sustain length control. External tuning of the instrument can be carried out and there is an optional photoelectric cell expression pedal.*



Elkarhapsody 490

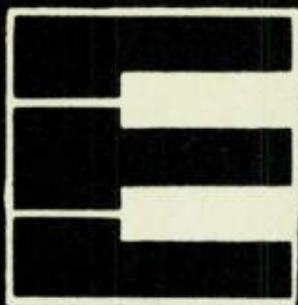


X55/P



X605





**ELKA-ORLA (U.K.) LTD**

# The perfect amps for keyboard sound

With top class portables like the Elka range, amplification obviously plays an important part in getting the best out of the equipment. Elka have designed a fabulous range of amplifier/speaker units which perfectly complement the Elka portable keyboard instruments.

The Elka RM100 is an ideal choice of amplifier for any keyboard. The extremely compact unit incorporates a solid-state 100 watt amplifier with two separate channels and five band frequency tonal controls. Each channel has two inputs for high or low sensitivity.

The unit also houses a heavy-duty 12" bass speaker to really throw the sound out. The speaker is especially designed to handle a wide range of frequencies so you can get the best out of your keyboard and give your best to the audience.

The Elkatone 610PR is a king among rotary sound cabinets. For a really big swirling sound, it incorporates two mechanical rotating units with variable speed controls plus an American-built reverb unit with two effects — short and long. The 100 watt amplifier section has volume, treble and bass controls located on the rear of the cabinet so you can set it up for the sound you want. The rotary units and the reverb can be controlled and switched in or out from a pedal, meaning you have ultimate control.

Whatever kind of sound or tone you want for your keyboard, the Elka cabinets can give it to you. For a big sound, there's nothing better!



610PR



RM100

## Drop in on Elka

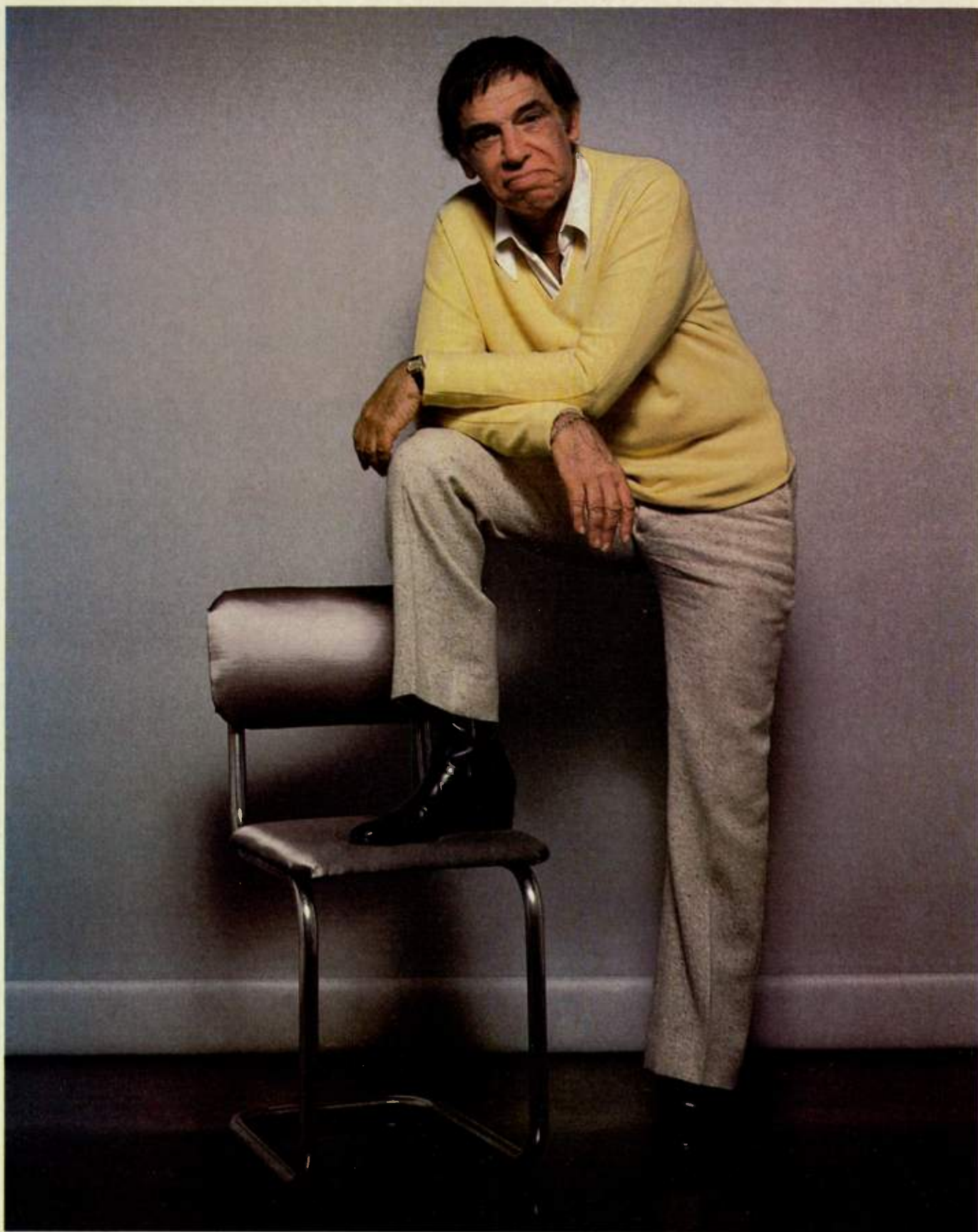
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**Bill Greenhalgh**  
Exeter (0332) 56487  
**Hodges & Johnson**  
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Chelmsford (0245) 66247  
Colchester (0206) 77463  
**Frank Hussy**  
Liverpool (051) 236 1418  
**Hamlins**  
Guernsey (0481) 27595  
Plymouth (0752) 25360  
Taunton (0823) 51133  
Weston-Super-Mare (0934) 23788

**John Holmes Music Centres**  
Bath (0242) 30600  
Bristol (0272) 46136  
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Swindon (0272) 46136  
**Fred Jones Music Centre**  
Ilfracombe (0271) 64 18  
**Kennards**  
Ashford (0233) 23226  
Canterbury (0227) 60331  
**Lynn Music**  
Kings Lynn (0553) 4390  
**Modern Music**  
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Basingstoke (0256) 64663  
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Central London (01 240) 0393  
**Chase Musicians**  
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**Stan Moreton Music**  
Southport (0704) 211445  
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Kingston-on-Thames 01 546 1231  
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**Sound Venture**  
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**W.J. Taylor**  
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Buddy Rich is playing Ludwig drums. And, we're telling drummers everywhere with 4-color ads and posters. Because when the greatest name in drums gets together with the greatest drummer, everyone should hear about it!

World Radio History



# Rose-Morris...





**NEW**

# Marshall Marshall



## Marshall go Country

In a totally new departure Marshall, the acknowledged leader in rock amplification, have developed a valve amp specifically for Country, Jazz and general club work. Far from being a variation on an existing theme the 4140 is a new design from the chassis up.

Development time for the new model has been over 2 years and many top Country and Jazz players, both in the U.K. and America, have made important contributions at various stages. The amp offers all the features you would expect — and a few you wouldn't.

There are two channels, with two inputs per channel; each channel having separate equalisation. Channel 1 is mainly intended for instrument inputs such as guitar or pedal steel and has full

Hammond reverb, bass, middle and treble controls, bright and boost switches and a channel volume control. Channel 2 is intended mainly for microphone inputs and has bass, middle and treble and channel volume. A master volume control operates on both channels together.

The amp is all valve for both pre-amp and power stages and delivers a minimum of 100w RMS. Speaker design was one of the more difficult development areas, and it took some time before Marshall were satisfied with the twin 12" 80w speakers. Reverb and boost are both controllable by a double footswitch from the back panel.

Visually the combo also breaks new ground for Marshall. Unusually for a valve amp Marshall have engineered the control panel to be on the front of the

amplifier which is the most convenient design for club work. The finish is also unique: brown oak leathercloth covering for the cabinet with a straw coloured speaker cloth. The portability of the combo is ensured by new-style castors, two recessed side handles and a strap-type top handle.

So much for the design and engineering — but what about the sound? How do you describe a sound? Simply that the combo out performs everything that America produces for Country and Jazz musicians — what else would you expect from Marshall?

**Rose-Morris**

*Marshall*



**NEW**

# Marshall Marshall

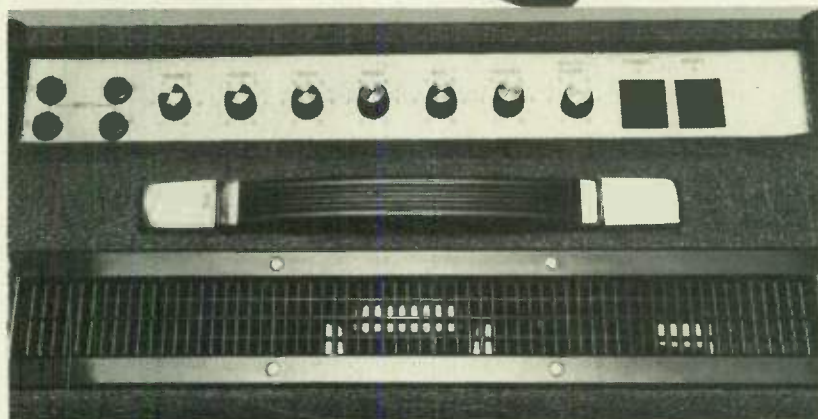


## Rock 'N' Roll Baby

The definitive 'Baby Marshall'. The brand new Marshall 2150 is the smallest, most powerful Marshall combo ever. Many musicians need the power and sound of a stack but in a compact unit. The 2150 does the job!

The unit is small but the sound is BIG. A full 100 watts of Marshall power is delivered into a specially commissioned Marshall 12" driver which really projects your sound, enough for the biggest gig.

The amplifier is a pure valve unit so that famous Marshall raunch is still very much in evidence. Wind it up and it sounds like a full Marshall stack in a crowded club. Wind it down and it can be clean or dirty at a volume level barely above a whisper! Slightly different from the Marshall



100 watt heads, the amplifier is four input, two channel but with the added extra of a Master Volume control. With the Marshall E.Q. circuit — Bass, Middle, Treble and Presence — and this special Master Volume, you have many sounds at your fingertips plus you can link the two channels and control the overall volume.

The speaker is a very special type of Celestion driver, exclusive to Marshall. It is easily capable of handling the output from the power amp, often well in excess of the 100 watts RMS rating. The sheer power that this compact combo produces is amazing. If you need a Marshall in a small package, look no further than the brand new 2150.

**Rose-Morris**  
*Marshall*



# Marshall Marshall

## PA SYSTEMS

### 2071

6 Channel Mini-Mixer with individual volume, treble and bass controls. 2 Outputs.

### 2205

100w Solid State power amp.

### 2097

125w 8 x 8 Cabinets. 4, 8 or 16 ohms per pair.

### 2047

Flared 100w columns with one 12" Celestion and one 10" Celestion in each. 4 ohms per pair.

### 2043

200w columns with two 12" Celestions and two 10" Celestions in each. 8 ohms per pair.

### 2121

100w 2 x 12 Solid State Slave Monitor.

### 2122

As above but 30w 1 x 12.

### 2123

50w 1 x 12 Monitor. Speaker cabinet only. 16 ohms.

### 2056

250w 2 x 15 Celestion Powercel Bin. 4 ohms.

### 2051

250w Solid State Power amp driving into 4 ohms. Built-in safety switch to protect amp.

### 2057

High frequency horn. Extends range of system to 20 kHz.

### 2120

"Supabin" incorporating the 2127 twin Celestion horns in a "Supabass" bin. 100 watts of superb PA sound. 8 ohms.

### 2126

"Supabass" Bin handling 100 watts. 15" speaker mounted reverse facing. Use with 2127 Horns and 2128 Piezo unit. 8 ohms.

### 2125

100w 8 channel PA Mixer Amp with reverb foldback facility. 4, 8 or 16 ohms.

## CABINETS

### 2095

100w 2 x 12 Cabinet, front loaded on a flare. 8 ohms.

### 2095B

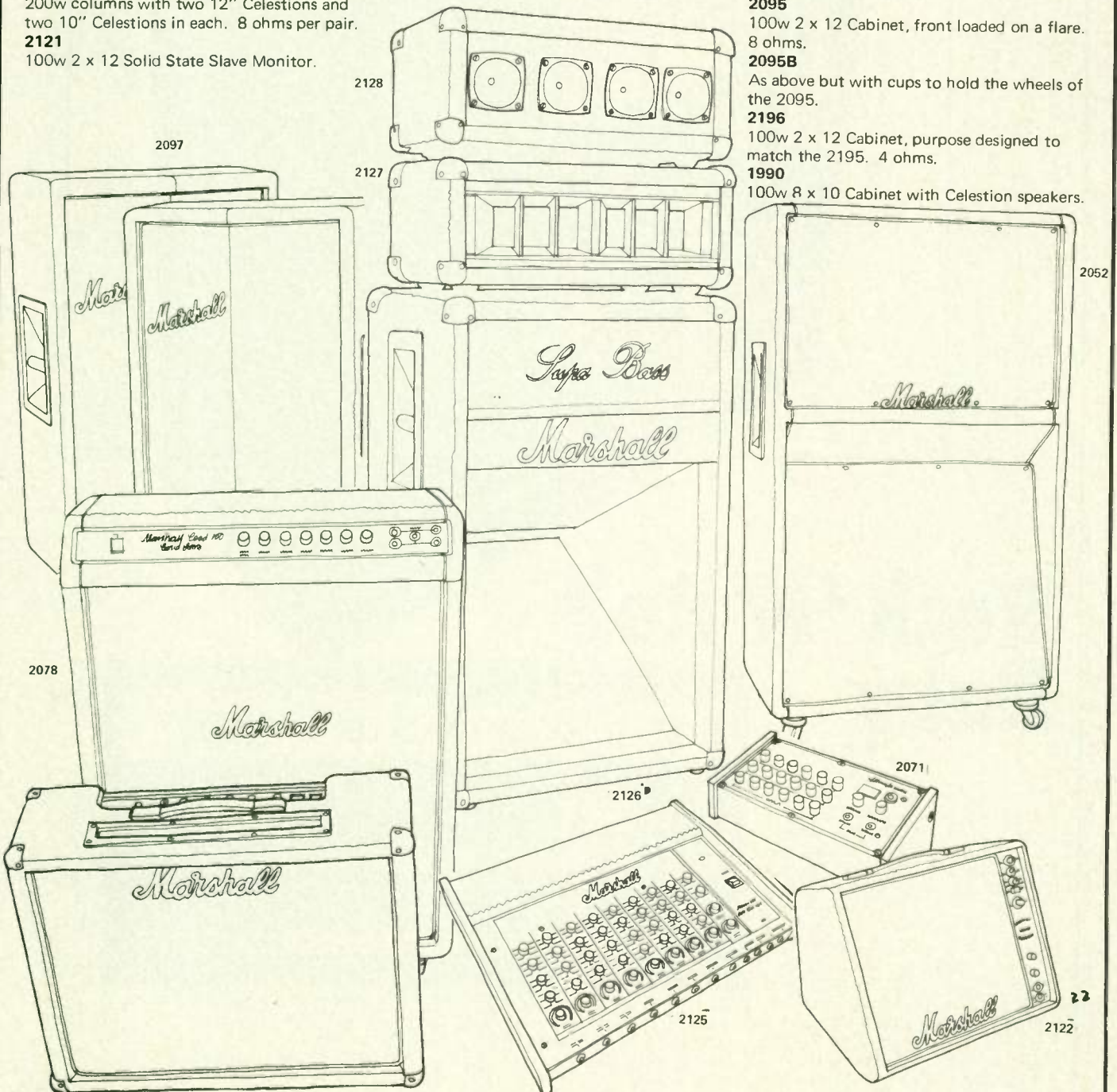
As above but with cups to hold the wheels of the 2095.

### 2196

100w 2 x 12 Cabinet, purpose designed to match the 2195. 4 ohms.

### 1990

100w 8 x 10 Cabinet with Celestion speakers.



Rose-Morris  
Marshall

2104



# Marshall Marshall

## 1979

200w 4 x 15 Cabinet with Celestion speakers. 16 ohms. Also available as 1979B.

## 2052

125w Bin loaded with a powerful efficient Powercel 15" speaker from Celestion. 8 ohms.

## 1960

Classic 4 x 12 100w Cabinet. Ideal for lead or keyboards. Angled front. 16 ohms.

## 1960B

As for Marshall 1960 but with straight front to form bottom half of complete stack. Other Marshall 4 x 12 Cabinets are 1935 series with extra bass response and the high power 120w 1982 and 1984 series.

## COMBOS

### 2077

100 watt Solid State Bass Combo with 4 x 12" Celestion 1281 speakers. Ideal for studio or stage use. "Master Volume".

### 2078

As for 2077 but filtered for lead instruments. "Master Volume" and channel link facility.

### 2103

100w 2 x 12 Valve Combo with Master Volume. Very powerful sound for lead or keyboards.

## 2104

50w 2 x 12 Valve Combo. Master Volume allows overload sound at low volumes.

## 4140

New 100w Valve Reverb Twin. Two channels, one normal, one with reverb. Two 12" specially designed speakers. Overdrive facility.

## 2150

New 100w Valve Combo. Two channels, 4 inputs with Master Volume control. Specially designed 12" speaker.

## 2200

100w Solid State 2 x 12 Combo with Master Volume, channel link and special cut and boost circuit. Ideal for lead instruments.

## 2199

30w Solid State 2 x 12 Combo with superb depth of sound. Master Volume control. Celestion speakers.

## SOLID STATE AMPLIFIERS

### 2195

100w Solid State amp top driving into 4 ohms. Recommended with 2196 cab or 2095/2095B Stack. Master Volume control.

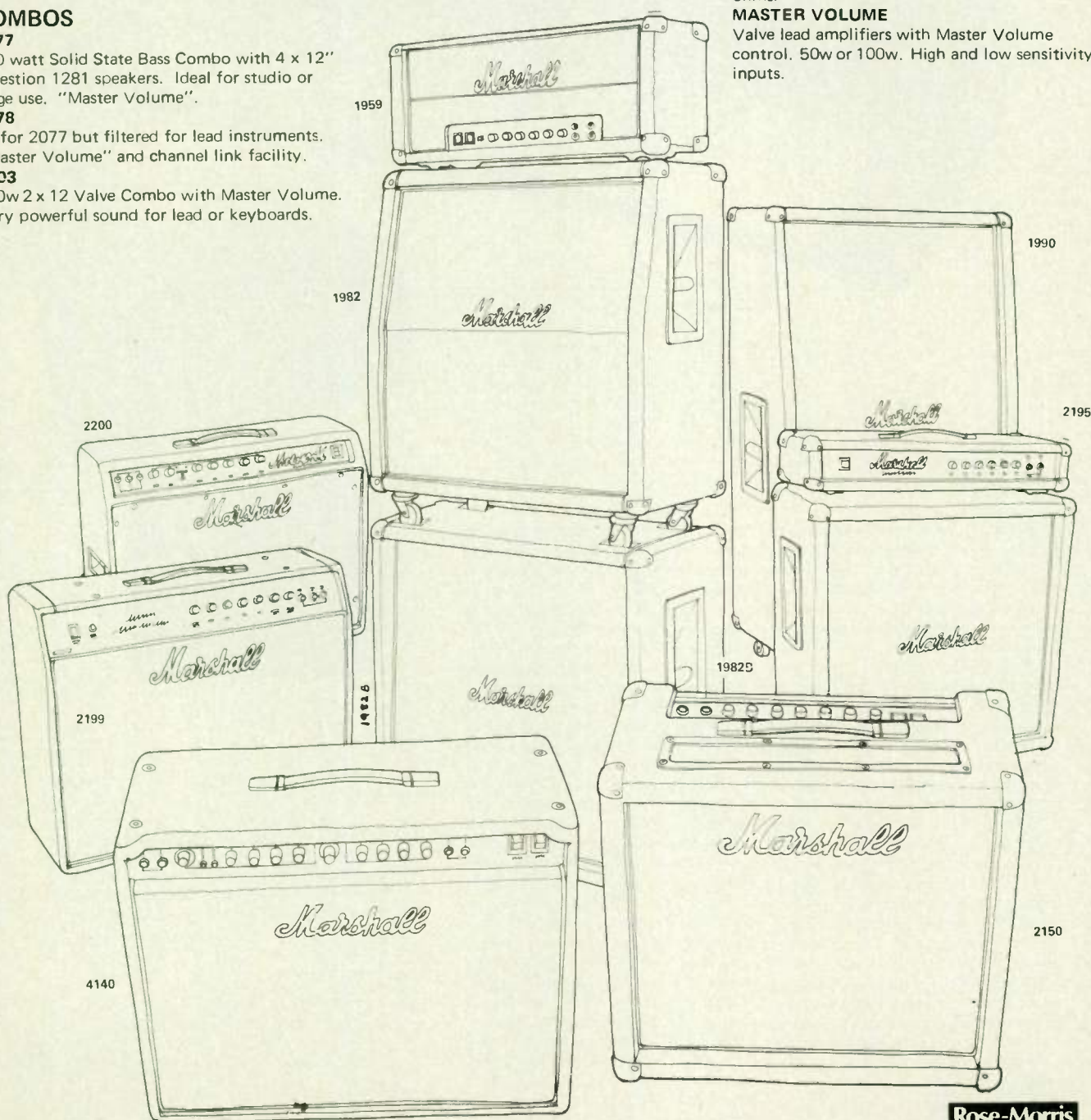
## VALVE AMPLIFIERS

### STANDARD

Super 100w and 50w Valve amplifiers for lead or bass applications. Driving into 4, 8 or 16 ohms.

### MASTER VOLUME

Valve lead amplifiers with Master Volume control. 50w or 100w. High and low sensitivity inputs.



Rose-Morris

Marshall



### MS-20 Monophonic Synthesizer

The MS-20 is a new addition to the Korg range. It has a host of features: a C-C 37-key keyboard, two VCFs, two VCOs and sweep filters. Two envelopes generators give independent hold, delay and attack times. The MS-20 has a patching panel with facilities that give envelope generator patching, and inputs for patching in an external signal. Compatible with the SQ10 Sequencer.

# KORG



SE-500 Stage Echo

The SE-500 is an echo unit which obtains its effect through a tape loop. The unit has facilities to vary the rate and volume of the echo effect with extra feedback controls and LED level indicators together with extensive input and output routing and switching including balanced XLR in and outputs.



Korg is one of the fastest rising names in the synthesizer business, and over the past 12 months the company have really made their mark by launching products for musicians at all levels, from the pub band to the top professionals.

Korg's proud boast is that they have destroyed the "never in tune synthesizer" image, thanks to the circuitry which guarantees accurate tone pitch. Their constant innovations and new additions to the range keep pace with the most demanding requirements of today's musicians.

The prime example of Korg expertise and technical achievement can be seen in the PS3300 polyphonic synthesizer. This incredible instrument actually incorporates three polyphonic synthesizer systems plus signal mixers and battery of controls which can produce any sound imaginable, letting the musician really be creative.

From the same keyboard you can play the three polyphonic systems independently by using the Keyboard Volume Balance controls. An X-Y

control stick is included among the manual controls on the PS3300 keyboard unit to give the maximum range of effects.

The PS3100, whilst retaining many of the new features of the PS3300, is not quite so sophisticated. It features specifically developed integrated circuitry for every note of the keyboard, and one of its most practical benefits when used live is the rapid access to a large number of pre-patched sounds.

Another aid for playing live is the synthesizer's flow chart system and rationally designed patching panel which makes setting up a specific patch simple. Thanks to the unique control panel layout and dependable circuitry the PS3100 allows for consistently reliable operation without sacrificing any creative freedom.

These two instruments serve to illustrate one of the best features of all the Korg keyboard products in that they have "hidden" powers. Their capabilities are infinitely more than their uncomplicated keyboard layout would suggest. This characteristic is true of all the famous Korg products and also of the new instruments which have been added to their already extensive range.



EM-570 Echo Mixer

The EM-570 is another addition to the Korg range and enables the user to link in echo with any other signal source such as from a microphone, guitar, or any other electric instrument as well as tape decks and record players. The echo controls give control over the rate of echo and repeat trade. Rear panel inputs are: Phono, Aux 1-1-2 (for connection of tape decks) and outlets for speaker and external amplifiers. The EM-570 has four channels with independent tone and volume controls.

Rose-Morris

KORG



# A UNIVERSE OF SOUND



**VC-10 Vocoder**

The Korg Vocoder is one of the most original breakthroughs to emerge in the short history of synthesizers. The Vocoder is a synthesizer which enables the human voice to be a source into the synth and altered through the playing of the keyboard. You can speak and at the same time accompany yourself on the keyboard and the synth functions will synthesize the pitch of your voice according to the settings you choose, altering the pitch of your voice as if you were a choir singing. Some of the effects you can get include: vibrato, octave changes, chorus effects and a myriad of other sounds which will enable you to make your voice do incredible things.



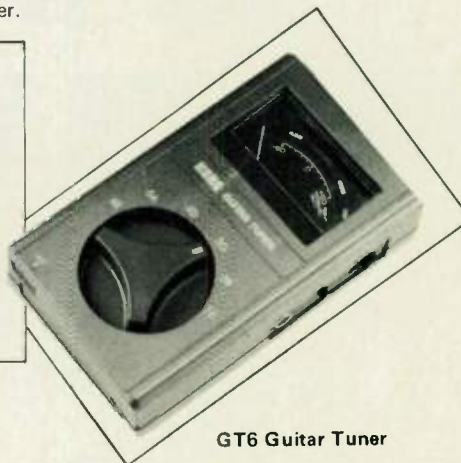
**MS-10 Monophonic Synthesizer**

The MS-10 is a 32-key synthesizer, equipped with envelope generator, VCO, and Low Pass Filter. A patching panel has a pink noise and white noise output. Portamento control and adjustment of external signal level are just two of the many features of the MS10. The synthesizer also has a modulation generator controlling the wave form and frequency. Compatible with the SQ10 Sequencer.



**SQ-10 Analog Sequencer**

Using the SQ-10 means you can vary the sound the synth makes according to prior selection of pitch, tone and colour. The SQ-10 is a 12-step, 3-channel, 6-mode sequencer. It enables you to select up to 24-steps and a built-in analog mixer lets you mix output voltages from each channel and connect more than one sequencer. Full facilities mean complete control over the mode of sequence, monitored by LEDs which give a visual indication of the channels and steps in a sequence.



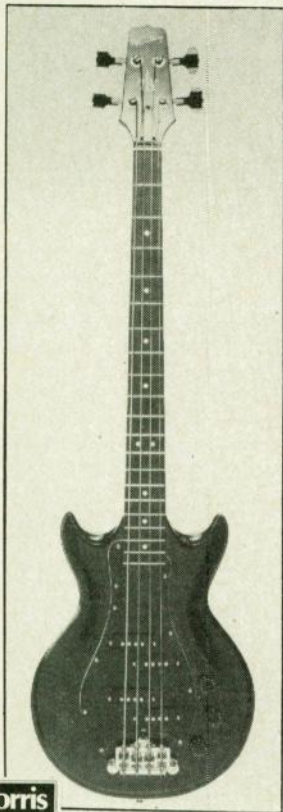
**GT6 Guitar Tuner**

One of the most frustrating and time consuming things for any guitarist is tuning his instrument. To eliminate this problem Korg have designed the GT6 guitar tuner for instant, accurate tuning. Small enough to be used with either electric or acoustic guitars, it features both an input jack and built-in microphone. Other features of this remarkable accessory include a built-in meter light for use in dim lighting situations and an output socket which permits audible as well as visual tuning when connected to an amp.

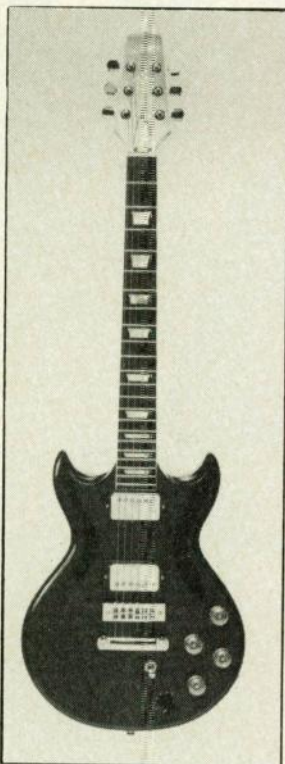
**Rose-Morris**  
**KORG**



# WESTBURY GUITARS



**Rose-Morris**  
Westbury



The fabulous Westbury range of guitars have already made a big impact on the American scene. Manufactured in Japan to American specifications and designs, they incorporate exquisite workmanship, total playability and handsome finishes.

Take the Westbury custom; an instrument designed with the professional in mind. Beautifully handcrafted and sculpted, the Custom is made of Canadian Hardrock Maple woods glossed in deep rich antique walnut or tobacco brown sunbursts. The superb craftsmanship is apparent in every aspect of the guitars from the beautiful arched top body design to the gold plate long-travel bridge and tailpiece.

In addition to the two tone controls plus pick-up selector switch, the Custom features the exclusive Pick-up Programmer which controls the sound from double-coil humbucking format to single coil configurations, a reversible combination of both, or two "out of phase" functions.

The Westbury Custom is definitely an instrument for the selective performer.

The Westbury Track IV Bass is a beautiful instrument to look at — and to play. The sculpted arched top design is attractively finished in walnut and the back is also carved to rest easily against the body.

The bridge/tailpiece unit is die cast, allowing precision tuning and correct octave intonation and it can be easily adjusted for personal action preferences. The Track IV Bass features dual split pick-ups to give the performer full tonal response. These powerful pick-ups each have their volume control and share a master tone control thereby giving a very wide range of sounds and tones with fast easy operation.

The Westbury Track IV — for the bassist who wants the best.

## SEE WHAT'S NEW THEN SEE WHAT'S BETTER

You've seen what's new . . . what's louder, slicker, bigger, shinier . . . but have you seen what's better? The MXR Phase 90 makes a small claim on new with its new lower price and new graphics, but even better is that MXR have added a touch of regeneration for more intensity without sacrificing that classic Phase 90 sound. What this amounts to is that the phaser sound that set the industry standard is now even more



versatile in its performance while maintaining the MXR standard of quality and reliability.

The Phase 90 is one member of the MXR family of phase shifters, which includes the Phase 100, the top-of-the-line phase shifter, and the

Phase 45, which offers the same MXR quality at an even lower price.

So, go out and see what's new. Then see what's slightly new . . . and better . . . from MXR.

**Rose-Morris**  
**MXR**



# Ludwig sounds as clear as it looks

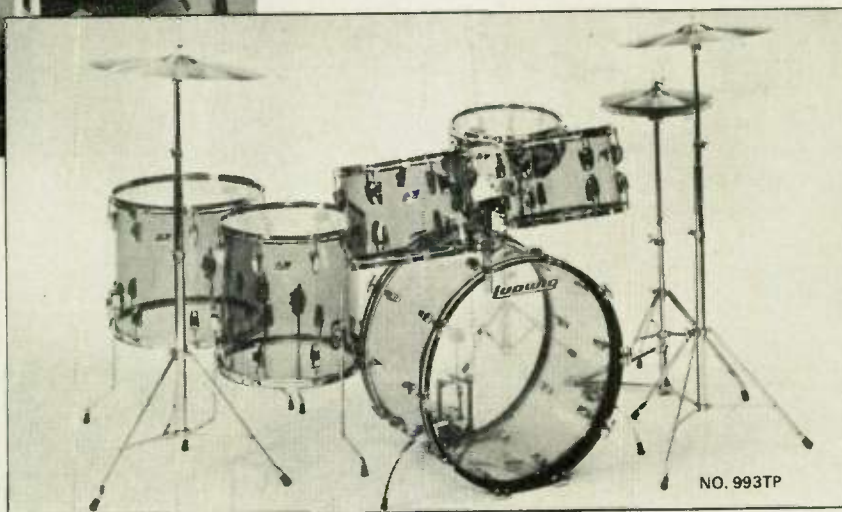


*Don Powell of Slade, a long time user of Ludwig, pictured here with a Ludwig Vistalite Kit.*

Although it's been around a little while now, percussionists are still discovering the characteristic sound of Ludwig Vistalite. Apart from a show stopping visual presentation Vistalite gives the drummer a sound that's tight and fat, ideal for club work tuned high or miking up tuned low. One of the most spectacular UK appearances of a Ludwig Vistalite outfit was on stage at London's Hammersmith Odeon recently. The group had put lights all round the kit and each time these changed, the drummer had a different coloured kit, and it sounded great too!

So there you have the ideal combination — Ludwig sound plus a visual appearance second to none. Vistalite outfits are available in a range of both opaque and see-through colours and also in pattern combinations called Rainbow Vistalite.

Available from all Ludwig Percussion centres.



## Ludwig Percussion Centres

In order to give British drummers the best possible service wherever they are in the country, the U.K. distributors of Ludwig, Rose-Morris, have initiated a network of specialist Ludwig Percussion Centres. Every

dealer participating in the scheme will now be fully equipped to offer the drummer speedy efficient service, whether he wants to buy a new Ludwig kit, a cymbal stand or that vital spare part he needs.

### SCOTLAND

**Bradleys**  
Glasgow  
041-332 1830

**House of Clydesdale**  
Ayr  
0292-69305

**House of Clydesdale**  
Edinburgh  
031-556 5748

### ENGLAND

**Drumland**  
Dartford  
32-24449

**Simon King**  
Tollworth  
01-330 3709

**South East Ent.**  
Lewisham  
01-690 2203

**Gig Sounds**  
Mitcham  
01-769 5681

**Blanks**  
London  
01-624 1260

**Percussion Services**  
London  
01-607 8383

**Sounds**  
London  
01-437 2458

**Music City**  
London  
01-439 3866

**Charles Foote**  
London  
01-437 1811

**Professional Percussion**  
London  
01-485 4434

**Peter Grey**  
Northampton  
0604 31211

**Carlsbro**  
Mansfield  
0623-25804

**Organ Loft**  
Huddersfield  
0484-25355

**Coda**  
Bradford  
0274-307433

**Hobbs**  
Lancaster  
0524-60740

**Carlsbro**  
Sheffield  
0742-663862

**Gardeners**  
Hull  
0482-223865

**Mean Machine**  
Darlington  
0325-82821

**Cookes Band Inst.**  
Norwich  
0603-23563

**Free 'n' Easy**  
Hemel Hempstead  
0442 59659

**Freedmans**  
Leystonstone  
539-0288/9

**Rushworth & Dreaper**  
Liverpool  
051-709 9071

**Hessy's**  
Liverpool  
051-236 1418

**Sound Pad Music Centre**  
Leicester  
0533-20760

**Free 'n' Easy Music**  
Oxford  
0865-721411

**Drum & Guitar**  
Cambridge  
0223-64410

**Percussion Sounds**  
Nottingham  
0602 701054

**Townshend Music**  
Blackburn  
0254 886694

**Honky Tonk**  
Hadleigh  
0702-553647

**Total Percussion**  
Brighton  
0273-698593

**Andertons**  
Guildford  
0483-38212

**Rose-Morris**  
London  
01-437 2211

**Bennetts Drum Centre**  
Portsmouth  
0705-60865

**Newtone Music**  
Newton-le-Willows  
09252 22514

**Yardleys**  
Birmingham  
021-236-7441/2

**Sound Centre**  
Coventry  
0203-457175

**Barratts**  
Manchester  
061-236-4843

**Mamelok**  
Manchester  
061-834 1946

**John Savage**  
Kings Lynn  
0553-4026

**Rock City**  
Newcastle  
0632 24175

**Buzz Music**  
Hereford  
0432 701054

**Mary's Music**  
Accrington  
0254 35060

**Achille Roma**  
Poole  
0202 743654

### WALES

**Gamlin Pianos**  
Cardiff  
0222-20828

**Picton Music**  
Swansea  
0792-55608

### EIRE

**Rafferty**  
Galway  
0009-4360

**Dublin Drum Centre**  
Dublin  
0001-757287

**Michael Foley**  
Carlow  
0503 41725

### N. IRELAND

**Sports & Music**  
Ballymena  
0266-41792

**Rose-Morris**  
*ludwig*



# SYNARE SPACE AGE DRUMMING



Latest addition to the range of Synare drum synthesisers is the Synare 3. A remarkably compact and versatile drum synthesiser, it is easy to operate and produces an astounding range of synthesised percussive sounds. Designed to fit the Ludwig 1350 Tom Tom floor-stand, the Synare 3 can be set up as a single unit or two or more can be used to give the drummer true creativity in his sound.

Giving excellent stick response, Synare 3 also responds to the force with which the pad is struck in the same way as a conventional drum – the harder you hit the louder it gets! Synare 3 is powered by two 9 volt batteries which last for up to 6 months. This eliminates the need for trailing mains cables and further enhances the portability and versatility of this remarkable new creative tool for drummers.

**Rose-Morris**

SYNARE

*Choosing a mic is one of the most critical decisions a vocalist can make. Select a mic that is not suitable for either the timbre of your voice or the venues you are playing and you could be landed with feedback or be totally swamped by the rest of the band.*

*AKG know that one mic cannot cover all the requirements of a band. That is why the company produces a large number of models, each one designed to deliver the maximum performance for the application for which it is intended.*

*It is not only vocalists who have to worry about mics. A player having his instrument miked through a P.A. system will have to depend on the quality of the mic used to faithfully reproduce the full tone of his sound.*

*A high quality microphone is an essential part of a good P.A. system, and AKG mics are designed to professional standards to ensure that your sound quality is maintained for gig after gig – with AKG the last part of the P.A. system you'll need to worry about is the microphone and the quality control standards at AKG's Vienna factory are unequalled.*



#### AKG D120 Series Mics

The AKG D120 E is an economically priced dynamic microphone with a cardioid polar pattern. Designed for vocal applications, it is an extremely rugged microphone with low feedback susceptibility and a chromium plated steel mesh wind shield. Low impedance with a rugged XLR connector or high impedance with fixed lead, model D120HL.

#### AKG D190 Series Mics

Although inexpensive, this mic is one of the most popular AKG microphones for vocal use. It has a particular sound response ideal for the voice but sounds excellent in virtually all situations, making it the true all purpose mic. Being a dynamic cardioid mic it is extremely rugged and the XLR professional connector keeps the sound flowing. The D190 is available with or without an off-switch, in low or high impedance.



**Rose-Morris**

AKG



# OVATION

## THE GUITARS OF THE STARS

Although you recognise an Ovation guitar by its sound, you certainly know it by its shape! Before the company first hit the market 10 years ago, it seemed that acoustic guitar design and technology had reached its limit — Ovation changed all that.

Ovation's unique and original approach to guitar acoustics led to the 'roundback' design. This bowl shape, together with the exclusive 'Lyrachord' material used in its construction is what gives that characteristic Ovation sound — full, rich and clean with incredible projection. Within a short space of time the word spread about Ovation guitars and suddenly all the stars were playing them.

Not content with producing impeccable acoustic guitars, Ovation tackled one of the most difficult areas of instrument design — an electric acoustic. As with all their products, Ovation technicians by-passed much of the recognised thinking on the subject of amplifying acoustic guitars and set about their own research. The result was a pick-up which really makes the acoustic guitar sound like an acoustic guitar.

Not only did they place a piezo electric crystal under each string to pick up both string and top vibration, but added a FET pre-amplifier for greater flexibility and natural sound. These guitars, above all others, are used widely by artists on stage thereby completely eliminating the problem of miking up.

Finally, the only instrument left for Ovation to conquer was the solid electric guitar, and this they did in their usual style. A superb shape, which owed nothing to any existing design, plus a sound which could match and better anything around made the Ovation electrics instant winners.

The ultimate test of Ovation products has come in their use by many of the world's top performers, who were perhaps more than a little swayed by the desire to own an instrument which was every bit as individual as themselves.

### The Ovation Viper

The Ovation Viper is a beautiful single-cutaway electric guitar which sounds as good as it looks. Utilising top quality alder and maple together with specifically designed pick-ups, Ovation have ensured that their reputation for individuality in sound and design will be enhanced by the Viper.

The one-piece maple neck, which is both glued and bolted to the body for extra sustain, houses a fully adjustable tension rod. The single coil pick-up has more windings for higher output; the individual magnets are firmly embedded so cutting out any unwanted feedback, and an additional capacitor has been added between the volume control and the output jack to ensure bright punchy response with plenty of cut even at lower volume levels.



### The Ovation Preacher

The Preacher is a double-cutaway solid which features double pick-ups with a refined low hum design. The pick-ups are the essential of the Preacher guitar, because Ovation have engineered a double-coil humbucker pick-up that is totally new, yet preserves all the best tonal qualities of traditional design.

Each Preacher pick-up has two opposing coils, with six magnets set into each bobbin. By eliminating the single bar magnet concept by wrapping the coils in opposite directions, Ovation have produced a strong pick-up that is a full 20dB quieter than most humbuckers.

A stereo output jack fitted to the Preacher (as well as the standard mono output socket) lets you plug the Preacher into two amps or into both channels of a single amp.

**Rose-Morris**  
**OVATION**

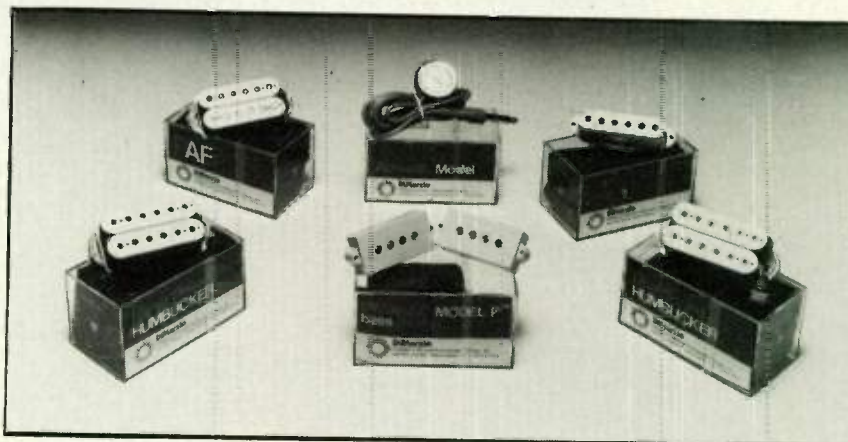


# There are two types of pick ups— Di Marzio and the rest

If you're a rock guitarist who lusts after the vintage sound, look no further than the DiMarzio Super Distortion Humbucker pick-up for the fire and attack you need from a strong pick-up. The SDHB is really two pick-ups in one. At full volume it roars into a gutsy sustained blast while at lower volumes it becomes mellow and warm, but without the loss in treble that you find in most other pick-ups. The SDHB is a replacement for large Gibson humbuckers and can be used in conjunction with a phase switch.

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to try. This will turn the duller sounding of guitars into a fiery instrument with razor sharp sound. The added advantage of the Super II is its low cost. Its standard humbucking size allows it to be fitted to most brands of guitars and it can be used with a phase switch for even more versatility of sound.

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## RIO GRANDE

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Already the EKO steel strung guitars have earned themselves a high reputation and now two new EKO guitars have emerged to consolidate that position. The EKO Rio Grande 6 and 12 string acoustics (shown opposite) are economically priced guitars which nevertheless retain the superb standard of the range of EKO products. Made from the finest available woods, these guitars incorporate a superb tone and rugged construction at a price which will appeal to the first time guitar buyer.



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Les Paul isn't tired. Despite a 40 year playing career and an association with Gibson guitars that has been the cause of a 25th anniversary celebration this year, he plays with enthusiasm and discusses with great interest the subject of music in general and guitars in particular.

The Les Paul file must be known to most musicians. For those who don't, it's worth recapping on some of the milestones. He was the first to build a solid guitar. He called it The Log because it was a 4"x4" (with acoustic "wings") length of wood with contact mikes. That was in the thirties. He was beaten to the commercial punch by Leo Fender who proved that the solid guitar would sell and Gibson were motivated to produce a competitive product. Luckily for Les, Gibson felt that the solid guitar boom would be short lived and they asked if they could build the guitar Les had taken to them sometime previously (when he had been shown the door) but "would he mind if Gibson didn't actually put their name on it?" This slight didn't deter Les too much and the guitar was produced under the Les Paul name. Today Gibson get quite upset at the use of Les Paul without the prefix Gibson when the guitar is referred to and that's an interesting comment on proprietary feeling.

At the time that the Les Paul guitar was originally produced, Les was a big international recording star along with his wife Mary Ford. They had many hits until the advent of Rock'n'Roll when the war babies generation cast them aside for new idols.

Les went into semi-retirement forgotten by most but the faithful of his generation and he left the three chord kids to get on with it. Nobody could have predicted that the three chord kids were going to improve to the point where they wanted a good solid guitar. But then nobody realised that the music this generation grew up with would finally dominate youth culture at a time when youth ruled the world through sheer weight of numbers.

In this quiet period, Les continued to invent. The most peculiar thing about the man is that he has a rare combination of talents. Other engineers may be better technical innovators than Les, other musicians may reach higher artist levels of communication, but Les is the artist mechanic. He will take an interviewer's tape recorder apart as happily as he will wander through an interesting chord sequence with a young guitarist who's fulfilling a lifetime's ambition and playing with the master.

Les Paul pioneered multi-track recording. It's not fair to say he invented it as the concept of running more than one recording in synch could never be exclusive to one man. But he did show the world how to do it. His original eight-track tape recorder stabilised by a Cadillac flywheel is just about to go into the Smithsonian Institute and on this piece of equipment he laid the foundations of the technique that has today resulted in the 32-track computerised mix-down studio we all spend most of our time in.

Les' work on pick-ups was just as important. His designs produced the sound Eric Clapton revealed to the world in the middle sixties. Gibson built Les Paul guitars throughout the nineteen-fifties. They didn't sell particularly well, but they were a useful catalog line. The guitars were discontinued by the early sixties and, as far as Gibson and the Rock'n'Roll world were concerned, that was the end of Les Paul's influence on guitar marketing. His design work had

# LES PAUL 25 Years on

by Ray Hammond





## "I NEVER PRACTICE"

been incorporated into many other Gibson's including the SG models, but the Gibson Les Paul was not expected to see the light of day again.

But in England, in the wake of the Beatles, a few musicians were interested in the blues. The Beatles had produced a white version (as had Presley) with more energy and melody than the American initiators of Rock'n'Roll but people like Mayall, Clapton, Beck, Jones and Richard wanted to play closer to the blues. Originally, they really cared about this. But such was the momentum of British rock at this time their experimentation was inevitably in front of huge audiences and, to get the sound closest to how they felt, the blues should be played *under high amplification conditions*, they chose the Les Paul guitar. These instruments had been found at giveaway prices in the second-hand stores of America. With a little loving restoration, these guitars came into their own and provided the sustaining qualities these players wanted. But it was no accident that the guitars had the sustain rock players wanted.

"I started to experiment with strings across a piece of railway track in the thirties trying to get sustain," explains Les as he sits in a hotel room high over Chicago just two blocks away from the area which spawned the Chicago blues which inspired Clapton, Richard et al and which in turn led to the revival in the fortunes of the Les Paul guitar.

"I realised that no-one was going to run around with a piece of railroad sleeper strapped round their neck and that's why I built 'the log'. Sustain was my principal objective because that's the element that's most important in any guitar."

Les Paul came out of retirement a few years ago. Today, he tours the States playing concerts with people like George Benson and Oscar Peterson and he travels the world for Gibson as their most prestigious ambassador. During a recent trade show in Chicago, Les was presented with a special "Anniversary" model Les Paul (serial number 0001) and among the guests was Leo Fender.

Les performs on two levels. He has a straight cabaret act in which he makes much use of pre-recorded backing tapes controlled from his guitar and he also sits and jams with little or no rehearsal with other musical giants. He extracts one sort of enjoyment from the first and another sort from the second.

"When you have a good band and you're doing a set routine, it's almost certain you're going to come off a winner. You know it's going to be a showstopper and you know exactly when and where you're going to get applause during a number. You know you're going to stop the show dead at the end of that number. It is true though that there are times when I may be playing a blues of "Over the Rainbow" whilst I'm thinking about Carter's peanuts or something and another time I forget there is a world and I'm just playing for the people out there and nobody else in this world.

"You see, I never practice. I get my practice on stage. It's easy playing my stage routine but when I start jamming with groups then it takes a little work and a little thought. It also takes a little thought when I make an album like the one I've just made with Chet Atkins ('Chester and Lester') where I've had to put on a country hat but yet keep it commercial because that's what the world is about. If it's Oscar Peterson, I've got to wear a different hat again and it takes quite a few minutes to adjust. If you're not in shape when

those opportunities come up, you'd better get into shape."

Les Paul belongs to the "Hollywood show business world" — despite the fact he lives in New York — and his experiences with "the big stars" over the years would fill a book on their own. But because he's essentially a musician he also carries a wealth of stories about the musical greats.

"Django first came to visit me in 1954 in the Paramount Theatre, New York. I was with the Andrews Sisters and the doorman yelled up six floors 'Django Reinhardt's here to see you.' I shouted 'send him up' and doggone he just walked into the room. I was shaving at the time and I nearly cut my neck. We just put our arms round each other and then he picked up a guitar and started to play and all of a sudden the room was filling up with all sorts of players. I called him a "down player" because he always played down, like I do. You play much more positively when you play down strokes. Most people use cross-picking and that's very apologetic and lady-like.

"Django and I just followed each other about and the last time I saw him during that period was three months later when he jumped ship in Cincinnati and went back to see his wife in Paris.

"The next time I saw Django, Grapelli was playing piano — he gave up the violin and he was playing piano — and he looked sick, Grapelli was definitely sick. In fact we couldn't recognise him and finally Mary (Ford) said to me, 'Do you think that could be Grapelli?' and I asked him. He said 'I am Grapelli' and I was knocked out. I said 'If you're Grapelli where's Django?' He said 'When you find him let me know.' He'd been missing for two years.

"I found two cabs and gave each driver half of a twenty-dollar bill. I told them to find Django Reinhardt for me and they'd get the other half. That was a lot of money in those days. Two days later, I heard from Django. We were staying at the St. George V in Paris and this voice came over the phone, 'Django Reinhardt.'

"He came to see me and we spent the day jamming and he was asking a lot. Electric guitar was running away from him. He said 'The note just seems to jump out when you put a pick-up on a guitar and I'm used to getting that note all by myself. It drives me nuts.' I explained that it was a different technique but he didn't like it. He fooled around with the electric guitar and I have his guitar and I have his pick-up. He finally retired again and went into hibernation with his fishing pole and his wife and kids. I talked him out of it and got him up and running and then, to my sorrow, he died from a stroke.

"I bought his wife a red dress but after he was buried she told me through an interpreter that she could never wear any colour but black for the rest of her life. That's the life of the gypsies. She died and his son is in prison in Marseilles for dud cheques or something. Anyway we got a tombstone for Django and I also got 10,000 dollars for his wife. I called up a bunch of publishing houses and I told them that I was going to buy up all of Django's tunes. That scared the hell out of all Paris and they all got together and called back and they said 'Would you settle for 8,000 dollars?' I said 'I'll settle for ten.' I bought the company for 10,000 dollars and I gave it to his wife. It was nice because it bought the gravestone and it got her some clothes and other bits and pieces. She was alone with her little Joey — by the way he had perfect pitch too — and just before Django died he asked the kid to lean over to him and he said "Listen, don't ever play the guitar. You'll never be as good as your father."



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# Getting Paid

by Mike Evans. Rock organiser/Musicians' Union

The working musician has always been in a particularly vulnerable position. The very fact that he chooses to earn his money — even in the humblest of semi-pro bands — in an area that most people would consider "leisure" be it pubs, clubs or concert halls, means that employers (and Joe Public for that matter) have always treated his (or her) position in the most casual way possible.

Given the situation where musicians are working on a one-off basis, gig by gig, the life is "casual" in one sense, certainly unorganised compared with that of someone who works set hours in the same place for a single employer. A band working six nights a week is likely to be working for six different employers per week, employers he may never see again in his career. Added to that is the usual situation of all these arrangements being made by a manager and/or agent. So when a band doesn't get the cheque it's been waiting for from the Cocacaban, Clitheroe, or the promoter at the Watering Hole, Bath decides to cancel the gig with only a week's notice, the lads in the back of the van on their way to the next booking feel fairly powerless to do much about it.

Of course, there's plenty you *can* do about it, especially if you make sure to protect your interests from the outset by insisting on a written contract. As far as possible all gigs should be contracted in writing, although in law a *verbal* agree-

ment is equally binding — given a witness to the agreement being made — but obviously such a "gentleman's agreement" is much more difficult to establish should you want to take someone to court over it.

Basically a contract should specify the: FEE, ADDRESS of the venue and DATE and PLAYING TIMES (where set) of the engagement. The contract should be between the band or their manager and the promoter, and should always be signed by the *promoter, not the agent* — bearing in mind that the agent cannot be held liable for any breach of contract on the part of the artists or the employer. And remember: the person signing the contract on behalf of the promoter should be someone in an *official capacity* to do so — not just the girl on the switchboard or the office teaboy.

The most important thing to keep in mind is that contracts have to be fulfilled, they *cannot* be cancelled unless a cancellation clause allowing for due notice is inserted. This applies to the musicians as much as to the promoters; if you fail to turn up to a gig, you can be sued for the original fee *plus* damages based on the loss of income, returned admissions and loss of goodwill that may have been the result of your pulling out.

Conversely, a contracted gig *cannot* be cancelled — even with "reasonable" notice — by an agent or promoter, again unless such a "notice" clause is put into the original agreement. If a gig is cancelled, then the group should claim the *full fee* in compensation. If the cancellation is before the date of the gig, then the band must use its best endeavours to find alternative work, and if another gig is found then the fee from that should be deducted from the original claim. If — as is all too often the case — the band is told of a cancellation after it arrives at the venue,

then the full fee plus expenses should be claimed.

The other cancellation many a band has suffered is where the promoter decides to pull the band off half-way through the evening, because they're "not suitable", "too loud" or whatever, offering half the fee as settlement. In these cases the band is put in a difficult position — to refuse part-payment or accept the reduction without protest; operating on the basis that any money in the hand is worth twice that amount still in the promoter's pocket, by all means take the part-fee but give a *written receipt* for that amount, making it clear that you intend to claim the rest of the full fee.

Which brings us to the point of making a claim. In the first instance, the group or their manager should ask for the money in *writing* — NOT on the telephone — stating that if no satisfaction is reached in fourteen days, further (i.e. legal) action will be necessary. And this is where membership of the Musicians' Union can prove invaluable.

Assuming the money owed isn't paid within the two weeks, then the threatened legal steps are going to cost money. If you win a case, that's fine — the promoter will have to pay your claim plus costs; but there's always the chance that a claim might not be successful, and the average gigging band often can't afford to take those kind of chances, given the cost of solicitors and such.

As a member of the MU, legal facilities are available to a musician to fight claims for outstanding money. If a claim is won — and hundreds are won on behalf of members every year — a small commission is deducted towards expenses entailed.

Of course there are other safeguards that MU membership can offer; the MU Standard Contract is a model which musicians should try to apply to as much of their work as possible, giving as it does the maximum amount of protection to the musician or band. But if you've any doubts about any kind of offer, be it for a one-off gig, a management deal, an agency agreement or that long-awaited record deal, let the Union look at it first before signing on the dotted line. Just legal *advice* costs money. For MU members it's free.

So back to that gig you never got paid for. In the first instance refer your claim to your local branch of the Union. If they are unable to bring sufficient pressure to bear on the errant promoter then it will be passed on to the MU legal department which operates nationally. Eventually — and in the majority of cases we are successful — you should get your money. But all that depends on the full band being members, and up to date with their subscriptions — not a lot to ask for the one organisation that is there to provide protection against the rip-offs for the working musician.

KEEP  
MUSIC  
LIVE



Mike Evans



In the early Sixties of the Liverpool bands and Mersey Beat popularity it was an accepted method of tightening a band up and turning it into a professional outfit to go over to Germany and take a residency in a club.

The long hours (as much as five a night) worked wonders on shaky techniques and the day offered opportunity to rehearse. Not forgetting regular wages; if you could get paid all you were supposed to get.

Some of the more unscrupulous club owners made sure that a band never had enough money to afford their fare home so that they could keep them there indefinitely.

The Star Club, in Hamburg, was the making of the Beatles who were one of the resident bands there. In fact when I first played the Star Club backing Gene Vincent, the Beatles took us down to the British Seaman's Mission for egg and chips as it was so much cheaper than the restaurants. And they were on a lot less money than we were although we didn't let on that we could afford a lot more. 'Zwei Spegeleir mit Pomfrits' was the first German that most of the bands learnt otherwise they couldn't get 'Two eggs and chips' and might starve. Closely followed by 'Noch ein beir', another beer, and 'Ich leiber dich' I love you, this covered life's essentials of food, drink and sex and was all the German that most of them ever needed.

Many musicians who were contemporaries of the Beatles can point to the time they spent abroad as the baptism of fire that turned them into professionals as well as, in a lot of cases, Men.

What was true then is equally so today. I went to Jack Fallon of Cana Variety agency who has been sending

# Going Abroad

bands abroad since 1952 and was a famous string bass player who worked with Duke Ellington and Ted Heath's bands as well as playing country fiddle on the Beatles' White album as just one of his session bookings. His famous adverts have been the start of a career in show business for many musicians. Having been a musician himself, he is only too well aware of the problems that can arise when you set sail for foreign parts.

## HOW DO YOU ASSESS A BAND'S SUITABILITY FOR WORK?

We first of all have a particular thing in mind when we are looking for a band. When a band calls up it is really to assess as quickly as possible how old the band is, how long they've been playing, whether they're semi-pro, have they got transport, what type of P.A. they are using and if possible to see whether it's worthwhile auditioning them to find out if they have the potential to do it.

The next thing is to ask them to send a picture and a cassette tape. Keep the numbers short because we're not trying to be entertained and after fifteen minutes of the same number there is a tendency to become a little bored.

What they should try to do is compress their programme onto the tape, about two minutes of each number, of every style they can play. Then after we've heard the tape we decide whether we want to see the band in person, although we have had tapes that were very unrepresentative of the band's ability.

A tape recorded in the front parlour in a garage or in a dance hall, can be very destructive as far as indicating the potential of the band, because it brings out the worst. I had a band recently who sent me a tape, and when I heard it I figured I couldn't use them. But when I heard them it was no way the same band, you wouldn't recognise them. They played great, they were marvellous and we used them for three months.

Making an audition tape of your band is really an investment. A bad tape gives a bad impression so it's worth going to a proper demo-studio. Have the numbers well rehearsed, keep them short with plenty of variety, don't repeat the same type of number for the sake of playing it because that's wasting time. You want to present as much material as you can, such as soul, pop, funk, rock, standards, and whatever you can do, do it. That way the agent will know what he's trying to sell, what he's got, the potential. So many bands I hear on the gig after I've booked them and I'd say to them that the manager



Jack Fallon

wants to hear more soul and they'd say, "oh we play soul" and I'd say "Well you didn't play any soul on the demo. I wanted to hear everything you do."

Many bands phone up. When you ask them what type of music they play they say "We do all our own material". Now this is a **NO NO** when it comes to entertaining JOE BLOW because the average man in the street couldn't care less about an original. They don't know what it is and it sounds like a long introduction to them. This is difficult to get across to a band that is orientated towards making records. They may never make a record but they have a bag full of originals that are no good until they make a hit. You have to play music that the customer wants to hear. I don't want to give the impression that a band has to play music for fetes and birthday parties. But the more material a band can come up the better. They can do it in their own original modern style no music is really detrimental. It's only the way you play it. A band has to be entertaining, a show band is only a band who have prepared each number to be slightly different so it looks like something and sounds like something, rather than just the run of the mill, into chorus middle eight chorus and back home again, they have thought about it. In other words you get out of it what you put into it and that goes for the everyday

KEEP  
MUSIC  
LIVE





playing of the instrument and presenting yourself.

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## DRESSING UP

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It's the same with dress. Some places insist on stage wear and that doesn't mean a pair of denims, boiler suits or a tee-shirt with their names printed on it. Stage wear is what looks good under stage conditions. These are all the things that have to do with just the doing of an engagement. It is no good if a band turns up for an engagement in a club looking so scruffy that the doorman won't let them in. This only causes unnecessary trouble for the band and creates a bad impression with the management. They should be "on stage" all the time they are in a club not just the time they spend on stage.

Continental promoters want to see publicity material before booking, as continental bands have large colour publicity photos and endless black and white pictures, stickers and handouts. If a band wants to work abroad they really need this type of publicity otherwise it's very difficult to book them. It's also very difficult for a promoter in another country to move a band around as he can't send anything ahead of them except some very tacky pictures. Once again, the importance of a good demo tape becomes essential in selling abroad.

There is an old adage that people hear with their eyes, if it looks good to them, it is good. If you are selling a band to a continental promoter, it is so much easier if he is looking at good pictures and listening to a great tape. You can't tell him something is good when all he is seeing is a rough picture. He won't be prepared to accept what you are saying! If a band looks expensive it is easier to get a better price for them.

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## WHAT TYPE OF PLACES WILL THEY BE PLAYING IN?

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They will be doing residencies of not less than one month at a time as we find it uneconomic to send them away for less, six nights a week. The playing times abroad are generally more than they are over here. The average playing time is four, forty-five minute spots. In Norway for instance they only play five nights a week for some reason . . . on Monday and Tuesday nobody has anything going on. They also don't charge a heavy admission so that the band has to do a lot of spots to keep the audience in to drink, as they make all the money on booze. So the types of places can range from discos in Norway to American servicemen's clubs in Spain, Germany etc. hotels, private clubs and even restaurants. People sometimes ask me how do you book bands to the Phillipines, Guam, Bangkok, Japan, Bahrain, but strangely enough from

a band's point of view, it just involves having their injections and getting on the plane. Somebody meets them at the other end and everything is taken care of, providing of course the agent has done his homework.

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## DO YOU FIND THAT WHEN YOU SEND BANDS OVERSEAS THAT PERSONAL DIFFERENCES WITHIN THE BAND CAUSE PROBLEMS?

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The mental balance of a band all comes out when they go abroad. First of all, Mum's not doing the shirts or cooking and the personalities start to either merge or things start to crack up.

Countless numbers of bands have found that the real breeding ground for finding out what the potential of the band is and who the passengers are, comes from working abroad because they are isolated from their other influences.

Some musicians like playing but when they find they are having to do four forty-five minute spots a night and he hasn't got his girlfriend and his Mum there, wants to go back home and stay there. The best thing that could happen to a band is to get rid of him, because then the other members who really want to do something can get on and do it. A band that has a girl singer in it can often find themselves divided as girls have a tendency to form a relationship with one or two members, causing the band to become two-sided, provoking a rift.

A girl singer can be a great attraction especially in the Middle East where the band can be sold solely on the strength of her physical attributes. In this case if the girl happens to be the type of person that would say that they were just her backing group this will lead to big trouble.

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## WHAT POINTS NEED TO BE TAKEN CARE OF WHEN A BAND WANTS TO WORK ABROAD?

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After the obvious current passport, you have to decide that you could be staying away for up to a year if you are successful or you might be coming back in two weeks if you are not. Therefore you have to decide whether you have the right mentality in the band to put up with a lot of adverse conditions. This is almost unavoidable as travelling in a strange country can produce strange situations.

An agent's job is to make sure that he's done his homework and checked whether a carnet is possible for the equipment. This means making a proper list of all the equipment which then has to be stamped by the London Chamber of Commerce and again when leaving the country and of course at every customs check the carnet is essential if long delays where they examine every single piece of

equipment are to be avoided. I once sent a band to Spain that forgot to have their carnet stamped at Southampton and after 36 hours on the boat they had to come all the way back with the van and equipment to get their carnet stamped because the Spanish customs wouldn't let them in.

In certain countries particularly the Far East you must have injections in order to enter so you have to check and make sure that you have all the necessary jabs.

When you are eventually admitted it pays to behave yourselves. One band upset the police and were out of a country in three days. Outside the Common Market the Police are also generally responsible for issuing work permits. If you upset them they will take away your permit and you will have to go home.

Transportation for driving long distances particularly in hot countries needs to be taken care of. Hose connections, batteries drying out and alternators are the things which cause most trouble. Spare hoses and regular checking are a must and make sure your green card for insurance doesn't expire during a prolonged absence.

Customs tend to knock the equipment about, so proper packing and padding are essential as are spares for valve amplifiers as these are virtually unobtainable in some countries. One of my bands had all the backs of their amplifiers prised off with jemmys by the Swiss customs ripping all the screws out while they were searching for drugs.

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## WHAT POINTS SHOULD A BAND CHECK ON, WHEN THEY ARE OFFERED WORK ABROAD?

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I think there are three main things a band wants to know; The times that they have to play, the type of audience they will be playing to and how far from the gig and what type is their accommodation.

The first thing a band should do is get as much detail as possible about where they're going to work, the name of the establishment, the name of the manager of the place, the town it's in and how many nights a week. They should check with the embassy of that particular country and find out if it is a valid establishment. We usually insist on 50 per cent up front if the work is for a promoter we don't usually do business with. We know that at least they are reasonably solvent if they can come up with the tickets and half the money.

Try to avoid at all times contracts involving a middle man. You must have a contract direct with the place that you are working. Your contract should always be between you and the actual establishment. If a middle man is involved and you have problems with your money



you can't complain to the manager of the club because he may well have paid your wages in good faith to the middle man who has then disappeared.

Check the cost of food and accommodation. In some countries it can cost £50 a week for somewhere to stay. In Denmark it costs around £20 a day for three meals. I always make sure that the contract for these countries includes food and accommodation. I never book to these high-costing countries without making sure that the taxes (which can be 30 to 40 per cent) is deducted before you receive your wages, food, hotel, and travel are all taken into account.

The most important figure is what's left after everything has been paid for. It is very important to make a note of what the person is offering you at the time they make the offer. That way you can check back that the offer is valid. What route are you going to take? What shipping company are you going to use? What ships are you going to travel on? How much will it cost? Then you go to the shipping company and check out the details for yourself. If there's anything not adding up, drop it there and then because everything will not be alright and it'll go from bad to worse.

#### ARE THERE ANY SPECIAL PROBLEMS PARTICULAR TO INDIVIDUAL COUNTRIES?

In Iron Curtain countries you can't take the money out so that means that the only way to take anything home is to buy something in the country and then take it home and try to sell it.

In Oman, which is a military state and doesn't admit tourists, you have to have a landing permit of permission to land otherwise you have to go back. Arab countries are also very strict about alcohol and have heavy punishment for breaking the drink laws.

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A very good way of checking up on an agent who is offering you work abroad is to ask him to put you in touch with another band that has already been and played for him at that venue as the musicians will be able to tell you what it is really like. If the band was happy he is going to be only too glad to put you in touch with them. So be wary if this is not possible.

You must have, before you leave, the net figure of how much you are going

to have in your pocket clear at the end of the week, after travel, food, tax, and accommodation has been paid. Only then can you decide whether it is worth going.

Working abroad can be a great way of seeing the world as well as really tightening a band up and making a bunch of individuals play like a band, as well as earning regular good money. But you have to be prepared.

## And don't forget...

- *Always keep your important papers, carnet, passport etc in an envelope buttoned INSIDE your shirt.*
- *Never use a wallet. Losing one of these with EVERYTHING inside is a disaster from which you might never recover.*
- *Keep any large sums of money in the form of travellers cheques; this way, you can claim back the full amount from American Express if you are robbed or lose it.*
- *Never put money on a bedside table when sleeping in a hotel. Many of the staff have keys to the room and are skilled in the stealthy art of lifting cash from sleeping guests. Ask at the reception to have it put in the hotel safe. This way the hotel is liable if it goes missing.*
- *Carefully check the expiry date of your passport and green card insurance as you may well be asked to work over the initial contract period for another club or sometimes in another country. In the excitement, your documents could expire while you are away, so make sure you check immediately any extension of your contract is offered.*
- *If you are taking a van all the things apply from part one 'Surviving on the Road', only more so as you are much further from home. Don't go without joining the AA or similar organisation that operates a recovery service for overseas. If you are unlucky enough to suffer engine failure and are not in one of these organisations it could mean that you lose the van if you can't afford the exorbitant cost of having it repaired on the spot or having it towed back to the shipping port.*
- *Never ignore the obvious. If you don't put enough petrol in you will run out, yet every day thousands of people run out of petrol. What is just a minor inconvenience on your home*
- ground can turn into a very unpleasant major disaster compounded by language problems when you are away.*
- *Don't take the van without a spare fan belt and a complete set of hoses. If any of these go while you are on the way to start a month's contract the delay of a day or two means extra food and hotels for five or more people which could make you too broke to get there. Or you may arrive a few days late to find that they have cancelled you out and got another act.*
- *Never leave the van with or without the equipment in without immobilising it. Especially when you just stop for a cup of tea. If you do this by removing the rotor arm from the distributor make sure you take a couple of spares as the spring contact on the top can snap. The easiest way is to swap the two leads round out of the distributor cap.*
- *Be sure to have a witness to this if you are likely to forget which two.*
- *Take out a medical insurance policy as hospital bills could break you and leave you owing a lot of money if you are unlucky enough to be in hospital for any length of time.*
- *Make sure your own personal instrument is insured for overseas. There are companies which will do this and it is well worth it. If it gets stolen will you be able to afford a new one or will you have to give up music?*
- *Use your head. Don't go on a contract that only guarantees the tickets and says that when you work the promoter pays the hotel, when you don't you do. He might pull out your gigs and leave you to try and support yourselves.*
- *For the last time don't go unless your contract guarantees you some money every week.*







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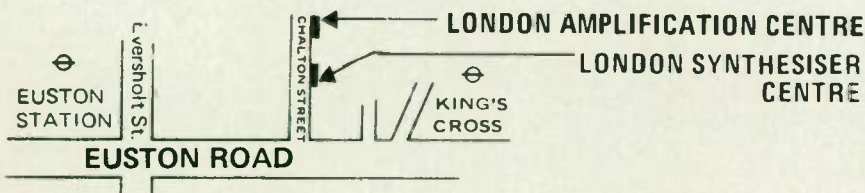
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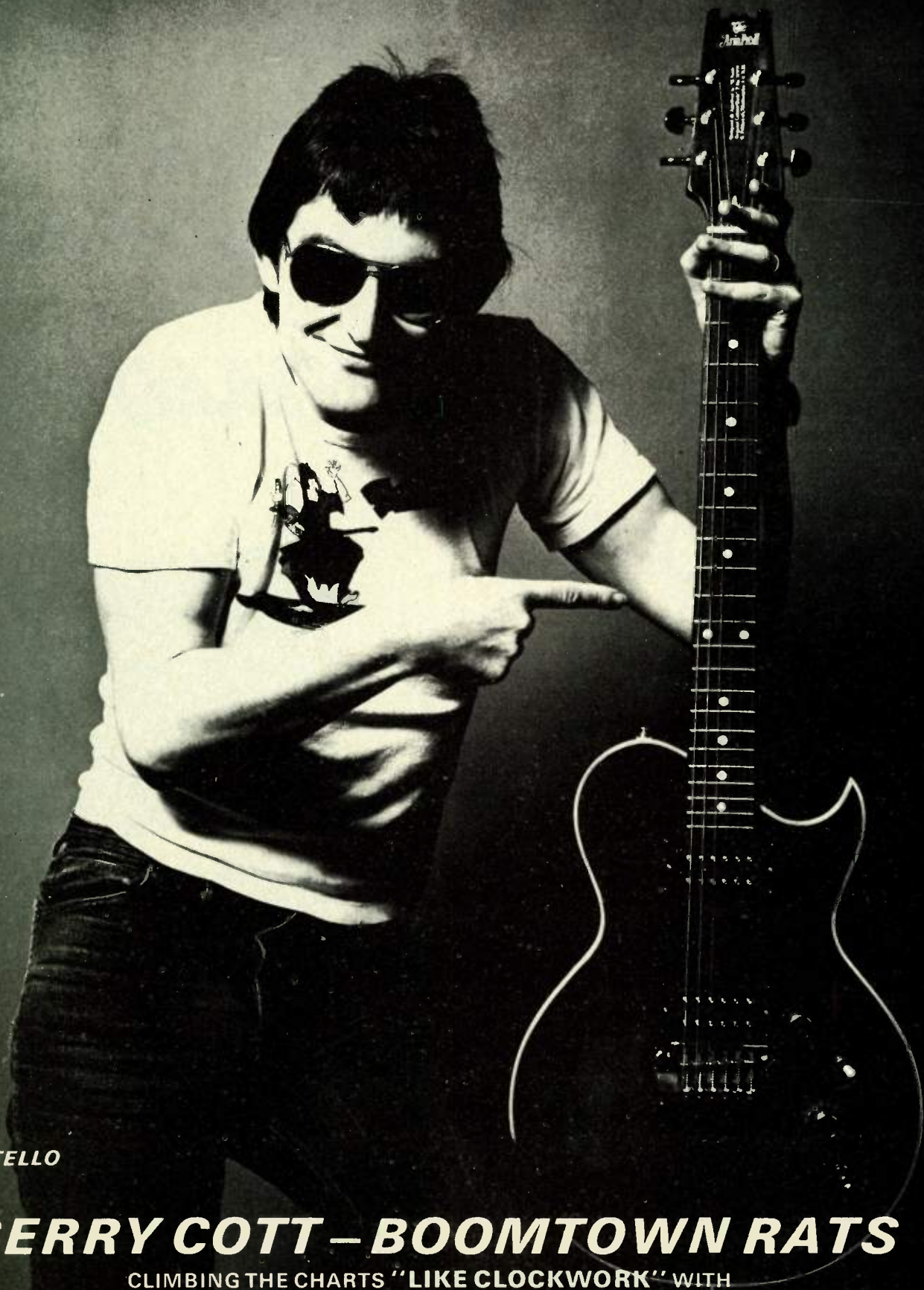


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# sawicki's SOUNDHECK

Mark Sawicki is an M.Sc. (Eng.) consultant in electronics who also designs and builds electronic equipment.

**TEST ON:** Studio Master Mixer

**DATE:** July 1978

**PRICE:** £852 (+ VAT)

## Introduction

Studio Master Ltd. of Northall, Dunstable, Beds. manufacture a range of quality audio and P.A. products which includes the 12/2, 24/2 and 16/4 mixing consoles and the stereo high power Slave amplifiers. Their products have been established both in the US/Canadian and European markets for sometime and the company's future looks quite bright.

The 16/4 Studio Master mixing console is the company's answer to the increased availability of 4-track tape recorders intended for semi-professional use. Their 16/4 desk is explicitly designed for 4-track recording which enables the full potential of such a recorder to be realised. The company claims that the 16/4 mixer provides facilities designed for convenience and ease of operation without compromising flexibility or performance.

## Construction

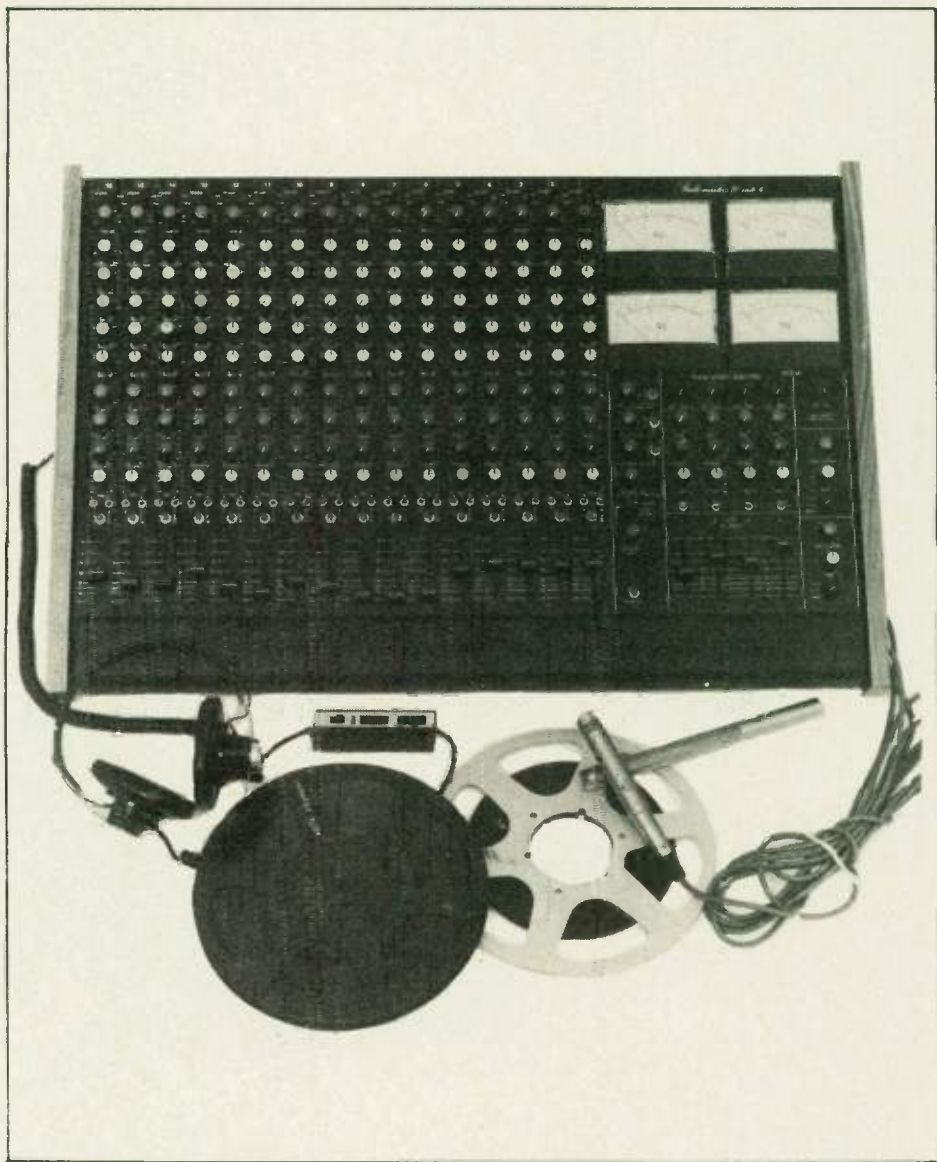
The object of multi-track recording is to provide the capability of making a recording in a number of parts, (not necessarily all recorded at the same time), and subsequently remixing these components into a final stereo program. The Studio Master 4-track console is designed for just this type of application and consists basically of 5 system subassemblies i.e.:

1. Input Channels
2. Outputs
3. Monitoring
4. Track Status switches
5. Sundry

The whole system — designed as a semi-modular construction, consists on the input side of the 16 input channels which will accept both balanced or unbalanced inputs in a range of -60 dBm to +15 dBm with an input impedance greater than 5 Kohms and is basically optimised for low impedance dynamic 200 ohms microphones or similar.

Each input's tone control circuit employs a 3-band equalisation network with +16 dB shelving on Treble (10 kHz), +16 dB on Middle (400 Hz-8kHz) and finally +16 dB shelving on both Middle and Bass equaliser bands are additionally equipped with individual frequency adjustments in the form of rotary controls covering 400 Hz-8kHz (Middle) and 30 Hz-300Hz (Bass) respectively.

There are separate level controls for



Photograph: Rick Cordell

SENDS to foldback (pre-fade) and Echo 1 and Echo 2 (post-fade) and the routing to the system's 4 output groups is selected via two sub-miniature toggle switches with a biased centre OFF position. This arrangement is extremely simple and allows the first switch to feed the signal from the left side of the pan-pot routes to the output groups No. 1 or 3 whilst the second routes to No. 2 or 4.

In both cases the content and level of processed material can be examined at anytime by a PFM push button switch localised at the top of each channel's fader potentiometer. The channel fader potentiometers (67mm length) are logarithmically calibrated with the usual -50, -40, -30, -20, -10, -5, ZERO markings and for the overload indication

one red LED is provided with a firing point adjusted to approximately 4 dB below the clipping point. I noticed a wide use of knobs with colour coded functions i.e. Red for Gain, Gray/Black for Equalisation, Blue for Echo, Green for Foldback and Yellow for Pan.

As for the Master area of the console, each output group has its own slide fader potentiometer calibrated , -40, -30, -20, -10, Zero, +5, +10, followed by a line amplifier with a 10 dB gain, feeding the line out (LO) ¼" jack sockets on the rear panel of the console. In addition there are two echo (Effects) Send/Return ¼" jacks, the foldback Send which may be used to drive alternatively a Slave Amp or up to ten pairs of 600 ohms headphones directly and finally the Monitor



Send.

The Monitoring is generally an independent four channel type with channel selection to a stereo loudspeaker mix based obviously on these four monitor channels. The selection will include either the group Line Out or the sync/ playback returns from the four track of the Live In sockets. Both the loudspeakers mix and the foldback mix can be derived from either track being recorded or tracks previously recorded as the foldback send is also provided from each monitor channel.

## Functions

The Track Status switches perform a variety of functions as the 16/4 operators manual claims. The main functions are: 1) recording 2) remixing (when the line input returns from the 4 track are rerouted through mic channels (1-4). In such cases both group outputs are converted to remix groups and therefore are sent to

two separate outputs provided for Stereo Tape units to record the final remixed stereo sound material.

The Sundry facilities of the Studio Master 16/4 include the echo returns (Effects returns) and a specially provided line up oscillator which simultaneously feeds a sinusoidal 1.0 kHz signal to all output groups for lining up purposes. This feature allows you to control the readings of all 4 VU meters on the console and compare these with those on 4 track recorders. Obviously if they read different levels — for example, too low — then this will result in a poor signal/noise ratio; too high — then this will cause distortions of various types. Personally I found this feature extremely useful and important for a good quality recording. All 4 VU meters are professionally calibrated (–20, 0, +3) VU with a percentage scale 0-100% included and they are mounted on the top righthand side of the console's control panel.

## Conclusion

This desk made a good overall impression on me because of its functional features, careful design, quality finish and reasonable price of approximately £800. There is one small point — it could be worthwhile to incorporate in this console slightly higher teak side pieces, enough to cover the highest level of the operating controls i.e. knobs, switches and so protect them against accidental damage during transportation, etc. One other thing — a small handle, for example on the front of the console would also be a good idea. Apart from this the table will tell you more about the specification — which in my opinion is rather conservatively rated as confirmed on my tests. If you are looking for a 4 track semi-professional mixer with as many as 16 channels, this one is really worth considering. Its quality of components and high level of workmanship should stand you in good stead for a long time.

PARAMETER	RESULT	TEST CONDITION	COMMENTS
Input Impedance	Greater than 5.0 Kohms	Ref. 1.0 kHz	Manufacturer claim is that optimum source impedance for dynamic microphones is approx. 200 ohms.
Nominal Operating Level	±4.0 dBm (1.2 V r.m.s.)	Ref. 1.0 kHz	The 16/4 operates basically at the studio line level of +4dBm (1.2 V r.m.s.). However the majority of 4 track (semi-prof.) recorders operate at a lower level of –10dBm (250 mV), hence certain facilities are included to allow operation of inputs/outputs at either level.
Maximum Gain	±70 dB	Ref. 1.0 kHz into 600 ohms	Agrees with manufacturer test report.
Maximum Input Level	±35 dBm	Measurement at onset of clipping Ref. 1.0 kHz into 600 ohms	Acceptable
Total Harmonic Distortion	better than 0.02% better than 0.018%	@20 dBm    Ref. 1.0 KHz @ 4 dBm    into 600 ohms	Slightly higher than specified: less than 0.015% @ 4 dBm less than 0.015% @ 20 dBm Still very good.
Tone Control Range	34.2 dB - swing 31.8 dB - swing 31.7 dB - swing	Treble @ 10 kHz Middle from 400 Hz-8 kHz Bass from 30 Hz-300Hz	Manufacturer claims: Treble: + 16 dB at 10 kHz Middle: + 16 dB from 400 Hz-8 kHz Bass: + 16 dB from 30 Hz-300 Hz Continuously variable.
Frequency Response	± better than ± 1.8 dB	Ref. 20 Hz-20 kHz	Very good and not only for semi-professional use.
Equivalent Input Noise	Less than -120 dBm (–128 dBm - typically)	Unweighted, 20 kHz — bandwidth Input termination is 200 ohms	Very good.
Signal/Noise Ratio	92.30 dB 87.17 dB  86.05 dB 76.11 dB 70.48 dB	Line o/p fader — down Line o/p fader — nominal, channel faders — down One microphone channel at 40 dB — gain Four microphone channels at 40 dB — gain Sixteen microphone channels at 40 dB — gain	Almost identical with a manufacturer specification
V.U. — Meters	OVU = approx 0 dBm	Calibrated on (–20 0; +3;) VU instrument scale, Ref. 1.0 kHz	All four VU meters are professionally scaled, rectified and accurately balanced.
Multi Input Priority	Satisfactory on actual experiments.	16-channel test and variations	Very good.
Headphones Output Level	approx. 0.5 w r.m.s.	Ref. 1.0 kHz with less than 0.5% T.H.D.	The manufacturer claims: 1) Minimum 8 ohms Impedance Ref. "Foldback" o/p 2) Minimum 600 ohms Impedance Ref. "Monitor" o/p.
Line Up Oscillator Frequency	1.0 kHz (sinusoidal)	Line up oscillator switch slates 1.0 kHz to all groups.	Present in all output groups simultaneously for lining up purposes. Very useful.





# sawicki's SOUND CHECK

Mark Sawicki is an M.Sc. (Eng.) consultant in electronics who also designs and builds electronic equipment.



**TEST ON:** Peavey Session 400 (115 BW)

**DATE:** July 1978

**PRICE:** £503.75 ex. VAT

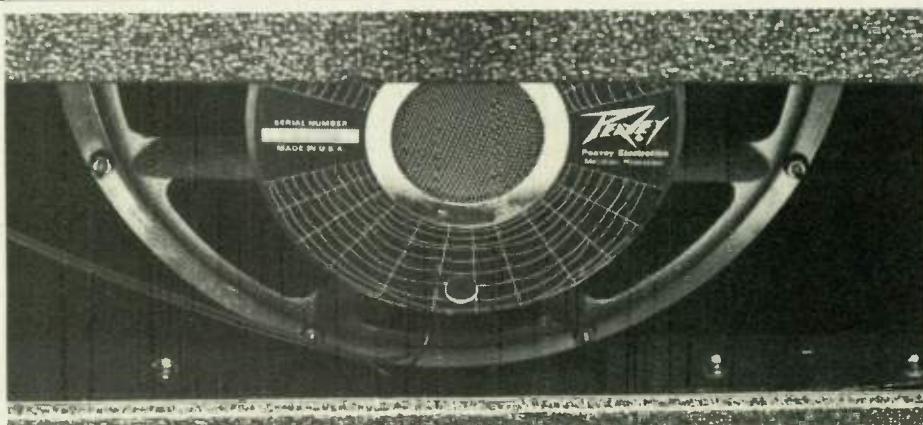
## Introduction

The Peavey Electronics Corporation, Meridian, Miss. is known internationally for its wide range of professional amplification equipment. I think that it is also fair to say that Peavey is also one of the leaders when it comes to innovation in this field and one is reminded of this when confronted with an amplifier such as the Session 400 Combo.

The Session 400 Combo was developed especially for pedal steel guitar and, as such, is different from the standard twin input combination amplifiers that you normally find. Very few manufacturers of musical instrument amplification have studied the requirements of the pedal steel player and, of course it is not surprising to find that this type of amplifier should have emerged from the land of country music.

## Construction

The Session 400 is a relatively small combination amplifier, delivering approxi-



mately 200 W r.m.s. at 1kHz into 4 Ohms which, according to the Owner's Manual, is either one 15" JBL or two 12" Electro Voice drivers. However, the unit I tested (Serial No. 183415) was equipped with something completely different, namely a 15" Peavey Black Widow premium loudspeaker.

The Session 400 has been designed mainly for the advanced steel guitarist and consequently covers a tremendous dynamic range. The unit features rotary controls (calibrated 1-10) for volume, presence, middle, middle shift, treble, bass, reverb level, tremolo rate (speed),

tremolo depth and finally a master sensitivity control. The middle shift control enables the guitarist to select a particular frequency range that he wants in order to cut in the whole mid-range spectrum — a useful control which varies the total sound characteristic. Steel guitarists have proved how important a feature this is in stage/studio work.

Although this particular amp has been designed specifically to work in conjunction with steel guitars, there is no reason why it should not be used by lead guitarists, as there is a wide tonal range on the EQ.



# "The amplifier is extremely well finished"

The Session 400, for its rated 200 W r.m.s., is probably one of the smallest amps available and measures 26¼" (W) x 20" (H) x 11" (D). The amplifier is also incorporated as standard with a good quality reverb system and tremolo circuits — both efficient and professionally laid out. The reverberation effect is controlled overall by one rotary pot which determines the amount of delayed signal blended into the amp's output.

The reverb circuit of the Session 400 features a fully complementary driver amplifier and is able to produce quite a high level of sustain as well as clarity by properly damping the driver coils of the spring unit. Both the tremolo depth and its rate (speed) are separately controlled by two pots and the tremolo master oscillator provides the driver for the amplitude modulation, with a low frequency signal rate of approximately 3-30

Hz. The footswitch for both the tremolo and reverb controls is of the "stereo" type — it looks a little ordinary next to the well-finished amp — and it uses a standard ¼" jack plug.

The back panel acts as the system's heatsink and contains three pairs of silicon power devices of the RCA 62188/7738 type which are covered with plastic TO3 insulating cups for protection purposes. The minimum operational speaker load is recommended at not less than 4 ohms and a special booster jack provides an output signal for driving additional booster power amps if required. Any booster amp can be used as long as its input will accept approx. 1.0 Volt r.m.s. signal level and has input impedance of at least 10 Kohms. Finally the amplifier is protected by 2A/250V fuse elements located within the cap of the standard fuse holder.

## Conclusion

The amplifier is extremely well finished with crisp design lines and smartly laid out controls. The unit is also quite compact for the level of power output that it can deliver. The circuitry is also of a high standard and carefully laid out which is very important to the service engineer. One criticism, however, was the clocking noise that I found coming from the tremolo oscillator with the tremolo in operation. I could not eliminate this even with the Rate (speed) control set in any position. This may be a slight fault on this particular amplifier.

As combination amplifiers go, this is a *good* amplifier and, with its efficient 15" loudspeaker and high power output, it certainly packs a punch. Whether or not aficionados of pedal steel in Britain are prepared to pay for all the extras is really going to be down to them.

PARAMETER	RESULT	TEST CONDITION	COMMENTS
<b>Specific power O/P WATTS (RMS)</b> Ref. 1 kHz	217 W R.M.S. 120 W R.M.S.	Onset of clipping into: 4 ohms Onset of clipping into: 8 ohms	Manufacturer claims 200 Watts R.M.S. of output power @ 1% T.H.D. into 4 ohms, Ref. 1 kHz. The session 400 combination amplifier is equipped with one 15" Peavey 'Black Widow' premium loudspeaker.
<b>Total Harmonic Distortion T.H.D. (%)</b> Ref. 1 kHz	0.62% 0.29% 0.15% 0.04% 0.05% 0.08% 0.16%	@ 200 W R.M.S. @ 160 W R.M.S. @ 130 W R.M.S. @ 100 W R.M.S. into 4 ohms @ 60 W R.M.S. Ref. 1 kHz @ 30 W R.M.S. @ 5 W R.M.S.	Nice and rich sound. Quite a low level of T.H.D. At high output the distortion consists mainly of the 2nd harmonic component, with a noticeable lack of crossover distortion.
<b>Input Sensitivity in mV r.m.s. for 200 W r.m.s. (28.28 V r.m.s.) output signal, ref. 1 kHz</b>	Input 1 11.20 mV r.m.s. Input 2 24.15 mV r.m.s.	Ref. 1 kHz; tone controls set for the best square wave response. "Sensitivity" set at 5	Ample sensitivity for most applications. Input impedance (on both channels 1 & 2) is approx. 330 K ohms. The "Master sensitivity" control is a unique innovation which allows the player to "Cut" or "Boost" sensitivity as he desires.
<b>Tone Control range</b> <b>Swing in dB</b>	40.52 dB — Swing 12.85 dB — Swing 37.17 dB — Swing 12.33 dB — Swing	Bass @ 20 Hz Middle @ 800 Hz Treble @ 5 kHz* Presence @ 5 kHz** *Middle—0, Shift—min., Bass/ Presence—flat. **Treble—10, Middle/Shift—0, Bass—flat.	Symmetrical. The middle "Shift" control enables the guitarist to select the particular frequency range that he wants to cut in the mid-range band. This means, as the "owner's manual" points out that the player can change and vary the total sound characteristics of the amplifier simply by turning a single control.
<b>Signal/Noise Ratio in dB</b>	Better than 77 dB	Ref. 50 K ohms source impedance. All tone controls set flat.	Good. Unweighted R.M.S. reading, with reference to nominal power output.
<b>Booster output signal</b>	Approx. 1 V r.m.s.	Ref. 1 kHz into 10 K ohms	Acceptable. Provides an output signal for driving additional slave amplifiers.
<b>Capacitive Load Test</b>	O.K.	2 uF capacitor and 4 ohms dummy load.	Satisfactory; however, a small overshoot observed.
<b>Open Circuits Stability Test</b>	O.K.	Dummy load removed, tone controls set flat. Volume/ Sensitivity set max.	Very good.
<b>Short Circuit Test</b>	30 seconds		No ill effects; worked when short was removed.



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# delft's GUITARCHICK

Stephen Delft is a luthier and instrument repairer. He is also a solo performer and a member of the Institute of Musical Instrument Technology.

**TEST ON:** Mossman 'Flint Hills'

**DATE:** July 1978

**PRICE:** £575 including case, inc. VAT.  
(\$1150) inc. VAT

If one considers only the better steel-string guitars, they seem to fall mainly into the two categories of 'private' guitars and 'public' guitars. The 'private' guitars are at their best played gently, and are responsive to subtle variations in the mood and playing technique of the owner. Such instruments were described by one well-known performer as 'guitars for dreaming on'. They seem to be rather popular with the more gentle and introverted type of singer-songwriter, and with musicians who perform intricate guitar pieces or accompany songs in an 'intimate' style.

This type of guitar usually requires amplification equipment of high quality and realism if it must reach large audiences. As the same requirements of high quality P.A. usually apply to the sort of performers who would want such a guitar, this is not a great disadvantage. The very best of these 'private' guitars have enough guts when played loudly, to permit their use under difficult acoustic conditions (such as open-air performances) or with P.A. systems of poor quality. The few 'private' instruments which will also act adequately as an extrovert 'public' guitar represent some of the cream of the world's guitar production, and usually attract justifiably high prices.

The 'public' guitar is at its best when played forcefully under difficult acoustic conditions for instance fronting a rock band in a large theatre, or playing un-amplified on an outdoor stage, or in a small room packed with people. Such instruments usually have a bright and penetrating sound, and tend to be popular with very extrovert performers, and those whose main instrument is electric guitar. These guitars are usually capable of producing a greater maximum volume before the sound becomes muddled, although they may be more or less sensitive than the 'private' guitars and some may require fairly heavy strings and a great deal of effort from the player to reach this maximum loudness.

Almost all 'public' guitars can have an overpowering treble when played in a small and reflective room, particularly to anyone sitting directly opposite the front of the guitar.

The very best of these 'public' guitars although optimised for power and penetrating tone, are pleasant and responsive when played gently and are (just) tolerable to anyone sitting opposite them in a small room. They may be rather more tolerable to the player, whose ears are out of the line of maximum treble output.

The very best of these 'public' guitars also represent some of the cream of the world's guitar production and also usually attract justifiably high prices.

It may be of interest that one of the properties which distinguishes most of the highly valued 'vintage' American steel-string acoustics, is that they function effectively when played delicately, and are also capable of producing a very loud and un-muddled sound if pushed to it. This may be a combination of age, careful use and natural selection. It is also possible, that most guitars are now made by different methods, and that the proportion of them which will eventually become superb instruments, is now considerably smaller.

I feel that this Mossman 'Flint Hills' is an example of a good 'public' guitar. It should be able to cut through even the most restless and inconsiderate folk club audience, and is loud enough that it can be miked-up into a P.A. system with a minimum of trouble. It is a little short of 'boom' at the bottom end of its range, but this would if anything make the process of close-miking it rather easier. (Most big guitars have rather too much bass when miked close up and the usual bass controls on simple P.A. equipment are not really appropriate for correcting this.)

I have not tried using this instrument with any type of contact transducer or bug but I see no reason why this should be any more or less difficult than with other similar instruments.

Although it has rather a penetrating and insistent tone, it remains very responsive when played gently, and there is an excellent balance between the loudness of each of the strings.

In contrast to the Maya guitar also reviewed this month, the G on the open third string can easily compete with the other notes on that string. There is a faint 'thud' superimposed on the beginning of the note and also on the F sharp immediately below, on the 4th string. This may be connected with the presence of a main soundboard resonance-pair around F-sharp and G. I would expect to find this resonance one or two semitones lower on similar American guitars from other makers. As mentioned in the Maya review, this is not necessarily a fault, but is just one of the necessary com-

promises in designing a production guitar. The usual sorts of 'suspensions' and melody lines super-imposed on a flat-picking accompaniment found in country music and Anglo-American Folk music are particularly effective because of this apparent separation between strings. I cannot say whether this is a result of the soundboard being a little 'tighter' than usual, or whether it is fortuitous, or whether it is the result of some other aspect of design. It is certainly a most useful feature, and one which is only rarely found in large-bodied guitars. There also seems to be something about this particular instrument which makes fast flat-picking sound cleaner and more precise than usual.

On the debit side, it seems to me that the notes between F and G on the 4th and 6th strings are a little more likely to buzz on the frets than any other notes. This may also be connected with the functioning of this particular soundboard, and it is possible that the effect would be less obtrusive if it occurred one or two semitones lower. If this was my guitar, I would be tempted to take the chance, and do some work on the soundboard to make it a little less tight, hoping that the clarity and separation of tone would not be reduced in the process.

## Finish

This sample is attractive and cleanly finished, except for a few traces of polishing compo. in the corners between neck and body.

Because the guitar is brown, and the compo is white, this could be mistaken for a bad neck joint, but it is quite harmless and only needs a few minutes work with a soft tooth-pick and a drop of naphtha stain. The head is an unusual and pleasing shape, without being in any way gimmicky, and the neck is finished so as to look like nice wood rather than plastic. The back of the neck has a slightly angular shape, which you may find disturbing or very comfortable, according to how you normally place your left hand on the guitar neck. Some necks are like the rounded end of an egg and some are like the pointed end: this one is like the pointed end.

Whether you like this or not, the shape of the neck and fingerboard combined, and the very smooth finish on the frets make this a very suitable guitar for lightning-speed pickers. I am no speed champion on guitar, but I found this instrument very fast and easy to play. It is not just the neck; the whole instrument seems to be built for speed. The



strings have a very immediate response when picked and this seems to mean that one can use a lighter and cleaner technique.

The soundboard is made from some sort of spruce, with a faint mottled figure in the grain. It does not look like the sort of wood usually employed in American guitars. The back and sides are Indian Rosewood, and except for the outer body edgings, all the inlays around the body and soundhole are made from different coloured woods.

Compared with the neck, I think the body edgings might have looked better if the plastic had been cream rather than white, and that the Rosewood body would have benefited from a little of the warm brown colour applied to the neck. However you may not agree with either of these points.

Both the fingerboard and bridge are Ebony. The bridge is not entirely black on this sample. Brown streaks (and also pale grey ones) occur quite naturally in some kinds of Ebony and I see no need to dye all Ebony a uniform shade of blue-black. It is not necessarily true that completely black Ebony is the best quality or the most suitable for guitars. As I have mentioned in the Maya review, if anyone should feel that cosmetic adjustments are really essential, Messrs. Holts can supply a suitable spray-can. The frets on this sample are well finished, although they may soon need a little trimming at the ends, and both neck and fingerboard appear straight and stable. The truss-rod adjustment is inside the body, under the fingerboard and requires a 3/8 inch or 10 mm cranked ring spanner, or a socket spanner with a short body. This is not the same as the Gibson or old-pattern Epiphone neck key.

### Intonation

With the strings supplied, the intonation on this guitar was terrible. Fortunately, it was quite obvious that the strings had been played for some time and were nearly dead. With new strings (Guild L.350) the intonation was almost perfect. However, after about one hour's use, I found all but the 3rd. string to be noticeably sharp at the 12th fret. Although the bridge position is (just) in tune with brand new strings, it might be a more useful compromise if it were set up for strings which are on average a few hours old. I think this corresponds more closely with typical usage. The resulting error with really new strings would to some extent be concealed by the slightly wild harmonics present in strings freshly put on.

Accuracy of tuning over the open strings and the first few frets seems to be quite acceptable with both new and partly used strings. Although I had to sit and change strings on this guitar, a mindless job which no-one really enjoys, at least some of you may learn something to your advantage: - If your guitar plays out of tune, first try a fresh set of strings of an appropriate type.

I have heard rumours of a fire in the Mossman factory. Frankly, I have heard practically the same rumours about



almost every major guitar factory. In my experience only about one in ten of these rumours has any truth behind it. There have, however, been some re-arrangements in the distribution of Mossman guitars, and there may have been a certain amount of mutual ill-will connected with these changes. I have also seen an advertisement in an American periodical which gave me the impression that Mossman was out of business. The latest information I have, is that he is very much *in* business, and that his guitars are (or were) being distributed by the Martin company. Incidentally, I hear that the Martin company is now once again producing guitars. I wish them

well: may not a single woodworm even consider entering their doorway.

### Conclusion

A very nice performers' guitar with a distinctly "American" sound.

Measurements on Mossman 'Flint Hills' Ser. No. 77-3950

Scale length 649 mm

String spacing at bridge 57 mm

String spacing at nut 37 mm

Fingerboard width at nut 44 mm

Action as supplied 2 mm treble / 2.7 mm bass.





# delft's GUITARCHECK

Stephen Delft is a luthier and instrument repairer. He is also a solo performer and a member of the Institute of Musical Instrument Technology.

**TEST:** Maya N40 D

**DATE:** July 1978

**PRICE:** £140 inc. VAT

A little over two months ago I reviewed a Maya guitar which was rather nice and remarkably similar to an old model Gibson J.45. At the time, I mentioned that this guitar was the product of one of the smaller Japanese factories, and that I would be interested in seeing what else they could do. As a result of my enquiries, a large parcel arrived, with the sort of speed and efficiency normally attributed to Djinn's and brass bottles, containing yet another Maya guitar. This one bears more than a passing resemblance to a Guild D.40 with a natural finish top, and once again the model number, N.40 D, leaves very little to the imagination.

The importers tell me that they consider this model is not quite of the same high quality as the previously reviewed Gibson copy, and this seems perfectly reasonable, as the price is considerably lower. I feel this requires some qualification. I would agree that the finish on this sample is not quite as good as the average of the two Maya Gibson copies which I have seen so far. Although it is well up to the standard expected from one of the better Japanese guitars, it is immediately recognisable as a 'Japanese' finish rather than an 'American' one. As the instrument is intended as a copy of an American guitar, this must be considered as a less appropriate style of finish.

However, I would *not* agree that the tone, playability, or standard of construction of this guitar fall very much below the average standard of the two Maya Gibson copy samples. In many respects it fits neatly between these two samples in general quality and performance. All three instruments fall within normal production tolerances for the better sort of Japanese guitar.

I feel that the major difference lies in the fact that the Gibson copy sounded astonishingly like a newly-made Gibson or Epiphone of a particular period, whereas this Guild copy sounds good, but not exactly like the real thing. Its tone has the character of Guild guitars, but it is also rather more brash, as if one had crossed a Guild with an Ovation.

If one considers the popularity of both these makes of guitar, it is quite reasonable to suggest that the mixture could produce a successful and versatile guitar, and I find this sample a very pleasant guitar to play, but it is not quite a Guild. The lower three strings are brighter and seem more responsive than the average D. 40, but I find the top E and B strings less satisfactory. In the lower positions they sound brighter and more reedy than on a good Guild (even a brand-new one), but beyond the 7th fret both strings lack the fullness and fluidity which I find characteristic of most Guild guitars. It is not a simple matter to produce instruments which have a good rich bass *and* play well in this upper region: another sample might be better in this respect.

I also feel that the third string on this sample is weak on the open G and on the first fret G sharp. This seems to be a result of placing the main soundboard resonance fairly low in pitch to assist the lowest notes on the bottom string. The weakness on the G string is not serious, and balanced against the benefit at the bottom end of the instrument's range, seems to be an acceptable compromise. This is not a fault of design, it is just one of the many compromises that guitar makers must accept, and one of the reasons why similar guitars of different makes have different characteristic sounds. It may be of interest, that several Guilds which I checked have this resonance a little higher.

They also have a relatively stronger open 3rd. string G, and a slightly weaker E and F on the bottom string. It would seem that Guild usually bias this particular compromise in the other direction. To be fair to the Maya, while comparing it with a real Guild, I did fit it with Guild strings. The original strings were of good quality and similar to Guild strings, and I found no significant difference in the guitar's tone with either make of strings.

The saddle nut and saddle both appear to be made of some sort of Bone or Ivory, and both require a small amount of work before they will work properly. The third string tends to stick in its slot in the nut, making stable and precise tuning very difficult. This problem was only partly cured by graphite in the slot. It seems that the slot is slightly tapered and rather a tight fit on the string at the bottom. This is easily adjusted, but it really shouldn't happen on any new guitar. Also the saddle is not finished to a smooth round top profile, or to any definite angled shape. As a result, some of the strings vibrate from a point near its front

edge, some from the middle, and some from near the back edge.

This is not an arrangement which is likely to give accurate intonation around the higher frets. In fact, most of the strings are slightly sharp at the octave, but this sample does have a relatively high action. If the top of the saddle were rounded over, and lowered a bit in the process, both action and intonation would probably improve significantly. In spite of the relatively high action, I do not find this instrument tiring to play. This suggests a neck cross-section shape which is very well thought out, and which happens to suit my own hands and preferences. It is a little thicker than some of the Guild necks and I think I prefer it.

The neck is probably not Mahogany, although the finished colour might give that impression. My guess would be natural wood. Whatever it is, something very like it is used for a large proportion of Japanese necks. It is usually softer than American Mahogany, and seems to be rather more brittle. However, unless you are likely to drop the guitar on its head, the difference is not of great importance. (If you *are* planning to drop your guitar on its head, look for a one-piece neck made from plain, unfigured Canadian Maple. With luck the guitar may bounce back with only minor damage). On this sample, the neck is straight, the frets seem to be level and smoothly finished, and the fingerboard is of good quality Indian Rosewood.

The Bridge, which is approximately the same shape as a Guild bridge, is also made from the same sort of Rosewood, and neither has been stained black in an attempt to produce the image of 'Ebony fittings'.

If you look around carefully, you will find plenty of guitars with black fingerboards and bridges described (quite accurately) in the Maker's catalogue as "Rosewood". It is a common practice, it is a perfectly legal, and I don't like it. It is nice to encounter a Japanese manufacturer who has the integrity to leave Rosewood in the colours which Nature intended. If you prefer the black painted effect, buy a spray-can, or read some of my previous reviews. While on the subject of black fittings, the truss-rod cover on this guitar is a sort of greasy off-black, typical of some of the A.B.S. and Polyvinyl plastics which seem to be taking over from Celluloid and Acetate sheet. Whatever you do with it it never looks properly black, and it never looks properly clean. If you try to buff it, it looks worse. Maya makers please note.



The plastic inlay round the soundhole and the edges of the body looks about right for a Guild copy and is neat and well-finished. The neck and body are finished with a red-brown overall tint and clear gloss lacquer, resulting in a colour somewhere between light Rosewood and dark Mahogany. It makes an attractive contrast with the white edgings and the chequered inlay strip down the middle of the back. The edges of the fingerboard are not bound with plastic, and the lacquer extends right to the front edge of the fingerboard. It does not show any signs of peeling off at the exposed edges. One of the small pearl dots in the fingerboard edge is broken half away. This must have been apparent before the lacquer was applied, but has been allowed to remain, and there seems to be some sort of filler in the remainder of the hole. This is a very minor point, but I would have thought it just as easy to replace the entire dot while it was accessible. While looking closely at the edge of the fingerboard, I noticed that the fret slots are considerably deeper than necessary. This weakens the fingerboard unnecessarily and should receive some attention on further production of this guitar.

Although the neck seems stable, it is not a good idea to cut the slots significantly deeper than necessary for the tang of the fretwire. (Of course, one does not know how many guitars with bound fingerboard edges have similarly over-generous slots hidden by the binding.) I also noticed that the lacquer was rather scruffy down the treble edge of the fingerboard where it fits onto the guitar front. This does no harm to the instrument, but I am surprised that it was not noticed and corrected.

The scratchplate is plastic imitation tortoiseshell, as fitted to some Guilds. It would never fool a tortoise, but it looks un-objectionable and I prefer it to the all-black variety. It seems to be stuck on *after* the lacquer and might, in time, become a bit loose round the edges. The traditional American method of cementing the scratchplate to the front before (or during) the lacquering process, makes subsequent polishing rather difficult, but it still seems to be the most reliable method.

The inside of this sample is neatly finished and quite similar to the internal construction of a Guild D.40, although the shaping and positioning of the struts may be a little different. This could perhaps explain the different tone on the treble strings. The D. 40 is usually fitted with Schaller machines. This Maya N. 40 D. is fitted with Japanese machines of similar appearance, bearing the Gotoh Gut symbol. Such machines are usually quite reliable, although they may not last as long as Schallers or Grovers. All six units on this sample work positively and very smoothly.

## Conclusion

This is a pleasant-sounding and versatile guitar, although not exactly like a Guild D. 40 in tone. I think I have average-size hands, and I find it a very easy and



*"This is a pleasant-sounding and versatile guitar . . ."*

comfortable guitar to play. It works well with either flat-pick, or fingers (or both). It would work more accurately if the nut and saddle were shaped more carefully. It would probably be a good choice if one had to play unamplified into a very absorbent acoustic situation, such as a small room full of people. In such conditions, the extra brightness would be a positive advantage. With somewhat worn strings, a guitar such as this can often sound better than a more mellow guitar with equally worn strings. This model of Maya is in rather limited supply at the moment. There may be some delay before the next shipment, which means almost inevitably that when it does arrive, the price of the guitars will be quite a bit higher. The present list price of £140 including tax seems to be rather good value for money, and if you do find one of this batch in the shops, it may be wise to buy it now instead of waiting for the next shipment.

I appreciate that "International Musician" is read in many countries out-

side the U.K. and I should mention that to the best of my knowledge this guitar is not available in other parts of Europe, or in the U.S.A., although similar instruments from other makers may be available. (Stentor Music, who are the importers, tell me that they have plans concerning another Guild copy from the same maker, which will be closer to the standard of the Maya Gibson copy referred to earlier. It will cost rather more than the present Maya N. 40 D. and is not intended to replace this guitar. No further information is available at the present time.

Measurements on Maya N 40 D Ser. 1977-1118.

Scale length 647 mm  
String spacing at bridge 53 mm  
String spacing at nut 35 mm  
Fingerboard width at nut 43 mm  
Depth of neck at first fret 22 mm  
Depth of neck at 10th fret 29 mm  
Action as supplied 2.5 mm Treble / 3.2 mm Bass





# mattacks' DRUMCHECK

Dave Mattacks is one of Britain's top session drummers who has worked extensively with dozens of top artists including Andy Fairweather Low, Kiki Dee, Brian Eno and Rick Wakeman. Although he works mainly freelance, Dave is a full time member of the Albion Band. He has been playing drums for 14 years and was with Fairport Convention between 1969 and 1974.



**TEST ON:** Pearl 'Art Blakey' Kit

**DATE:** July 1978

**PRICE:** £589 inc. VAT (\$1,178)

## Introduction

In the last few years, Pearl have strongly established themselves in the percussion world by making quality drums and accessories at competitive prices to suit today's market. Arguably the most successful company making fibreglass shell drums, they've recently introduced Maple Wood to their range of shell types which also includes Phenolic, Wood/Fibreglass and Wood. A new range of

heavier hardware will be available soon – including a compression spring bass drum pedal which his holiness Gadd is reputed to be using – and these will probably have the same effect on Pearl's competitors as did the first range. However, more on these and the Pearl Roto-tom/drum as soon as I get a chance to see them in the metal.

In the meantime, the Art Blakey kit is as follows; 18 x 14 bass drum, 12 x 8 and 14 x 14 toms (bass drum and toms have all-fibreglass shells), 14 x 5½ brass shell snare drum, two cymbal stands, hi-hat, bass drum pedal and snare drum stand.

## Sound

The snare drum I especially liked. The

ever popular 'quick tune-up' ensued and gave a thick, solid sound but still lively with a very good snare response. The counterhoop seemed perfect – not the usual high pitched 'clack' that results from rimshots when the batter head is tensioned up. The toms were very lively with a lot of ring even when tuned down. I don't like fibreglass shells but I must admit the tone was good; not quite as brittle and hard sounding as I'd expected. I didn't like the bass drum. No matter what tension I applied to the heads, the drum persisted in impersonating a tympani with a cardigan inside. A felt strip had been fitted to the back head but because of the 'live-ness' of the drum, I thought another strip close to the edge of





the front head would have helped. With 18" and 20" bass drums (more so than larger sizes), I feel it's really necessary to 'play the drum in' and give the heads a chance to stretch and settle. The 'newness' of the heads plus a felt beater on the pedal (I would have preferred a cork one) didn't help the sound much. Without the front head, the drum still seemed to lack a solid punch although there was enough volume to match up with the rest of the kit.

#### Snare Drum

The 14" x 5½" snare is fitted with square-headed tension rods (also fitted to the toms), ten double-ended lugs, triple flange hoops and Remo Ambassador batter and snare heads. The brass shell has three concave strengthening beads and 45 degree inverse flanges. The appearance of the damper doesn't do much for me – the knob looks like it's pressed from rather thin metal and the 'V'-shaped piece of spring steel inside the shell is a bit flimsy. This isn't that important because unlike some smart looking dampers, this one works well. The snare release looks a little like the current Gretsch model, although the basic design for this type has been around since the forties. The on/off lever comes away from the drum for the 'off' position unlike the more common side-throw type. A knurled knob behind the lever adjusts the tension of the snares which are attached by plastic strips. I thought the snare butt was rather ungainly but like the damper, does its job.

#### Bass drum

The drum has 16 lugs, smart-looking tuners and claws. Remo Ambassador ruff-coated heads and metal hoops with plastic inlays are fitted. The spurs are really substantial and work very well. A large cast block bolted to the drum has an offset circular recess with 'teeth' inside and a thread taped into the centre. The principle is similar to a ratchet-style cymbal tilter. At one end of the spur/leg is the matching other half of the ratchet with a wing nut through its centre which locates and tightens the leg onto the cast block. In the folded away position, the spur lies flush along the shell. For setting up, it moves through approx. a 110 degree

arc and locks with the casting simply by tightening the wing nut. This puts it in an ideal position – pointing slightly forward and at an acute angle to the vertical. The other end of the spur is a threaded rod and this screws into the leg so as to adjust the overall length. I thought the locking collar that prevents this threaded section from turning could be more efficient. There's a sharp point at the end of the threaded part and if you wish, this can be covered by unscrewing the rubber foot.

The new Pearl tom-tom holder is a fine piece of engineering. For a start, it looks immeasurably better than its predecessor. It's also very strong. With the stem in the bass drum and the arm out at a right angle, I managed to push myself off the ground without any signs of stress – from the fitting, anyway. The basis of the design seems to be a straight lift off Memriloc, with some changes made. The double receiver block (Pearl assume you'll want to add another drum at a later date) is sensibly mounted close to the front of the shell. The 7/8" diameter stem is locked into place by a wing nut which tightens a floating clamp against it/them – like the Rogers 'Knobby' idea.

Each stem has a large, cast jubilee-style clip/clamp which is held in the desired place by tightening a small square-headed screw. This clip has a small, square protrusion which locates into a corresponding hole on the tom and bass drum brackets. The angle between the two arms is adjusted by a small screw and the principle is along the line of Pearl's cymbal tilter except that the screw tightens onto a bush inside the circular housing. The advantages this holder has over the Memriloc are 1); not finding you want the angle right in between grooves as on a ratchet model, and 2); an improved stem-gripping method: i.e. indirect pressure. Also available is a device which fixes to two parallel arms (you'd need that second tom) and makes it possible to use a third, suitable for a small pair of concert toms or a cymbal maybe. It's a really good holder, in all.

#### Tom-Toms

The 12 x 8 tom has six lugs per head and the 14 x 14 eight. Each tom has Remo Ambassador heads, triple flange hoops and a damper. The lugs on the toms (and bass and snare drum) are held in place by two self tappers and washers per lug, and have a spring with a piece of plastic inside to keep the insert in place and prevent buzzes and unwanted resonance. All the fibreglass shells are approx. 5 mm thick including the covering, and are neatly finished inside. The brackets on the floor tom that hold the extra long wide angle legs are the usual eye-ring and wing nut type and work fine.

#### Stands/Pedals

The bass drum pedal has proven to be a favourite in a comparatively short time. It has an alloy two-piece footplate with a reversible toe stop, twin posts, fibre/webbing strap and a single expansion spring. The stroke length is adjustable (like the Rogers pedal) and the unit

clamps to the bass drum by screwing up a knob near the bottom of the left post which acts on a large cam. The hi-hat is the centre-pull type with a thick nylon link and a two-piece footplate. The spring tension is adjustable via a small disc-shaped knob just above the saddle unit, but even when this was apparently at the loosest position, I still found the action far too stiff for my liking.

The pedal also has a small adjustable spur underneath the saddle unit, a clip on the upper tube to mark the height, a bottom cymbal tilter and an efficient top cymbal clutch. The two three-tier cymbal stands, like the hi-hat, have wide angle bases and plastic – not rubber – feet. The height adjustment stages have nylon inserts and solid, decent sized wing nuts. As far as I know, the tilter design is exclusive to Pearl. A cast, hollow, disc-shaped housing at the end of the top tube has a slot cut in one side (end on), and a wing-nut tapped into a thread through the other side, again, end on. A solid disc with a threaded rod protruding from it for the cymbal sits inside this housing and is free to rotate through nearly 180 degrees.

The wing-nut tightens through the housing onto the edge of the solid disc and locks it at any angle. It's straightforward and works perfectly. The snare drum stand is good, too. The wide angle base is not too wide you can't get it between your pedals, but wide enough to be stable. The height adjustment again has the nylon bush and large wing-nut and coach bolt, and the top of the stand is the Buck Rogers type with basket arms tightened by a large locking nut and another large 'T' shaped wing-nut to lock the angle. For the price, it must be the best on the market.

#### Summary

Every drum manufacturer makes every size drum to cover the market but I personally feel that this particular kit is the odd one out in the Pearl range. It has nothing to do with quality – the kit is fine in that respect – more to do with the sound fibreglass makes. I hope that some time I'll get the opportunity to hear Art Blakey himself on this outfit, especially to hear what sort of bass drum sound he gets. I would prefer this kit in wood/fibreglass (or better still, Maple) because it would round the sound out a little without any loss of volume. Certainly 22" & 24" bass drum fibreglass sets sound fine and rock drummers who buy such kits are aware of, and want the inherent characteristics, but generally (I'm making assumptions here), drummers after a small 'jazz' kit want something a little 'warmer'.

Before you all write in with lists of rock drummers playing 18" bass drum kits – yes, I've heard Christian Vander – I would like to make it clear that this is a generalisation based on personal experience and conversations with very many fine drummers. Right, now I've got that out the way, let me re-iterate that Pearl make good, quality drums, and if you're thinking of getting an Art Blakey kit, try the wood/fibreglass model as well!



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# lumley's KEYBOARD CHECK

Robin Lumley is a record producer and keyboard player working mainly in London. His first major venture in the business was as keyboard man in Bowie's Spiders and he later formed a writing partnership with Jack Lancaster.

TEST ON: Elka Solist 505

DATE: July 1978

PRICE: £384.72 inc. 12% VAT

## Introduction

The Elka Solist 505 is a member of that ever-growing family of pre-set synthesizers. It seems, that as synth-technology and sophistication increases, and more complex instruments arrive on the market, so the saleability of the simpler models seems to increase also. I don't know whether or not this is a reaction to the techno-baffle of the biggies, or simply because stage operation requires instant results, but nevertheless, here's another pre-set model; this time from Elka. With the Solist 505, the design boffins have really not done their homework for, in many ways, this is a very disappointing package. Let's have a look at this machine, and why I've got a bit of a downer on it.

## Layout

Firstly, the case that the review model arrived in was a fairly insubstantial black plastic affair, with a steel bar handle that was uncomfortable to use. As usual, I subjected the review model to studio uses and tests, and the Solist 505 was duly set up and plugged in, ready for action. Sitting at it, the first minuses became apparent. This is a pre-set instrument, and virtually nothing else, and so it seems like bad design to actually place the pre-set buttons on the vertical face of the instrument, below the keyboard.

The value of a pre-set instrument is its immediacy of sound production and re-selection; so why put all the knobs and buttons where they may be hard to see and read under the abnormal conditions of lighting, and the stress situation, of a live gig? Either standing or sitting at the Solist, one would always need to be bending down to check which button to press.

## Facilities

Examining the layout of the instrument in detail, we find that it has a 49 note C to C keyboard (4 octaves) of plastic keys, some white, some black, and arranged in a recognisable order! And on the control bank, from left to right, we first find a panel of seven faders, marked: Volume, Slow Attack, Decay, Wow, Cut-Off Filter, Vibrato Depth and Bend. This little section is the only bit with which the player can exercise any control over the sound, save pushing a pre-set button. Sadly, it's an "either/or" situation:— you can have the pre-sets, or this modification bank, but you can't use them together, which is a great pity, and an unfortunate



limiting factor.

The operation of a press-tab on the middle front right-hand side selects either the pre-set bank or the modifier faders. Next button-bank from the left is a 6 tab panel containing two envelope controls (VCA and VCF), and buttons which control some of the faders. These are On/Off buttons, and control the filter, vibrato and bend sliders. Furthermore, there is an "Octave Down" button, which lowers the whole keyboard by an octave.

Finally, there is the pre-select bank, containing the following sounds:— Trombone, Trumpet, Saxophone, Clarinet, Oboe, Guitar, Hawaiian Guitar, Violin, Flute, Cosmic (!) and Telstar (!!). A small knob to the right of this lot looks after the overall tuning. Since this is basically a pre-set instrument, it must stand or fall on the quality and practicality of its set sounds. So I checked them out one by one, and formed certain opinions:—

The trumpet sound didn't have any of the real qualities of trumpets, but sounded like some bland drone. The saxophone sound have a very weird vibrato all over it, but the trombone was quite realistic. Also, the clarinet sound was very good, quite a passable synthesis, in fact, but the oboe (according to my notes written during the test) was "yecchh". As for the guitar setting, that sounded more like an African Ant-Eater sneezing! However, the Hawaiian Guitar made an interesting sound. Pressing the Violin tab provides one with the ability to terrify all the cats within a ½-mile radius, but the flute setting sounds nicely pipey. But not like a flute. The last two buttons prove that the designers of this instrument have a sense of humour, even if warped. These two selectors, labelled Telstar and Cosmic, defy description, and have to be heard to be believed (or not, as the case may be!). I suppose you could say they were cheap synth noises, but they both sound more like large pieces of intergalactic farm machinery frightening innocent traffic wardens.

Levity apart, I really don't think that the range and quality of these pre-sets

makes it at all. They all sound basically "cheap" somehow, with very little size or power to their intrinsic sounds. Now, no pre-set synthesizers can actually be expected to deliver an accurate rendition, soundwise, of the labels on their buttons, but at least each sound on many of the Elka's competitors' synthesizers has a quality of its own that is worth hearing. The Solist 505 is not even polyphonic, and thus can't be used chordally like even the cheapest of string machines.

Turning back to the modifier faders, which can be brought into action by a button that also ditches the pre-sets; these sliders provide the player with a very rudimentary control over a bland sine-wave-like sound. This area is weak, and not really usable for anything I personally can think of. It would have at least been useful to have been able to apply these simple, partially operational controls to the pre-set sounds but, alas, no. This would have been an easy design alteration, and would have involved very little extra circuitry.

It seems as if no musicians or users of synthesizers were consulted during any stage of the design or production of this instrument, because there are so many basic faults in its layout, its sounds and its control facilities. One factor in its favour is the fact that, at least, the generated signal is loud and clean, and thus very recordable in professional studios. But the chances of anyone wanting to record it must be thin. But I must say, that on a few pre-set selections, a certain amount of "key-clunk" occurs, and on my review model, a couple of keys just didn't work at all, and the two top C naturals made the same note, instead of being an octave apart.

## Conclusion

When composing these reviews, I always try hard to find the "plus factors" in any instrument presented for inspection as purely destruction criticism does not help you, the reader, choose the instrument you want. But sadly, with this Elka Solist 505, I really can't find much to say in a positive sense. Perhaps it would have helped had I known to whom the makers were trying to appeal, but this could not have disguised a basically unsatisfactory instrument. There are so many good pre-set synths on the market today that this one doesn't get a look-in.



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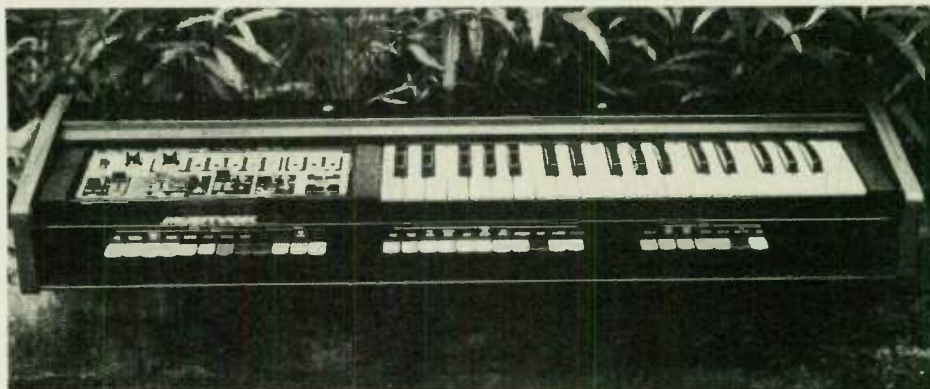


**TEST ON:** Multivox MX 2000  
**DATE:** July 1978  
**PRICE:** £659/\$1,300 inc. VAT.

# simmons' SYNTHCHECK

Dave Simmons is an expert on synthesizers. He understands them both musically and technically and his background has made him uniquely qualified to be I.M.'s Synthesizer Consultant.

Dave's a musician and a technician. He studied classical piano and organ as a child, later developing into synthesizer and rock. His musical achievements include playing the massive synthesizer part in David Bedford's "Odyssey" and his technical background included a thorough training in practical and theoretical electronics. For two and a half years he was UK Service Manager for ARP Synthesizers and today he's a partner in a highly specialised company called Music Aid in St. Albans, Hertfordshire where he undertakes all types of synthesizer modification and servicing.



## Introduction

The Multivox MX 2000 Duo is another single-voice pre-set synthesizer aimed at the musician who requires a multitude of synthesizer sounds to be available quickly and with a minimum of fuss. The MX 2000 is slightly different to others in that it has two oscillators which can be re-tuned slightly and this adds depth and variety to the sounds.

Although Multivox is an American company, the instrument is manufactured in Japan and bears a remarkable resemblance to the Roland pre-set synthesizers already on the market.

## Layout

A three octave C—C keyboard is fitted towards the right hand side of the instrument with the variable and 'Touch Effect' controls to the left. Running along the front of the synthesizer are the 30 pre-set tab switches, in an ideal position if the synthesizer is used on top of an organ or piano. The tab switches have a good position action and are protected from damage by a perspex strip which runs proud of them along the underside of the case. The front panel is finished in matt black and grey with white lettering. The keyboard action is O.K. if a bit noisy.

## Pre-sets

The pre-sets are divided into three groups and colour coded according to the groupings of instrument types. They are: Pre-Sets 1. Wind instruments — Tuba, Trombone, French Horn, Trumpet, Saxophone, Clarinet, Accordion, Bassoon, Oboe, Flute, Songwhistle and Singing Voice. Pre-sets 2. Strings — Cello, Violin, Bass and Hawaiian Guitar, Banjo, Fuzz Guitar 1 and 2, Harpsichord, Piano, Xylophone and Vibraphone. Pre-Sets 3. (Funny Noises) — Percolate (2 sugars please), Space Reed, Outer Space, Frogman, Alley Cat, Ring Modulator and Wind. Why manufacturers insist on inventing names for the electric sounds I can't imagine, unless it is to give us all a laugh!! (I would have thought that a better name for the 'Alley Cat' pre-set was Dog's Doos).

The quality of the sound the pre-sets produce depends entirely upon the listener and the player. Each of us has his, or her, own idea of how a particular instrument

should sound. If the player is skillful enough to imitate the playing characteristics of the instrument that is being copied, a reasonable facsimile of the sound can be produced.

## Variable Controls

Although the basic wave shapes of the pre-set sounds cannot be altered, the voltage controlled filter (through which all the pre-set sounds are routed) can be controlled manually.

The filter is Low-Pass type with slider controls for cut-off frequency, resonance and modulation. Modulation of the filter is by sine wave which is generated by a low frequency oscillator. The oscillator speed can be altered from about one cycle every five seconds to eight cycles a second. The speed of the low frequency oscillator is indicated by two flashing LED indicators.

Portamento (Glissando) can be switched in and is variable from zero to about five seconds per octave. It can also be switched to 'Touch' portamento which means that the effect only works when playing legato.

The range of the keyboard can be transposed up or down an octave, and VCO 2 can be de-tuned from VCO 1 by up to an octave (the control is variable so that the two oscillators can be set at fixed intervals i.e. 5th or Major 3rd etc.)

Various effects can be added by pressing the keyboard after the note has been played (Touch Sensor or Second Touch) which is useful if only one hand is available to play the synthesizer. The effects are Vibrato, Brilliance, Growl, Loudness and Bend Up or Down. The effects can be used simultaneously or singly and the bend range is adjustable with the sensitivity control, up to a tone sharp or flat.

Other effects are Repeat (repeat triggering of the note being held down at the speed of the low frequency oscillator) Long Decay and Hold (the last note played sounds indefinitely) Two Sample and Hold (Random note) generators can be switched in, one triggers at the speed of the low frequency oscillator and the other triggers completely randomly.

Sockets on the back of the instrument are High/Low outputs, Gate, and Audio Input — allowing external signals to be processed through the synthesizer's filter.

## Conclusion

There is nothing startling about this synthesizer. It is as good as many others presently on the market but it has a few extra features i.e. the extra oscillator and the ring modulator (useful for creating bells and gongs etc.). It should appeal to the home organist as well as small band keyboard players.





# IN BRIEF IN BRIEF

**TEST ON: Carlsbro Phase Two and Flanger.**

**DATE: July 1978**

**PRICE: Phase Two £38.78 (\$80) ex. VAT. Flanger £49.50 (\$100)**

These two pedals from Carlsbro, the Phase Two and Flanger employ the same basic design and controls. Each has a sturdy flat steel case with the usual on/off footswitch and pot controls, and of the two the Flanger proved the more versatile.

The unit has three rotary controls which allow for changes in depth, speed and colour, and as on the Phase Two pedal the maximum and minimum positions are clearly marked (unlike many other units whose settings are baffling at first). The Flanger has an extra switch which allows for an inversion of the flanging effect.

When tried on guitar and various keyboards, the pedal produced a variety of interesting effects. The most effective combination was with the speed set at minimum and the colour and depth set on maximum which, when each note is played, triggers a background ascent or descent through a wide range. On guitar the flanging sound comes through strongly, sounding not unlike a chorus pedal or 12 string on certain settings. The only criticism is that it produced perhaps a too-metallic sound from electric piano, yet even this can be used to good effect, for a judicious use of sustain can produce a vibraphone sound and also controlled distortion from both organ and piano.

The Phase Two pedal has pot controls for the speed and depth of the phase effect and an extra switch for colour; unfortunately the colour control seems to make little substantial difference except to the volume.

The phasing effect is quite pronounced and in some cases probably too pronounced because it tends to sound rather obvious and the vibrato soon becomes wearing. One common use of phase pedals is the simulation of a Leslie effect from organs, but this particular pedal seems to lack the "throatiness" necessary for this. Nevertheless, the controls are quite sensitive and anyone looking for a pronounced vibrato sound might well investigate this pedal.

Both the Phase Two and Flanger appear ruggedly built which would make them suitable for stage work, their flat heavy design ensuring they won't creep away from the foot if they are being constantly switched on and off.

**David Lawrenson**

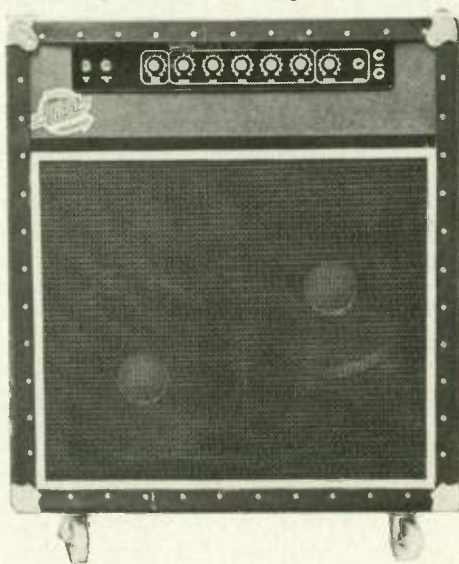
**Funkshun Flight 100 watt combo. Price £269.51 (\$540) inc. VAT**

Funkshun, as regular IM readers will know, are a group gear shop in Northampton who recently started manufacturing their own Flight range of amplification.

The C100DD is a 100-watt combo and incorporates a 100 watt amp and two special Fane 75 watt drivers. The company are already enjoying great success with the gear in Germany and, if this unit is anything to go by, should do equally well elsewhere.

The combo is housed in a flightcase-type cabinet and there is also a front "lid" which straps on to further protect the already kickproof speaker grille. The covering in fact is made from a special scratchproof material and the general appearance is that of a very workmanlike and rugged unit.

It's a single channel job with two inputs. The controls are Presence, Treble, Middle, Bass and Drive (another word for Volume). There is also an overdrive control situated to the far right of the control panel with an input for a foot-



switch, and this overdrive can be pre-set and switched in with the footswitch for solos or loud passages.

A very wide range of sounds can be obtained from this comparatively simple control layout. With the treble wound up and the bass rolled off, I got a nice Fenderish sound which nicely complemented the Hagstrom Scandi I tested it with. Running with overdrive, and with a bit more bass in, the sound was really meaty with the kind of distortion that doesn't blur everything into a fuzzy mess.

The power it gave out was quite staggering. It sounded more like a stack than a combo. Even with the unit at full volume, the speakers didn't start to "act up" like many others. Although Fane is a name often looked upon with disdain by some musos, Funkshun spent a long time testing different types of drivers and the Fane G6SE came out on top so, although they do offer a choice of driver, Funkshun prefer to supply the gear with these Fanes. On listening to this combo, I certainly agree with them.

**Eamonn Percival**

**On Test: Bluebird Flight Case. Price: £55 (\$110) ex. VAT**

Flight cases have become a new growth industry in the music instrument industry over the last few years. Whereas once custom flight cases were just for big bands doing Trans-Atlantic tours, it seems they have now been accepted by musicians everywhere as the proper protection for

instruments and sound equipment.

It's not surprising that the flight case makers are finding plenty of customers. With the price of gear these days and the fact that no manufacturer really offers proper protection apart from plastic covers and hardshell cases (Martin and Ovation being the exception) a good flight case is essential to protect your investment. Even a good guitar case breaks up after several months of only three nights a week gigging after the punishment of countless loadings and stacking away.

Bluebird cases are made by the Edinburgh firm MBE Amplification. Apart from the guitar case submitted for review they can make any flight case you need as well as regularly producing cases for amps and guitars.

If the case we saw was any example, Bluebird cases would seem very well made. The Bluebird guitar case was not that much heavier than a conventional case without seeming to sacrifice any of its durability. Please bear in mind that this is not so much a review of how the Bluebird case held up after extensive use out rather an appraisal of its construction and general evaluation of workmanship.

On this criteria a guitar would be well-protected by nestling in a custom-cut foam insert which MBE will cut to whatever guitar you have. Corners have heavy-duty protective steel caps and the plywood sheet is covered with blue vinyl. A continuous steel hinge fastens the two halves and it would probably take a strongly forced jemmy to prise open the case after it has been locked. MBE assure customers the flight cases will "cope with normal trucking" and they promise to remedy any defects "although we can't give immunity to bizarre accidents".

Remember, though, that at nearly £60 you are almost paying double for a flight case such as the Bluebird than you would for a conventional guitar case. Although a well-made case, the materials used would not appear to be that expensive in their raw state. This is the sort of money you would expect to pay for a plush-lined moulded polyurethane case.

The Bluebird case would seem to offer your instrument good protection from normal handling perils but for a price that you would expect it to do no less for.

**Ian White**

**On Test: Intermusic Imp. Price £49 (\$100) inc. VAT.**

This is a new combo from Intermusic and is rated at 15 watts rms, which is plenty loud enough for a practice amp but would also be useful for stage use miked up. To be honest it's a very loud 15 watts. By that, I mean there seems to be more power than you would expect from a 15 watt amp, probably due to the efficiency of the single 8" speaker and the design of the enclosure.

There are two inputs, one high and one low sensitivity plus a loudness switch which either boosts or cuts the power and means you can get a nice "dirty" sound at lower volume setting. The rest of the controls are fairly straightforward volume, treble, middle and bass, all applicable to



both inputs as it's a single channel unit. All the controls work well and the treble control is particularly "active".

With the volume turned up full, the sound is loud and gutsy but, when the bass control was brought up toward three-quarters, the speaker began to cut out intermittently. To be fair, the model we tested was a pre-production model and I suggest this is one area the manufacturers should look at closely.

Apart from that, and I should imagine that fault to be cleared up without much trouble, it's a great value for money amp with lots of volume and a good tone range.

**Eamonn Percival**

**ON TEST: Marshall 100 watt Reverb Twin Combo and 1x12 100 watt Powercel Combo.**

**DATE: July 1978**

**PRICE: Reverb Twin £400, Powercel £330 (prices are approximate and not yet fixed).**

Marshall equipment has always been designed to be functional and durable rather than "pretty" and the Powercel combo is certainly as basic as you can get from a design point of view — a black box with amp and controls built-in in the AC30 mode. This valve combo is 100 watts and certainly is as loud as you could possibly want — unless you need a nuclear warhead for your gigs. It is certainly solidly built and could probably survive any unintentional disaster it encounters.

The size is very portable — the weight is a shortcut to a severe hernia. If you've got your own roadie don't worry about the next few sentences. The weight of both this amp and the Reverb Twin is, quite frankly, ridiculous. I am sure there are some very good technical reasons why these amps weigh as much as they do but, from a practical and gigging point of view, they are literally impossible to carry one-handed suitcase style for more than a few yards without stopping for breath and a rest. Allowing for the fact that I may be a run-down weakling, I asked a rather beefy colleague to try lifting them. His reaction was: "F... me! They must be joking."

Fortunately, the production combos will be fitted with castors which should alleviate the problem somewhat and the final Powercel is expected to be lighter.

Andy Eastwood at Rose-Morris confirmed our suspicion that the weight factor was due to the speakers and transformers in the amps. The Powercel has a 125-watt specially-designed 12" Rola Celestion which looks as if it could handle double that power.

The Reverb Twin is equipped with two 80-watt special 12" McKenzie speakers and again these speakers are the fattest I've seen in any combo.

The Reverb Twin is a two-channel amp equipped with two inputs (high and low) for each channel with independent tone controls and master volume with Reverb on one channel. The reverb is of



an "all or nothing" nature and it is hard to get subtle changes gradually. The Reverb Twin aesthetically is far more attractive than the Powercel combo and has the control panel conveniently located on the front. The amp is covered with a very nice brown vinyl and brown grille cloth which makes it look far more handsome than most other Marshall products.

Now the sound. Both amps have that unmistakable Marshall raunch ideally suited for hard driving rock and rhythm and blues. Both these amps are made to work hard. If you play a lot of gigs where you have to play quiet, these amps are not suitable. However, if you ever get the chance to regularly turn up and wail, they

sound terrific. The Powercel has the familiar cross linking of Volumes I and II and although the tone controls do not give as subtle a shading as you might expect, blending of the two channels gives a myriad of sounds.

The Reverb Twin can also be criticised for the under-effectiveness of the tone controls. But bear in mind these are not amps for jazz or country: they are out and out rock and roll amps where much of the tone and colouring comes from the hard driving of the amp and speakers.

To summarise, if you are looking for the power of a Marshall stack in a small but quite heavy package, these combos are terrific. They are ideal successors to the famous Marshall stack.

**Ian White**





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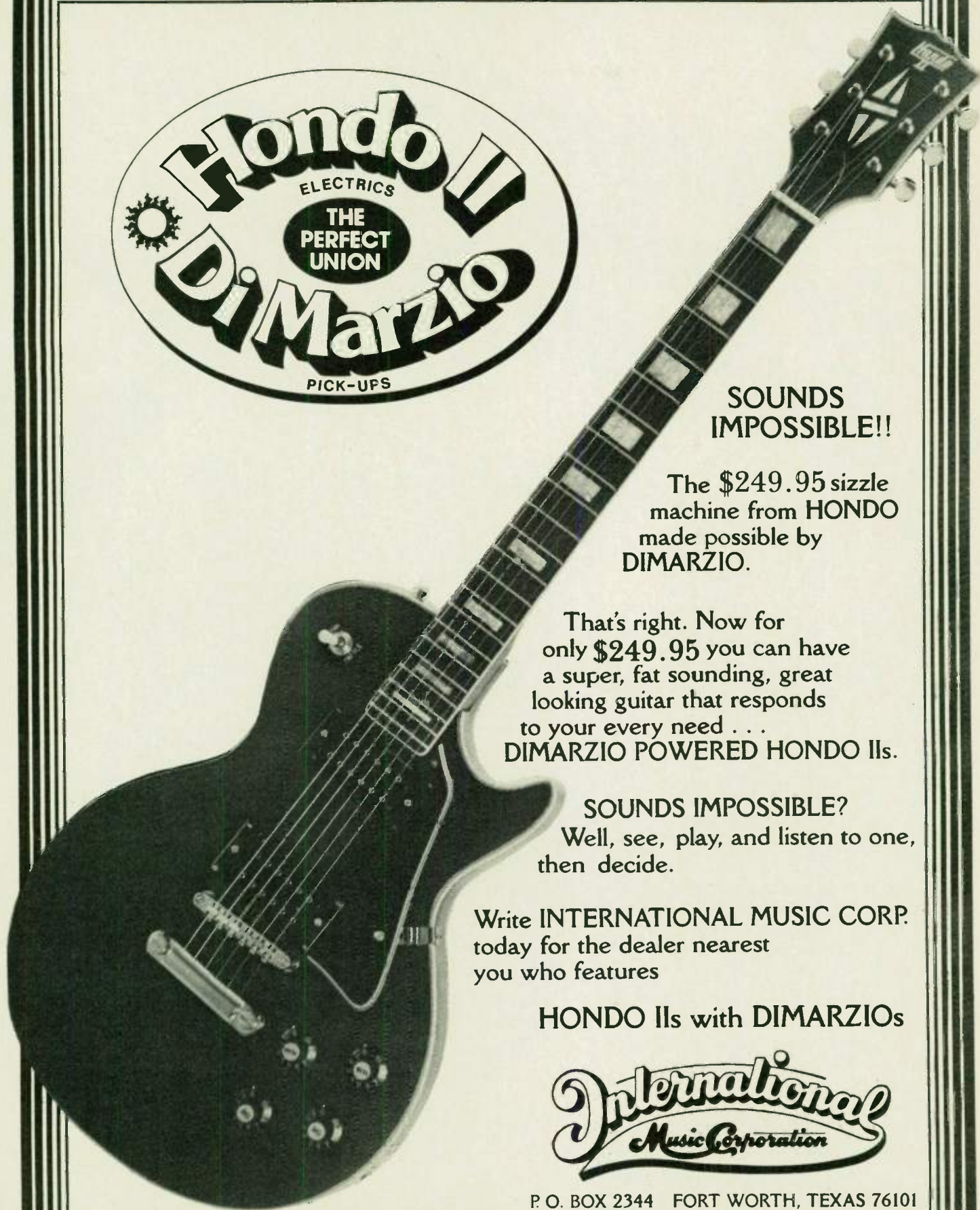
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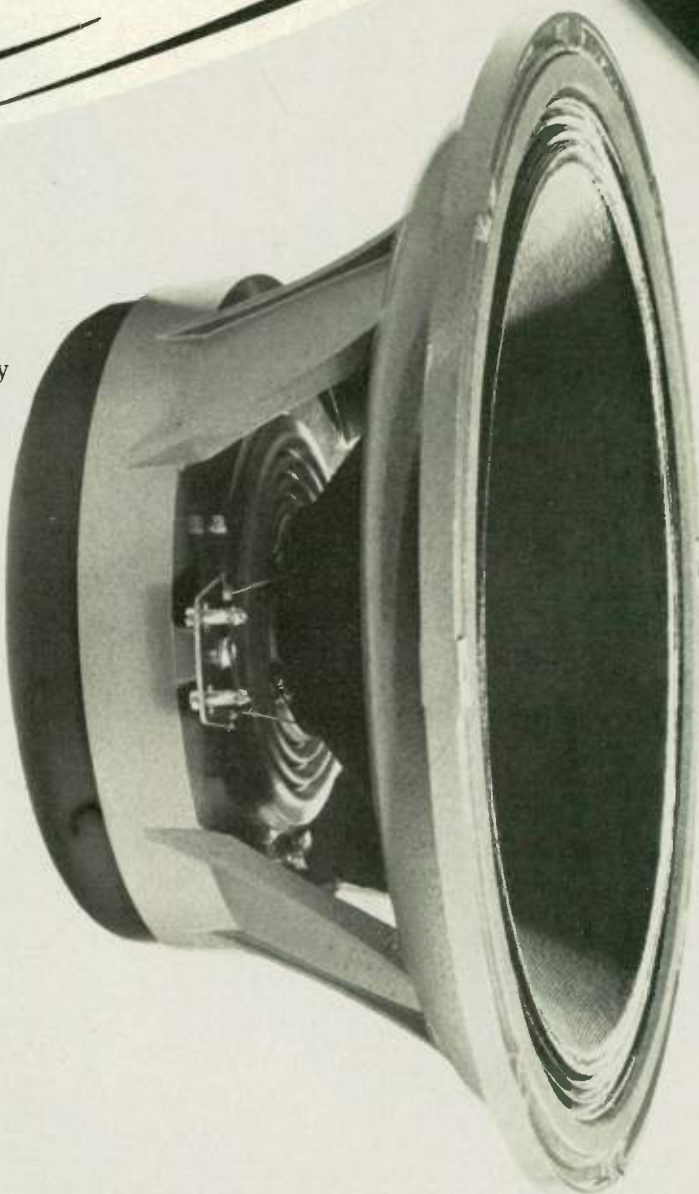
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# ★PLAYING★

Paul Brett and Johnny Joyce at Pembroke Castle Festival.



Paul Brett talks to Johnny Joyce about 12-string Blues Guitar playing.

12-string guitar played in a traditional blues style can be a most compelling sound, both to the player and listener alike. With simplicity as the key, relying heavily on syncopated bass lines and clean finger picking, this style of guitar playing was most commonly used by the negro blues singers of the 1930s whose most commercial exponent was Huddie Leadbetter, better known as "Leadbelly". A convicted murderer, Leadbelly charmed his way to a pardon after serving only 6½ years of his 30-year sentence through his talent for music. With his composition "Goodnight Irene" he attained a massive commercial hit record, thus exposing the 12-string guitar to the general public.

The 12-string originally came from Mexico, being picked up across the border by travelling negro players and brought back across the line into the USA. Its attractive sound qualities and piano-like tones were soon adapted to the blues style and opened up a whole new area of guitar playing.

The leading exponent of this style in the UK for the past 15 years is Johnny Joyce. Currently enjoying the reputation of Master Guitar repairer and putting his stamp of approval on Aria guitars (adding to their growing reputation for quality) I asked Johnny to explain his approach to 12-string Blues playing.

"I play an original Guild 12-string, one of the first to be imported here, using La Bella silk and steel medium gauge to give me a round sound, like a piano. I tune to D flat, a tone

## PAUL BRETT

and a half below concert, this suits my voice and also blues playing."

Here's the D flat tuning in chart form:

Tune the lower four pairs in octaves and the top two pairs in unison.

"I was inspired by Leadbelly and Cyril Davis, together with Blind Willie McTell; these were the people who were the main-spring for my interest in the instrument..

"During my early days in playing, I ran the Crown Blues Club in Twickenham where I booked people like Ralph May (later McTell), Roy Harper, Al Stewart, John Renbourn, Bert Jansch and many others. They used to play for £10 a night, although I doubt if they'd do it these days.

"To demonstrate the basics of Blues playing for the 12-string I've chosen these four riffs.

"Firstly, this Leadbelly riff was typical of his type of approach to the 12-string guitar. It incorporates plenty of bass string work. Play D and A shapes and tune down to the D flat chart.

"Secondly, this is a Blind Willie McTell riff from the now legendary song 'Statesboro'

Blues'. McTell was born in Statesborough, Georgia and is possibly the most widely-recorded 12-string Blues artiste. Play D and G shapes and tune the bass D flat string down to B flat in octaves.

"Thirdly, this exercise is from a blues called 'Dink's Song'. It's a traditional blues with a three bar intro into a moving 13 bar sequence. Use D flat tuning and play E, A, B7, C, C sharp shapes.'

"The last exercise leans more towards rock and roll and was the style used by Snooks Eaglin. This is a foot stompin', almost early Presley style, great for live performance of shouting blues type songs. Use D flat tuning playing A, D7 and E shapes to the chord beats."

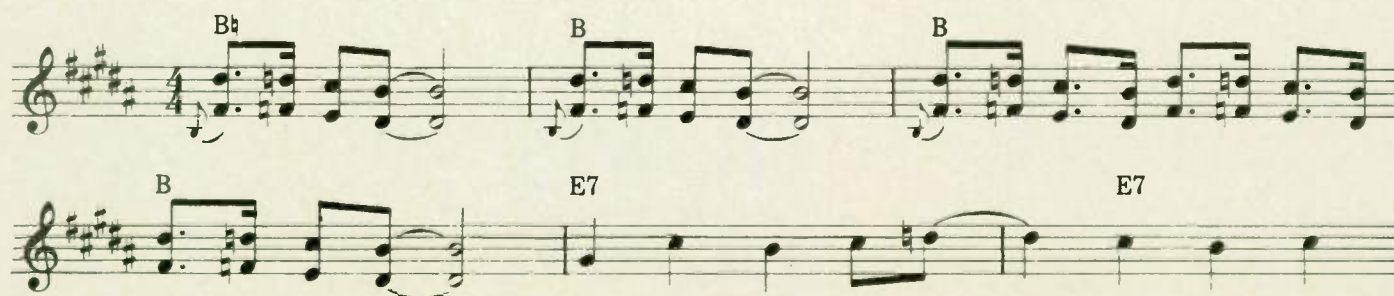
Should you want to obtain recordings by the artistes mentioned, then Collett's or Dobells' record shops in London's West End carry a large selection of Blues Records. Alternatively, Potters Music in Richmond carry a wide selection of Blues Imports for the purist.

If you want to obtain more information on playing 12-string, you can write to me or John c/o International Musician and, indeed, for any help you may need on acoustic guitar, feel free to inquire and I will do my best to help.

### Exercise 1



### Exercise 2





B B $\flat$  B

B B $\flat$

Exercise 3

D $\flat$  D $\flat$  C7 D $\flat$

B7 D $\flat$  D $\flat$

D $\flat$  D $\flat$  G $\flat$  ditto

G $\flat$  D $\flat$  ditto D $\flat$

A $\flat$  A A A7 B7 D $\flat$  riff

Exercise 4

G $\flat$

C $\flat$ 7

G $\flat$  D $\flat$

C $\flat$ 7 G $\flat$



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# ★PLAYING★

## MICK ABRAHAM'S

*Mick Abrahams was a founder member of Jethro Tull and later went on to form Blodwyn Pig with Jack Lancaster, Andy Pyle and Ron Berg. Mick has been writing and recording some new material and is soon to re-emerge as a solo artist. In this series of articles, he will be giving advice and tips on bottleneck and open tunings.*

In the last issue of IM I spoke mostly about chord tuning with the particular emphasis on the chord of E major and some of the various chords to be obtained within that specific framework. Opinions vary widely as to the overall flexibility of chord tuning and its subsequent limitations i.e. playing diminished, minors, 6ths and some of the more easily obtained chords in standard concert tuning. Although I would agree it is not altogether possible to obtain as many of these types of chords, it is not as totally limited as it may seem. Take for

example a chord of D major (one, I might add, that is a particular favourite of my own), namely because it has such a gutsy deep throated effect particularly when using the bottom E string tuned down to D. The method of tuning is as follows. 1st (E) string tuned up to F sharp, 2nd (B) string to D, 3rd (G) string to A, 4th (D) string stays as D, 5th (A) string also remains the same and the 6th (E) string down to D. Playing the whole chord open on its own gives a superb melodic but ballsy sound. That's enough dramatic enthusiasm about it

from me just for the moment.

I've chosen an exercise based loosely on one of the instrumental pieces from my forthcoming album (plug plug) called simply Raga-Ragger. I felt that, as the first section of this piece was a fairly freeform raga-ish kind of feel, it would prove good ground for simple experimentation along the lines of the suspended D chord but this time using various points along the exercise to try and fit in some interesting counter-melodies. This is where I have found a lot of weird and wonderful combinations of diminished, minor, 6ths, 9ths, etc., etc.

Try for yourself by playing a full 6 string open chord but starting with the middle 4th (D) at the 12th position by playing simple alternating thumb and forefinger strokes in 4/4 medium tempo. Play this down the scale alternating a tone, semitone, tone, etc. until D at the "open" position is reached once again. To get the hang of it, just repeat the same scale up and down for a while. Then start doing the same thing but this time using the 5th (A), 4th (D) and the 3rd (A) to the same pattern and, as you become more fluid with this, change the pattern completely around, starting from middle to top and so on whilst you are playing these varying sequences. By constantly using the bottom D as a drone and changing the timing (2/2, 4/4, 5/4), you'll begin to find some interesting

melodies, then try making a normal three-fingered ordinary D7th chord shape at the 4th position on strings BGD, (transposed in this case to DAD), and playing the whole chord, whilst using the little finger to change the 7th back and forth to D major. Try then playing in 3rds and 5ths up and down the scale adding a few odd notes here and there to get the odd discord (if played in context especially in a sunset type of raga these can sound incredibly haunting and beautiful).

Using the bottleneck too, especially in the higher registers of the guitar, can add some nice sounds to mix in with what you are already playing. I feel it is always best to understate the slide on this type of number as it simply adds effect as opposed to 'featuring' the bottleneck. Try possibly to work around six to eight notes between the 9th, 10th, 12th and 15th position occasionally going right down to the 6th and 5th position. Don't be frightened to experiment, especially from the chord angle. You'll find a lot of goodies there if you just stretch those fingers about. Next month I'm going to diversify a little from guitar tunings and talk about amplification; choosing the right axe for yourself and general compatibility. Also, a few of the drawbacks and hazards of buying general group equipment including some rather amusing "Bargain Buys" that I've personally learnt some hard lessons from.

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# ★PLAYING★

## JIM RODFORD: Bass Guitar AMPLIFICATION

One of the most popular topics of conversation amongst bassists is, in my experience, amplification. We tend to be almost fanatically enthusiastic about every aspect of our trade or hobby and, like drummers, can drone on endlessly to each other on, what seems to us, vitally important bass playing subjects. Like most of the aspects I've discussed in these pages over the last year, bass guitar amplification is a controversial and extremely wide subject, and if I'm not careful, I could be found guilty of droning on endlessly myself. Instead, I'll have to summarize my thoughts from within my experience, and as usual, start from the beginning.

I stress again that my advice and thinking in this field is purely personal, and may not be in line with some of my contemporaries. But at least, hopefully, it is an informed and educated opinion as, being a "first generation rocker" I've witnessed, and been involved at first hand, with the development of this technology from the word "go"!

My first experience of bass amplification was in placing a "Grampian" microphone underneath my Tea-chest bass as I was fed up with being drowned out by the washboard player. The mike was fed into a 30 watt "Linear Concorde" amp which we had proudly just acquired, having already gigged for about a year without amplification of any sort. With skiffle music it wasn't essential. But the singers used to get rather hoarse, and there was nothing on the market in those days to suit our needs, so we built our own. The amp was built into a three direction facing speaker cabinet, similar to the old Watkins "Dominor" amp introduced some years later. With the advent of Rock 'n' Roll, one of the five guitarists in my group bought a DeArmond pick-up to transform his "Spanish" into an "Electric" guitar. This automatically updated the group, and qualified us as part of the then "new wave" of music. Suddenly we were a Rock 'n' Roll band. The poor little home made combo didn't last long, as eventually it was being called upon to amplify three "Electric" guitars, one "miked up" Tea chest and a vocalist, and this was a similar situation that hundreds of emerging Rock 'n' Roll bands around



50 watts at Shea Stadium

the country found themselves in.

This sudden, explosive demand called for a rapid advance in electric instrument amplification. With the introduction of the bass guitar, as a new and innovative instrument in the early fifties, its individual amplification requirements also began to be catered for. It was always treated as secondary to the main market of six-string electric guitar amplification, and many manufacturers included a bass amp and speaker enclosure, purely as a token gesture, almost as an afterthought, with the shining exception of the legendary "Fender Bassman". This piece of equipment was an unattainable dream to most British bass guitarists as for many years you couldn't buy it in this country, but had to send to the States direct. The prohibitive price, which included hefty import duty, put it completely out of reach, unless your father was rich.

The "Linear Concord" amp continued to be widely used, and

all sorts of weird and wonderful speaker enclosure concepts were evident, from huge "wardrobe" scale cabinets containing usually 15" or 18" drivers, sometimes these were partly filled with sand, to smaller boxes containing various single or multiple speaker sizes. In other words, most of us had different ideas regarding bass guitar sound and projection, and unconsciously we were experimenting.

### Vox Beatles

In the early Sixties in this country and subsequently around the world, Vox took a firm hold of the market and their "Foundation" and "T60" cabinets became almost standard professional equipment powered by their 50 watt valve amp.

These combinations have stood the test of time, and can still be seen in use with semi-pro and club/cabaret outfits in the smaller venues around the country. Remember Paul McCartney refusing to change from his one T60 cab containing

1-15" and 1-12" speakers, powered by the 50 W amp, even when Vox designed and built the 100 W "Beatle" amps and speaker enclosures, especially for their open air gigs in Australia and the USA.

This was all he used for the famous Shea Stadium 55,000 seater gig in New York for instance. Remember, nothing was miked in those days, as PA systems were purely "Public Address" systems designed only for voice reproduction. Even top recording studios had only four channel mixers, so you can imagine the lack of sophistication offered by normal "house PA systems".

What chance had the poor bassist then, at increasingly large venues, brought about by the British Rock music boom of the mid-Sixties, which suddenly engulfed the world, spearheaded of course by the Beatles.

Enter The Who, and in particular John Entwistle with regard to the topic being discussed. This group more than any other, rapidly pushed the



boundaries of onstage rock band amplification forward in terms of power capability and sophistication, due initially to the excessive volume demands made on inadequate equipment.

### Gut Blasting Who

Much of the appeal of the early Who was due to Townshend's original approach of screaming volume with controlled feedback and outrageous aggression, coupled with Entwistle's crunching gut-blasting bass lines and chords, which formed the backbone of the band's onstage sound, especially when Townshend was destroying his instrument and equipment, leaving the bass alone playing both riffs and chords under the screaming of the dying guitar.

I remember playing at the then Richmond (now Reading) Jazz and Blues Festival in 1966 with the Who headlining, and gasping at the sight of four T60 cabs lined up behind Entwistle, powered by four 50 W Vox valve amps. Two hundred watts for bass alone was unheard of in those days, and at later gigs he was using 6 Marshall 4x12 cabs powered by 3 Marshall 100 W tops. By around 1968 it was starting to get a bit silly, with bands trying to outdo each other equipment-wise. This was due, in my opinion, to the comparatively slow development of the professional concert PA system as we know it today.



Townshend: screaming volume

As the great British groups of the middle to late Sixties frequently toured the USA the more rapidly increasing standards of concert sound technology evident there generally, were introduced here.

The huge sound systems used in the generally larger venues across the Atlantic (comprising monster bass bins of varying internal design, mid range units, and high frequency horns or tweeters) helped to balance the growth of onstage backline amplification, and for bass especially, lift the burden of filling a 20,000 seater indoor arena with terribly unsympathetic

acoustics for bass, from the bass amp and speakers behind the musician.

The general research and experimentation involved with PA bass bins then has, in my opinion, benefited the bass guitar speaker enclosure market.

The various front-facing, rear-facing, folded horn cabinets available at both ends of the price range today, are direct descendants of early PA bass projection research.

### Small Gigs

There is a world of difference between large concert and small room gigs. I feel the overall standard of speaker design and quality, plus enclosure, efficiency to size capabilities, have shown enormous improvement over the last eight years or so. With a single Acoustic 301 or Ampeg 18" bass bin powered by various amp combinations preferably of their manufacture, the bassist has an extremely versatile yet portable piece of equipment for effective use in the smallest to quite large semi-concert venues.

I prefer the Acoustic 301 bin to any other, after years of trial and error experimentation with most makes and various set ups. This enclosure with its 18" Vega speaker has amazing depth and "throw", and must be used carefully, especially in small halls.

If you're standing right on top of it, which on postage stamp stages is often unavoidable, you cannot efficiently monitor its power, and your internal balance may sound fine to you but ten yards out into the audience, you may detect a few white faces, drained of blood, and even someone being physically sick!

### Projection

For this reason I prefer to use a combination of bin (or bins) depending on the size of the venue, and 4x12 cabinets, preferably driven by a valve amp. The valve versus transistor argument is a whole different trip which I'll discuss at a later date.

My view is that for an "ideal" bass sound, more high frequency characteristics of front facing 12" speakers, together with the deeper bass projection of 15" or 18" bass bin enclosures add richness and "throw" to fill a venue with a pleasing and pulsating bass sound. Most of my contemporaries have settled for this type of set up, with varying concepts of higher frequency reproduction.

Some players use horns instead of speakers, and although to me this gives a hard, clinical unpleasing sound at the top end, this is purely a matter of personal taste. Most of the top bassists in the first division of world touring rock bands, have bass rigs especially built to their individual requirements. None of it is production line or marketed product. What they have in effect is what most bands would class as a sizeable sophisticated PA system for bass alone.

All this probably has little to do with the requirements of the



Entwistle: a pioneer

average readers of this column, and if you'll bear with me, and treat this month's offering as an introduction to this general topic,

next time I'll discuss my thoughts on the realities of bass guitar amplification at other levels.



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# LOWE Profile

Nick Lowe has become a cult figure on both sides of the Atlantic. The British singer/songwriter/producer is very much a Pied Piper character on the rock scene with fingers in many pies and success never very far away.

Lowe began his musical career playing bass with pop band Kippington Lodge in the Sixties, the nucleus of which went on to form Brinsley Schwarz in 1970. In their early days, they were best known for the hype which surrounded their debut at the Fillmore East and subsequent commercial flop. The band then went to the other extreme and were largely responsible for the growth of the "pub rock" circuit on which they became legendary performers.

It was during this period that Lowe largely formed the basis of his approach to songwriting and recording, and when the band eventually split around 1975, this was the area he moved into. Nick became one of the founders of Stiff Records, a totally independent label formed at the beginning of the punk explosion. Their first single release was in fact *Heart Of The City/So It Goes* by Nick Lowe, which wasn't a hit but aroused a certain amount of interest within the business.

Nick's biggest success was to come with another Stiff artist, Elvis Costello, whose first album he produced; he also produced the very first punk album by British band The Damned. Lowe finally broke away from Stiff and went with Costello to a new label, Radar Records, where he produced Elvis' second hit album. While at Radar, Lowe finally managed to put the finishing touches to his own solo album "Jesus Of Cool" which proved successful and yielded the hit single, "(I Love The Sound Of) Breaking Glass".

His producing efforts include work with Dave Edmunds and Graham Parker — he even managed a number one hit in Japan with a song about teenybop group, The Bay City Rollers under the pseudonym of The Tartan Horde.

On the surface, Lowe would appear to scoff at attempts to intellectualise pop music and regards it all as "disposable"; however, a close look at his work would reveal his obvious musical tastes and affections.

*Wasn't "So It Goes" a hit?*

No, that was the first Stiff single and because it was all mail order then, we didn't have any distribution. We sold 10,000 which I was amazed at, because that's good sales for a single in England.

*Was "So It Goes" consciously "Reeling in the Years"?*

No it wasn't. In fact, I wrote that song when I had a job tour managing for Graham Parker and the Rumour on their tour supporting Thin Lizzy in the States. The Lizzys, well, Phil Lynnot, had just written that song "The Boys are Back in Town" and I loved that song when I first heard it. So, hearing it so much, both when they played it on stage and at sound checks and things like that, I wrote the first verse about Brian Robertson in the Lizzys. You know they called him The Kid and he had hundreds of amplifiers and he was always screaming at the roadies and everything. And I was just wandering around, doing my business, getting the group onstage, and I just started humming this thing, and it's got this descending (sings): da da da da. It wasn't until later that someone said, "Oh that's just like Steely Dan," but I do that, you know. I crib from all sorts. I used to imitate people's styles; I just steal from them nowadays.

*Is Dave Edmunds on "The Tartan Horde"?*

No. *He's on the Disco Bros. though?*

Yeah he produced it and he played guitar on it as well. Him and me played guitar on it, I played bass. Actually Terry Williams played drums on it as well. But I didn't know Terry so well then, as he was still with Man in those days. *So the Tartan Horde is all you — or different people?*

Well the first one is all me. "Bay City Rollers We Love You" was the one that was No.1 in Japan.

The b-side of "Bay City Rollers We Love You" was the track with a stupid Moog synthesizer solo over the top of it, an instrumental version. And the b-side of "Rollers Show" was a thing called "Hello Rollers", which was like the "Hallelujah Chorus" except instead of going "Hallelujah" it went "Hello rollers, hello rollers, hello rollers". It was just a Gary Glitter sort of drum thing. But I don't know what's happened to that. *The EP with the Disco Bros. has been re-released.*

Yeah from Holland. It was never released in England, they put it out in Holland. And apparently it's selling loads and loads of copies. It's amazing because it was done under a pseudonym and it was "conscious crap". I did it on purpose just to see if I could fool people. It's just to tease people. You know, I like doing that sort of thing.

*It must be a lot of fun to have those outlets for whatever crazy ideas you have.*

Yeah it is. It's great fun. But I'd have never put that out in England under my own name because I would've got so much stick. But over here people understand the spirit in which it was intended

much more than English people. I'm really surprised — *everybody* has talked about that. In fact, I've met a lot of people who say they really like it, as well.

*Your set is much more rock and roll than the album.*

Yeah it was that way because I know from my years with the Brinsleys, that when you're a support group you very rarely get a sound check. We didn't get a sound check last night; we've only had two or three this whole tour.

But it's very hard to fuck up the sound of a classic rock and roll group: just three guitars and drums. That's the classic lineup of a rock and roll band. It's very hard to fuck it up, so I on purpose decided to play the tracks from the album which are the most rock and roll, and the ones that are easiest to do, just to cut down on the risks I had to take.

Somebody who likes a song like "Tonight" on the album, which has a lot of acoustics, is going to be disappointed because I ain't going to play it. If I did play it, they'd probably think, "Oh, that's really rough."

If it isn't spot on, it's going to sound really duff. I thought it best just to play it real safe and just do those ones. Because Elvis is top of the bill, the people coming along to the shows are a very Anglophile audience. They know who I am. It's much better supporting Elvis than if I was supporting Kiss or someone like that.

They also know who Edmunds is so I can do "I Knew the Bride" and things like that and people are more likely to know them. By the mere fact that they're into Elvis, they generally know something about me and Edmunds, as well.

*Don't you get tired of those songs?*

No, I love them, I really love them. And it's not so much each song, it's the whole thing that I get off on. There's a sort of a shape to it so it becomes sort of one song almost. I like sets that aren't interrupted too much, so it's almost one long noise. Even though it's different songs. The English groups started this banging into numbers, you finish one and go — *blam!* — straight into the next one. It started in England because it doesn't give people a chance to boo. That's why English groups started that style of banging straight into the next one. It's no good, not for rock and roll, not for two minute numbers. You've got to whack, whack, whack, whack, whack, you've got to keep on churning them out, that's the thing to do. You know all that (imitates guitar tuning): *dee-uhn, dee-uhn, tuning up shit, that's just not on at all.* You've got to get all of that stuff out of the way and get on with it.

*If it wasn't Halfway to Paradise" that*



# IRA KAPLAN TALKS TO THE JESUS OF COOL

*made you leave Stiff, what was it?*

Well it was me and Elvis and Jake (Riviera) who left Stiff and me and Jake started Stiff. In order for me to explain why I left, I have to tell you about why we started it really. Jake and I started Stiff because there wasn't anything else around we thought, any other record companies around that knew what was going on. There were all these talented people around who couldn't get deals who are now starting to get really popular. You know people like (Ian) Dury and Elvis and Graham Parker as well. And we figured that all these A&R guys, these record companies all had cloth ears, because they were signing up these dreadful groups who were just reincarnations

of Led Zeppelin, reincarnations of Queen, or Yes, or all those groups which I don't like.

They were just signing up all those groups, not noticing that what was under their noses was something completely new. You know, like my stuff – I'm really into rock and roll as a basis, rock and roll, and pop music. It's all been done before, the chords have been played before, but it's the attitude with which you play it.

I thought that all these people had cloth ears. Me and Jake thought, "God they can't see these people with a whole new attitude and style." Rather than sign with a major record company, we thought we'd try it ourselves. Everybody said it

couldn't be done, in terms of hit records; the majors have it sewn up, an independent label would never do it. But, the records that were made by the people we signed to Stiff records were good records. They were exciting records the way that pop music should be. That, and also Jake's talent for creating a sort of style and demand. He's very clever at that; it's a media thing.

By that combination Stiff became very big. And like all big things that start from nothing and then become big news, you start attracting hangers-on and people like that.

I felt that Stiff records was becoming very cultish and elitist. You know, it was becoming a very snobby sort of in-crowd club, which I don't like. It's a very fine line that I myself feel I have to walk between wanting to keep ahead all the time – to set fashions instead of following fashions, or set styles and trends – but also making sure you don't leave your audience behind, that you don't look down on your audience.

It's a very fine line, because you can turn into a musical snob very easily, you know by thinking, "Oh that was *last* year's thing, now I'm onto *this* year's thing," and I don't want to do that. I don't feel like a hermit or you know, genius is pain or anything like that. I don't feel *at all* like that. So I just thought we proved our point. Everyone said we couldn't get hit records and we did. It just wasn't fun anymore.

In order for me to stay in this business (there's much easier ways to make a living you know), it's got to be fun. That's the major thing I think about. I've got to enjoy it and if I didn't enjoy it, I'd get out straight away. You know I don't aim to stay in this business for very much longer.

I just want to make my pile and get out because I think there's nothing more pitiful than someone who's just lost their grip. At the moment I've got my finger on the pulse of what's going on. But it doesn't last forever, there's kids all the time that are coming up who will do it much better than me.

As soon as that happens, I'm going to get right out of the way, because I think it's pathetic when people slide downhill when they haven't got it anymore. They're just in the way, so I'll get out of it.

*You've progressed and you've changed over the years. Don't you think you can keep adapting?*

While I can, I will. But what I'm saying is that, as soon as I feel that I'm losing my grip on it, either through boredom or through loss of enthusiasm for it or something and I'm just sort of sitting back and picking up royalty checks for "So It Goes" or something –





I'll get out of the business.

At the moment, as I say, I think I know what's going on in the music business.

I mean there's millions out there who disagree with me, but I couldn't care less about that. All I can do is what I think is a good idea at the time. And it seems to me that the public's tastes are changing, not mine. I've always done what I thought was good. I've made a lot of crap records as well, but at the time I believed in it, and that's all I can continue to do.

*Are there specific releases on Stiff now that you don't endorse, or was the problem strictly behind the scenes?*

Obviously there's some records they put out that I didn't like that much, but generally the ones that I had something to do with I thought were great (laughs). *You said that you think you're doing nothing new.*

Not in terms of C, Am, F and G.

*But the words are new.*

Yeah, the attitude and the style is new I think. That's the thing that links me with Elvis and Ian Dury and even Graham Parker. Even though the actual music may be different, we meet at a certain point. All of that stuff is linked to the same thing; an attitude and a style. And the words, I suppose... well, for instance, my words are much more fatuous than Elvis' are. You know Elvis does write extremely good lyrics. He'd hate it if he heard me say this, but he is a poet; you could read his lyrics as poetry, some of them especially. But my things are much more light-hearted and tongue in cheek than Elvis' are. Much more throwaway stuff.

*So would you say that all of you are doing Pure Pop for Now People?*

It does seem to be a sort of pop – yeah, pure pop for now people approach. But I guess it is, because it's easy to understand. It's not an effort to get behind it. If you don't like it, fair enough – try something else.

It's no work of art or anything like that. It's trash music; it's garbage music. But if you treat it with the attitude that it's garbage music, trash music, you're much more likely to come up with something lasting I think.

When Elvis Presley made some of his early recordings, he wasn't labouring over it like it was art, and they'll be playing those records in 100 years, probably. Admittedly, they'll be very cranky, but I don't think they'll be playing Moody Blues albums in 100 years.

*Do you prefer producing to making your own records?*

No, I think of the three main aspects that I'm involved with in the music business – producing other people, performing and making my own records, and songwriting – exactly the same because I have such a low boredom tolerance.

I have to be very involved in whatever it is I do, so I get just as excited with an

Elvis album going in the charts as I do if one of my records goes into the charts. They're exactly the same to me because I feel proud of it, I feel proud of my contribution to that, just the same as if it was my song – it doesn't make any difference.

*What is your contribution to Elvis' records?*

I understand the way he likes to work, musically, probably better than anybody else. So I can translate what he is trying to get across. I can make it actually sound like that, the way he wants it, which probably another producer wouldn't. He'd probably be too hung up on, "Aw, the kids aren't buying this sort of sound nowadays, Elvis. I think you'd better do this."

I translate what he wants. It so happens that we both have a modern outlook on it as well and we want to make modern records. His stuff is very modern in its approach. I can translate that. My talent is in translating what the artist or the singer wants to get across so the butcher, the baker or the candlestick maker can understand it. You don't have to be a musician to understand it.

It's a modern outlook. I mean if you're talking in actual examples: I help him arrange the tunes, but his group the Attractions do that as well – they're very good too. I do a lot of singing on his records, harmony singing, things like that. I play a bit of acoustic guitar, odds and sods. But basically it's to get his impression down on vinyl.

*Was it your idea or his idea or a shared idea not to put credits on the records?*

I think that's something we all felt. All those reams of "Thanks to my Auntie Doris for making the boys a cup of tea" or "Thanks to the postman's brother for buying this record"... it's so fucking boring. Again, it leads up to that very in-crowdsy thing which I don't like at all. Also, the funny thing is, it works the other way: the less you tell people about things, the more they want to know.

Probably if you did put reams of credits down, people would just go, "Oh, yes...", but if there aren't any, people go out of their way to find out what they are.

*Who is on Elvis' first album?*

An American group called Clover. They played on "Rollers Show" as well. They were in England a lot. Their guitarist, John McFee is quite well known, he plays on a lot of Van Morrison stuff and Steve Miller stuff. He did the pedal steel on two of Van Morrison's albums, I think, and he plays a lot with Steve Miller. He's a fabulous guitarist. They're from San Francisco. We couldn't announce them because the musicians' union in England would've jumped on them while they were over there for doing it. You know, Americans playing, taking jobs away from English guys.

*How about your record?*

Oh it's all sorts of people. Whoever was available at the time. The Rumour

played on two tracks.

*"Breaking Glass"?*

Well, that's Steve Golding, the drummer from the Rumour – he plays on nearly all the stuff I've done since I left the Brinsleys. "Breaking Glass" was the drummer and the bassist from the Rumour. I played guitar, Bob Andrews, keyboard player from the Rumour, played that great piano stuff. So it's individual members of different groups. Ian Dury's group played on one track as well. Ian Dury played the drums for Wreckless Eric and he's great as well, because you know he's got polio, he's a cripple. But he's dynamite, he's really good.

*Are all those guitars on the album cover yours?*

No. I borrowed them off various people. I borrowed most of the clothes off various people as well. I do have quite a lot of guitars. I really like collecting those strange looking guitars, but a lot of them I borrowed off Edmunds or whoever was around.

That's one good thing about knowing all those guys from the pub rock days: if you want to get your hands on a Rickenbacker 12-string and you know somebody who's got one, you just give him a ring and you can borrow it.

*In your band, you all use just one guitar each?*

Yeah, they all sound the bloody same, you know.

*I've always wondered about that.*

That's bullshit. Of course they all sound the same. You can plug into anything. Rockpile especially, we have a real good thing going for us because we can go to Holland and Germany and places like that, as we have done in the past, and we just take our guitars on the plane with us and turn up and there are amps there.

It doesn't matter – all those amps all sound the bloody same. It's all horseshit, that stuff: "I must have my amp and my guitars... oh no, the action's not quite right... no, I just can't play this." Bollocks, that's rubbish. This way there's no embarrassing road managers, no unpleasant blowouts on the motorway so your equipment gets there late – you just turn up, where's the amp, show me a hole to stick the plug in. You make far more money doing that than if you're lugging all your gear all over the place. So, I couldn't give a shit. I'm more interested in what they look like, really. If they look good, then it's a good enough guitar. They all sound the same.

*What about playing all the instruments on a record. Isn't it harder to do it that way?*

No, it's easier. It's not as satisfying either. I started to do that because I couldn't afford to pay people to do it. My instrumental prowess is very limited, in fact. I can just strum rhythm guitar and I can play bass. I know where to move my fingers – whether to go on the thick ones or the thin ones, you know, up





MADE IN GERMANY

**DC 100**  
**Dynacord Organ Speaker**  
The super-small, handy, high-performance organ system. Brilliant reproduction of highs with horn-driven system, radiation in all directions with treble rotor. Soft, rich bass with rotating polystyrene drum. Space-sound effect with 2 special rotor systems. Power: 120/80 watts.  
2 input channels, separately controllable volume, bass and treble.  
**Channel I** with 2 decoupled inputs;  
High input = 15 mV, low input = 30 mV.  
**Channel II** with 1 input jack, sensitivity 30 mV.  
Dimensions: without casters, 24" x 27" x 20"  
Weight: 66 lbs.

**DC 300 E**  
**Organ Speaker System with Fully Electronic Space-Sound for Bass and Midrange**  
Radiation with 15" wide range speaker, oriented towards the front, and supplementary piezo-tweeter. Tweeter reproduction with horns on mechanical double-horn rotor.  
With brilliant sound. Omnidirectional coverage. High S/N ratio. Two separate power amps of 120/80 watts each for bass-midrange and treble range. 2 inputs for organ (high/low) with space-sound effect. Reverb and volume controls.  
Adjustable Hammond spring reverb system can be used for channel I or channel II as desired. The organ and mix inputs can be used simultaneously. A master volume control serves for overall volume setting.

**DC 200 R**  
**2-Section, 160 Watt Organ System**  
With space-sound effect in treble and bass ranges; creates Doppler effect in upper and lower frequencies. The two speaker rotor systems are driven with separate power amps with 120/80 watts each.

**Large Hammond reverb spiral** built in, adjustable and remote-controllable.

**Bass-midrange section** with one high-performance, 15" diam. full range speaker. Sound dispersion to all sides with rotating drum. Two integral amplifiers, 2 x 120/80 watts. Short-circuit and open-circuit protected; two bass and treble controls. Two separate, adjustable and mixable inputs.

**Tweeter section:**  
High-frequency reproduction with horn system on double horn rotor with brilliant sound. Omnidirectional radiation.  
Frequency response: 30 to 20000 Hz  
Dimensions: Lower section (bass/midrange)  
24" x 30" x 20"  
Dimension: Upper section (treble)  
24" x 13 1/2" x 20"  
Weight: Total 158 lbs.

**BC 300**  
**Robust 200/300 Watt Bass Reflex Cabinet**  
Equipped with two 15" Electrovoice speakers, detachable Netlon grille, pedestal rollers and stable handles.  
Design: Plywood with black textured finish.  
Dimensions: 24" x 41" x 15"

**5010 HB**  
**150/100 Watt Bass and Organ Speaker System**  
One 15" special-design bass speaker with metal calotte insert for full bass and crisp reproduction. One exponential horn with switch for special reproduction of attack transients.  
Bass-reflex port for full bass reproduction.

**5010 E**  
**9-Step Octave Equalizer with Feedback Control**  
Suitable for instrumental and vocal reproduction. Frequency adjustments at 50, 100, 200, 400, 800, 1600, 3200, 6400, 12800 Hz,  $\pm 15$  dB.

**5010 G**  
**150/100 Watt, Transistorized, Single-Channel Guitar Amplifier**  
Built-in amplitude vibrato.  
Input can be overdriven for sound with marginal break-up.  
Built-in FUZZ can be adjusted as to volume and degree of distortion.  
Four tone controls - bass, middle, presence and treble; treble boost switch.  
Driver output for slave amp to increase power; connection for echo unit.  
Outputs: two 16-ohm or one 8-ohm (impedance 6 ohms).  
Final stage power amp protected against shorts and open circuits as well as against overheating, via thermal counter-coupling.

**5010 HG**  
**150/100 Watt Guitar Speaker System**  
Two special guitar speakers, 12" diameter, with metal calotte insert for brilliant sound. One exponential horn with switch for brilliant high-frequency and presence reproduction.  
Bass reflex ports.

**DS 201 A/2**  
**Microphone Stand**  
Upper section adjustable with clamping sleeve. 3/8" threaded connector.

**DS 200**  
**Isolating Microphone Stand (patented)**  
With foot-fall filter - insensitive to foot-fall and floor resonances.

**DS 210/2**  
**Boom Microphone Stand**  
with DS 211 boom.

**DS 255**  
**Microphone Stand with Folding Feet**  
stand shaft can be tilted up to 90 degrees.

**DS 238**  
**Microphone Mounting Bracket**  
can be clamped on music rack and stand.

**DS 235**  
**Multiple-Mike Bracket**  
fits all stands, for installation of up to 3 microphones.

**DS 215**  
**Stand Adaptor Piece**  
(Reducing threads), 1/2" and 3/8" inside, 5/8" 27 Gg. outside.

**G 5**  
**Dynacord Equipment Rack**  
Suitable for all DYNACORD amplifiers and echo/reverb units; for a maximum of three chassis.  
Interior clearance = 26 1/2"

**LHS 3**  
**Speaker Elevation Stand**  
This speaker stand is collapsible and thus easy to transport.  
Maximum extended height: 74" (lower edge of speaker cabinet).

**LHSG**  
**Stand Fork**  
This fits the LSH 3 speaker elevation stand.

**Mosquito Coupler**  
For subsequent fitting on a Mosquito cabinet. Thus two or more Mosquito cabinets can be stacked and rotated.

**DSE 100**  
**Mixer Stand**  
suitable for GIGANT 200, EMINENT 100 A and EMINENT 200.

**DS 211**  
**Boom**  
many uses, maximum extension approx. 30".

**DS 211/1**  
**Boom with One Telescoping Section**  
Max. extension approx. 28".

**SH 21**  
**Gooseneck**  
Suitable for direct connection of all microphones with standard 3-pole plug.

**SH 224**  
**Gooseneck**  
Suitable for all stands with 3/8" connector.

**MBA**  
**Active Monitor Box with Built-in Power Amp and 12" Wide Range Speaker with Calotte Tweeter.**  
Can be used on any stage for monitoring purposes. Amplifier power 60/40 watts. Tone balancing circuit for excellent reproduction in midrange and presence range. Volume controllable. 2 inputs: Input I (12 V) for direct connection to a speaker system in the PA system without impedance influence. Input II (1.55 V) for connection to a mixer with monitor output. 8-ohm output for supplementing with one MBP monitoring speaker. Two speakers can be joined into one space-saving cube for transportation.

**MBP**  
**Passive Monitor Box with 12" Full Range Speaker with Calotte Tweeter**, as auxiliary speaker for the MBA or as monitor speaker for a power amp system with integral monitor amplifier, e.g., EMINENT 200. Capacity 40/30 watts, volume controllable. Two parallel wired connector jacks for connection of further monitors.

DC 100



DC 300 E



DC 200 R



BA 300, Valve Amplifier  
300/200 Watt High-Performance Tube-Type Bass Amplifier

two inputs of varying sensitivity; gain, treble, midrange, bass and volume controls, 7-stage graphic equalizer. Output: Switchcraft, 4 ohm, 8 ohm and 12 dB, 1 studio output, symmetric, ground-free.



BA 300, Valve Amplifier

5010 B  
150/100 Watt, Transistorized Single-Channel Bass Amplifier

Wide sound variations with bass, midrange, presence and treble controls and bass-boost switch. Built-in FUZZ can be adjusted as to volume and degree of distortion. Connections for special-effects units and slave amplifier. Outputs: two 16-ohm or one 8-ohm (impedance 8 ohms). Final stage power amp protected against open and short circuits as well as thermal overload.

STAR  
150/100 Watts, High-Performance Guitar Amplifier in Carrying-Case Cabinet

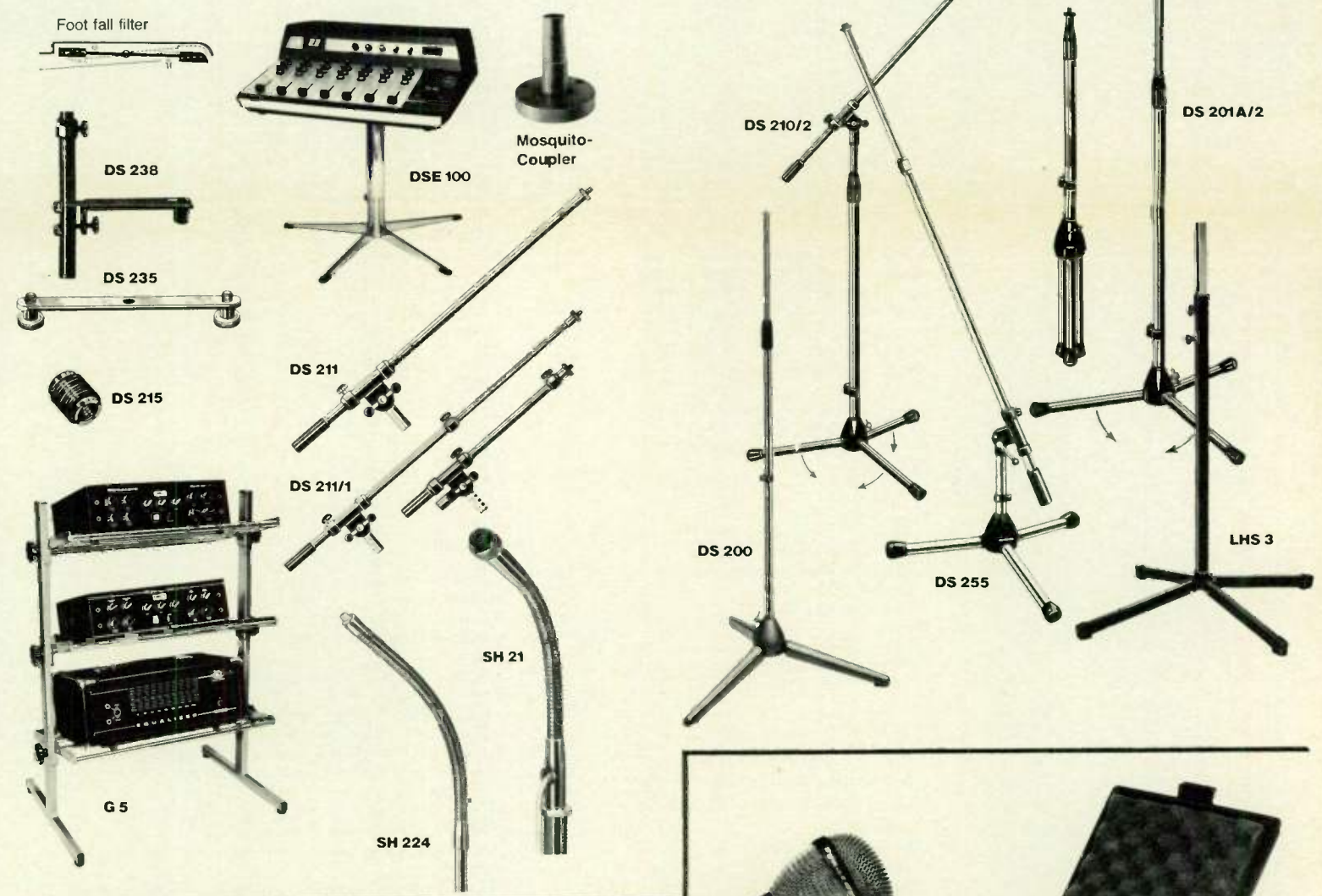
2-channel amplifier, 2 decoupled inputs per channel, (low + high), volume, bass, midrange and treble controls, treble-boost switch; 1 master volume control; channel 2 with additional vibrato and spring reverberation. The unit is fully transistorized and equipped with electronic short-circuit protection. Two 12" full-range speakers.

5010 B

STAR

5010 HG

5010 HG



DD 400  
Dynamic Studio Directional Microphone  
with wide response range, from 50 to 16000 Hz. For exacting musicians.

DD 800  
Dynamic Studio Directional Microphone  
for the very highest demands and difficult acoustical conditions, with particularly wide frequency response range from 30 to 20000 Hz and high sensitivity; hypercardioid characteristics, particularly feedback-resistant.

The DD 100 and DD 200 microphones are delivered in rugged, hard-plastic cases, foam rubber lined.

DD 600  
Dynamic Cardioid Microphone  
A top-quality microphone for the professional musician. Switchable characteristics. Built-in pop and wind protection. Extremely resistant to feedback. Frequency response range: "Bass" 25 to 15000 Hz "Medium" 60 to 15000 Hz

DD 100  
Dynamic Cardioid Microphone  
Rcuball all-round microphone. Switch in Switchcraft microphone plug. Built-in pop and wind protection. Connection cable with jack plug. Sturdy case supplied. Response range: 60 to 16000 Hz.

DD 200  
Dynamic Studio Directional Microphone  
for vocal use. Cardioid directional characteristics, switch in Switchcraft microphone plug, built-in pop protection. Connector cable with jack. Sturdy case supplied. Response range: 50 to 16000 Hz.

# Dynacord Around the World

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P.O. BOX 68  
D-8440 STRAUBING  
WEST GERMANY

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HAYWARDS HEATH  
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EIRE: JOE O'NEILL LTD.  
GLENAMADDY  
CO. GALWAY

USA: DYNACORD ELECTRONICS INC.  
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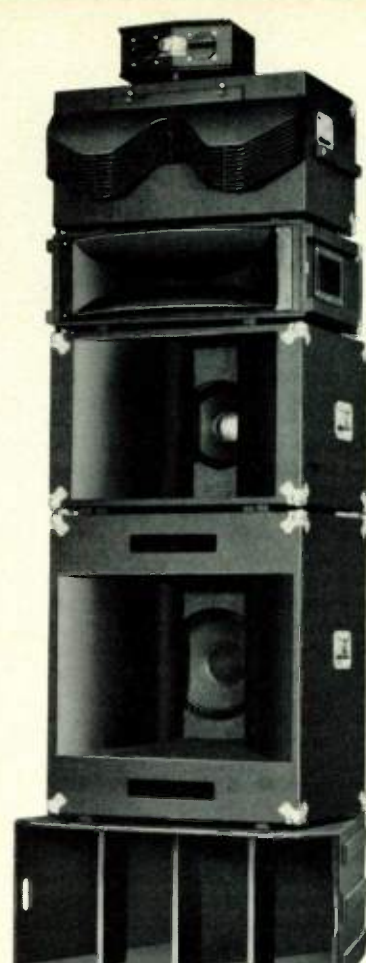


**Dynacord**

# Sound Equipment '78



Picture Above: Dynacord DRS 78 Digital Reverberation System



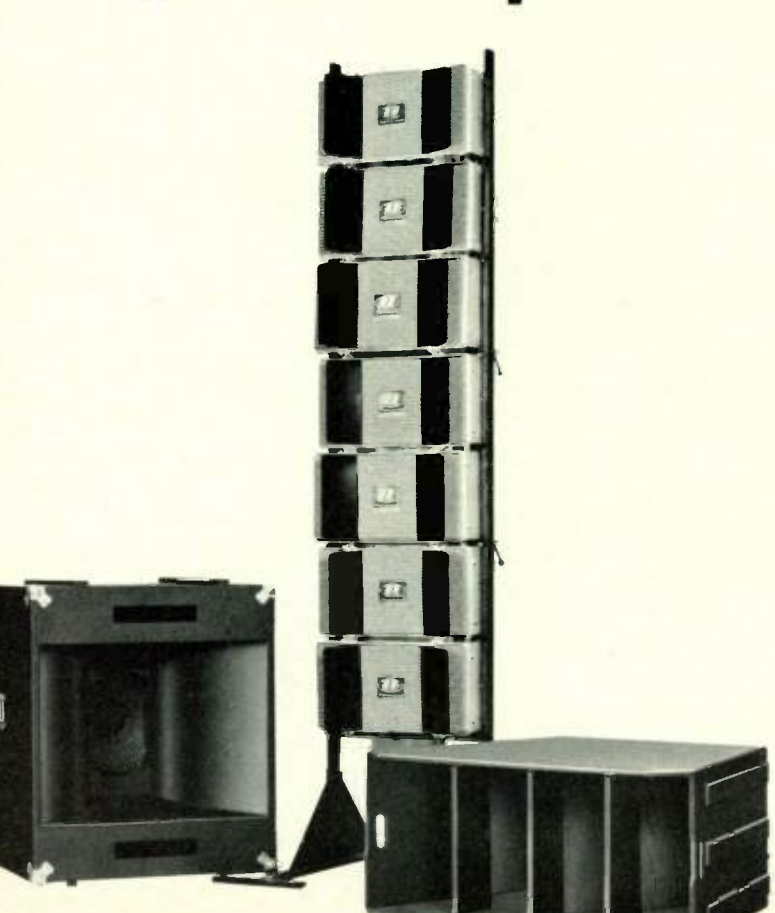
**DRS 78**  
Digital Echo/Reverberation Unit  
Approximately 140 integrated circuits, partially in hybrid technology, most modern memory technology (100,000 bit capacity), sequence control determined by program memory (5000 bit capacity), pre-programmed reverberation times.  
The computing element executes 375,000 division operations and 250,000 addition or subtraction operations per second.

**Major advantages:**

- Shatter-free reverberation
- Good signal-to-noise ratio
- Improved effect frequency range, 20 to 8000 Hz
- Memory capabilities
- Inputs:**  
Universal 2 mV  
Dynacord patch jack 15 mV  
Stereo left/right 775 mV
- Outputs:**  
Universal 200 mV  
Dynacord patch jack 1 mV  
Original stereo right/left 775 mV  
Effect-modified stereo left/right 775 mV  
Original-effect stereo left/right 775 mV

**Operational controls**

- a) Original: Vol./Bass/Treble
- b) Echo: Return/Duration/Bass/Treble/Delay 0-320 ms/3 delays pre-programmable
- c) Reverb: Return/Duration/Decay time
- d) Other: Push-button echo-reverb/Push-button Delay 1-2-3/Repeat
- Indicators:**  
Delay time in ms/Level (LED chain)/Echo-Reverb/Delay 1-2-3
- Remote control:**  
Swell-Echo return/Reverb return/Repeat Push-button: Delay 1-2-3/Echo-Reverb
- Frequency range:**  
Original 20 Hz - 20 KHz  
Effect 20 Hz - 8 KHz
- Dimensions:**  
20 1/2" x 8" x 16 1/2"



**TAM 19**  
Time Axis Manipulation  
• Stereo flanging, stereo phasing  
• Stereo pitch shifting  
• Double tracking  
• Mono-stereo conversion  
• Stereo space-sound simulation

Flanging, phasing, pitch shifting, double tracking, ambience enhancement, chorus, space-sound — it's got to the point that you can't see the forest for the trees. The basis for all these effects is time axis manipulation or, put more simply, the music 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 music spectrum, which changes in time and creates extraordinarily pleasing sound sensations. Extremely simplified, the TAM 19 consists of two exceptionally low-noise lag or delay lines, whose delay times can be modified, either parallel or opposed, in response to internal or external command control. The time-axially manipulated signals are then mixed in an effect matrix and remixed with the original via a mixing board. The stereophonic design of the system makes it possible to produce (along with a multitude of other effects) positive and negative flanging, phasing, pitch shifting — a very extreme effect — and double tracking, just as in the studio. The intensity and phase panorama results in an outstanding

## Stage-Studio

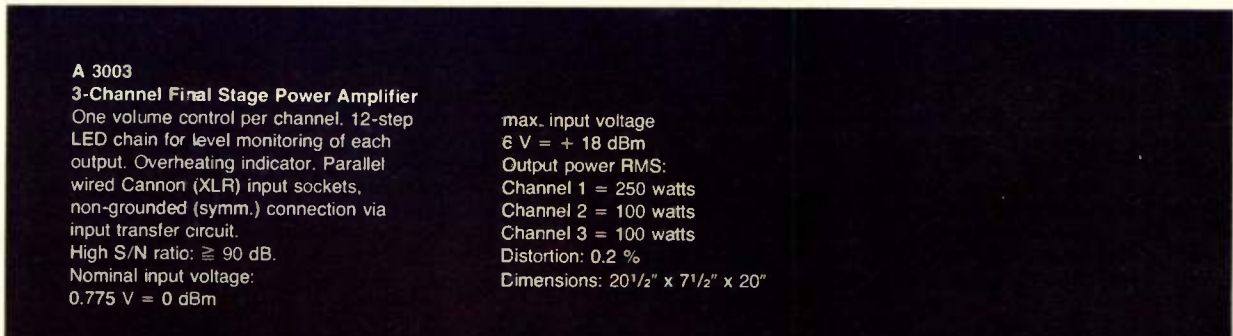
stereo effect, making it possible for every vocalist and instrumentalist to achieve completely new tonal dimensions on-stage. Studios and other professional users can also tap the time-axially manipulated signal in front of the effect matrix. Thus the whole range of special effects can be mixed on an external mixer. The TAM 19 is equipped with three internal generators for time axis manipulation — triangle, sine and AVRGD (averaged), which can be mixed one with another in any desired combination. Of particular interest here is the AVRGD generator, which uses 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. A control voltage output can be used for time axis manipulation of a second TAM 19. In this way it is possible to achieve triple channel and multiple channel effects, either synchronous or semi-synchronous. If you are interested in learning more about the application possibilities of the TAM 19, request information brochure

"Dynacord Stage Studio Series"  
— SRS 56 and TAM 19, stereo experience on-stage —  
from your dealer.

### A 3003

**3-Channel Final Stage Power Amplifier**  
One volume control per channel. 12-step LED chain for level monitoring of each output. Overheating indicator. Parallel wired Cannon (XLR) input sockets, non-grounded (symm.) connection via input transfer circuit. High S/N ratio:  $\geq 90$  dB. Nominal input voltage: 0.775 V = 0 dBm

max. input voltage  
6 V = +18 dBm  
Output power RMS:  
Channel 1 = 250 watts  
Channel 2 = 100 watts  
Channel 3 = 100 watts  
Distortion: 0.2 %  
Dimensions: 20 1/2" x 7 1/2" x 20"







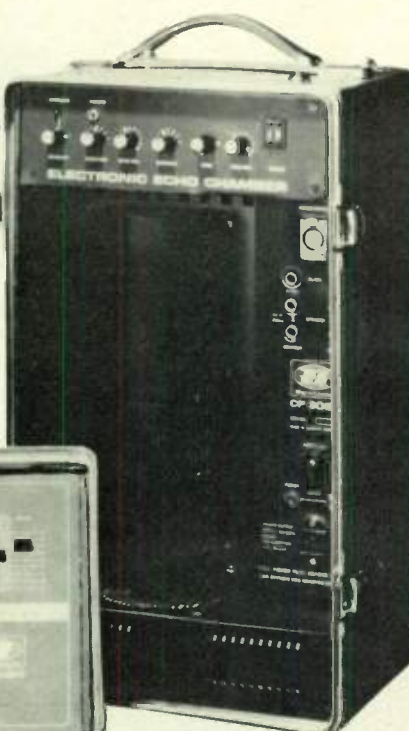
EMINENT 200



GIGANT 200



EMINENT 100 A



CP 3080

**CP 3080**  
**Compact Power Amplifier System**  
Mixer with 10 input channels, each with effect, treble, bass, and volume control. One each monitor, treble, bass and volume control in MASTER channel. Graphic equalizer with the indispensable feedback monitor at 3200 Hz.  
Lag-free level indicator with LED chain.  
The particular extra is the **electronic echo system**, equipped with an echo-time, sensitivity, echo volume, duration and echo tone control. Quick changeover from echo to programmed reverb is made with a double throw switch. Coding switch for programmed echo duration.  
The **2-channel final stage** has a MASTER output with 300 watt power and a MONITOR output with 80 watts. The final stage is fully transistorized.

**Technical Data:**  
**Final stage:**  
Power: MASTER 300 watts/4 ohms  
Power: MONITOR 80 watts/8 ohms  
**Equalizer:**  
Control range:  $\pm 15$  dB at 100, 200, 400, 800, 1600, 3200, 6400 Hz.  
**Mixer:**  
Frequency range: 20 to 20000 Hz  
Input sensitivity: 12 mV/10 kOhm  
**Electronic echo:**  
Frequency range: 40 to 10000 Hz  
Echo delay: 35 to 300 msec  
Case dimensions: 14" x 17 1/2" x 15"

**EMINENT 200**  
**220/150 Watt Compact Music Amplifier**  
Mixing board design with integral 5-head tape reverb/echo system; eight separately mixable inputs, extremely resistant to overdriving. Separate volume, treble, bass and reverb controls for each input.  
VU meter for level monitor, switchable for reverb or final stage monitoring.  
In the mixed-down channel a **7-stage equalizer** with built-in feedback monitor to suppress feedback whistle; slider volume control and echo-return control. Four speaker connector jacks for two 4-ohm systems or four 8-ohm systems; one 4-ohm speaker jack for monitor speaker.  
Integral **25/20 watt monitor amplifier**, with separate level control.

DIN-plug tape deck connector for simultaneous recording and backtracking.  
Output for connection of slave amps.  
Remote switching jack for reverb, on-off.  
Fully transistorized power amp stage, short-circuit and open-circuit safe; thermal protection.  
Accessories:  
Stand DSE 100  
Carrying case TK 100  
The TK 100 carrying case is supplied with the unit but is charged separately.

**EMINENT 100 A**  
**120/80 Watt Compact Power Amplifier**  
Mixing board design with integral 5-head tape reverb/echo system; six separately mixable inputs, extremely resistant to overdriving. Separate volume, treble, bass and reverb controls for each input.  
VU meter for level control switchable for reverb or power amplifier.  
Mixed-down channel with sliding volume control, bass, treble, and echo-return controls.  
2 speaker jacks for two 8-ohm systems  
1 4-ohm speaker jack for monitor speaker.  
Integrated, independently controllable **25/20 watt monitor amplifier**.  
DIN-plug tape deck connector for simultaneous recording or backtracking.  
Output for connection of slave amplifiers.  
Remote control switch jack for reverb, on - off.  
Fully transistorized final power stage, short-circuit and open-circuit protected; overheating protection.  
Accessories:  
Stand DSE 100  
Carrying case TK 100  
The TK 100 carrying case is supplied with the unit but is charged separately.



**EMINENT II**  
**110/80 Watt, 4-Channel Mixer/Amplifier**  
6 inputs, 4 of which can be separately mixed. Separate volume, treble, bass and reverb control for each input. Volume, treble and bass control in summation channel.  
Connection for echo/reverb unit; VU meter for level control.

**ECHOCORD MINI**  
**Echo-Reverb Unit**  
with tape loop and sliding playback head.  
2 inputs; separate tone control for original and echo-reverb signal.

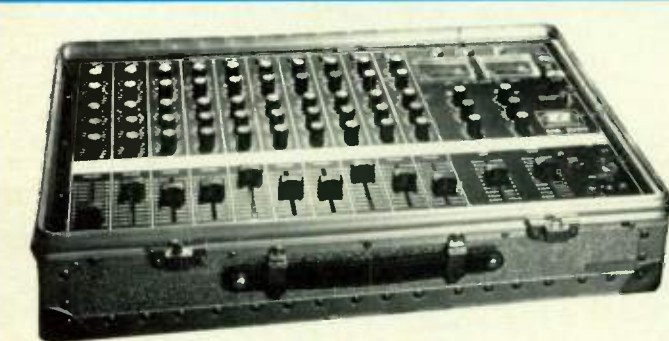


EC 280

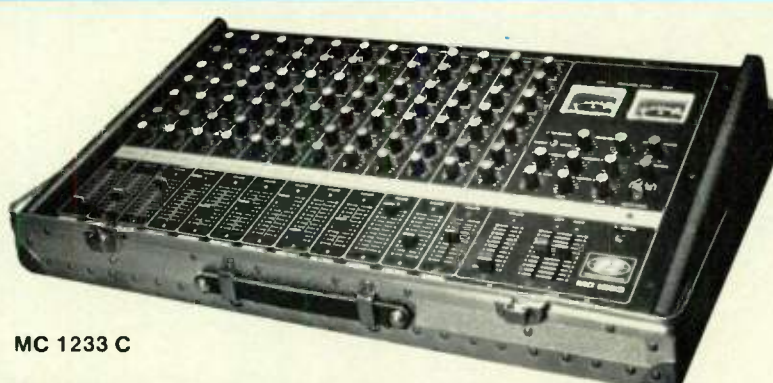
**EC 280**  
**Fully Electronic Echo and Reverb Unit**  
Maximum echo interval 280 msec;  
echo and reverbation programmable with push-buttons; quick switchover from echo to reverb;  
speed control to adjust echo interval and reverb duration.  
Chorus generator to produce special effects.  
Universal input, universal output; inputs and outputs for mixer, etc.; patch jack for Dynacord amplifiers.  
Direct signal accessible with VKKSM 3 special patch cord.  
Foot switch jack for remote control of echo/reverb and chorus.  
Chorus generator makes it possible to create special effects such as 6-string into 12-string, soft reverb or echo with random generator.



EC 504



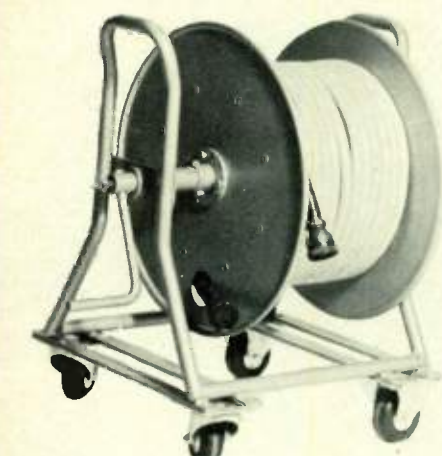
MC 1030



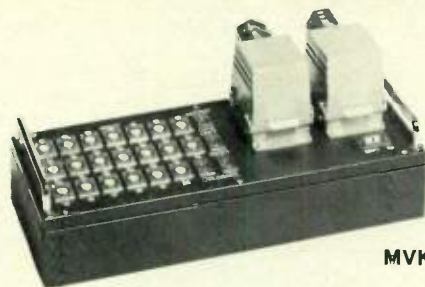
MC 1233 C



MC 20/8/2



SKW



MVK 30



MVK 21

**MVK 30**  
Stage microphone junction box.  
20 microphone inputs  
2 outputs, right-left  
2 outputs, foldback  
1 multicore plug for connection of cable from remote board.  
1 multicore jack.  
(Plugs illustrated not supplied with unit.)  
Switchcraft sockets at all inputs and outputs.

**MVK 21**  
Stage microphone junction box.  
12 microphone inputs  
2 outputs, right-left  
1 output, foldback  
1 multicore plug for connection of cable from remote board.  
Switchcraft sockets at all inputs and outputs.

**SKW**  
Cable drum cart for remote board cable.

**SK 21 A**  
Remote board cable, 27 yards long, for connection to mixer MC 1233 C.

**SK 30**  
Remote board connector cable, 27 yards long, for connection to MC 20/8/2 mixer.

**EC 504**  
**6-Head Echo/Reverb Unit with Endless Tape Loop**  
8 toggle switches make possible a wide variety of echo/reverb effects; ECHO/REVERB selector switch for quick changeover from echo to reverb; echo/reverb switching with foot switch supplied.  
1 input channel with volume, bass, treble and reverb control;  
2 input jacks with varying sensitivity.  
Controls for the echo channel: echo/return (volume), echo/bass, echo/treble, echo/duration (length); level control with VU meter and LED peak indicator; large Pabst external-rotor motor.  
Separate echo inputs and outputs with level controls.  
Frequency ranges:  
Original 20 to 20000 Hz  
Echo/reverb: 50 to 12000 Hz  
Echo duration:  
75 msec, 150 msec, 225 msec, 300 msec.  
Inputs: high = 5 mV, low = 15 mV  
Standard accessories (supplied): 1 foot switch, 1 VKKS 1 stereo jack cable

**MC 1030**  
**10-Channel Stereo Mixer for Vocal and Instrumental Power Amp Systems**  
10 microphone inputs with jack plugs (nonsymmetrical), one bass, treble, foldback, panorama, echo-send and volume slide control for each input.  
Distortion reduction at input.  
**3 summary outputs** (jack plugs) with separate controls for right-left-foldback. The right/left output channels have separate bass and treble controls.  
One echo return control.  
Max. output level: 0.775 mV = 0 dBm  
Distortion reduction in master channel.  
Output right/left modulation monitoring with 2 illuminated VU meters.

**Echo looping jack**  
**Stereo tape deck** - DIN connector for simultaneous recording and backtracking

**MC 1233 C**  
**12-Channel Stereo Mixer for Vocal and Instrumental Power Amp Systems**  
12 symmetrical microphone inputs each with one foldback, level, bass, presence, treble, panorama, echo and volume control. 3 outputs with separate controls, right-left foldback; all 3 outputs have separate bass and treble controls. Inputs and outputs equipped with Cannon (XLR) plugs.  
Output level switchable from 0 dBm to +6 dBm.  
2 echo-return controls, echo jack serves for connection of stereo tape deck for mixing in backtracking.  
Monitor system switchable for pre-monitor of foldback summary (mono), pre-monitor of right/left master (stereo), monitor of right/left master (stereo) and monitor of foldback output (mono), with simultaneous monitoring with stereo headphones, optical monitoring with two VU meters.  
Further connection options: docking system for sub-mixer, echo unit, stereo tape deck with prior level adjustment.  
The following accessory sets are available for this mixing board:  
90 056 Signal source input, high-impedance (stereo)  
90 055 Signal source input, high-impedance (stereo)  
90 054 Phono, magnetic (stereo)  
90 058 Output transmission input for 0 dBm/+6 dBm, symmetrical.  
Dimensions: 30" x 7" x 19"

**MC 20/8/2**  
**20-Channel Mixer for Studio or Stage**  
The MC 20/8/2 is a high-quality mixer for professional use. The input modules are located in groups of four on a common face panel.  
The MC 20/8/2 can be utilized in power amp systems or studios. As an international-standard PA mixer, this unit is the "brain" of any system, as both Dynacord PA systems as well as those of other quality manufacturers can be connected on both input and output sides. The MC 20/8/2 was conceived as a multi-track mixer for studio use. This system is distinguished by the following features: microphone input with Switchcraft plugs or line-in with jack plugs with separate electronics.  
In addition to controls for adjustment of input sensitivity, additional damping possibility with -20 dB push-button. Low cut (push-button controlled) to damp all frequencies below 80 Hz; triple tone control with infinitely variable middle frequencies, two each effect and stage monitor channels (foldback), 4 stereo sub-groups, which makes it possible to comprise various channels from an instrument or group of instruments (keyboards, drums, etc.) or voices into one stereo group each.

**Controls, each channel:**  
Sliding volume control  
2 foldback-send controls (rotary)  
2 effect-send controls (rotary)  
Panorama control  
Channel "On/Off" switch (push-button)  
4 sub-group selector push-buttons  
Channel pre-fade listening, push-button  
Channel overmodulation indicator (LED)

**Master section:**  
8 slide controls for 8 sub-groups (4 left, 4 right)  
2 effect send and return level controls  
Foldback level control  
Treble and bass controls as for input channels  
Level control 0 - 10  
Master fader L - R  
Master bass-treble L - R

**Outputs:**  
Sliding level control  
Bass/treble control as for foldback.

**Headphone monitor:**  
Level control  
Switch for master, PFL channel or one of the sub-groups.

**Modulation indicators:**  
2 VU meters, switchable from master to sub-group.

**Connections (on rear panel):**  
All mike inputs = XLR plugs, symmetric  
Line-inputs = jacks (mono) non-symmetric  
2 effect send and return = jacks  
Foldback L - R  
Master L - R  
Multicore connector plug  
16 sub-group breaks, symmetric.



MOSQUITO



DT 83

**MOSQUITO®**  
**120/80 Watt Vocal and Instrumental Speaker System**  
Eight 4" DYNACORD heavy-duty full-range speakers ensure transparent and homogenous radiation over the entire frequency spectrum. Two movable deflectors (90° arc).  
A power-pack that's always ready for use and very easy to transport. In rugged, lockable aluminium flight case with flange for elevating stand. Detachable protective cover.  
("Mosquito" is a registered trademark).

**MOSQUITO® S**  
**220/150 Watt Vocal and Instrumental Sound System in Aluminium Flight Case**  
The sound that overpowers. Eight 5" special-design full-range speakers and two piezo-electric horn tweeters ensure linear radiation across the full spectrum, from 40 to 20,000 Hz. The special geometry of the resonator panel achieves a radiation arc of more than 180°.  
("Mosquito" is a registered trademark).



MBP  
MBA



MOSQUITO S





# Radio-Series

**SRS 56**  
Stereo Reverberation System

- Stereo echoes up to 560 msec delay time
- Stereo reverberation
- Conversion from mono into delay time stereo signal
- Parallel mode and tape echo simulation
- Independent access to the delay lines for power amplifier and studio applications

Every artist knows the problem: At the sound check in an empty hall the sound is rich; he hears himself and thus can monitor his performance accurately. In the evening the sound evaporates; everything sounds dry and spotty, the room seems to have disappeared. The explanation is relatively simple: In an empty hall, the artist hears the acoustic reflections of his music, giving him dependable acoustic feedback and accurate monitoring. With the auditorium full, the room acoustics are damped sharply — the sound is thin and monitoring possibilities are absent. The SRS 56 arose from the requirement to supply the artist on the stage with an acoustical sphere independent of room acoustics. The SRS 56 offers him the opportunity to design his acoustical environment personally, according to his own conception and perception. Time delay stereophonic reverberation signals are produced in the SRS 56 which — and this is

decisive — distribute the tone across the entire stage. Thus it is not a matter of simple left-right effects. The new, stereo tonal dimension which the SRS 56 offers the artist is difficult to describe in words. The artist should test the system in the most unfavorable acoustic environment — it converts the mono performance into stereo — an intimate dance club into a concert hall, a studio into a cathedral — the SRS 56 creates a special acoustic effect on the stage. In addition to the stereophonic dimension, the SRS 56 also covers every field handled by a "classic" tape echo unit. In addition a wide range of effects such as stereo pitch shifting, double tracking, etc. can be realized, which were previously possible on-stage only with expensive digital studio units. Both time delay lines in the unit are directly accessible, so that studios and other professional users can make any desired external time-delay mixes. The SRS 56 is fully electronic and completely maintenance-free. If you are interested in learning about all the possibilities of the SRS 56, such as reverse quadrophonics, delayed monitor, stereo synthesis for instrument amplifiers, just request the information brochure

"Dynacord Stage Studio Series"  
— SRS 56 and TAM 19, stereo experience on stage —  
at your dealer's.

**A 2002**  
2-Channel Final Stage Power Amplifier

One volume control per channel. 12-step LED chain for lag-free level monitoring. Thermal overload indicator. Switchable for mono or stereo mode. Parallel wired Cannon (XLR) input sockets, galvanically isolated with input transformer (symm.) High S/N ratio:  $\geq 90$  dB Nominal input voltage: 0.775 V = 0 dBm

Max. input voltage: 6 V = +18 dBm  
Output power RMS: Channel 1 = 250 watts  
Channel 2 = 250 watts  
Distortion: 0.2 %  
Dimensions: 20 1/2" x 7 1/2" x 20"



**AX 303**  
3-Channel Final Stage Power Amp with Crossover

Selectable crossover frequencies for the bass-midrange and midrange-treble splits. Thermal overload indicator. Master volume control for matching to mixer output. 3 volume controls for bass, midrange and treble. 2 change-over switches for crossover. Lag-free level indication by means of 12-step LED chain. Separate power supply (line) section. Parallel wired Cannon (XLR) input connectors. Galvanically isolated inputs by input transfer circuitry (symm.).

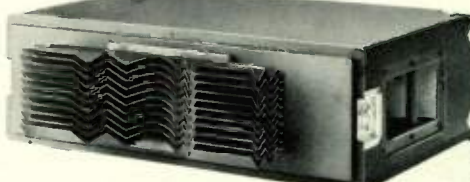
Nominal input voltage: 0.775 V = 0 dBm  
max. input voltage: 6 V = +18 dBm  
S/N ratio:  $\geq 90$  dB  
Transition frequencies — crossover: Bass-midrange 400/800 Hz, switchable Midrange-treble 4000/8000 Hz, switchable  
Crossover:  $\geq 50$  dB  
Output power RMS: Bass 250 watts  
Midrange 100 watts  
Treble 100 watts  
Distortion:  $\leq 0.2$  %  
Dimensions: 20" x 7 1/2" x 19 1/2"

**HH 100**  
Tweeter Cabinet 60/40 watts (Without crossover) with two JBL professional horn-driven slotted radiators. Driven with series-connected active or passive crossover. Extreme high-frequency reproduction for PA towers. Acoustic pressure: 108 dB at 1 watt at 1 meter. Frequency range: 8 kHz to 25 kHz Impedance: 8 ohms.

**HM 200**  
Midrange-Tweeter Cabinet with JBL fan distributor for good dispersion near the unit. Capacity: 50/30 watts (without crossover) Acoustic pressure: 107 dB at 1 watt and 1 meter. Frequency range: 800 Hz to 8000 Hz Impedance: 8 ohms

**H 150**  
60" Horn-driven Tweeter-Midrange Cabinet with extremely long throw due to 60" dispersion pattern. Capacity: 50/30 watts (without crossover)

**HM 200**



H 250



H 250 N

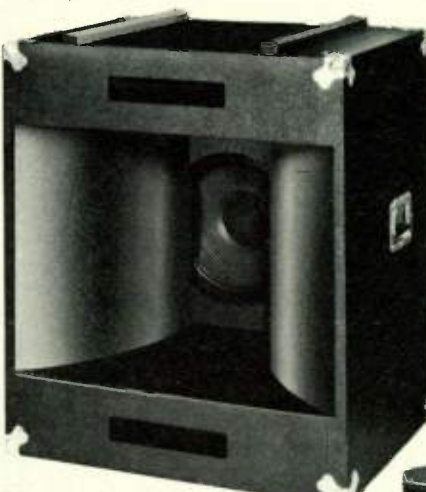


MB 200



**MB 400**  
Exponential Midrange Cabinet equipped with two 12" Gauss speakers. Capacity: 600/400 watts. Acoustic pressure: 110 dB at 1 watt and 1 meter. Frequency range: 400 Hz to 2000 Hz Impedance: 4 ohms

**MB 400N**  
Is like the MB 400 but with RCF speaker Impedance: 4 ohms Capacity: 240/160 watts



**BB 200**  
Bass System with one 15" Gauss speaker Capacity: 300/200 watts Acoustic pressure: 107 dB at 1 watt and 1 meter Frequency range: 20 Hz to 800 Hz Impedance: 8 ohms

**BB 200 N**  
Is like BB 200 but with RCF speaker Impedance: 8 ohms Capacity: 160/120 watts

Acoustic pressure: 118 dB at 1 watt and 1 meter. Frequency range: 700 Hz to 8000 Hz Impedance: 16 ohms

**H 250**  
90° Horn-driven Tweeter-Midrange Cabinet with 90° dispersion pattern for best coverage at moderate distances. Capacity: 100/60 watts (without crossover) Acoustic pressure: 111 dB at 1 watt at 1 meter Frequency range: 800 Hz to 8000 Hz Impedance: 16 ohms

**HH 100 N**  
Tweeter Cabinet equipped with 10 high-frequency piezo drivers for extreme high-frequency reproduction; can be driven without crossover. Frequency range: 8 kHz to 18 kHz

**H 250 N**  
90° Horn-driven Tweeter-Midrange Cabinet with 90° distribution pattern for best dispersion at medium distances.

Frequency range: 800 Hz to 8000 Hz. Capacity: 150/100 watts Impedance: 16 ohms

**HM 200 N**  
Midrange-Tweeter Cabinet equipped with RCF fan disperser for good dispersion at close range. Capacity: 150/100 watts Frequency range: 800 Hz to 8000 Hz Impedance: 16 ohms

**MB 200**  
Exponential Midrange Cabinet equipped with one 12" Gauss speaker. Capacity: 300/200 watts Acoustic pressure: 104 dB at 1 watt at 1 meter Frequency range: 400 Hz to 2000 Hz Impedance: 8 ohms

**MB 200 N**  
Is like the MB 200 but with RCF speaker Impedance: 8 ohms Capacity: 120/80 watts



HH 100



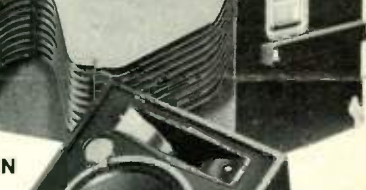
H 150



HH 100 N



HM 200 N



WM 100

**WM 100**  
Floor Monitor, can be loaded to 150/100 watts, impedance: 8 ohms, equipped with one 15" woofer, one midrange-treble horn and one piezo-horn. Both horns adjustable.



BB 300

**BB 300**  
Exponential Bass System equipped with one 15" JBL K 140 speaker. Capacity: 300/150 watts Acoustic pressure: 104 dB at 1 watt and 1 meter Frequency range: 30 Hz to 400 Hz Impedance: 8 ohms

**BB 300 N**  
Is like BB 300 but with RCF speaker Impedance: 8 ohms Capacity: 150/100 watts



BB 300



BB 200



high or down to the bottom . . . and I can tune it, and I can play in time.

But I can remember a time, almost the day, when I thought, "Right, great, that's it, that's what I need to know now," and all of a sudden I stopped learning.

I never practise or anything like that. When I get a guitar, I have a strum and see if I've got a bit of an idea for a song or something. I've learned a few chords — enough for my needs and that's it. It's what I explained to you earlier on about the accent isn't necessarily on the musical technique, even though the guys in Rockpile are very good. Billy and Dave and Terry are fantastic.

But as far as I'm concerned, I know enough for my purposes to write songs or whatever, and I've got an ear for people who are good. I've got the ability to make people who are good do things for me if I'm producing them or something like that. I can explain to them what to do even though I can't do it myself. I can say, "Hey do it like this: (sings)

doo-doo-doo-doo-doo," or "Can you play that?"

*So it's pretty unlikely that you'll play any more guitar on your albums?*

Yeah, on my records now I generally get someone to play bass as well because I find it much easier to direct people. I do play bass on a number of tracks on my album, but I generally sit in the control room and plug it straight into the desk, and just play it straight on.

*Do you do the vocals later on?*

Yeah generally I do, although with the other people I produce I get them to do it all at the same time, if possible. Nearly all of Elvis' stuff is done that way; there's hardly any overdubs at all — just maybe a harmony or certain things like that. But he sings the tunes straight away and all the solos are done at the same time.

*Are there any groups around now that you like?*

There's a couple of people in the States I really like. I was beginning to despair about American bands — I must

admit, bands in general are a bit passé to me now. A bit boring, it's all been played.

But there's a group called 'Cheap Trick who I really like. And there's a band called George Thorogood and the Destroyers. George Thorogood is a blues guy from the midwest somewhere. I like him a lot. And I really liked the Dictators last night. I thought they were dynamite. I went to see them at CB's last night and they were great. The drummer was a killer — I don't know who the drummer is, but he's dynamite.

Drums are the most important thing — if you've got a hot drummer, that's more than half the battle. You can get away with murder if you've got a good drummer.

*You keep making jokes about Brinsley Schwarz. Do you really think you were that bad?*

I look back at that time as very much a learning period for me, because I was just starting to write songs then. When I heard something I liked, like the first Crosby, Stills and Nash album — I thought that it was fantastic. I'd never heard stereo before that and I thought it was fantastic. So I went over the top imitating that style, or the Band, or Van Morrison, people I thought were really good.

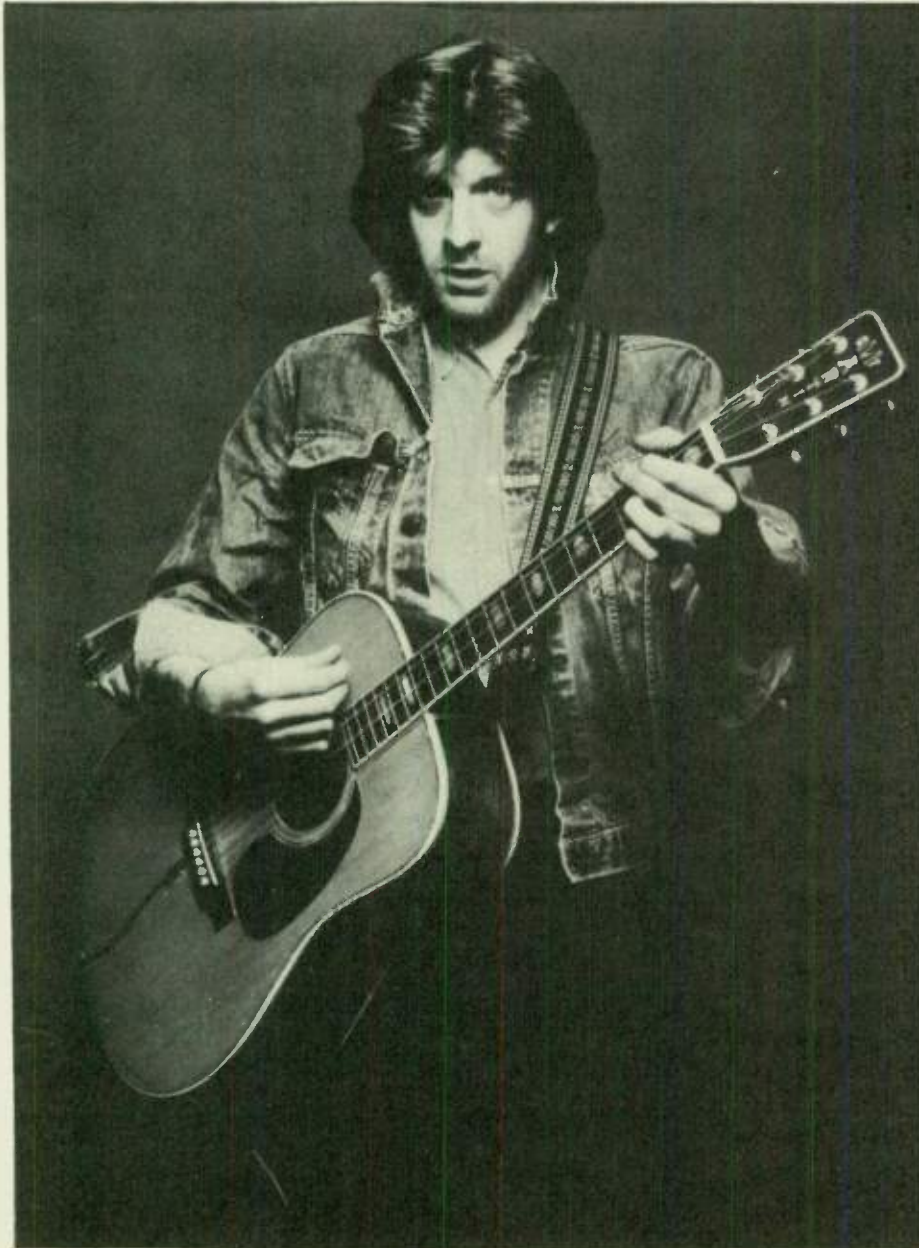
Instead of just saying, "Mmmm, that was good, I wonder where he got that from," and instead of going and buying a Bobby Bland album, which is where Van got it from, I'd take Van's thing.

One day I woke up and realized that my roots were in pop music and when I found that I could admit this to myself, I found I had a huge spectrum — that I wasn't restricted to one thing. And the Brinsleys, the reason I sort of make fun of it, is because, especially towards the end, it wasn't like a rock and roll band. We were real good live.

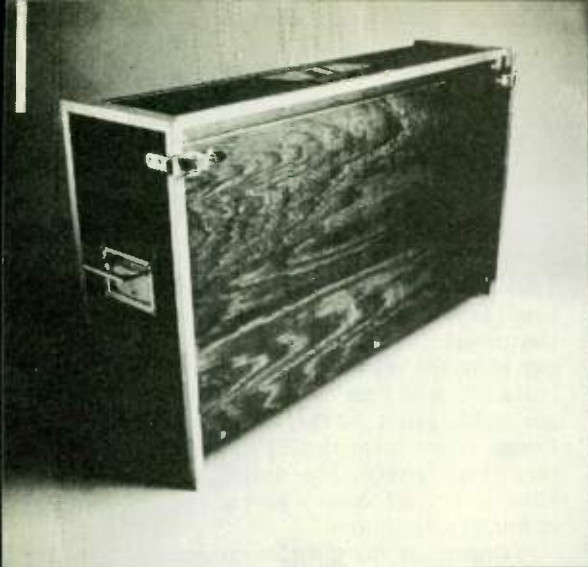
**Our live gigs were great;  
our albums were shit.**

Our live gigs were dynamite, except that in the end, we seemed to be attracting these intense, bearded liberals who would sit at the front and examine each note: "A very tasteful obviously New Orleans influenced drummer there," when the drummer was pissed out of his head. You couldn't pull any chicks at a Brinsley Schwarz gig. We used to get these guys who would come up and say, "Tell me, the lyrical content of some of your songs. Is it sort of a collusion of a Japanese community up in Seattle, or is it more of a cross-collateralization of the pollutionary Chuck Berry feel of the mid-Sixties?" You know, all this garbage, I didn't know what they were talking about.

It was more like a rock and roll lesson, and I thought, "This ain't a rock and roll group, it's just old men." I felt myself turning into an old man before my time and I knew it was time for me to go.







The HIT is ready to play in just ten seconds.

# SOUNDS JUST RIGHT.

The human ear is a demanding master. That's why it's necessary to understand the hearing physiology before you can make a good musical instrument.

At WLM we do.

In making electronic organs the supreme judge for us is the human ear. The sound produced by an electronic organ may be clear and clean, but if it fails to excite, lacking sparkle and character, it can't win the audience.

This is how we produce the distinctive WLM Sound:

1) To begin with, all WLM organs are based on use of electronic sine-wave generators, which make for a perfectly clear and flawless sound.

2) Our sound also contains consonants, not just vowels, which means an exciting and pleasing sound impression.

3) All WLM organs are drawbar-operated. All registers — even percussion and attack — can be controlled just as you want.

4) WLM organs also carry practical presets. A light touch of your finger enables you to use seven fixed sound combinations.

5) Advanced techniques give the sound as perfect a foundation as can be obtained.

WLM organs come in two models: the HIT is a portable combo organ that folds into its wooden case in ten

seconds. Its well-designed structure and sturdy cabinet easily withstands the rough life on the road — a source of comfort to a touring musician.

The BEAT is a beautifully designed cabinet organ which is suitable for homes, clubs, restaurants, theatres and other public places. It has the same advanced technology as the HIT and furthermore an amplifier, Leslie and rhythm unit.

#### STOCKISTS SO FAR

Rod Argents Keyboards — London WC2  
Birds Music — Bexhill-on-Sea  
E.O. Brown (Organs) — Kendal, Nelson,  
Blackburn, Preston, Blackpool, Bolton  
Allan Clarke (Music) — Nuneaton  
Clinkscales Organs — Melrose  
Duck Son & Pinker — Bristol  
Forth Valley Music — Falkirk  
Freedmans — Leytonstone London E11  
Free 'n' Easy — Hemel Hempstead & Oxford  
Funkshun Supersounds — Northampton

Hamiltons Music — Middlesbrough  
Hodges & Johnston — West Cliff  
McCormacks Music — Glasgow  
Sheldon Organs — Birmingham  
Eddie Moors Music — Bournemouth  
Music Ground — Dunscoft, Doncaster  
Music House — Peterborough  
Regent Music — St. Helier, Jersey  
Sharon Organs — Downham, Maldstone  
Canterbury, Tunbridge Wells  
Gordon Simpson — Edinburgh  
Waltons — Dublin  
Jack White Organs — Bury St Edmunds, Norwich

Representative in the U.K.:  
Richard Brown Distribution, The Minster,  
Harbridges Lane, Long Buckby,  
Northants, England.

**WLM**

Manufacturer: WLM-Organ Oy SF-03600 Karkkila, Finland



# OTARI

## The unusual masterpiece: half-inch, eight-track. Otari MX5050-8SD for discriminating recordists.



If you have been thinking eight-track machines are bulky and costly, this unusual one will change your idea. It's exceptionally compact, yet comes with every feature critical professional applications require. DC-servo capstan motor for less than 0.05% wow/flutter, with  $\pm 7\%$  pitch control. 63 dB S/N and greater-than-50 dB crosstalk. Selective reproduce on all eight tracks. Motion sensing control logic, front panel edit and adjustable cueing control for fast-mode monitoring. Front adjustable bias, record equalization and output level. 600 ohm

+4dBm fixed output with XLR connectors. And it comes with the latest plug-in card electronics. The compactness and performance make it ideal for live recording.

In short, the MX5050-8SD is an exception of eight-track professional recorders with performance, reliability and economy internationally proven in hundreds of applications producing high quality 15 and 7-1/2 ips masters. For the full story of this unique model, get in contact with your nearest Otari distributor.

### Please send me details on MX5050-8SD

Name

Company

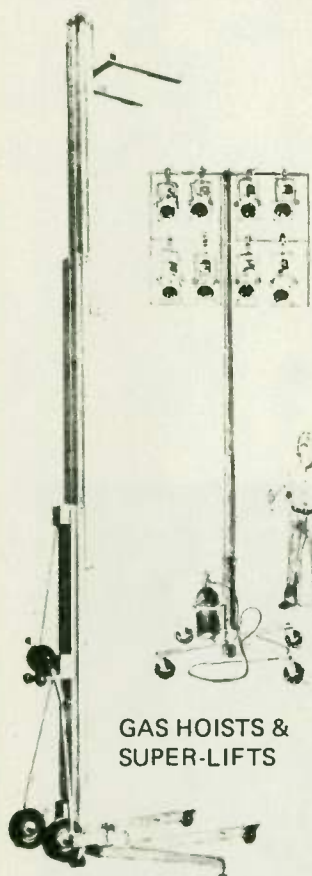
Address

IM

Japan: Otari Electric Co., Ltd., 4-29-18 Minami Ogikubo, Suginami-ku, Tokyo 167, Japan U.K.: C.E. Hammond & Co., Ltd., 111 Chertsey Road, Byfleet, Surrey KT14 7LA  
France: Reditec, 62-66, Rue Louis Ampère, Zone Industrielle des Chanoux, 93330 Neuilly-s/Seine West Germany: Peter Strüven GmbH, 2 Hamburg 53, Bornheide 19  
Belgium: Trans European Music S.A., Koeivijverstraat 105, 1710 Dilbeek, Brussels Italy: Exhibo Italiana S.R.L., 20052 Monza, Via F. Frisi, 22  
Switzerland: Audio Bauer AG, CH-8048 Zürich, Bernerstrasse-Nord 182, Haus Atlant Australia: Klarion Enterprises Proprietary Ltd., Regent House, 63, Kingsway, South Melbourne, 3205



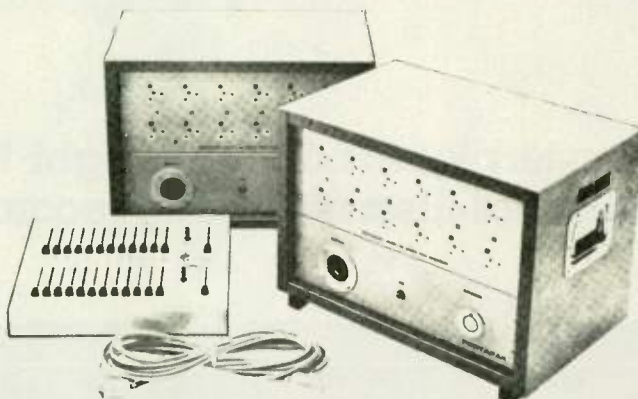
# ANY BRIGHT IDEAS?



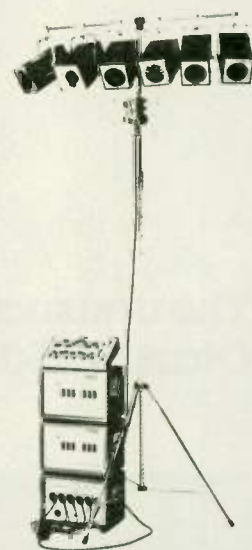
GAS HOISTS & SUPER-LIFTS



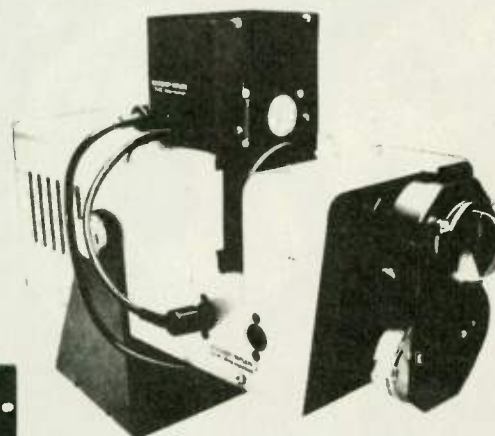
SPECIAL EFFECTS



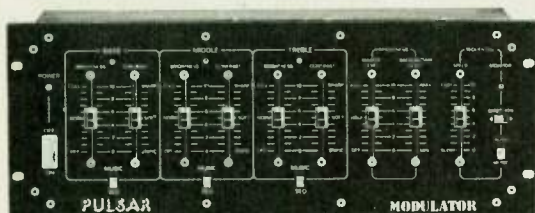
CONTROL DESKS & DIMMER RACKS



POWERDRIVE STANDS



EFFECTS PROJECTORS



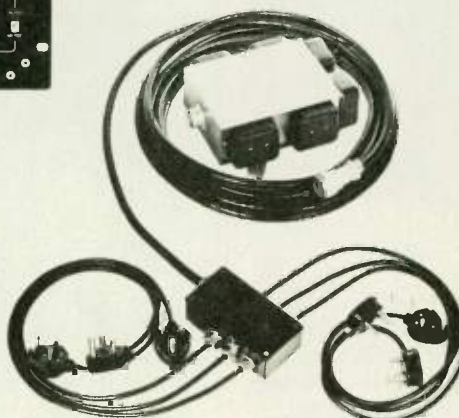
LIGHTING SEQUENCERS



FOLLOW SPOTS



300, 500 & 1,000 WATT SPOTLIGHTS



CABLES & CONNECTORS



DISPLAY LAMPS



STROBES

CEREBRUM  
  
 LIGHTING

Cerebrum Lighting (Sales & Hire) Ltd, 168 Chiltern Drive, Surbiton, Surrey KT5 8LS, England.  
 Telephone 01-390 0051

Retailers — Wholesalers — Export Distributors — Equipment Rentals





**DynaCord**  
the technology of tomorrow

# STAGE-STUDIO-SERIES

1978 Novelties



## DRS 78 DIGITAL ECHO & REVERBERATION SYSTEM

The essential advantages of this new product are:  
Completely shatterfree reverberation, very high Signal-to-Noise ratios of 75 dB on the original signal and 70 dB on the echo signal, far better quality in reproduction than tape echo machines, no maintenance of tape run, variable delay times up to 320 m.secs.

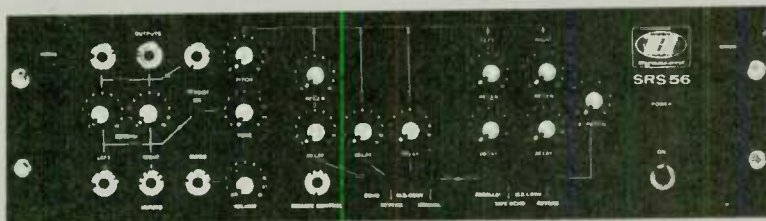
**Frequency response:**  
Original 20 Hz – 20 kHz

**Inputs:**  
universal 2 mV  
3-pin connector 15 mV  
stereo connector left/right 775 mV

**Outputs:**  
universal 220 mV  
3-pin connector 1 V  
original stereo left/right 775 mV  
effects stereo left/right 775 mV  
original-effects stereo left/right 775 mV



## TAM 19 TIME AXIS MANIPULATION SYSTEM



## SRS 56 STEREO REVERB SYSTEM

New appliances in the field of musical sound reinforcement and effects equipment which are setting a guide line for the future. The digital, analogue, and hybrid techniques of today determine the technology of new developments in the future. The results of our basic research work over many years enables us to show and offer you today the future of tomorrow. With these new products DYNACORD gives the user an equipment which is unequalled throughout the world and which enables him to produce studio quality sounds on stage.

### DRS 78

With this fully electronic digital echo/reverb system DYNACORD covers another gap in the field of echo machines for the most pretentious and demanding user.

It would take pages to enumerate the full range of possible echo and reverb effects. The unit contains approximately:

140 integrated circuits, a memory storage capacity of 100,000 bits, run-off control by program stores (5,000 bits capacity), calculating units with 250,000 additions and 375,000 divisions per second. Do not get confused by all this technical data. You will be greatly surprised how easy it is to operate this unit.

### TAM 19

- Stereo flanging
- Stereo pitch changing
- Stereophonic double tracking
- Mono to stereo signal conversion
- Stereophonic spacesound simulation (simulation of rotating speakers)

Basis for all these producible effects is the so-called time axis manipulation. Expressed in more simple words the music in its course of time is being expanded and compressed alternatively and effects signals are being mixed with the original in different ways and manners. By mixing the manipulated effects signal with the direct signal a comb filter like response is obtained within the spectrum of music which changes in temporal respect and which produces extremely pleasing impressions of the sound.

### SRS 56

- Stereo echo, variable delay times up to 560 m.secs.
- Stereo reverb
- Mono to stereo signal conversion
- Parallel mode and tape echo simulation
- Independent access to the delay lines for studio and special sound reinforcement applications

The SRS 56 Stereo Reverb System has been designed in order to create an artificial acoustical sphere for the musician on stage which makes him independent from the acoustical properties of a room. The SRS 56 gives you the means to create your own acoustical sphere according to your personal likings and taste.

The SRS 56 generates stereophonic delayed reverb signals distributing the sound over the whole space of the stage which is a very important and decisive feature.

For full details write to:

**DYNACORD,**  
Electronic und Gerätebau GmbH & Co. KG  
P.O. Box 68, D-8440 Straubing, West-Germany.

**In USA:**  
**DYNACORD ELECTRONICS Inc.**  
P.O. Box 26 038, Philadelphia PA 19 128.

**U.K. Distributor:**  
**BEYER DYNAMIC (G.B.) LTD**  
1, Clair Road, Haywards Heath, Sussex  
Telephone: Haywards Heath 51003



# HEAVY EDDIE

by Steve Rosen

*Van Halen represents a new wave of music based on proficient playing and strong compositions. Unlike the simplified aggression of punk rock, Van Halen is reminiscent of the early English period when bands like Deep Purple were shaking audiences with a combination of blues and rock played at high volumes and master proficiency.*

*And Eddie Van Halen represents that new wave of young guitarist — he's 21 — who has taken the time to learn his instrument and the intricacies thereof. Van Halen's first album titled 'Van Halen' presents Eddie ripping off licks at blinding speed but with a feeling and emotion too long missing from rock and roll. From deep in the south (Florida) Eddie phoned this International Musician & Recording World representative to talk about his playing and the band.*

## When did you first start playing?

I started playing classical piano when I was 7 or 8. My brother started playing piano when he was 6. We decided to come to sunny California, and started getting into rock and roll a little bit; Dave Clark Five, the real early stuff. I got a drum set after I got a paper route; originally I played drums and my brother played guitar. While I was out throwing my papers he was practicing my drums. He got better than I did so I said, 'OK, you play my drums and I'll pick up your guitar', and we went on from there. I didn't really start playing guitar and getting into lead guitar and stuff like that until Cream came out. When the heavy guitar thing started happening.

## How old were you then?

That was 10 years ago so I was about 11. That's when I got my first guitar, a Teisco Del Rey from Sears, one of the four-pick-up jobs. I thought the more pick-ups it had the better guitar it was. The more switches and everything. Nowadays I've got a homemade copy of a Strat with just one pick-up and one volume knob on it. It's really simple.

## Tell me more about that guitar

It looks like a Strat but there's this place in San Dimas, California, called Charvel's Guitars who custom make them. Mine really isn't custom made; it was a junk neck and a hacked up body that was just lying around and I wanted to experiment building my own guitar to see if I could get the sound that I wanted. I've always wanted a Strat because of the vibrato bar. I love that effect. So I just bought a body from them for 50 bucks

and a neck for 90 bucks and slapped it together and put an old humbucking pick-up on it and one volume knob and painted it up the way I wanted it to look and it screams. It's my main guitar, the one on the cover of the album. Just one pick-up, one volume, no tone, no fancy out of phase switches or nothing like that. Completely direct.

## You used a regular Stratocaster also.

Yeah, I did, but I couldn't get the sound I wanted out of a regular Strat. Somebody told me about the Charvel place and about their work; the bodies get much better tone and stuff like that, so I checked it out. It's true.

## You're able to get enough tone out of the guitar with just one pick-up and one volume pot?

Yeah; I use a couple of effects like phase shifter and Echoplex which changes the sound a bit. But tonewise I just crank everything all the way up and depending on how you pick you get different tones and stuff.

## What kind of phase shifter do you use?

MXR: everything I use is MXR. It's about all I can afford.

## What kind of amplifiers do you use?

I've got six old Marshalls which have been rebuilt to have bigger tubes in them and bigger transformers to make them a lot louder. I use six heads (100's) hooked to six cabinets; the cabinets are pretty much stock except I changed the way they look a little bit. And I use these things called voltage generators. What this box does is it enables me to put 150, 160 watts through the amp; it enables me to crank up the voltage higher than the amp is supposed to take. It really makes the tubes red hot, it really makes the amp overload so much that it gets the sound I like.

## Does this plug into the amplifier or the guitar?

It's a box that you plug into the wall and it has a big knob on it which goes all the way from zero to 160. And you plug your amp into it.

## Are there certain settings you use on the Marshall heads?

I just crank them all the way up; everything is all the way up. Presence, middle and bass. So I'm using well over 600 watts because even a regular Marshall is over 100 watts. They're underrated; they say they're 100 watts but they're about 140 watts.

## How do you keep the guitar from going out of tune when you use the vibrato arm?

That's a very tricky question; so far I haven't told or showed anybody. I dicked around with a Strat for years and learnt how to do that. There's about four or five different things that you have to do including knowing the technique of playing it.

A lot of people just grab the bar and go wan-wan-wang (*simulating sound of bar being pulled*) and expect it to stay in tune. There's little things that you have

to do like after you hit the bar, after you bring the note down, usually one of the notes goes sharp, one of the strings. So what you do before you come back in with a full chord is you have to stretch with the left hand to pop it back. Without picking the string you just grab the string and just jerk it up real quick and then it pops right back to where it was before you hit the bar. And then on top of that you know the little metal jobs where the tuning pegs are? Fender always has these little metal things to hold the strings down; string retainers or whatever they're called. If you have those too tight the string will get caught up on that and it won't pop back the way it's supposed to. It's the way you wind your strings, the way you wrap them around the heads. And the kind of strings are important. I don't know if I should be putting down certain strings but I use Fender strings. They're very good and I like them.

## What gauges do you use?

Let's see if I can remember. They're pretty light really; from the low E it's .040, .032, .024, .019, .015 and .011. So far for that Strat those are the best gauges for keeping it in tune. I used to think that the heavier strings I used the better it would stay in tune but that ain't true either. This is the perfect gauge for a Strat; the tension is just right all the way across the neck.

## Did you do anything to the tuning pegs themselves?

Well, I used Schallers, they're not Fenders. Schallers are good.

## Did you make any adjustments to the bridge?

On the spring set-up on the back-up. They come with five springs but I only use four. It's hard to explain everything because it also depends on the guitar. I mean I could tell you exactly what to do and you could do it to your Strat and it wouldn't work. Also there's a thing in the back where the springs are, where the springs hook up. There's two big long screws and depending on how tight you've got that set it changes the tension of the springs. It's that, the way you wind your strings, how many springs you've got, the string retainers at the top, the way you play it; it took me a while to figure it out.

## Do you use a certain type of pick?

Fender mediums. What I always used to do was use a metal pick. A friend of mine always used to make me metal picks, he worked in a machine shop. And they were really cool but when I started sweating I couldn't hold on to them. They'd slide out of my hand.

## Then the only pedals you use are a phase shifter and Echoplex?

I use a phase shifter, two Echoplex and a flanger. I use a pretty long cord on stage, it's about a 25 or 30 footer, and after it goes through the pedals I use an equalizer to boost the line back up before it goes into the amps.



**Do you use the same set-up in the studio?**

I use the exact same thing.

**Do you set up all six Marshall stacks?**

Oh, no. You see the thing is I can get the exact same sound out of one or out of six. All the difference in numbers is how loud it's going to be. Each amp sounds the same so I can get the same sound out of one. I use two actually (in the studio) because I like to feel it too while I'm playing. We play at stage volume when we record.

**What types of phrases do you tend to work from?**

I don't really know what scales they are, I really don't. I know music theory and I know how to write music on paper and how to read for piano but with guitar it's a different story. I don't know about what scales or anything like that. I know basic notes. I just play what sounds good, what I think is good anyway.

**How were you able to develop such a quick pick stroke?**

Just practice, I guess. I've been playing eight to ten years and that's quite a while. I started early which is good. A lot of people start late and play for ten years and they don't get quite as far, because they've got a lot more hang-ups. I enjoy playing and I think that's the main thing. It's not like I was forcing myself because I wanted to be a rock and roll star. I started out playing because I really liked it.

**Do you still practice a lot now?**

Oh, sure. I mean I'll change strings before every gig and play for half an hour or an hour. Just to break in the strings and loosen up my fingers.

**You change strings for every set?**

Oh yeah; every day. Especially on the Strat because they wear out so quick with the bar.

**It seems that one hears Ritchie Blackmore and Jeff Beck in your playing?**

To tell you the truth for the last five or six years I really haven't been into any one guitarist, I like everybody. I've listened to Blackmore and Beck, especially *Wired*, I like some of that stuff, but the guitarist who influenced me the most was Clapton. Believe it or not. Every review I ever read about the album or my playing it's always Blackmore or Beck or Page influences, but I've never really sat down and copped their licks like I did Clapton's.

A lot of people do think I sound like Beck or Blackmore because I do use the bar and they do also so it kinds of get the same kind of sound. But I feel a lot of my licks are different than theirs. Like the wide stretch things I do I try and make sound a little different (*he uses large intervals between his notes*).

**You have a technique where you use a finger from your right hand to hit a note on the fretboard instead of picking it.**

It's like having a sixth finger on your left hand. Instead of picking you're hitting a note on the fretboard. I really don't know how to explain that. I was

just sitting in my room at home drinking a beer and I remember seeing people stretching the note and just hitting the note once. They pop their finger on there real quick just to catch one note. And I said nobody is really capitalizing on that, I mean nobody is really doing more than just one stretch and one note real quick. So I started picking around and came up with a technique that nobody really does. And it is. I haven't really seen anyone get into that as far as they could. It is a totally different sound. A lot of people listen to that and they don't even think it's a guitar. 'A synthesizer, a piano, what is that?'

**The way you play harmonics is unique.**

I just liked the sound of it and kept working at it until I got the notes I wanted. Because, you know, you can almost do a complete scale with all the harmonics; you've just got to know where to hit them.

**Can you describe your right-hand style?**

I kind of pick at an angle, a downward angle. For one, I do this one picking thing which is like really fast picking. This kid once, when we were playing the Whisky a long time ago, interviewed me for some high school paper and said, 'Wow, that's a really unique picking style and I've developed a name for it; I call it the Eddie Van Halen hummingbird pick'. That's what I do, kind of. I mean it's almost a spasm; like my wrist kind of bends and I can do it anywhere. When I pick normal, the palm of my hand always rests right on the bridge but when I do that my hand is off the guitar. That took a long time because I started out just doing it on the high E string because there weren't too many

strings to get in the way. But I've got it now, I've got it now where I can do it on every string. It's hard to control sometimes, to pinpoint the string you want to hit.

**You also trill very quickly with your left hand**

That just developed also. I guess I could be funny and say I take a lot of pills but that ain't true.

**Do you play any acoustic guitar?**

I've never in my life owned an acoustic guitar. I've written songs on an electric guitar that would sound real nice on an acoustic but I've never owned an acoustic guitar. I guess one of these days I'll buy one. I don't know nothin' about acoustic; I know what I like in electric guitars but with acoustics I'm lost. I don't know what's good, I really don't.

**Do you think you'll stick with Strato-casters?**

Well, when we were in New Orleans I bought a Les Paul. I needed another guitar because I tend to bend the hell out of strings a lot and usually after my solo live I change guitars. So I needed another guitar and when we were in New Orleans I picked up a Les Paul. It's a real nice white one, it looks cool.

**Do you play any slide guitar?**

A little bit; there's nothing on the record, there's no slide on the record. But who knows what lurks in the future? Me and my brother both play keyboards too and I've been thinking about getting a synthesizer. A lot of people are starting to get into guitar synthesizers but with Roland you have to play one of their guitars. But I don't dig them so I think I might get a synthesizer and play keyboards. But who knows, I might not.







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# Bootsy's Spaced-Out Bass

When Bootsy Collins and his band make an appearance, it's rather like the circus coming to town. The sparkle, glitter and general razamataz which surrounds Bootsy and his Rubber Band has to be seen to be believed and follows in the great tradition of American spaced out funk outfits Parliament and Funkadelic.

However, the razzle-dazzle of the show should not overshadow the leader's playing. Bootsy plays bass like no one you've ever heard, on an instrument which looks like something out of Star Wars. Although he may look like a comic book figure, his musical credentials are impressive.

Bootsy began his musical career in 1967, he said: "I was playing guitar first for about a year and a half before I even thought about bass. I always wanted to play with my brother, but he was playing guitar so I thought I'd better switch over."

"My first bass was made out of a Sears Silvertone guitar, I took the six strings off and put four strings on. Me and my brother were just messing around at that time doing stuff like 'Peter Gunn'. Our first band was 'The Pacemakers', we used to do clubs and bars around Cincinnati and from there went to the studios of King Records.

"First we started recording little things here and there, then other artists and producers started hearing us and eventually we became the studio band. James Brown used to record there all the time, and so he started hearing us and the next thing we knew he wanted to meet us. So he meets us, likes us and from there we hit the road with James Brown."

James Brown is reputedly one of the hardest taskmasters to work for, and the stories of him fining musicians on the spot for playing a wrong note or just simply firing them in the middle of a tour — a fate which befell the late great Jimi Hendrix — are legendary.

Bootsy regards his stint with James Brown as one of the biggest steps in his musical career. "Working with James

Brown was like going to school, the music, the road, the whole trip, it was the best lesson I could have learned. You learn an awareness of self-discipline, there are certain things you have to do and certain things you can't do.

"We were really young and aggressive and he gave us more freedom, so we kind of played what we felt. The first album we did with James was 'Sex Machine' and we stayed with him until 1971, that year we toured Europe and after that me and my brother just split."

Bootsy went back to Cincinnati and eventually became involved in the Parliament/Funkadelic funk family. He stayed with them for about four years, then decided that it was time for him to strike out on his own.

He got together with his brother and several old friends from the James Brown band, including sax player Maceo Parker, and formed Bootsy's Rubber Band. In a couple of short years they have established themselves as one of America's hottest raw funk properties who are able to sell out top venues such as the Los Angeles Forum.

Eventually, Bootsy was able to fulfill one of his ambitions which was to design his own bass guitar. He had been using both Fender Precision and Jazz basses, but wanted something different.

"The guitar I play is called a Space Bass, I designed it and named it myself, and a young dude called Larry Pletz from Detroit made it for me. I originally took the design to the guy who made Rick Derringer's guitar, but he said it wouldn't sound right because of the shape. The guy from Detroit wanted to try new things and so he tried it and it came out really nice. It sounds and plays like a Fender, because that's the sound I wanted anyway."

Bootsy has two star shaped basses, one has two Fender pick-ups and the other has three. He has recently had a twin-necked instrument made which has a bass on top and a six string guitar below. On his basses he used Rotosound Swing-

bass strings.

He is one of the most inventive players around, using a whole battery of effects to wring some incredible sounds out of his instrument. On the three pick-up model, each pick-up has its own lead going directly into an amplifier set up, which gives Bootsy almost unlimited sound possibilities and variations.

"On stage I use three separate amplifier set-ups which go through 12 speakers. Like I'm using four Crown DC300A's and three Acoustic 370's through Cerwin Vega speakers, so all the balls and guts are there. Plus I've got a thing I call a Space Case which is about five feet long and has got just about every effect in it.

"For example, I've got phasers, three Big Muffs, two MXR digital delays, fuzz-wah etc. The reason I have two of certain things is that I might hit a fuzz on one side and you might hear it come out of the high end, then I might hit a fuzz over the other side and you might hear it coming out of the low end. I might hit an MXR digital delay out of the high end which would come out like a fast ping, then if I hit a Space Echo it would give a slower sound. The whole thing gives me different levels of effects.

"The pick-ups go straight into three separate amplifiers, so instead of hearing one certain effect, you might hear four, five or six. I've also got a thing I call a Space Station, which is like speakers out in the middle of the auditorium and sweeps the sound from the stage and then back. So you might hear a bunch of effects coming out of the Space Station and different things coming from stage, so there is always something going on."

The phrase "always something going on" is a bit of an understatement to anyone who has witnessed one of Bootsy's live shows. Even though you may not be a funk fanatic, Bootsy's bass playing is certainly worth catching, but be warned: from a man whose influences include Larry Graham and Superman you can expect just about anything.



# SONOR

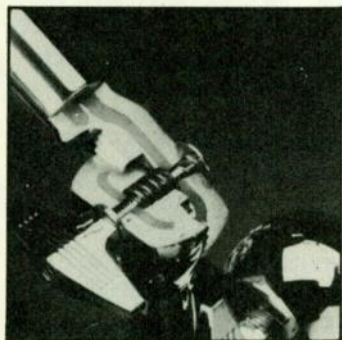
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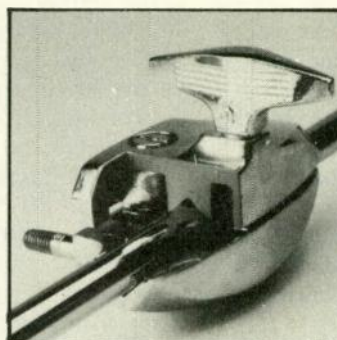
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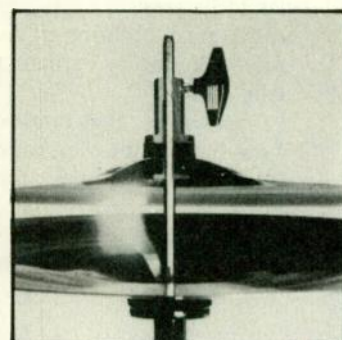
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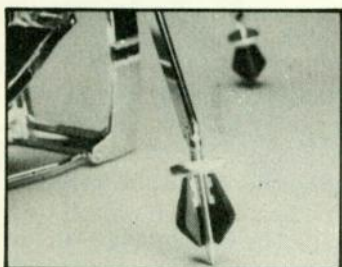
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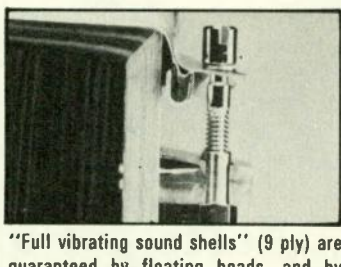
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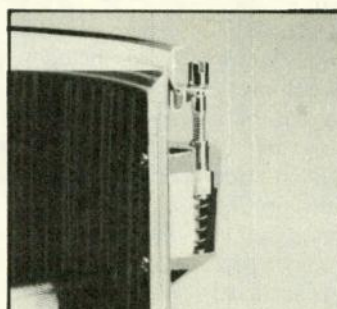
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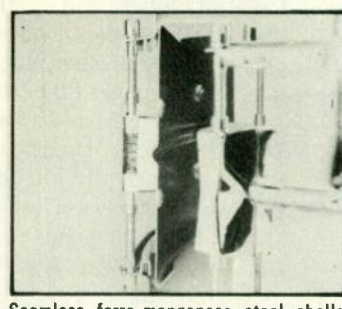
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## Rob Stoner

**Fame by association isn't the most desirable thing for a serious musician like Rob Stoner. But his teaming up with Bob Dylan for the Rolling Thunder Tour in 1975 certainly brought Stoner's name and reputation to an audience who would still be unaware of his talents were it not for the Dylan connection.**

Such is Stoner's seriousness about playing the music he wants to play that he threw over the chance to continue as Dylan's bassman and instead kicked his heels for a time with Robert Gordon and Link Wray who together stormed into London in June for a few dates of "Power Rockabilly".

On stage Rob Stoner is a master of the Precision bass; he wields the instrument from his small frame like a machine gun, throwing out rumbling riffs, chords and steaming bass patterns that seem like an amalgamation of every style in the book.

Although essentially a rocker, Stoner sees his bass playing as being just more than holding down the beat, although he does an excellent job in that department as a listen to Bob Dylan's "Desire" album will quickly show. Throughout that record's long and winding songs, Stoner's bass pumps through upfront linked like a Siamese twin with the steadfast drumming of Howie Wyeth, Stoner's long-time sidekick and favourite drummer.

It was after a storming night with Gordon and Wray at London's Music Machine followed by a night-owling session with Dylan himself who was in town that Rob Stoner talked to us in his Holiday Inn room.

Like the majority of his generation of players, Rob began playing in High School working out on piano and bass. He took any gig he could to broaden his musical horizons during a period of his life which he now regards as "on the job training or earn while you learn".

"I couldn't find any bass players who were doing what I wanted so I started fooling around with the bass myself and developed a melodic style instead of just playing the same old patterns. When I started listening to jazz I realised those players were doing those melody things all the time."

His bass playing improved so rapidly that he began to gain more notoriety for that instrument than the guitar. By the time he got to college Rob had a "hot"

rock band with, among others, Billy Cross the guitarist who was eventually to stun London audiences playing for Bob Dylan at the latter's triumphant Earls Court concerts.

"We were playing a lot of original material, almost like punk is now. Except we were more vocally proficient and, I think, a lot more technical than a lot of the New Wave groups."

His success with the band, called Meat, eventually led to session work and his development as a sideman and studio musician for a lot of folk-orientated artists in New York. His time was divided between the studio and working with his own Rockabilly power trio with Howie Wyeth and various guitar players.

Through producers and mutual friends, Stoner's name reached Dylan who recruited him for the Rolling Thunder tour. Rob ended up as musical director of the Revue by default.

"I walked into the rehearsals and there was a lot of confusion. It seemed if someone didn't sort it out soon we'd lose the gig. I'm sure any of the musicians who were there would have been qualified to have been band leader because it was just a token post," he modestly explained.

His musical association with Dylan ended when the band became too big giving him little room to stretch out on bass and leaving him with the task of just holding down the bottom end. In retrospect he says of the tour: "It was a challenge all the time working with Bob. He's really got a vision like no-one else. He always keeps you on your toes."

It is Rob Stoner's refusal to accept the limitations placed on rock bass playing that makes him an innovator rather than just another player who runs with the pack.

"I've got a lot of concepts for using the bass that don't quite fit behind other people's music because what I want to do is a little too ambitious. I find when I walk into a gig a lot of people have preconceptions about how the bass should sound. These preconceptions are well-founded and a lot of them have to do with holding down the bottom all the time.

"But people get too hung up on that. They've heard the bass be simple for so long there is a big prejudice against progressive ideas on the bass, which I can understand. We're just used to hearing



Pictures: Sarah Wyld

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Words: Ian White



**"THE BIGGEST PITFALL ROCK GUITARISTS GET INTO  
IS THAT THEY ALL PLAY IN THE SAME POSITIONS"**

## Rob Stoner

the treble clef instruments to do the fills and apeggiating. I don't know how pop bass playing got to be so limited in scope, but that's what people expect.

"I find when I get to a session I throw in interesting stuff. Then it gets to the point where whoever's gig it is will tell me to lay back. Then I'm happy to lay back. It's just that I was trying to find the level of interesting shit they wanted thrown in.

"It's very rare you find people who will be interested in having the more progressive ideas like using a note in the chord rather than the root and all the other various techniques that are available to the bass that aren't very popular."

As far as listening to other bass players goes, Rob is startlingly candid: "You can't name a good bass player who I haven't stolen ideas from. But the only way I can get the kind of bass playing I'm looking for is to do my own trip. If you want something done the way you want it you have to do it yourself."

Apart from being an excellent bassman, Stoner admits to being a good guitarist and indeed has an understanding of the six-string instrument which is rare amongst four-string pickers. He has the same melodic approach to the guitar as he has to the bass.

"Whenever I find myself playing the stock finger patterns that make you sound like every other guitar player, I stop playing the guitar for a few days and play the piano instead, or else I listen to some horn solos and try to figure those out.

"The biggest pitfall rock guitarists get into is that they all play in the same positions. The positions are great and they work but they limit you. They're great to know and to pull out of the hat when you need them but you shouldn't get hung up on that type of playing.

"Even if you're going to learn melodies by position you should go out and learn some melodic approaches to playing a 12-bar blues because maybe you'll learn some new positions if you are a position player, which most people are."

Like many other recording and pro musicians, Rob does not read music. But his reasons for not doing so are constructive ones.

"I would like to be able to read music. But every time I try, I get hung up on practising for purposes which are more immediate for what I want to do. I work on my voice or my songwriting. I

don't have the patience to apply myself so I end up working on stuff which comes more naturally to me."

So many musicians have that problem. You end up being one kind of player and you have aspirations to expand your playing. But what you end up doing is expanding yourself within the limits of the kind of player you naturally are.

"You have to make a decision about whether the limits of your style are limits. Maybe your trip is not to be the great all-knowing player'. I don't want to come on like a non-technical player putting down technical players because that is the easiest cop-out.

"I don't consider myself a guy who knows everything I'd like to know. But I'm always trying to find as many musical principals I can apply to the stuff I already know. There are so many players I know who are great players and know so many more things than I do but they don't come across strongly on stage.

"The thing that comes across to the public is soul and feeling. That's the principal that enables some people to say more with three notes than other people can say with 300 notes. And soul and feeling is a product of finding out who you are and how you can best express your feelings. You have to talk to an audience.

"The best singers are those whose singing actually speaks to the people. The instrumentalists I find who come across best are the ones who are conversational with the instrumentalists they are reacting with on stage. You have to follow your soul."

Stoner is something of an expert on audience psychology and urges all bands and performers to understand how an audience responds to an act.

"For a crowd to 'happen' I've noticed it usually starts from the front. If the people in the front are self-conscious, either because the spotlight is on them or if they are hearing or seeing something wierd on stage that the rest of the audience isn't hearing, they start to get weird and the rest of the crowd stays cold as well.

"But if the people up front are boogieing and having a good time, the people behind see this. The people in the front area of the stage are the people with who your crowd reaction starts or dies with.

"These are the people you have to play to. If you're looking to get a really powerful sound to the audience through the PA and you're not getting it to the front, you can f... up. It can be a real problem because the people in the front don't hear the PA. They hear the stage sound. If you're playing at low on-stage volume levels so you can hear each other the front crowd just doesn't get into it. Then you're depending on the rest of the crowd to get off on what you're doing. That's a valid reason for keeping your stage volume loud except then you've got the problem of having to have the monitors louder so you can hear the vocals. You have to find the line of compromise where both things work."

Loud volumes don't bother Rob. He wears earplugs and reckons these actually allow him to hear better when he's playing.

"I find wearing them is useful for singing because it enables you to hear your headtones. Your skull becomes a sounding board and when your ears are closed off the actual skull bone resounds with the note you're singing.

"Have you ever noticed when you're walking into a gig, from the outside the band sounds great. Then you get into the club and you notice either they're out of tune or this is wrong or that is wrong. This is because when you filter out sound by putting a wall in front of it, it enables you to hear better and past a lot of the bullshit noise that is going on. I've found when you go to a loud concert, and you're sitting in front of the PA stacks, if you put something in your ear you hear better.

"I've been using plugs for years and I know they are saving my hearing. I recommend them to all musicians. There are special filter plugs you can get and you can still hear stage directions and the music."

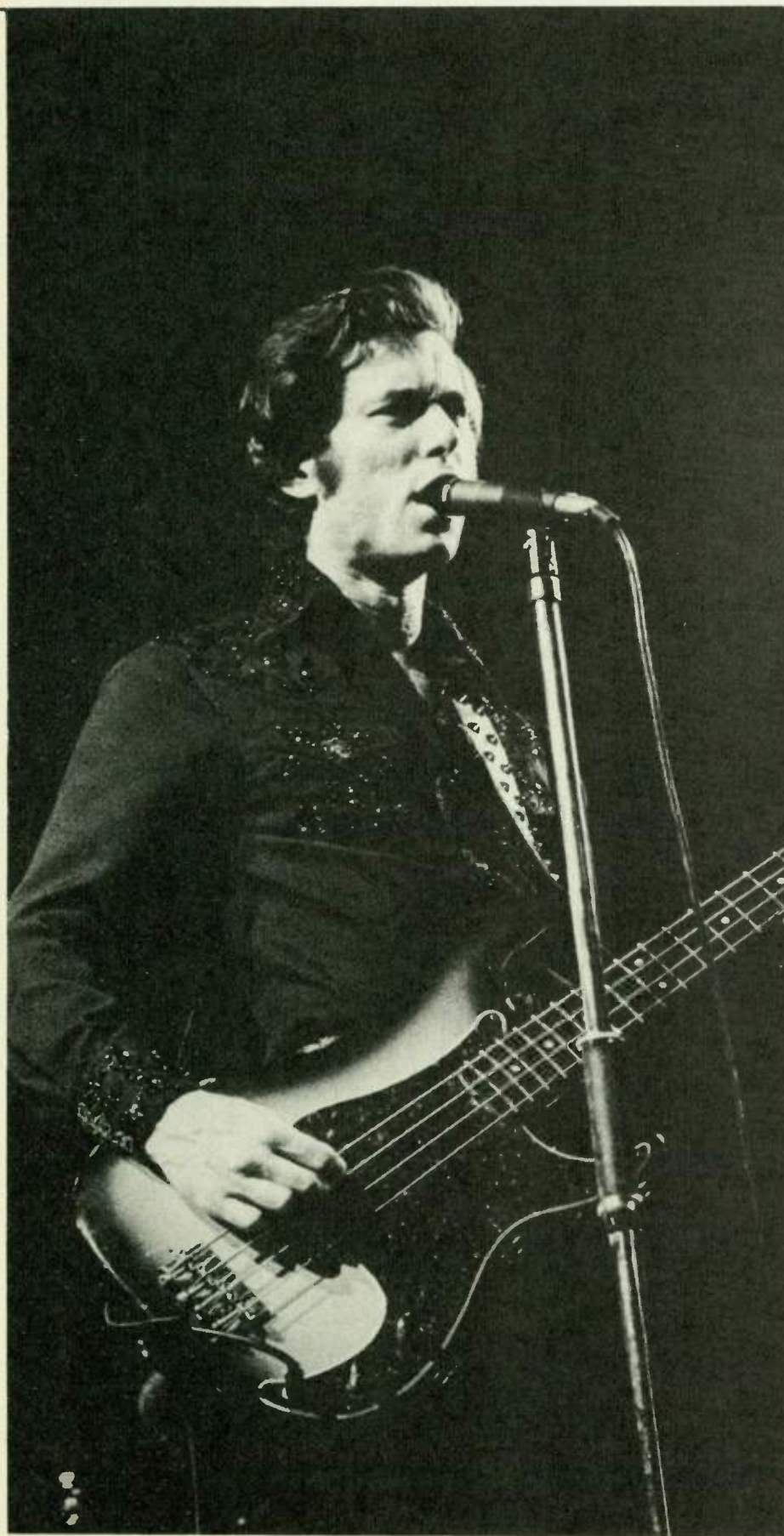
Stoner's maturity as a player comes through in his statement that when a player is accompanying a singer his job is to make the singer sound good rather than use the gig as a form to flash out and show all your own ideas.

"I couldn't have played on all those people's records if I hadn't been able to get myself into an accompanist frame of mind which is to listen to the singer and make him sound good. It's not making music if you flash out. Making music is people intereacting and working as an ensemble instead of everyone going off



"IF YOU WANT SOMETHING DONE THE WAY YOU  
WANT YOU HAVE TO DO IT YOURSELF"

## Rob Stoner



on their own trips."

Stoner is not a musician who is too bothered with the equipment he uses although he insists on using Fender Precisions. His guitars are stock following his experiences in modifying his basses unsuccessfully.

"I find when you put an extra pick-up on a Precision it diffuses the signal too much. That split pick-up design is intrinsically a humbucking pick-up. It is two pick-ups which cancel each other out. Leo Fender came up with a winner on his original design and if you f... with it you're making a mistake. Everytime I make a modification on one of my basses I go back to using the stock bass."

He cannot praise Rotosound highly enough but reckons they acts like a file on the frets. One of his basses had to be refretted so many times because of the abrasive Rotosounds that eventually there was just no more fingerboard left to refret.

For amplification, Rob relies on his own Ampeg B15s whenever possible. He has two of them on stage and the B15 was the amp used during the Rolling Thunder tour.

"If you're playing through the PA on a gig, I don't think your stage equipment really matters that much as long as you get a decent sound. Your stage gear is really just a monitor system for you to hear yourself because I think the bass should go direct.

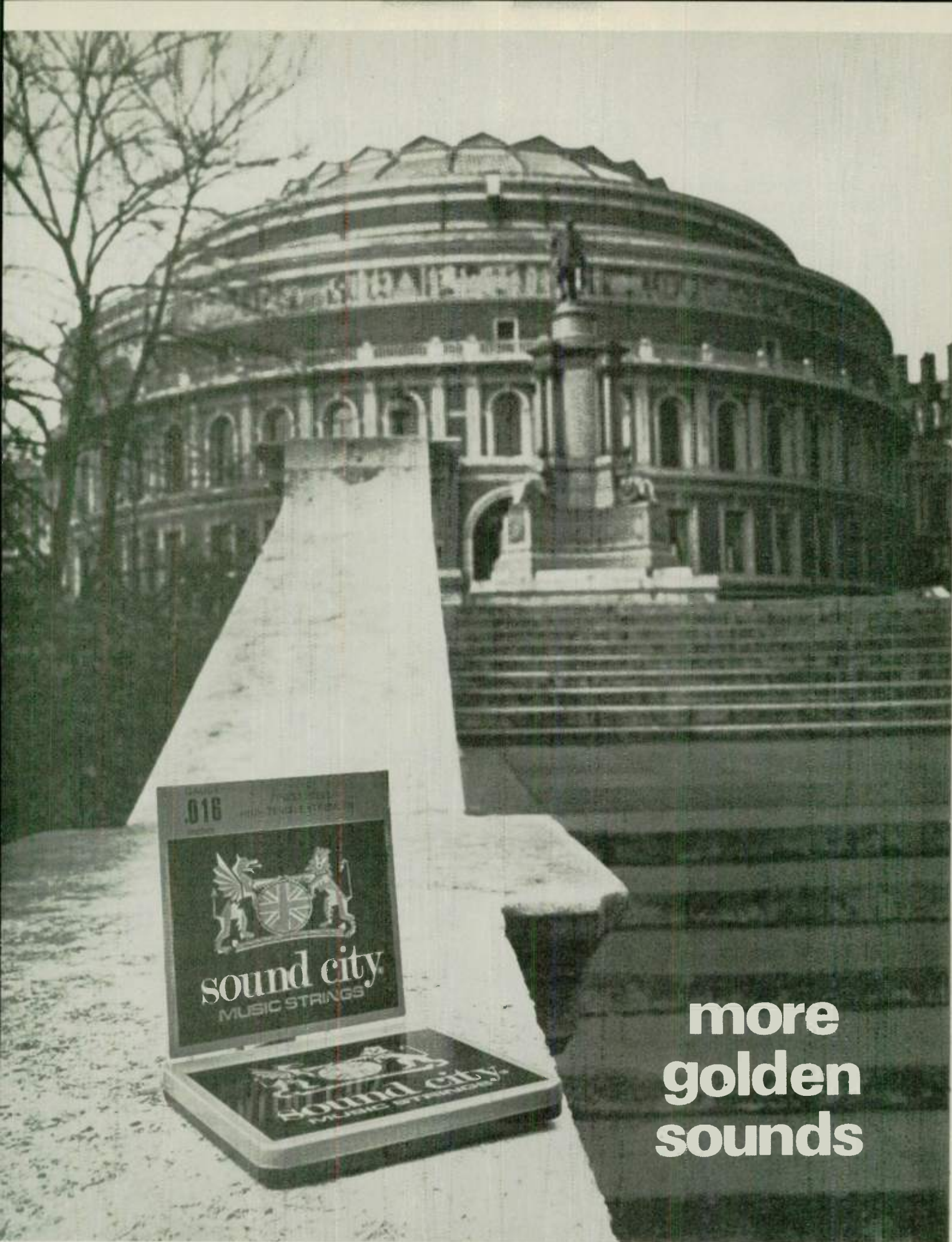
"On the Rolling Thunder tour our volume levels were very sensible. The B15 was for me to get a nice mellow living room sound on stage. It was just like doing a studio gig. You have to play at a reasonable stage volume to hear the people on the other side of the stage."

Nowadays, Rob wants to concentrate on his singing. And judging by his vocal debut with the Gordon/Wray gig he has a fine voice ideally suited to rejuvenate early Sun-type rockabilly.

"I don't really want to play jazz because I'm not a jazz musician. I'm a rock musician and I've picked up some elements of jazz playing and jazz tonality which I think work well in rock and which I've applied to what I'm playing.

"I listen to everything. I listen to classical and jazz but basically I just want to play rock and roll on stage. I think of singing and songwriting as the central thing in anybody's music. The music is really accompaniment."





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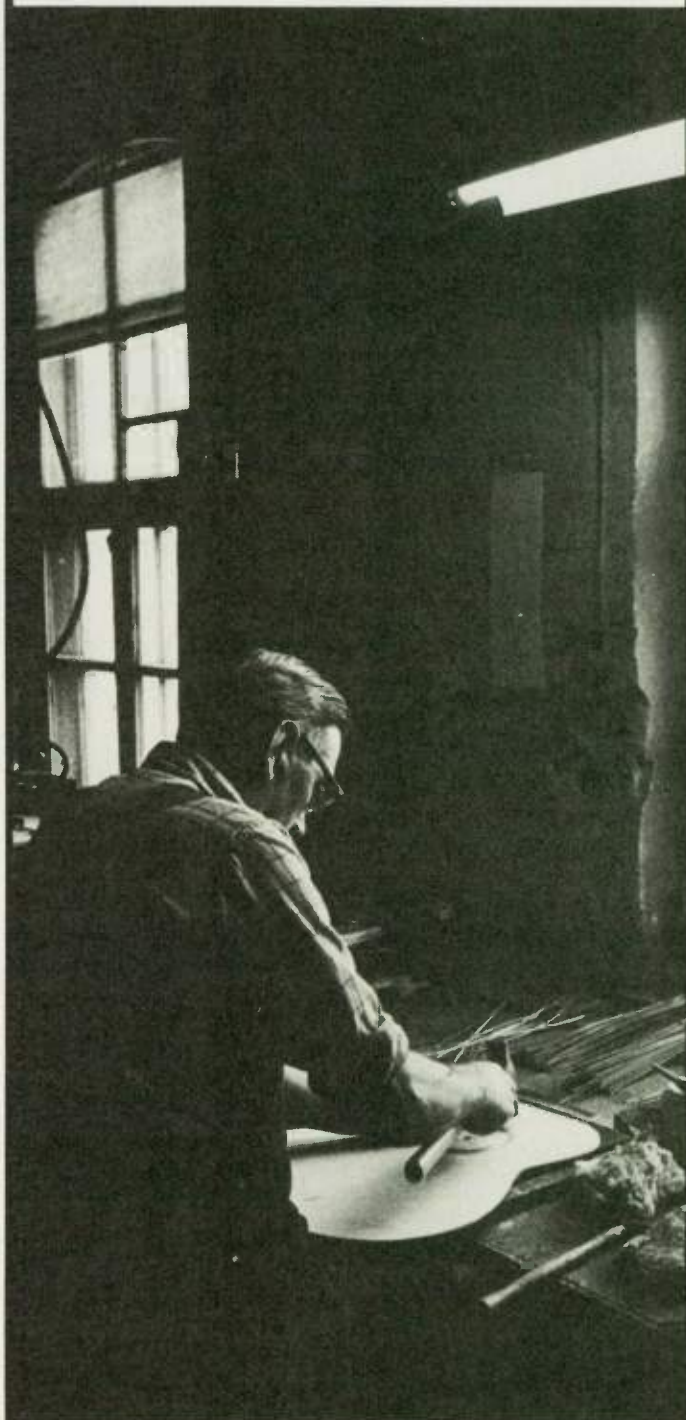
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# UNDERSTANDING SYNTHESIZERS

by A. Horsman B.A.Ph.D  
Silverhill Music

## Introduction

In the first two articles I covered quite a lot of ground, introducing and explaining some of the basic terms which included frequency, amplitude, vibrato (frequency modulation) and tremolo (amplitude modulation). I also introduced the idea of a waveform as a pattern which shows, for example, how a voltage output from an oscillator varies during one cycle. Before I start next month to describe how the various parts of a synthesizer work and what they do, there are a few more basic concepts to sort out, the first of which is the idea of harmonics and the frequency spectrum of a waveform.

## Harmonics and additive synthesis

There is one particular waveform called a "sine wave" which is very important in sound synthesis. The reason for its importance lies in a unique property: any constant sound with any waveform whatsoever can be made by adding together sine waves in the right proportions. The sine waves which are added together must have frequencies which are related to one another and have certain relative amplitudes.

Suppose you wanted to try to

synthesize a sawtooth waveform with a frequency of 440Hz from sine waves, using sine wave oscillators and a mixer to add their outputs together (see Fig.1). You would start with a sine wave having a frequency of 440Hz (that's the lowest frequency you would be using, so let's call it the "fundamental"). You would then add to this a sine wave with a frequency of 880Hz ( $= 2 \times 440\text{Hz}$ ) i.e. twice the frequency of the fundamental, then add a sine wave with a frequency of 1320Hz ( $= 3 \times 440\text{Hz}$ ) and so on. If you could experiment with the set-up shown in Fig.1, you would find that with four oscillators (and a great deal of patience!) you could produce an output signal from the mixer which looked like a lumpy sawtooth wave. You would also find by trial and error that the best result was obtained by setting the volume (amplitude) control for each oscillator at a lower position than the one before i.e. the higher the frequency of the sine wave, the less of it you needed to add.

The oscillators which are producing sine waves at multiples of the fundamental frequency could be called "harmonic generators"; they are generating "harmonics". If the fundamental fre-

quency is 440Hz — which actually is a standard tuning frequency for the "A" above "middle C" — the second harmonic has a frequency of  $2 \times 440\text{Hz}$ , the third harmonic  $3 \times 440\text{Hz}$  and so on. In summary then, you could synthesize an approximation to a sawtooth wave by adding together sine waves (a fundamental and its harmonics), and the more harmonics you added the more closely the end-product would resemble the true sawtooth shape. This way of producing waveforms is called *additive synthesis*.

## Frequency spectrum

If you measured the relative amplitudes of the fundamental and its harmonics, which you could do using an oscilloscope to display each sine wave in turn, you could show the results of your efforts to synthesize a sawtooth waveform in one simple diagram. Have a look at Fig.2. The relative values of the oscillator output voltages are expressed on the vertical axis in decibels. (Find a copy of Part 1 if you're worried about decibels!) Notice that the amplitudes have been expressed relative to the amplitude of the fundamental i.e. we have chosen to call this 0dB. Just as +20dB means an increase

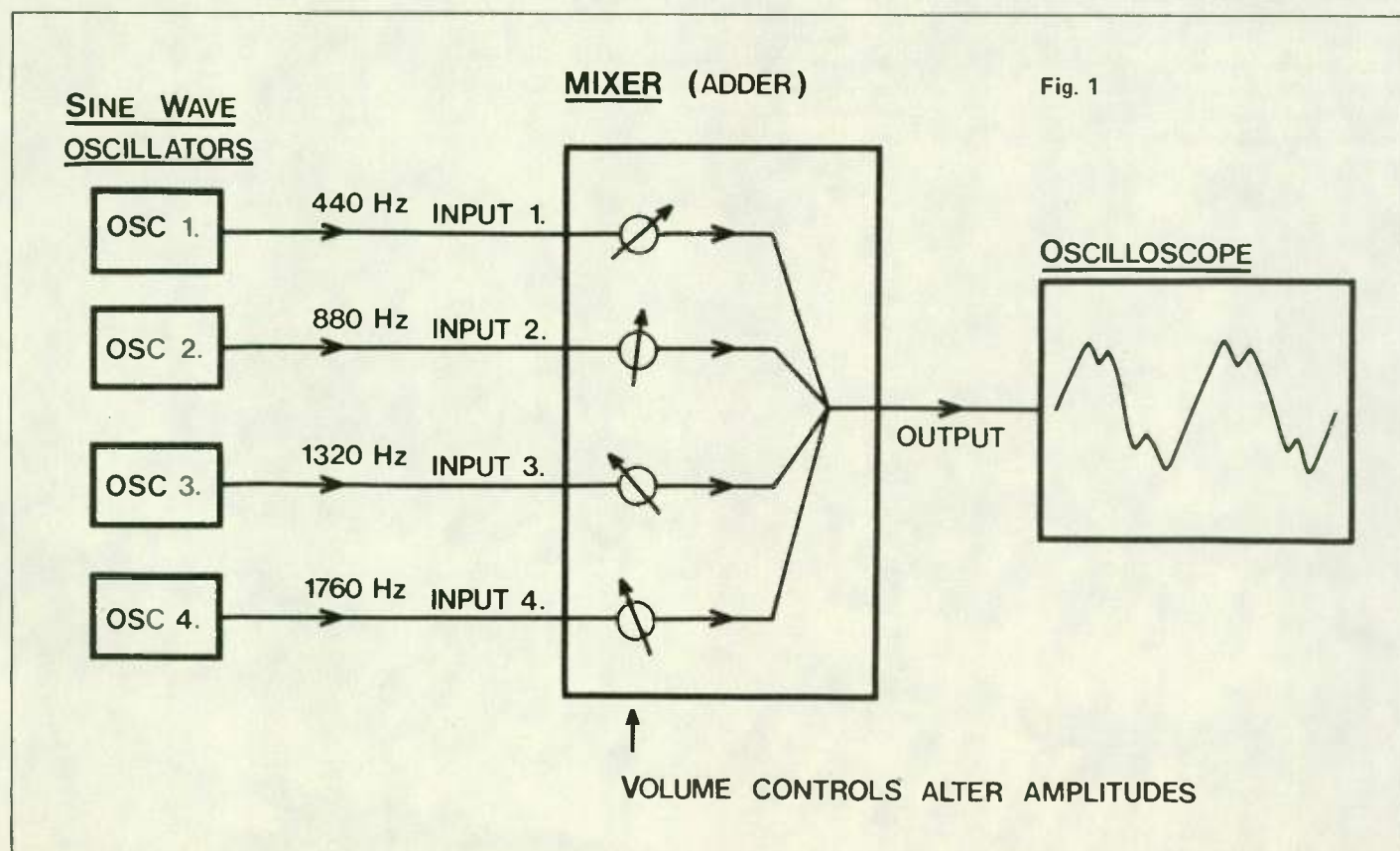


Fig. 1



# UNDERSTANDING SYNTHESIZERS

of x10, so -20dB means a decrease of x10 or in other words, ÷10. Your second harmonic (the fundamental is the first harmonic!) had an amplitude of -6dB relative to the fundamental. The third harmonic was about 10dB below the fundamental i.e. had an amplitude of -10dB relative to the 0dB reference. This type of diagram has been introduced as describing the results of an experiment you never did – but it really would have worked! The diagram is called a “**frequency spectrum**” and you would have produced this particular frequency spectrum when trying to make a sawtooth wave by additive synthesis.

Now look at it the other way round; the same diagram (Fig.2) tells you exactly what is in a sawtooth wave! In other words, when a synthesizer produces a sawtooth wave output, it is literally providing a fundamental and harmonics, all with related frequencies and particular amplitude ratios. All waveforms other than sine waves contain harmonics, and the frequency spectrum describes the relative amplitudes of the various harmonics.

The frequency spectrum characterizes the tone quality of a sound; it is the harmonics which give sounds their different qualities. Harsh sounds have stronger high harmonics than mellow sounds. You may be surprised to learn that in some sounds – for example the sounds of the triangular wave and square wave (these were illustrated in Part 2) – some of the harmonics are absent. I will be showing you the frequency spectra of all the different oscillator waveforms next month. As an example of an acoustic instrument, Fig.3 shows the frequency spectrum of a violin (open E string). You can see that some of the harmonics are as strong as the fundamental, and these give the violin its characteristic “biting” sound quality.

## Subtractive synthesis

Because synthesizer waveforms such as the sawtooth wave already contain many harmonics, it is very common in sound synthesis to do the opposite of additive synthesis. Instead of adding together harmonics to build a complex waveform, we **start** with a harmonically rich waveform and **remove** those harmonics which are not required. This technique is called **subtractive synthesis**, and I will be describing how “filters”

are used to do this later in the series. But before we get on to filters, we have to start next month unravelling the mysteries of voltage control, keyboard voltages and voltage-controlled oscillators.

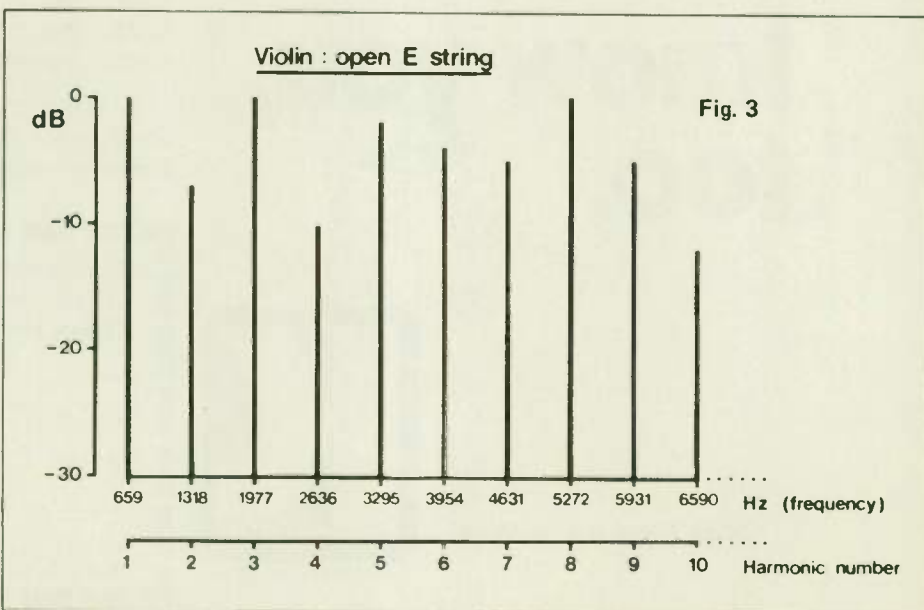
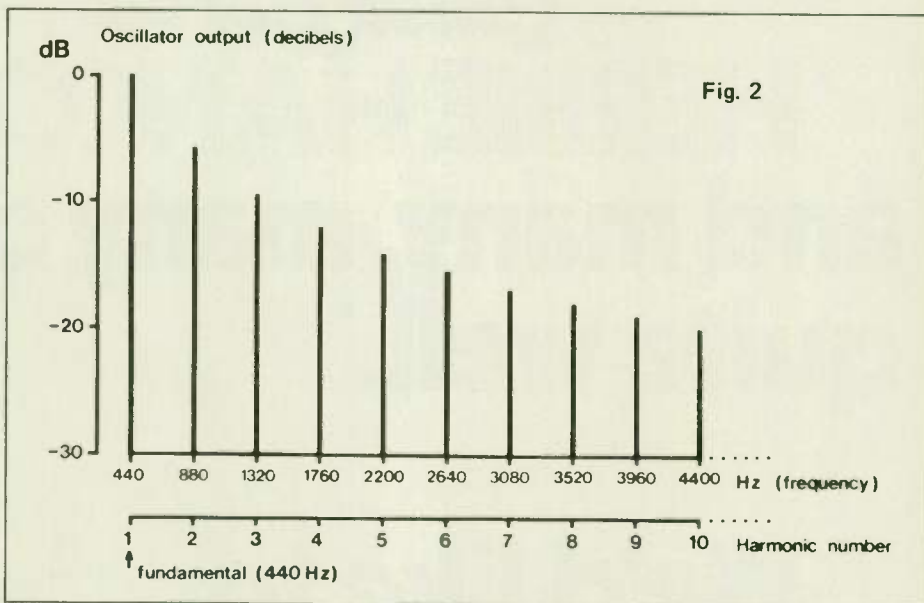
By the way, as a help to people using the synthesizers in my studio at Silverhill Music I have always recommended the set of instruction manuals for the Roland System 100. I have a limited supply of these (courtesy of Brian Nunney, General Manager of Brodr-Jorgensen) and I will be happy to send you a set in return for 60p in stamps to cover postage. The address is *Silverhill Music, 142 Silverhill Road, Bradford BD3 7JJ.*

## Part 3 Figure Legends

**Fig. 1** Additive synthesis of a “sawtooth” waveform with a frequency of 440Hz using four sine wave oscillators.

**Fig. 2** Frequency spectrum of a sawtooth wave with a fundamental frequency of 440Hz (showing only the first ten harmonics).

**Fig. 3** Frequency spectrum of violin (open E string; fundamental frequency 659Hz). Notice that some of the harmonics are comparable in amplitude to the fundamental. These give the violin sound its characteristic “biting” quality.





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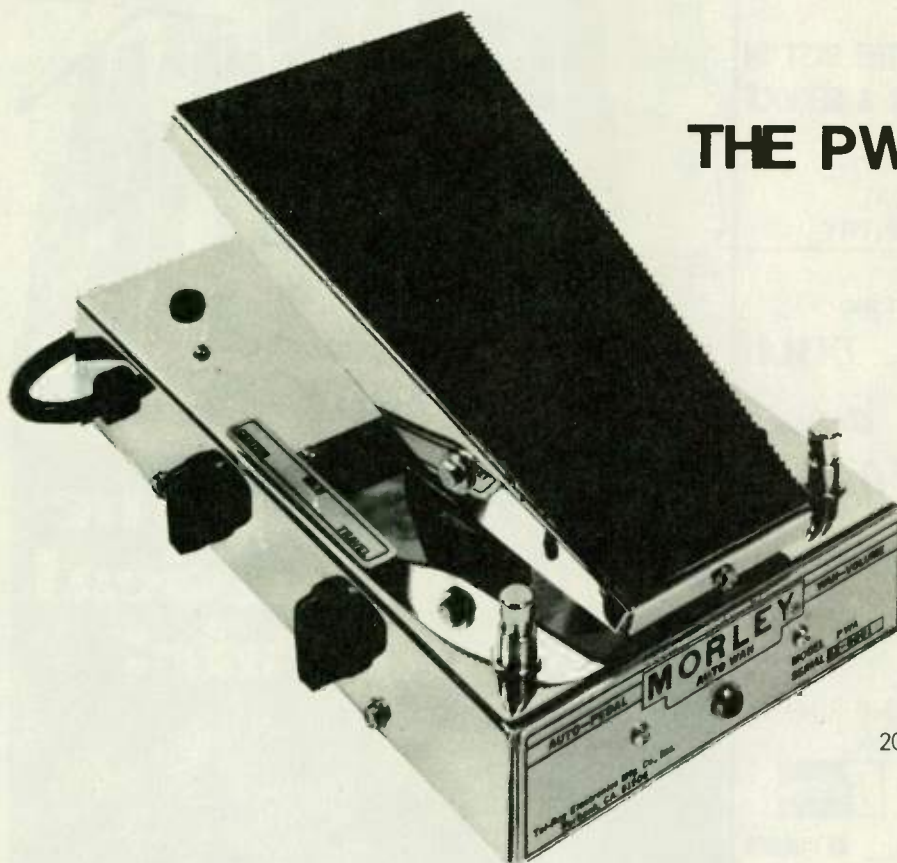
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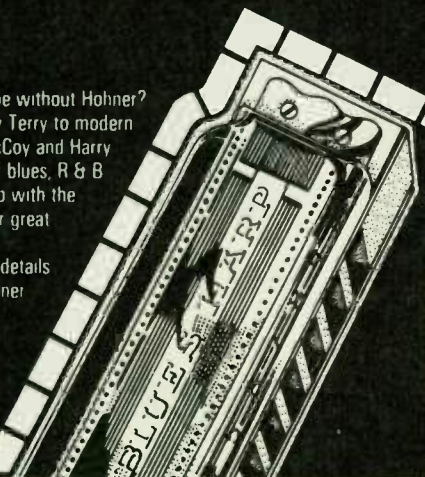
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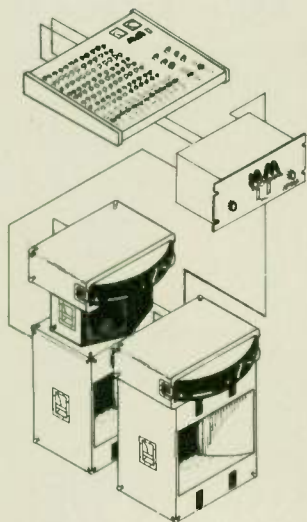
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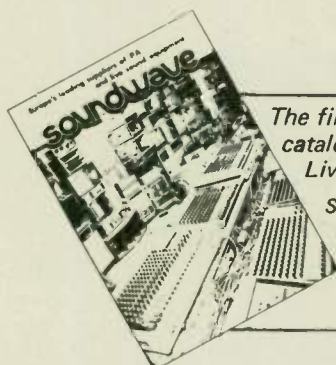
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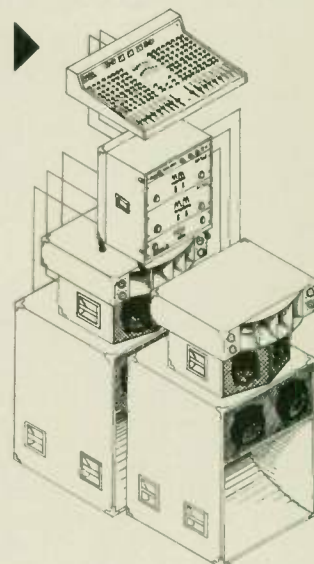
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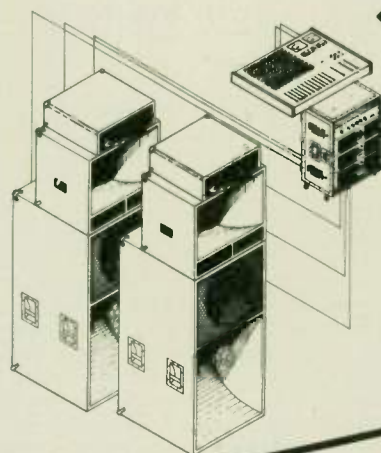
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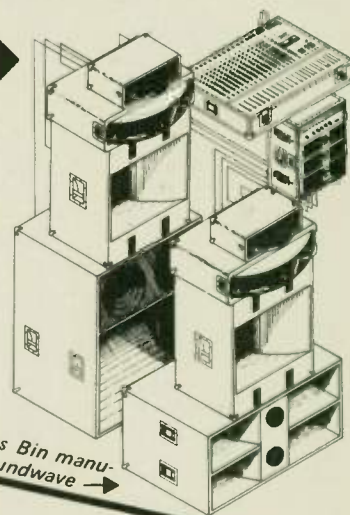
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# Chuck Leavell: On The Level

*Chuck Leavell is reckoned to be one of the five best rock pianists working today according to the readers of a popular keyboards magazine. He is said by fellow keyboard players to be one of the six top electric piano players. Leavell rose to fame and fortune with the ill-fated Allman Brothers and is now carving out a new career with a high-pedigree band Sea Level which plays a sophisticated form of southern rock. Steve Rosen recently talked to him.*

**When did you first start playing and why did you choose piano?**

My mother played piano and I used to enjoy listening to her play. She played standard pieces and read music pretty well. I just enjoyed listening and she would get up after playing and go about her business around the house and I would sit down and try to imitate her. So I gained a little bit of ear training from doing that kind of thing. She encouraged me to take lessons which I did for a very short period of time, about four months.

I was in the second grade, so I would have been seven years old, and I decided I'd much rather be out with the guys playing kickball or something, so I discontinued that but I continued to listen to her and occasionally tinkered around on it. It was more or less a hobby, it wasn't anything serious. I think that helped later on because, at an early age, music was fun for me, it wasn't any pressure thing, so I think it helped my attitude. The ear training was really good just tinkering around on the instrument. When I took the lessons, naturally, they tried to start me out trying to read music, but it was something I didn't catch on to too easily because my ears and eyes kind of had a war. You know, I already had a little bit of an ear. Later on, after I discontinued the lessons, my cousin had a guitar and taught me a few chord changes. This was in the folk era: Peter, Paul and Mary, the Kingston Trio, Chad and Jeremy. I learned a few folk songs on the guitar and a little bit later, rock and roll was happening. Chuck Berry and the Beatles of course, so I started playing guitar in the band and that lasted for a little while.

**What was the name of that band?**

The Mizfits. With a "Z". We had to be cool. That band played at little school functions and parties that our buddies had and, eventually we got a steady job at the YMCA. We played every Friday night for the kids. It was a great gig. We made \$12.50 a piece a week. It was big bread back then.

**And you're playing guitar all this time?**

Right. Well, I must say that the keyboards started coming back to me about this time. We had two guitar players in the band so, after the band had been together for close to a year, a rival band that was in town had this guy who got a Farfisa mini compact. And boy, I was green with jealousy. That was the neatest thing I'd ever seen in my life. I had to have one. I saved every penny I had and made a down-payment and bought one from a local music store and started getting into that. That led to a Wurlitzer electric piano which was the beginning of rock 'n' roll for me. I realised the piano was really where it was at for me, mostly. And later on, to make a long story short, I just got totally into the keyboard and left the guitar



behind. All the guitar players were getting better anyway and I was just kind of staying the same. And I stuck with it.

**You later moved to Georgia?**

Yeah, I got to Macon through a mutual friend, Paul Hornsby, who used to produce the Marshall Tucker Band. Paul and I were friends back in Alabama. He used to play with the Hourglass with Duane and Tuskaloosa, and we had a band together, which was a big break for me. He eventually moved to Macon and was a studio musician and that's how I got over there. He said, 'Hey man, why don't you come over here. There's a couple of bands that need some players and there's a little bit of studio work going on'. So, he did me a great favour and got me in over there. We're still real good friends and he's done everyone under the sun these days and is still doing well. That was my contact.

**'Brothers and Sisters' was the first Allman Brothers album you were on?**

Right. This was November of 1972 when I joined the Allman Brothers. Berry Oakley was still in the band. He was a bass player. It was real strange. They asked me to join and we were recording the album and I was naturally elated, I had a great gig with a great band for the first time in my life. It was really a successful thing and, after three weeks of being in the band, Berry Oakley had his accident. Horrible tragedy. It was a real strange situation for me, because I had just joined the band. But I was with the guys, wanted to stick it through, and everything. And they stuck with me, too. It was a great band. I learned more with the Allman Brothers Band except for this band, Sea Level, than I've ever learned doing anything. I'll always really cherish that experience. I'll always love those guys for wanting me to play with them.

**When you came in, were you playing organ with them also?**

No, Greg had the law of that. At that time, I really wanted to get into the piano, but I was kind of laid back when I joined the

Brothers. They gave me a few good spots. There was a couple of real nice solos they gave me like in "Jessica". But mostly I just kind of supported the rest of the band and I was more or less in the rhythm section, with Jamo and Butch and Lamar of course, when he joined the band. I was mostly supporting Dicky's playing and Greg's vocals and, every now and then, I would get a little solo shot. The first year or so I kind of laid back and then they gave me more and more room to play, which was really good, but one thing I always regretted was that I never really developed any songs or anything with the Brothers and that was one thing I would have liked to have done if the band had stayed together longer. When the band did break up, my writing was just beginning to develop and of course, Jamo and Lamar and myself played as a trio and that's how Sea Level got started. We started developing our own little "inner" band. We would play in dressing rooms and in hotel rooms, that kind of thing.

**You were playing grand piano?**

That was the greatest part about joining the Allman Brothers Band. When I got with the Brothers, they had invented the electrostatic pick-ups at that time. Carl Countryman and Hathem Steel had their thing, too. I got a Countryman pick-up and man, I was in heaven. I could get all these amplifiers and everything and you could hear the piano. It was incredible. That was like a new era for me, too, being able to hear myself. And I stuck mostly with a grand piano. I used a Fender Rhodes with the Brothers as well, but mostly used the grand.

**Would you sit down with Greg and actually work out what he was going to play on the organ or were the keyboards something you felt you knew?**

We worked together, but Greg mostly used the organ for colouration and that kind of thing. He didn't do a lot of soloing. He did a few like "Elizabeth Reed". He mostly filled in the gaps, more sustaining type thing and let me handle more the rhythm. I would kind of play with the bass and the drums.

**Were you singing at all?**

I sang harmony on a lot of tunes and then towards the end we did one of Dicky's songs off his first solo album. "Long Time Gone" was the name of it and he gave me a verse to sing. That really gave me the fever. I started to want to sing so when Sea Level got together I started developing my voice a little bit and now I feel much more comfortable with it. It's still developing and I still want to work at it.

**Did you actually learn from Greg, watching or listening, or was it vice versa?**

Oh sure. Greg's main point on the keyboards is sounds. He really knows how to get good colours and good support for a song. He's





really good at that, so I did pay attention to his organ playing in that direction. He is a tasteful soloist, not flashy or technically great, but very tasteful. He comes up with the right lick in the right place.

**When did Sea Level really start and when did the idea take shape?**

Again, it started when the Brothers were still together with Jai and Lamar and myself. Then when the Brothers did break up, we were

faced with a decision. I could have gone and looked for a job in another popular band or something like that or else we could try to get our own thing going. We chose the latter and we got Jimmy Knowles to play guitar with us. He worked with Alex Taylor and Dr. John and he was the first guy that popped into my mind. So I got him to come down to Macon and he rounded out the quartet which was the original Sea Level. We went on the road,

spending 200 days the first year that the band was on the road and we did the first album. Then, we decided to expand.

When we started thinking about a fuller sound in Sea Level, Randall Bramlett was the first guy that popped into my mind. I really wanted to play with Randall. So I suggested to the band that we add him and Jimmy had done some session work with Davis Causey who was playing guitar with Randall and they said,





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'let's get Davis, too. Let's really get a big band going.' I said, 'Hey okay, I'll go for that.' So that's what we did. We got Randall and Davis and we rehearsed for five or six days. We went on the road, did about five or six concerts, went back and polished up what we had worked on for another week and then recorded the second album. Also, at this time, Jaimo announced to the band that his back was really bothering him too much to do the amount of roadwork we were doing. He was great about the whole thing. He said, 'Look man, I just can't handle it. I'll help you find another drummer.' He gave us a list of names to think about and he helped us find George Weaver. George and Jaimo and Lamar knew each other back in the old days.

He joined the band and, for a while, we had two drummers. That was real nice, it was really a killer, but Jaimo was still having trouble with his back and he just finally stopped going on the road altogether and now it's just a six-piece band with George doing the drums.

**When you were starting Sea Level, you knew that maybe you wanted to expand your keyboards — it went from organ and piano to synthesizer and clavinet to everything else. Was it something you always wanted to do or was it that there wasn't room before?**

Yeah. That's right. With the Brothers, Greg handled all the organ and I was kind of out of it in that department because he did it real well and that was his gig and then towards the end of the last tour we did, Greg got a clavinet and started using it on stage. I kind of got jealous. God man, I wish I'd thought of that. I should have been playing clavinet. I might mention that doing a lot of session work or as much as I could get in Macon and around the South, I played different keyboards on sessions. I played organ, clavinet, a little synthesizer. I'm still a novice at the synthesizer. The grand piano is my first and true love and always will be. To me it's the most versatile and interesting instrument there is. The synthesizer may be more versatile, but I don't know, it's just not as interesting to me as an acoustic instrument is. So I stuck mostly with the grand and when Sea Level got together, I immediately got a clavinet and I'd always played a Rhodes with the Brothers. So that was it; grand, clavinet and Rhodes and then, later on, when we got the new guys in the band, I started hearing a little synthesizer in there for colour and for blending with the guitars and saxophone so I started using a Micro Moog.

**So the keyboards you're using are: synthesizer, Micro, Rhodes and clavinet?**

Right, and I use a Yamaha grand as well. It's a C-3 Conservatory model. It's a very good instrument, very roadworthy.

**Is that electric?**

No. They make an electric grand which is real good for bands that can't afford to carry a grand piano that want to simulate that sound. To me, it's not anything near the sound of a real grand piano. I mean, to me it's somewhere between a clavinet and a piano because a grand piano usually has three strings per note on the middle and upper registers and the Yamaha only has two and then some of the notes where a grand piano will have two strings, the Yamaha electric only has one. So it's not as full a sound.

**You have your own little mixing console on stage?**

I do, yes. I have the four keyboards on my side of the stage mixed with the Yamaha board and then I have a direct on the grand and on the Fender. I use direct boxes that go straight to the P.A. so I can get a direct on that and on the clavinet and on the Moog I use the echo-send out of the Yamaha board so they still have a separate mix on that, too. They can mix four keyboards out there and I can mix them to what I like on stage.

**Have you done anything to your keyboards, changed them around, modified them in any way?**

Naturally, with the Rhodes I've worked on the action. I've had the same Rhodes for about five years now.

**Do you have the stage version?**

No. The studio version: the suitcase model with the speakers. To me it's essential to have that pre-amp. There's really a difference in sound and in power. I much prefer that. It is getting a little bit funky, I must admit that, but it's still my instrument and I like the way it sounds, like the way it plays. The clavinet is a stock clavinet and the grand, again, I've worked for a number of years to perfect the sound, to reproduce it as accurately as possible. I don't want to mess up the sound too much on the grand anyway. I do a bit of EQ on the clavinet and the Rhodes and the Moog, of course, has a multitude of sounds. You can mess with that till you get it just right.

**Because your main instrument is the grand piano, did it take you maybe a little more work to develop techniques on the clavinet and the synthesizer?**

The clavinet was not a problem. The clavinet has such an easy action, it's like playing an organ. The Rhodes, of course, took a while to develop, but I've used the Rhodes for about seven or eight years so that's pretty natural to me now, I don't have to think about it. The synthesizer, amazingly enough, has given me a little damn trouble, you know. It's the strangest damn thing. The main thing that's giving me trouble is getting back to the grand piano or another instrument after using the synthesizer. I'll use the synthesizer for a line that may last twelve to sixteen bars or something like that and then it's a real quick movement to get back to the grand, so I try to make it fast, but sometimes I may miss the last note on the damn synthesizer and I say, 'Oh no' and I'm still back there trying to make it, but I think it'll come in time. The organ has been a natural for me. A natural feeling, no problem with the action or technique on that.

**When you're soloing, are there certain runs or scales that you tend to work from? What makes a Chuck Leavell solo?**

There are a few devices I use, minor 7th runs, minor 9th runs and that kind of thing, usually 30-second notes, when I'm doing a long extended thing, but I've tried lately to start breaking it up. Say a two-octave minor run and then stop and play a 9 note or something and then accent that with the left hand or parallel 5th chord. I'm also getting into counterpoint. In a solo, I'll trade off fours and eights with my left and right hand. That's an interesting thing to do. That'll break up the monotony of the solo because it really gives an interesting effect. It's like two people soloing. Another thing I've begun to do now that my left hand is developing is to solo with my left hand and double an octave with my right and not even think about my right hand, just think about what my left hand is going to do. You get some interesting bass type effects.

**How do you think your playing has changed since leaving the Allmans and since Sea Level's two records? Your technique has obviously developed a whole lot more.**

Thank you. It's freedom. That's the main key whereas, with the Brothers, mostly I was supporting Dicky and Greg with a few solo spots here and there. With Sea Level it's total freedom. We're doing a lot of my songs and everybody's open-minded. We have a band here. This is not my band, it's not Lamar Williams', it's not Randall Bramlett's band. It's Sea Level. It's everybody working together. The songwriting is developing on everybody's part and that's a great thing. Everything feels a little more a part of something when they're contributing to the writing. So we all work together, and we leave each other enough breathing space. One of the most important things in having a band, to me the most important thing is not to be defensive. When somebody makes a suggestion, you've got to listen to

what the hell they're saying. If Randall Bramlett come to me and says, 'Hey man, last night I think your solo might have run a little long and I think you could condense what you're doing,' I try not to get defensive and say, 'Well, who's he to tell me how long I can play a solo!' I listen and I think about what he's telling me and usually he's right. And I do the same to him. I say, 'Hey man, maybe you might be playing the wrong sax. Maybe you should play the tenor instead of the alto or the alto instead of the soprano.' But he'll listen and we all work together in that aspect and that helps the soloing and the group. It's a tough thing to do. People get defensive and sometimes my reaction is immediately a little defensive, but if you just take a deep breath and think about what the man is saying, usually it comes out for the best.

**Are there any keyboard players that you particularly listen to?**

Well, naturally I listen to as many different people that I can to gain influence from all different aspects. And that includes other instruments as well. I love Charlie Christian, Django Rheinhardt, Charlie Parker, Coltrane and Miles Davis. I listen to those instruments to get ideas for the piano. But probably my favourite two keyboard players would be Oscar Peterson and Keith Jarrett. They're two living keyboard players. Now there's Art Tatum and cats like that who are a long time gone, but they were masters. Course, Hancock and Corea, those guys are so good and I've learned a lot from listening to their records.

**Are there certain things that you use in the chords that identify them as Chuck Leavell?**

Well, various different things. Again, the parallel 5th and 4ths at times. Another thing I've gotten into is, I'm not sure of the technical term, but if you're in the key of D, to solo in E, which is a step above the root. That's a real interesting effect to me. You can do some interesting things with it. Another thing is using D minor and use an E major chord, or if you're in a key of B minor, sometimes I'll go for an F sharp run, which is kind of out of the blue. It really sounds funny, but it's an interesting thing and will lead you into something different. One device I'm using more and more is I'll be in one key and just decide to go into another, keeping the root the same, and then play off of that. Then I'll start using the left hand to go to perhaps another key. Again, the suspended run, arpeggio, suspended 4ths, chord clusters like with your left hand if you're in the key of G minor, using a suspended 4th on the left hand and on the right using a minor 7 chord, it makes a real fat sound. I'd like to get more and more into larger chords, using ten fingers and that kind of thing, but that takes a lot of concentration and willpower and I haven't quite developed that.

**What about people like Emerson, Wakeman and those types of players?**

I must admit that they're incredible players. Emerson can sit there and whip on a B-3 and what's his name, Rick Wakeman, incredible player, but to me... I don't know, maybe it's the European thing or something but it's just not as exciting for me, what they do. Emerson's work, the one where they take a classical piece and do it with a rock band, that's pretty interesting. I think it's a good thing and I think that's all helping to 'sophisticate' young audiences. But for my own personal taste, it's not as hip as something like a Jarrett or something like that. It's not as hip as something like the Mahavishnu Orchestra to me. Their music, for some reason, doesn't have as much freedom in it, as much improvisation. It's a little more worked out. Like Yes, they're an incredible band and it's very interesting what they do, but it's a little bit too structured. You don't hear a guy sit down and just wail, set himself free and play, way down deep inside, that's what turns me on, to hear a guy sit down and totally abandon himself and just play, no matter what key, just play from the heart.



# The Thorogood News



BY IAN WHITE

The biggest joke in George Thorogood's life right now is the adjective "new king of the slide guitar". George laughs at that. He knows he plays slide OK but he certainly doesn't regard himself as any "king" — despite the fact that he totally blitzed out seen-it-all-before audiences at London's Dingwall's during a lightening visit to Britain.

Thorogood and his Destroyers are the latest phenomenon on the rock scene; a phenomenon because the act is so basically without frills or gimmicks and works solely off the sweat and musical quotient of the three-piece from Delaware.

George Thorogood is just out to have a good time playing rock 'n' roll and blues the way it was always meant to be done — in crowded bars far away from the whirly-gig of the conventional rock circus.

Although only 27, Thorogood displays an ability and understanding of the blues that belies his young years. Even now they have hit the "big-time", the band's stage equipment could easily be stowed in the back of a large estate car.

First hearing shows off George as an Elmore James sound-alike. However, he admits he was not especially influenced by anyone in particular.

"I always enjoyed listening to the records of Elmore James and Robert Johnson. I used to watch Hound Dog Taylor and I did a few shows with him. I can't really say I stood at the knee of any one great guy."

George discovered slide guitar chiefly by accident. Some friends gave him a slide for his birthday as they thought that would be the key to his progress on the guitar.

Although mainly self-taught, Thorogood did have a friend who instructed him in various open tunings and he took it from there.

"I used to play strictly acoustic guitar. I didn't know anything about electric guitar, I still don't. I found out I liked playing with a couple of my friends and just said to them 'let's get an electric guitar. We went down to a hock shop and I picked one up — a beautiful Gibson 125. I had a Princeton amp with a 12" speaker and I used that the entire time. Any set-up I've tried before, after, since or during has never worked as good as that."



# 'I don't like to experiment with guitars on stage'

George was lucky, he hit his ideal amp and guitar combination straight off and his London performances were upset to a degree that his beloved Gibson was stolen before his departure from the U.S.A. and he had to make do with both a substitute amp and guitar.

He is the antithesis of the equipment-conscious musician who will gladly discuss string gauges and pick-up windings indefinitely. Asked about the action on his guitar, Thorogood just shrugs:

"I have it a little higher than most guys but not as high as I've seen. My strings I guess are medium although probably heavier than most people who play guitar. Most guys use an .09 or .10 on the high string. I use a .12. For the bass strings I use a .54. I guess I do use a heavy string."

Does he ever have trouble bending the strings when he discards the slide for conventional playing?

"Sometimes I do, but I end up changing my strings just about every other day to keep them fresh. I like GHS, Gibson and Ernie Ball strings. Although the Ernie Balls wear out pretty fast."

Like many other modern guitarists, George is a big fan of Keith Richards' playing, claiming the Stone always had a good sound as well as good chops.

In London, George was spending much of his time missing his Gibson 125 and really berating his substitute axe which he claimed was just a 2nd from the factory with a "whacked-out neck".

"I don't like to experiment with guitars on stage. I just like to go out with nothing on my mind except to give a good show, not worrying 'is the amp gonna work, is this guitar gonna work? You can't have that.'"

If you watch Thorogood at work his guitar playing is that of an expert. Yet he believes himself to be on the first rungs of the ladder to master the instrument. He admits he'd like to be better at the things he does with the guitar and there are a lot of other techniques he would like to learn.

"I'd like to get more close to acoustic-style playing. I'd like to be able to turn down and play something really good as opposed to just slamming away. I'm just starting to learn about volume control as far as my own guitar is concerned. Before I knew nothing about it. I just picked it up and wailed away on it. You know, you can turn down for some type of song and turn up for a solo. I couldn't really do that before because we were a three-piece and I couldn't even

stop to put my hand down to turn down the volume."

Watching Thorogood's picking technique, his fingers are a blur across the strings and it seems he uses thumb and all four other fingers.

"I just put a fingerpick on my index finger and use a thumbpick then I just play using two fingers and my thumb. As I told you, I used to play acoustic and that's just the way I play."

George's grounding on acoustic was so strong he has his semi-acoustic set up like a regular acoustic. He now has difficulty playing a conventional solid-body guitar like a Telecaster or a Strat because there is too little clearance for him between the body and the strings.

"I've tried to use those guitars but I think they are more for people who have a flat-picking style which I don't. I have a certain strum I use and I have to have enough space between the strings and the guitar. On my electric the strings are high off up the body. I have a way of slamming my hands up against the strings and I have to have something set up close to an acoustic."

Currently the Destroyers make up George, Jeff Simon (drums) and Billy Blough (bass) although Thorogood says there is no hard and fast rule they should remain a three-piece. If they find another guitarist or a sax player who "is as crazy as we are" the Destroyers could well expand.

"I'd like a sax. But we'd need someone we dig. That's how the band first started. We were friends first. We just played out of sheer joy. It wasn't a case of having to get a band together."

The Destroyers stage act is roughly rehearsed but a lot of the arrangements, dynamics and breaks have come out of live performances which I think is good."

While four years hard work doesn't make George Thorogood and the Destroyers the "overnight sensation" they may appear to be, George is very worried that the bigger the band gets, the more remote they may become from their audiences. You can see his point when his act involves leaping off stage and jiving with his guitar down among the paying public.

"I'm not worried about it because I think it's going to happen. I'm just worried about it because I don't think I would feel comfortable that way. I'm not ready for that yet."

"Walking into the audience is something I do on the spur of the moment

and it's something I do almost everytime I play. It's not like people stop you although someone might be wise and step on the cord. People always try to help you out".

George plays strictly by feel and claims reading music is an "outdated thing". "People nowadays play by feel. I just play what I feel".

As a no-frills guitarist, Thorogood shuns effects, or 'gimmicks' as he calls them. His biggest problem on his British tour was feedback through the use of loud volumes playing with a semi-acoustic.

"I had a lot of trouble from the monitors. But feedback can be controlled to some extent. I told them to turn down the guitar until I got just a pinch of feedback. I always get feedback through a 10" speaker. If you get a larger speaker it can handle it. That's why I use a 12", you can play high without the feedback."

He dismisses the praise of people who say he is the best slide player they have heard:

"It's probably because they haven't heard that many slide players. Actually I'm moving away from slide guitar. On the next album I put out, the songs won't have anything to do with slide guitar. Lately I've been getting away from slide".

Vibrato is one of the hardest aspects of slide playing and George has got his vibrato down to a fine art.

"I just put my finger on the note and shake it. I just do it as I feel. I'll tell you something, it's a lot harder to play slow than it is to play fast. John Lee Hooker is an excellent example. He can play one or two notes and it means a lot more than some of these cats who fly all over the neck. It's harder to play slow and get any meaning out of it."

"I haven't really learned to take solos on the low notes. I used to when I first started playing and I thought was wrong because everyone I saw was over the top of the neck. Those people who saw me play said I was doing it wrong. So I tried to play all flashy and high".

His choice of slide leans towards copper: "The glass to me sounds too tinny. I just like the tone of a heavier slide. A copper slide to me sounds like an old freight train."

What George Thorogood and the Destroyers are doing is proving that you can make good music without the sideshow and technical arsenal that much of Rock has got embedded in. You'd do worse than to catch their act or listen to their album.



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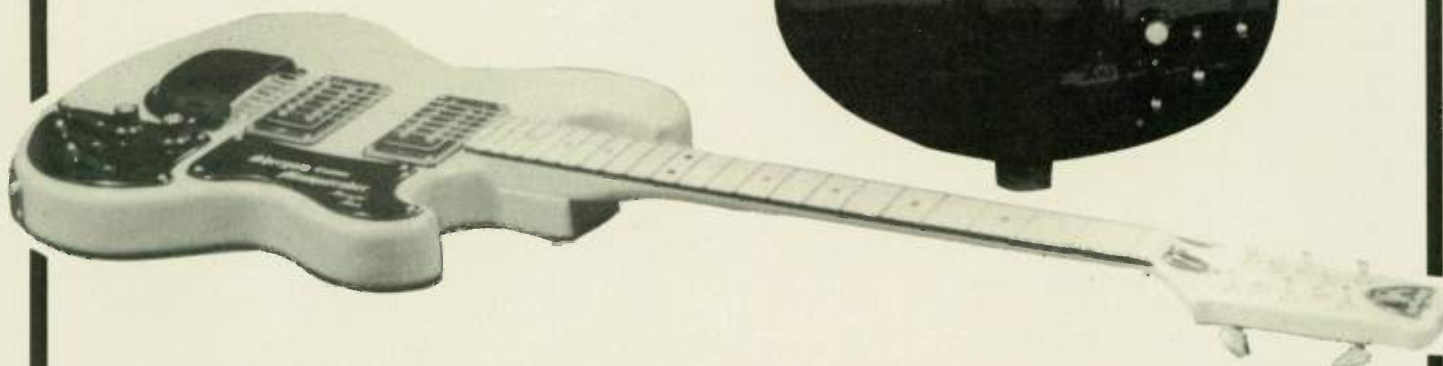
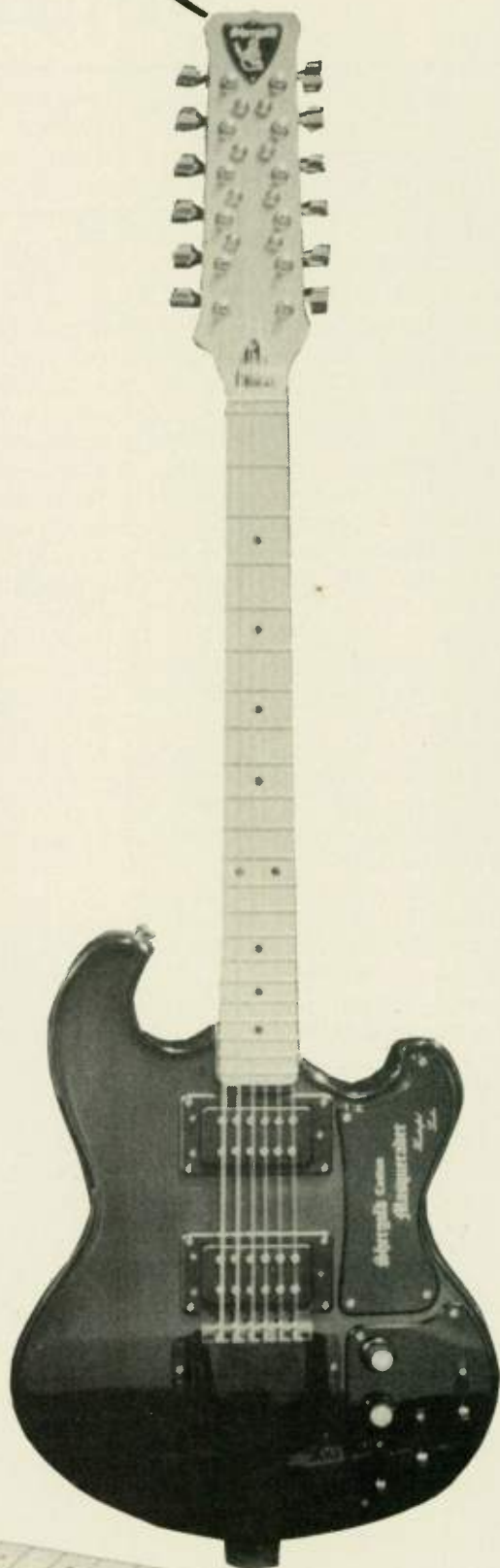
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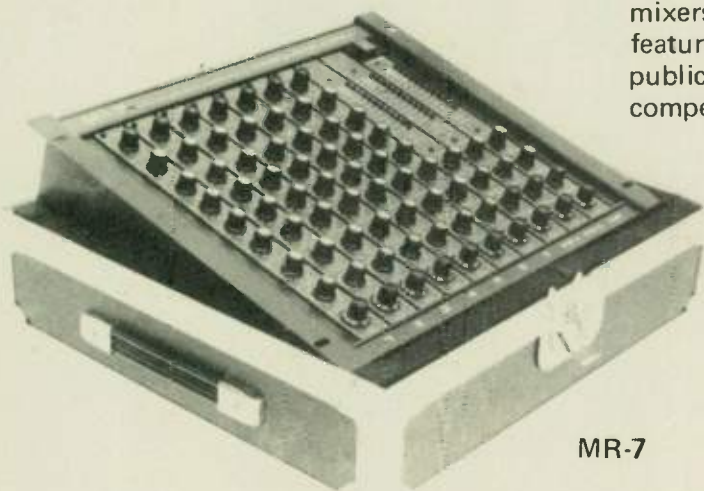






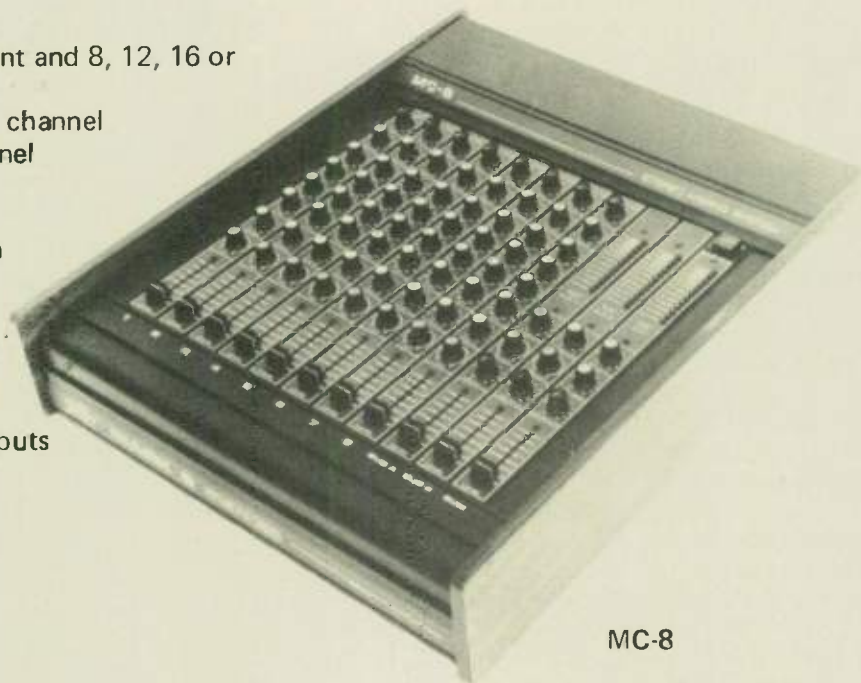
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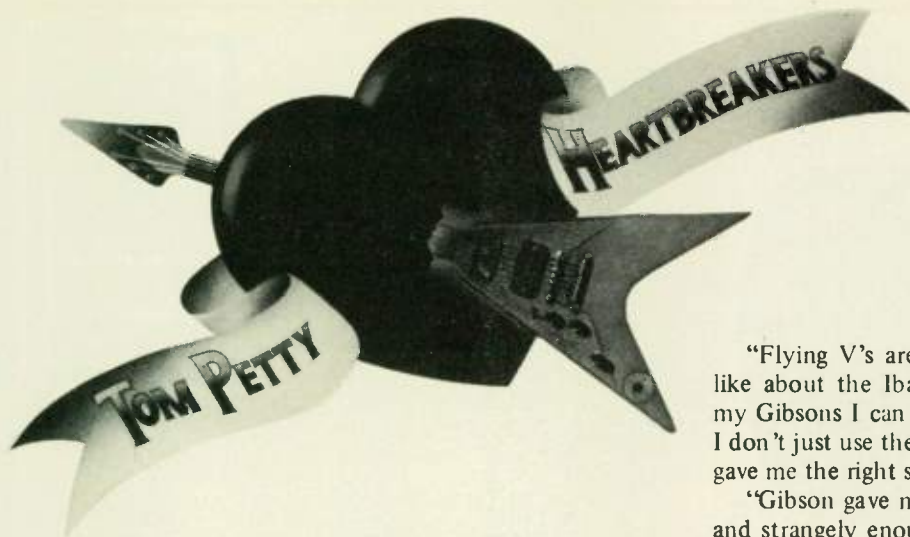
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# TOM PETTY

For all those who think that America's West Coast only produces laid-back Eagles type music, Tom Petty will come as a bit of a surprise. Tom and his band The Heartbreakers play a brand of rock and roll that owes very little to the soporific sun and sea of Los Angeles.

They have emerged as one of the best new acts to come out of the USA in recent years combining an exciting rock and roll approach with a penchant for writing good pop songs. The band first came to prominence with the single "American Girl" which was a hit on both sides of the Atlantic.

With the release of their second album, and a major American tour – interrupted by a special guest appearance at the Knebworth festival in Britain – Tom and the band are heading into the big league of rock.

Although the band are based in LA, their origins are very much rooted in the Southern states. Tom said: "I come from Florida, the northern end near Macon, and most of the band grew up in the South. I started out listening to Jimmy Reed and that kind of rhythm and blues stuff. I was playing bass originally but then switched to guitar and later moved to LA.

"I managed to get a record deal to do a solo album and, by accident, a lot of old friends were in LA and wanted to join the band. The easiest thing to, rather than try to get me out of my deal, was to call the band Tom Petty and the Heartbreakers. I didn't really want to put my name up front, but it was the most convenient thing to do."

Tom's quite a guitar collector and takes up to 15 guitars on the road when he's touring. He has a penchant for Flying V guitars which have become something of a trade mark and are incorporated on the band's impressive logo.

"I started with a Gibson Flying V," he explained, "they are my favourite type of guitar. Then it got nicked and another one I had got bashed in and I played Ibanez for a while which isn't quite the same thing. The Ibanez Flying V's are a little bit rougher, the wood's not as thick so it's a little more distorted. Michael Campbell, Heartbreakers guitarist still uses one for slide. Now I've got another Gibson which is the best one I've had so far, so I'm being very careful with it.

"Flying V's are real versatile guitars, that's what I didn't like about the Ibanez. It only had that one sound, but with my Gibsons I can make lots of noises. They do look good, but I don't just use them because of that, I'd play a square one if it gave me the right sound.

"Gibson gave me my current one straight from the factory and strangely enough it is a good one. It's even better than my old one which is unusual. I think they are trying to build them again like they used to because popular opinion is that the new ones are not that good.

"I also use a 1962 Stratocaster. It's so old, the pick-ups keep falling out so now I've got them pasted in. I have an incredible Vox 12-string which I haven't brought on tour because I was afraid it would get bashed in. It's a really weird-looking thing and I use it for "American Girl" and all that kind of stuff.

"I also have a B tuned Dan Armstrong plexiglass guitar which is good for some things but not the type of instrument you could play all night. We use it on "too Much Ain't Enough". In addition, I have a Gretsch Rock Jet which is a little Les Paul-shaped Gretsch. I was into that for a while.

"There's a Telecaster which I call the Red Dog. It's custom-made with a pre-amp inside and something I call the 'destroy button'. When you hit it, it boosts the guitar to give about four times the volume so you get long, sustain distortion.

"The guy from Gibson was telling me about their new RD guitars and I hadn't seen one so he gave me one. It came to LA just as I was ready to leave and I didn't have time to unpack it, so I still haven't seen it but it sounds really interesting."

The band's amplification set-up also arouses much interest among musicians and enthusiasts. Whenever Tom and The Heartbreakers play, the stage is always reminiscent of early Beatles concerts thanks to the mass of Vox amplifiers they use.

Tom said: "Everyone always asks me whether they are real Vox. They are, Vox Super Beatles, and they are all transistorised. I use two, one for a slave amp and the other through eight 12" speakers, I think they call them Bulldogs or something. They are old amps which are really difficult to keep in shape. We have seven on the road with us and we usually get back after a tour with about two working. Anytime we see one, we buy it because they are so rare.

"I like them because they make a lot of noises, there's a hundred noises you can get from all those buttons. You've got things like a floor switch for mid-range boost, plus a pretty nifty fuzz-tone, a repeater and the tremelo is good as well. I've been using them for ten years. Every amp I've ever used has been a Vox starting with the AC30's and then working my way up to the big ones – I might even go back to the AC30's. Our keyboards player uses Crown amps, but both Michael and I use Vox, we really love them."

As an acknowledged lover of "noises", it is surprising to find that Tom does not use any effects pedals – this he puts down to his roadies. Apparently every time he stepped on a unit he would end up blowing everything so the roadies banned him from using any effects.

Tom is essentially a rhythm guitarist, being content to lay down a solid backing for Michael to solo over. He believes that a good rhythm player shouldn't be really noticeable and cites



# TOM PETTY



his favourite guitarists as John Lennon and Keith Richards.

As the main songwriter, Tom has very definite views on the matter. He explained: "I think songs are very disposable. I write one and then if we don't like it, we throw it out. We wouldn't do one again and again until everyone gets bored with it. You never know where you are going with a song. I might spend weeks making some little changes to it, then again we might play a song as a ballad one day and, if it doesn't work out, kick it up into a rocker the next."

"It's real disposable, you never know what you have got until you hear it back. I write on guitar and piano, but piano mostly because on guitar you tend to fall into patterns. I'm not really a piano player so I'm more likely to hit weird notes and come up with some interesting ones."

"The guitar I use when I'm writing is a Gibson Dove, it's very old and is, in fact, my favourite guitar. I've got a really neat acoustic for recording; an Ovation Legend. It's a stereo acoustic guitar with each string separated so you get the E string going to the left, A to the right and so on all the way down, it's really crazy."

Any conversation with Tom Petty will inevitably lead to "American Girl" and its Roger McGuinn overtones: "American Girl was just a five-minute job a real quick one. I never really got to meet Roger McGuinn before that. He came across the song through the music publishers or something and then he called me and asked me to come up to the house with a guitar."

"I went up there with just my acoustic and, when I opened the door, Roger was there with his whole band. I played electric with the band for a while and then he said 'Do you know this song American Girl, show me how it goes'. He liked it and eventually recorded it."

"Actually, we kind of cancelled each other out because he put the single out at the same time as we did. I kept hearing them back to back on the radio and there was quite a bit of confusion. People thought that Roger's version was our version and a lot of people still think that Roger wrote the song which is real frustrating."

Tom is credited as a co-producer on his latest album and the studio is an area in which he has quite an interest. "I've spent so many years in studios from way back and Denny Cordell is an old friend, he is one of the great producers. I ran around with Leon Russell and him for years. I always wanted to produce but never felt confident enough to say 'let's do it my way', but now I feel I've got one more stripe on my coat."

"Doing us, I'd rather not be the sole producer, because I'm afraid that I wouldn't have anything to bounce off of. It's good when I've got Denny there and Noah Shark. I think Noah is going to be one of the real producers of the Seventies. He engineered our first album and now he's got quite a few projects. He's doing the Dwight Twilley Band now and I think he's doing Andrew Gold. I learn a lot from these guys, just hanging around. We don't work in a commercial studio, we just work in this little shack in LA, it's one Denny built up in East Hollywood."

"That's what I'm really interested in. I like producing, the more I do that the more I learn. I love to go out and play all that but we have done about two years of it now and I'd really like to get down to producing at some point. The Heartbreakers take up all my time but one day, if we ever take a break, I'll do that."

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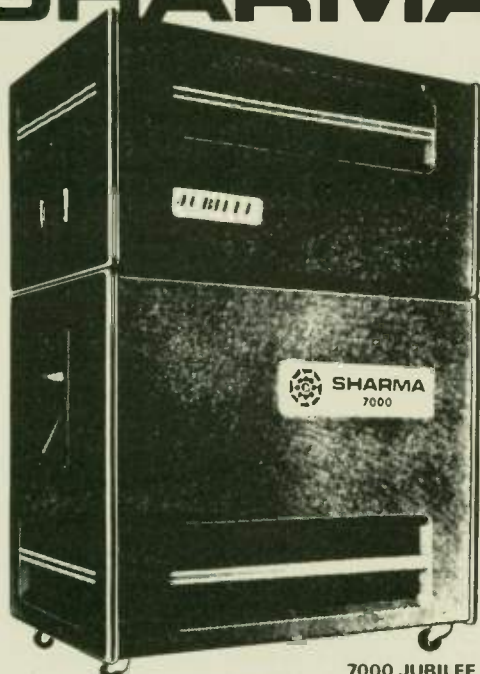
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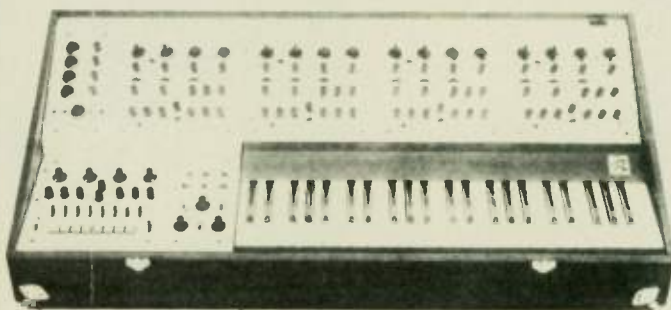
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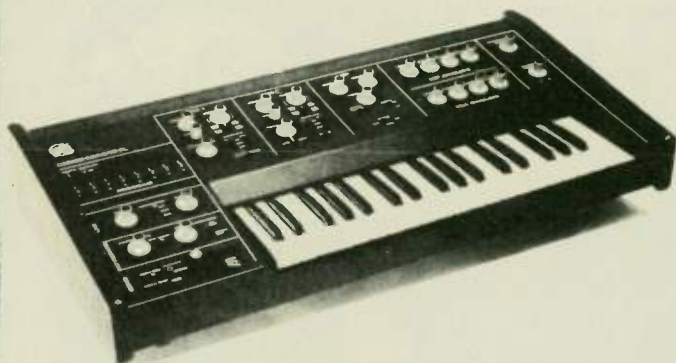
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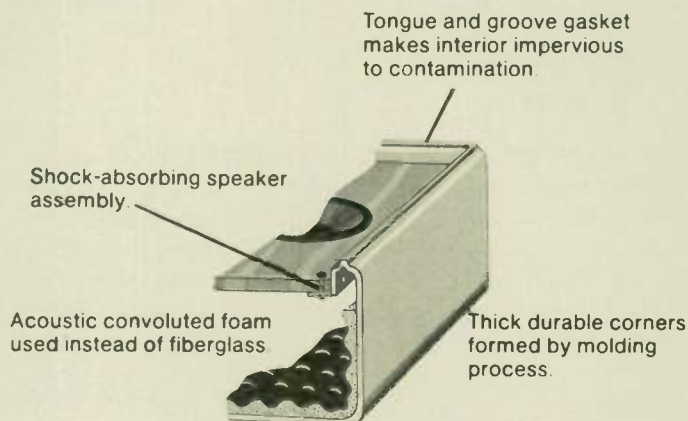
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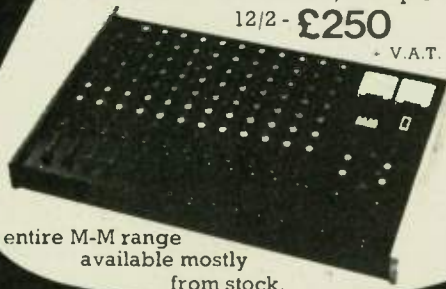
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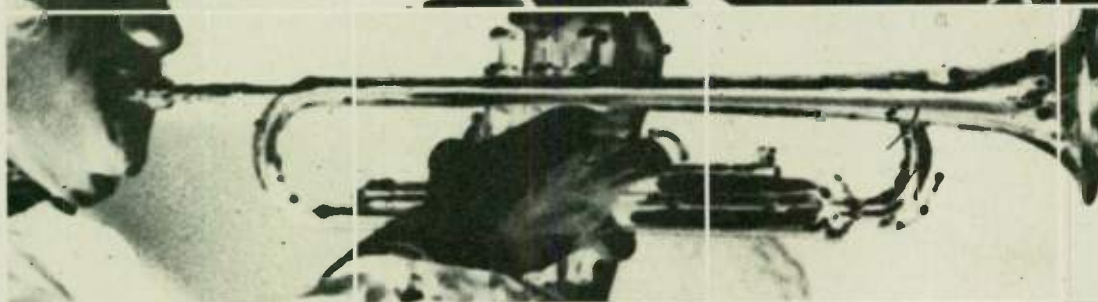
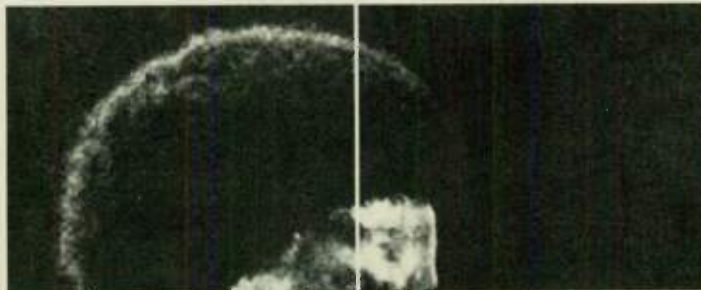
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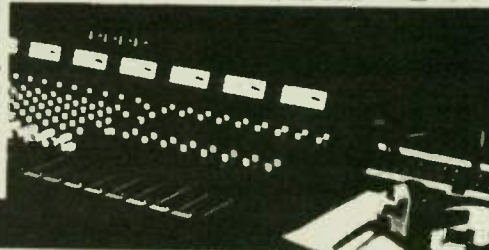
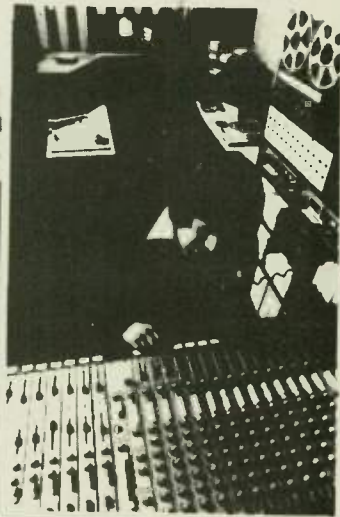
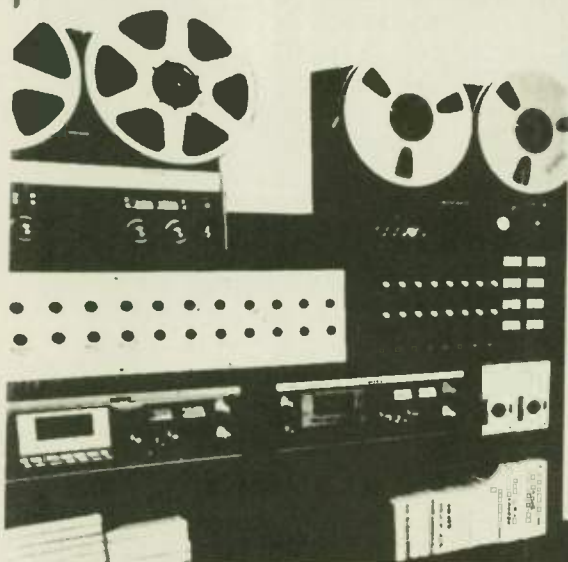
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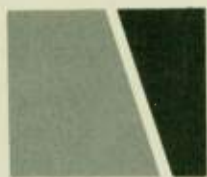
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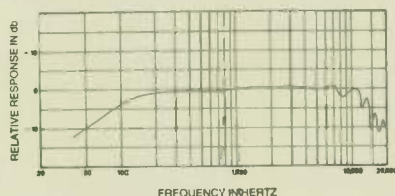
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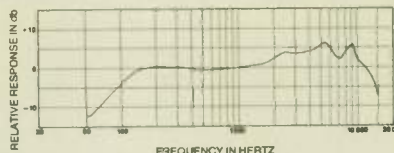
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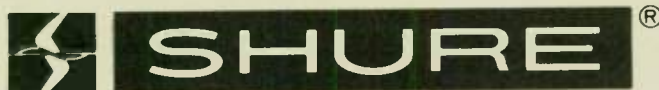
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## Average White Band: "Warmer Communications" (RCA XL 13053)

It's always disappointing when a band with obvious musical talent fails to live up to expectations on record — the Average White Band are one such outfit. Scotland's favourite soul sons won much critical acclaim with their brilliant debut album which proved that "whiteys" could play soul.

Unfortunately, the band have failed to be consistent on vinyl, although they maintain a hard core of followers both in Britain and America. Their teaming up with Ben E. King for an album somewhat revived their sagging fortunes, but unfortunately with their latest album "Warmer Communications" they appear to have slipped back again.

I find it hard to pick out any number on the album to compare with the freshness of the white album, the AWB seem a pale shadow of a once superb soul outfit. The warning signs are there on the opening track "Your Love Is A Miracle", a plodding, lifeless number which sounds more like a warm up studio jam than an album opener.

"Same Feeling, Different Song" has the almost inevitable "Pick Up The Pieces" sax echoes, but features some good crisp drumming from Steve Ferrone. The title track "Warmer Communications" on the second side, shows the first real change in approach with the band utilising a reggae-type back beat but once again the song is a let down.

"The Price Of The Dream" is probably the stand out track because it has the cand displaying some much-needed urgency and attack, but the rest of the album is uninspiring.

The musicianship of the AWB has never been in doubt, and on this album they are joined by the inevitable array of session musicians who include the Brecker Brothers on horns and Cornell Dupree on guitar. The trouble is that the band have become too laid back, there is no urgency or excitement in their playing. It is as though they feel they only need to jam around for awhile to come up with the same formula as before.

It is obvious that the band have become firmly entrenched in the USA, as witnessed by all the credits on the album, and that I believe is where the fault lies. They have fallen into the trap of some many American soul outfits who find a hit formula then work it to death. Perhaps a swift return to their native Scotland before their next album would provide them with the stimulus to produce the kind of records they are capable of.

**David Lawrenson**

*Produced by Arif Mardin, engineered by Gene Paul.*



## Stanley Clarke: Modern Man (Epic EPC82674)

Stanley Clarke's new album is as unobjectionable as it is uninspiring. Sadly lacking is most of the virtuosity and style that so powerfully marked the jazzrock sound that grew out of his tenure with Chic Corea and was apparent on his first solo efforts. In the slide into the jazz-funk, disco sound, Clarke seems to have settled into a groove that will provide easy listening music, but little else.

From the marching cadence of "Opening (Statement)" Clarke sets a standard for Side One that bears little of the urgency and edge that gives his music power. The opening track features his lyrics, as do all but two of the songs (Michael Garson and Michael Maurer contribute one each) on the album. "He Lives On" introduces us to the funk beat and style that coarsens through the record in varying tempos. Lacing through the cliché beat however, Clarke contributes some fine acoustic piano runs and Jeff "Skunk" Baxter adds some superb guitar.

Through "More Hot Fun" and "Slow Dance" we're treated to a similarity of sounds until "Interlude: A Serious Occasion". The title of this cut alone tends to imply that the remainder of the album is done half-heartedly. Indeed, it's in this track that Clarke displays his skill but it is all too short. On the second side, "Modern Man" confirms in lyrics the suspicions of a "light" album: "I dance and sing/And play those pretty things". Pretty maybe, but definitely not exciting.

The digression into the slick funk/disco sound is nearly saved by the infusion of effects and synthesizers and with the entrance of Jeff Beck and Carmine Appice on "Rock 'n' Rock Jelly". The original promise of its opening licks, however, can't be sustained and becomes repetitive but it is good to see Beck return to his early style.

"Closing (Statement)" shuts down Side Two with a tempo that is more like a sigh of relief than a stunning end. Although there is some fine work done

on the album by guitarist Raymond Gomez and Michael Garson on Oberheim synthesizer, *Modern Man* proves an album that makes easy listening, background music, but falls far short of what we've come to expect from a superlative bass player. Clarke has slipped into a groove that we can only hope he manages to come out of with his future efforts.

**Bill Stephen**

*Produced by Stanley Clarke, engineered by Ed. D. Thacker, recorded at Electric Lady Studios, New York.*

## Daryl Hall and John Oates: "Livetime" (RCA PL 12802)

I must admit that I tend to regard live albums as a necessary evil of the recording business. All too often they are seen as stop gap measures either to give an artist breathing space or fulfill an album obligation to the record company.

It would seem that the only justification for a live set would be to capture a particularly exciting live band in their best environment, or as a souvenir for fans who attended the gigs. Good worthwhile live albums are few and far between and classics do exist e.g. The Who's "Live At Leeds", but they are not a suitable vehicle for all bands.

Daryl Hall and John Oates had always struck me as a decidedly studio-orientated duo, they write good pop songs, make good albums, but chart success has so far eluded them in Britain. Because of the high standard of their studio albums, the live LP "Livetime" would not appear to advance their cause very much.

There is no doubt that the duo and their band are good in concert, and with such great numbers as "Rich Girl", "Do What You Want, Be What You Are" and "Sara Smile" there is the basis of a good album. The problem is that Hall and Oates have a hard core of dedicated followers who are likely to have these numbers in their best form i.e. studio.

Tracks like "Do What You Want, Be What You Are" and "Sara Smile" do not really benefit from being stretched out, although the vocals and musicianship is excellent throughout. Drummer Roger Pope and guitarist Caleb Quaye late of Elton John and Hookfoot are both excellent players, although Quaye's guitar tends to be too far down in the mix on occasion.

Overall a pleasant album, but not one which is unlikely to set the charts alight. I look forward to them returning to the studio and the environment in which they work best.

**David Lawrenson**

*Produced by Mark Pines, Bernard Yervanian for Bristol Productions, mixed by Ed Sprig and Glenn Orsher. Recording supervised by Robert Zachary.*



## Tom Petty and the Heartbreakers: 'You're Gonna Get It' (Shelter ISA 5017)

Tom Petty first rode in on the crest of the New Wave although he is strictly pop. You can read about his background in our interview with him elsewhere in the magazine. Meanwhile on with the album.

The first hurdle to Tom Petty if you are a Byrds fan is to get past the McGuinn-alike vocals which tend to make you think "Cor don't he sound like Roger" instead of "Cripes... what a good tune".

Nevertheless the Byrds influence is hard to get away from, especially in "Listen to Her Heart", with Petty's strained back-of-throat vocals and the jangling Rickenbacker rhythm. But the song, along with most of the other cuts on the album are fine examples of a good pop singer and writer at work. The Heartbreakers know their stuff as well although Mike Campbell's stage posturings are fairly groan-inducing he does have an excellent vocabulary of licks played with the right feel.

Petty's music, along with his Shelter stable-mate Dwight Twilley is infectious Hollywood pop with solid rock foundations. If pop means good short and immediate songs played with expertise and style, Petty's got it. Stand out tracks: "Listen To Her Heart", "Baby's a Rock'n Roller" and "Magnolia".

There's nothing heavy either lyrically, or musically heavy in Petty's music: great cruising music and made to be turned up loud on the car cassette player.

**Ian White**

*Produced by Denny Cordell, Noah Shark, and Tom Petty, Recorded and Mixed at the Shelter Studio.*

## Jerry Reed: "The Hits of Jerry Reed" (RCA PL42180).

First the bad news: there's very little of Jerry Reed's virtuoso picking on this record which is appropriately titled "The Hits of ..." rather than "Jerry Reed's Greatest Hits". The album takes up the latter part of Reed's recording career when the guitar man struck out for a pop audience with songs like "When You're Hot, You're Hot" and "Tupelo Mississippi Flash".

These recordings moved away from pure country and have girly choruses, horn sections, and the full production number. On the whole album Reed's picking just gets a quick flourish as a bridge on "Lord Mr. Ford". So, having warned you that "The Hits of Jerry Reed" is not full of classic Reed guitar work, on to the good news: ol' Jerry is the singer of some of the funniest satirical songs ever penned about such national institutions as the car, telephone and oil crisis.

These are not so much songs, more



Reed shouting and cursing his way through rigged poker games, ("The Uptown Poker Club"), malfunctioning phones ("The Telephone") and the automobile ("Lord Mr. Ford") plus a "talking blues" epic on giving up smoking which should have every smoker who tried to kick the habit writhing with embarrassment.

It is Reed's treatment of the songs which clinch their hilarity. He shouts, moans and whoops his way through the numbers in complete abandon in that glorious Georgia Red-Neck dialect. Jerry Reed is the James Brown of Nashville, forget his guitar playing for a while and put on this album when you need to laugh a lot.

**Ian White**

*Recording details unspecified.*

## Ducks Deluxe: "Don't Mind Rock-in' Tonite" (RCA PL25132)

Ducks Deluxe were, without doubt, one of the forerunners (and also one of the best), of the "pub rock" bands who gigged like crazy around the legendary London pubs like The Kensington, Nashville, and Hope 'n Anchor, in the early Seventies along with bands like Brinsley Schwarz, Bees Make Honey and Kilburn and The High Roads. Formed in 1972, they comprised Sean Tyla and Martin Belmont (guitars), Nick Garvey (bass) and Tim Roper (drums). Andy McMasters joined later to add keyboards to an already powerhouse line-up and, when he and Garvey left to form The Motors, was replaced by Mick Groome.

The band split in 1975 after releasing two albums ("Ducks Deluxe" and "Taxi To The Terminal Zone") and a handful of excellent singles. This album features cuts from both albums plus three tracks from their last maxi-single and, as such, is a fair representation of The Ducks at their best.

Most of the material is uptempo, nonsense stuff like their great debut single "Coast To Coast" and their last,

"I Fought The Law". Other standout tracks are "Please Please Please" which sounds like an early Beatles number and "Something's Going On", written by Belmont with vocalist Mick Groome sounding more like Lennon than Lennon.

Add to these, the Dylanesque "Two-Time Twister" and the reggae treatment of "Here Comes The Night" and you have a great album from one of our best bands from that area.

**Eamonn Percival**

*recording details unspecified.*

## Todd Rundgren: 'Hermit of Mink (Bearsville K55521)

At last The Runt returns to sanity, well comparative sanity. This album is similar in many ways to his early work like 'Ballad Of' and

Like the latter, he plays all the instruments himself and his current material seems to be a return to well-constructed, melodic songs unlike his recent Utopia meanderings which to me were at worst directionless and, at best, bearable.

Todd Rundgren is a great songwriter, musician and vocalist and the tracks on this album go a long way to proving this. Rundgren's forte is in constructing classic pop songs. There can't be many people who don't like 'I Saw The Light', an excellent example of his ability in construction, arrangement and, equally execution. The same could apply to a number of tracks on 'Hermit' like 'Can We Still Be Friends' or the more immediate 'All The Children Sing'.

The material is split on the album over two sides. Side One is sub-titled 'The Easy Side. Side Two 'The Difficult Side' Patronising maybe, but it's easy to see why the songs are separated like that, bearing in mind Rundgren's public criticism of the Business. The difference between the two sections is only superficial however. Side One is perhaps more instantly accessible but side Two is still recognisable Rundgren although slightly more adventurous musically.

One Rundgren album couldn't show the man's talents to the full, but even if you haven't heard any of his earlier re-classics, you might get a fair idea on hearing this album

**Eamonn Percival.**

*Produced and arranged by Tod Rundgren, additional engineering by Mike Todd, recorded at Utopia Sound.*





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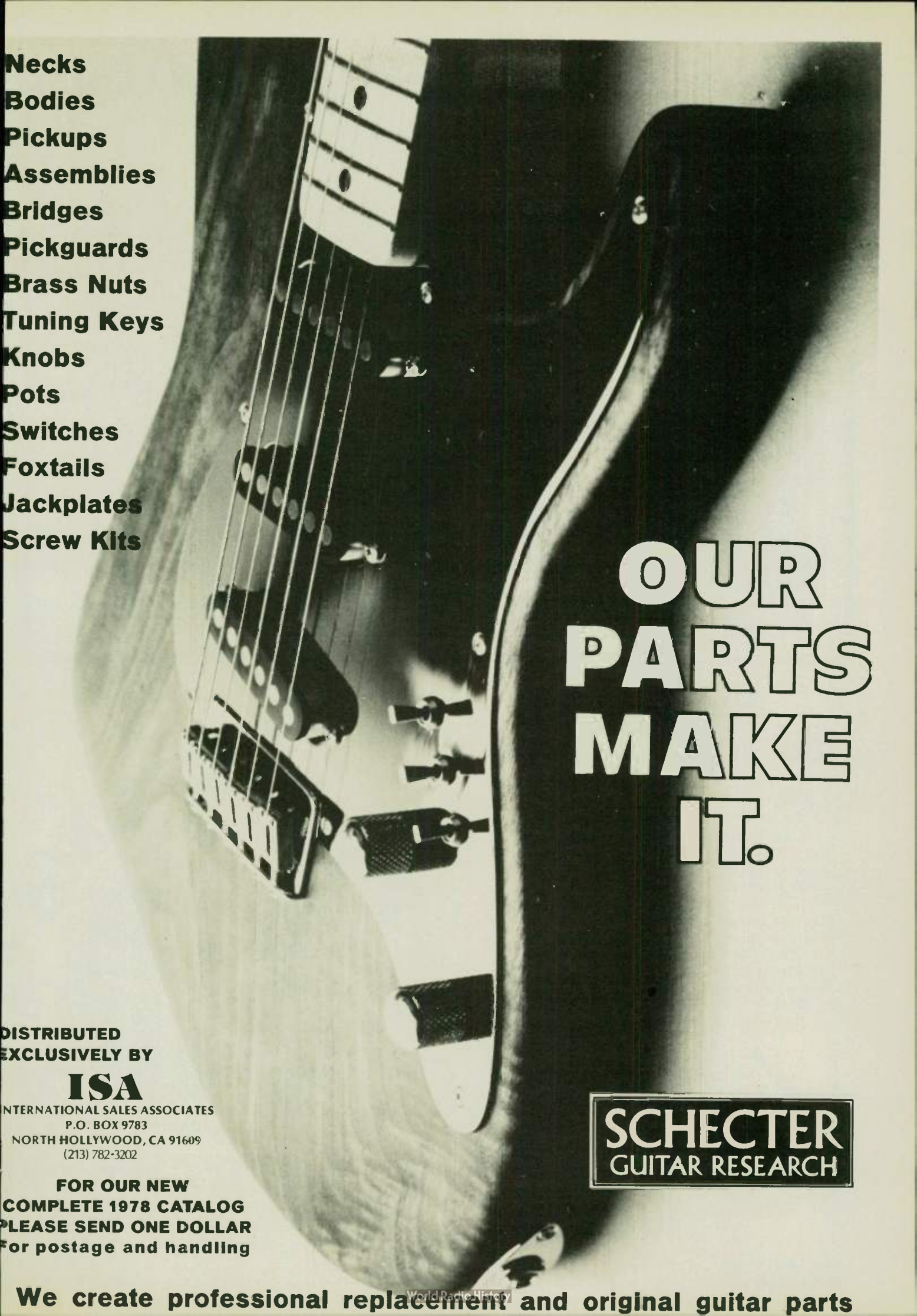
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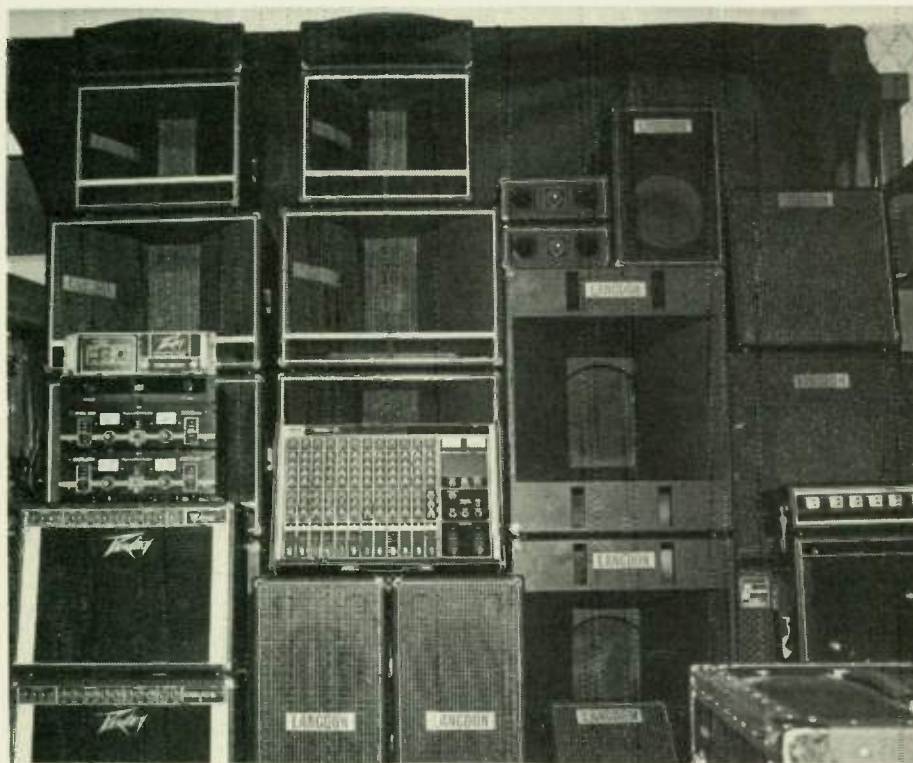
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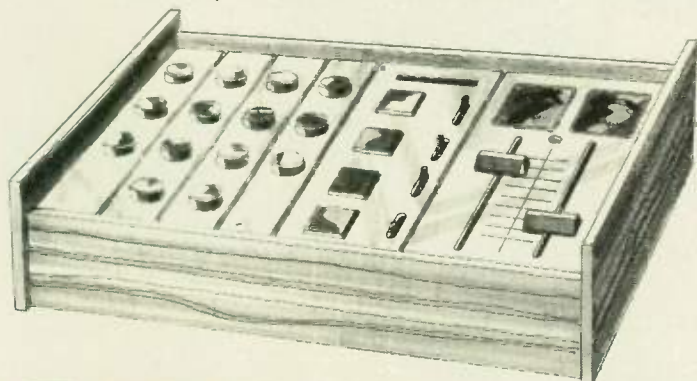
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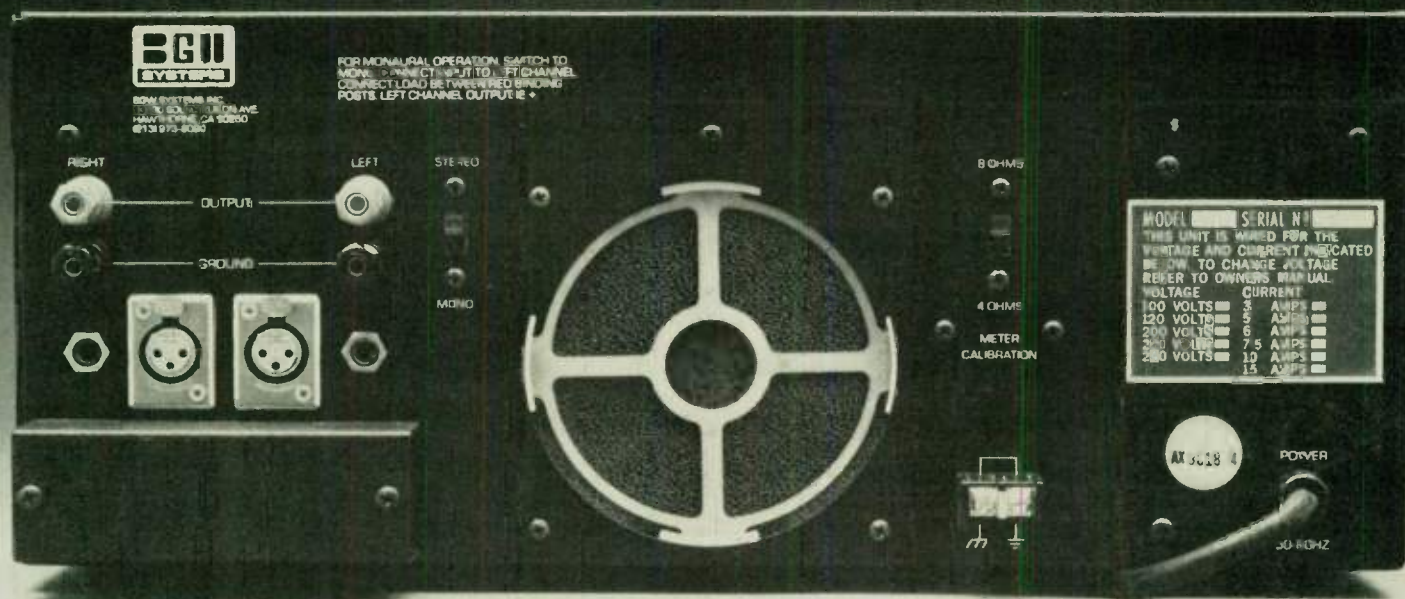
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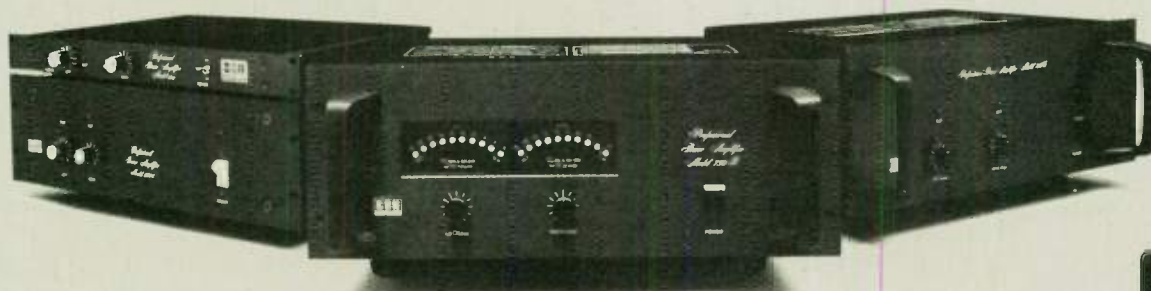
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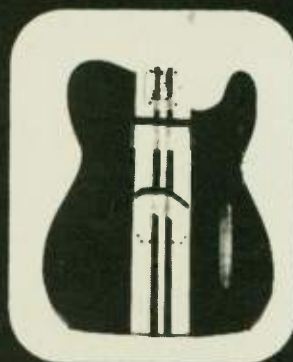
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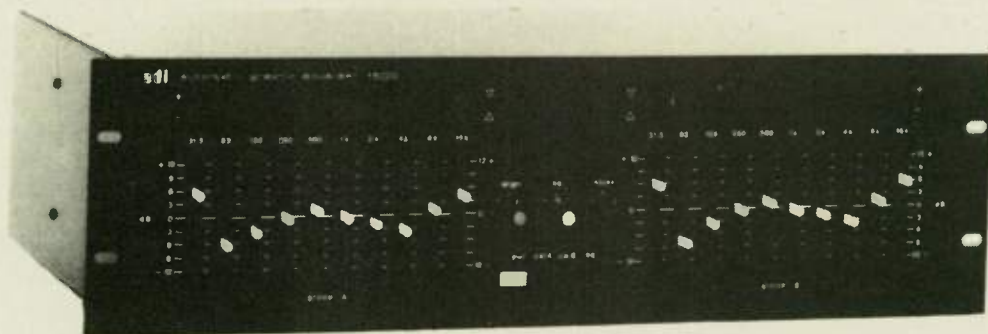


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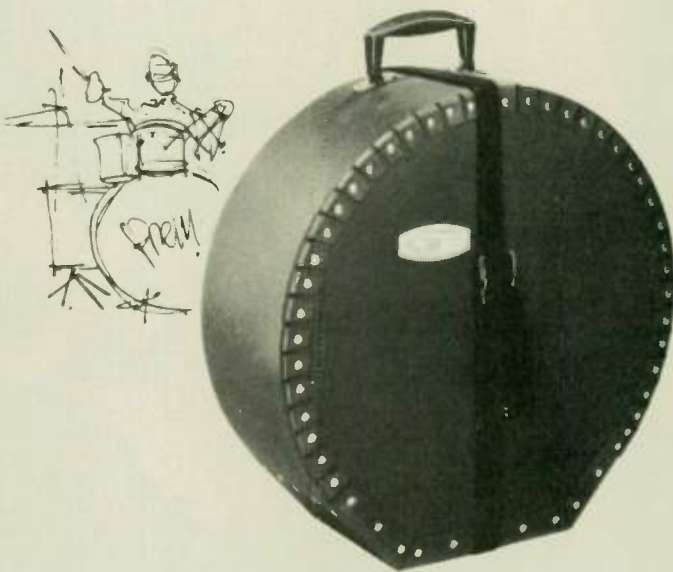
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# Keyboard Kapers

There can't be many musicians who haven't heard of the Chase Musicians operation which is responsible for the opening of two music shops in London — The London Synthesiser Centre and The London Amplification Centre. It's quite a success story for Amrik Singh-Luther, Director of Chase Musicians and the brains behind the venture. He opened The London Synthesiser Centre last June which has grown into THE place to go for synths and electronic keyboard instruments.

The London Synthesiser Centre is the only centre in London where all the world's leading synthesizers could be demonstrated, compared and played. The staff are all experts in synthesizers and are more than willing to help young musicians who are sometimes baffled by synthesizer terminology.

The store, one block away from Euston station, is now Britain's main centre for anyone interested or involved with synthesizers and synthesizer technology. The staff are knowledgeable, the stock is huge and many name musicians are often found at the Centre either talking synths or buying them.

The staff are friendly and, more important, they *care* about the business. They are just as interested in explaining to the novice what a VCO does as selling an expensive polyphonic synth to the latest keyboard superstar.

One of the shop's main assets is the fact that they are willing to undertake modifications to synths for their customers and this side of the business is rapidly expanding as many musicians realise that even the smallest and simplest synth can be modified and interfaced with a more comprehensive unit to further expand on the sounds available. The staff at The London Synthesiser Centre are very involved in this side of the business and there is an expert service engineer at their workshop to carry out these modifications.

The shop also holds regular demonstration evenings which are tremendously popular and always well-attended and, apart from promoting certain products at these evenings, it also brings the Centre closer to the musicians.

Their stock covers the whole range. Just about every make and model of synthesizer is there: ARP, Cat, Korg, Elka, Yamaha, Roland — you name it, The London Synthesiser Centre has it.

The London Synthesiser Centre laid



the foundations and, expansion being the key word to success, The London Amplification Centre opened last month this time dealing solely with amps.

The stock includes amp tops, cabs, combos and PA equipment from all the major manufacturers. Again, the shop is just a few minutes walk from Euston Station and, in fact, is only a couple of hundred yards from the Synthesiser Centre.

Common to both shops is their special Mail Order system, proving quite popular. They can supply synths, pianos or amplification to any part of England,

Scotland, Wales or Ireland. The customer simply writes or phones his order and the shop will advise the price and delivery arrangements. All their rail deliveries are done by express Red Star and so can be picked up at the nearest station or they will also arrange road delivery from the station right to the customer's front door. In the majority of cases, same day delivery should guarantee that the customer can be playing the instrument of his choice within 24 hours of his placing the order. Pammi Singh-Luther is the manager and the rest of the staff comprises Ian Blake, Raphael Preston and Philip Bishop.



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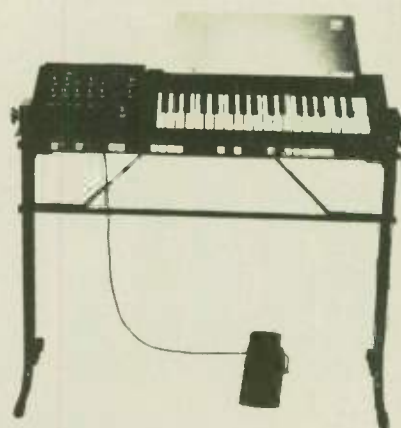
**MUSIC  
MAN**



EP 20



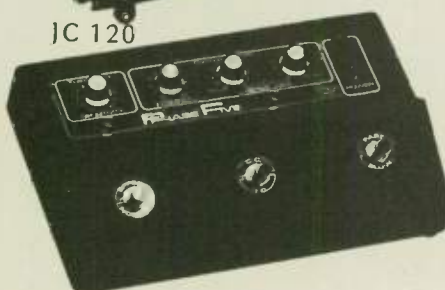
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AP 5



EP 30



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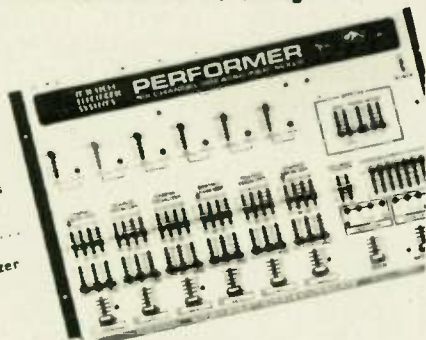


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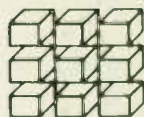


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# MAKING A SOLID GUITAR

Stephen Delft

## Finishing off the Finishing and Fitting the Fittings

## Part 20

### Plain or 'varnished' fingerboards

You can spray or brush lacquer onto the fingerboard, or mask it to keep it clean during finishing, according to your taste. The only restrictions are that a fingerboard made from a pale-coloured wood such as Maple, will become very dirty and possibly a little rough and worn if it is not lacquered, and that a fingerboard made from a hard, resinous wood such as Rosewood or Ebony should be cleaned *all over* with solvent and a clean rag, if it is to be lacquered. This is the same process I have already described for cleaning and preparing the edges of the fingerboard, and it has the same purpose: it helps the lacquer to stick firmly to the wood. Usually, Maple fingerboards are lacquered and Rosewood and Ebony are left bare. Lacquered and polished fingerboards have a different feel and some players prefer this. There is nothing magic about the use of Maple for lacquered fingerboards: a lacquered Rosewood one would feel just the same, although it might require a little more work to produce a really flat and shiny surface. Also, some *single-component* varnishes and polyurethane finishes will not 'dry' properly on some Rosewoods. If you insist on using different finishing materials from the ones I have recommended, you should bear this in mind. "Ronseal" is one of the otherwise excellent materials which may cause trouble on some samples of Rosewood.

If you are going to lacquer the fingerboard, apply thin coats, or you will collect drips under each fret. Also, try to apply some of the coats to the fingerboard with the guitar held upside down to produce similarly-shaped build-ups of lacquer on each side of the frets. This will feel better to most players.

If you are *not* going to lacquer the fingerboard, cover it with masking tape of good quality and rub this firmly down onto the edges of the fingerboard, particularly on each side of the fret ends. There is a trick to this: you rub it down onto the frets as you lay it, one or two frets at a time. If you use the common 1" wide



tape, do each edge of the fingerboard first and then fill in the gap in the middle. Trim off any overhang with a razor blade or very sharp knife and rub down again along both edges. You may be shocked by the price of the best masking tape, particularly in the industrial rolls about 6" in diameter. Don't try to save pennies here, either on cheap tape or on small rolls. By one 6 inch roll of good 1 inch masking tape such as 3-M super-quality. In hot countries, the tape may go stale quickly. If it won't come off the roll in a continuous strip, it is too old. The tape stays on until after the lacquer is hardened and finally rubbed down.

Then it is pulled off and the rough edges smoothed with 600 paper. You must always pull off masking tape in a direction which does *not* tend to lift or peel back the lacquer film. There is always a risk of this happening when the tape is removed and also when you are rubbing down the edge. Think about the safest directions in which to work. When the lacquer

edge has been thinned down gently to nothing, ("feathered"), the risk of peeling is much smaller. It can be made less by careful choice of lacquers and by thorough cleansing of the fingerboard edges beforehand, but it still may occur occasionally. If you can catch the 'blister' when it is small, wait for any white-spirit or other rubbing-down lubricant to dry out (usually overnight). Then very carefully lift the open edge of the "blister" by inserting only the tip of a pointed scalpel blade, and apply one drop of 'Super Glue' or other Cyanoacrylate adhesive. If you are lucky, the glue will run right underneath the blister.

Leave to dry for five or six hours and then rub down again to a feather-edge with 600 paper and the lacquer-makers recommended lubricant. This is usually White Spirit (Turps substitute) or soapy water. If you have a choice, use White Spirit. Be careful with the 'Super Glue': it also sticks fingers. Read the instructions before opening.





### Hardening and polishing the lacquer

You will probably need about six or eight coats of lacquer, with rather thinner ones on the fingerboard, if it is to be lacquered also. Allow about one week after the last coat and then rub down with 600 paper and recommended lubricant until you have a smooth, matt surface. Try to finish at least the larger, flat surfaces by rubbing uniformly along the direction of the wood grain. To avoid cross scratches, do the sides *and edges* first, then the front and back of head and body and the neck. Use a cork block for flat surfaces, and a piece of hard felt about 60 to 80 mm square and 10 mm thick for the curved bits. You can bend the felt to fit different curves, but it will still be hard enough to make a firm backing. Use thinner, but very hard felt over your fingers, for flattening edges and narrow, or very curved, surfaces and apply much less pressure. It is useless to try to rub down and polish the lacquer before it has had a week to harden properly. Several weeks would be better still. Cellulose lacquer can be burnished by hand with cotton wadding and burnishing cream. You can also use a special polishing liquid for celluloid made by Gedge, who are in St. John Street, London. Polyurethane lacquers are a different matter. They

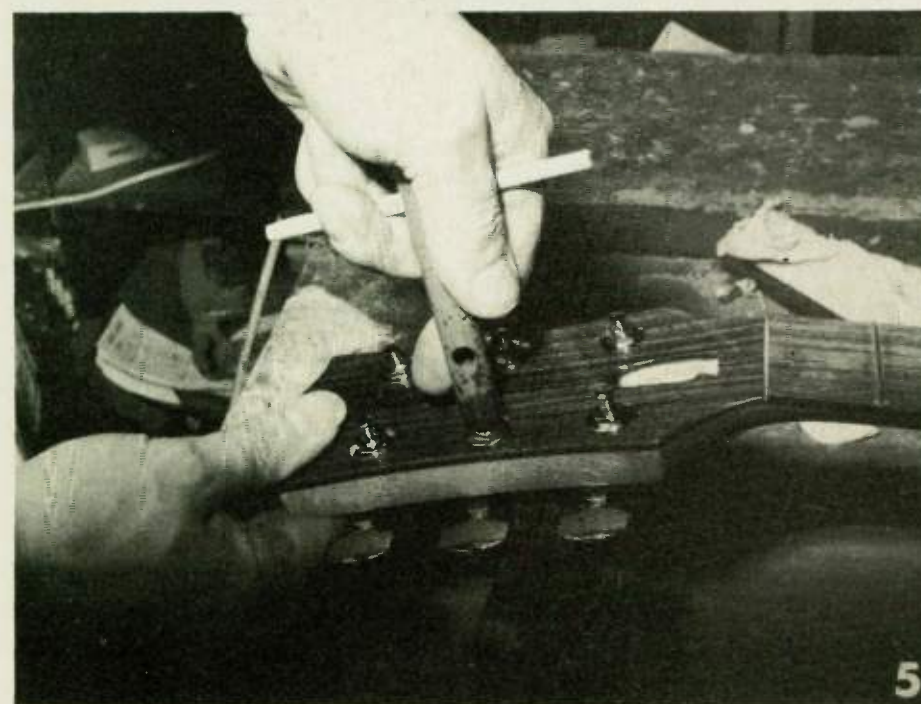
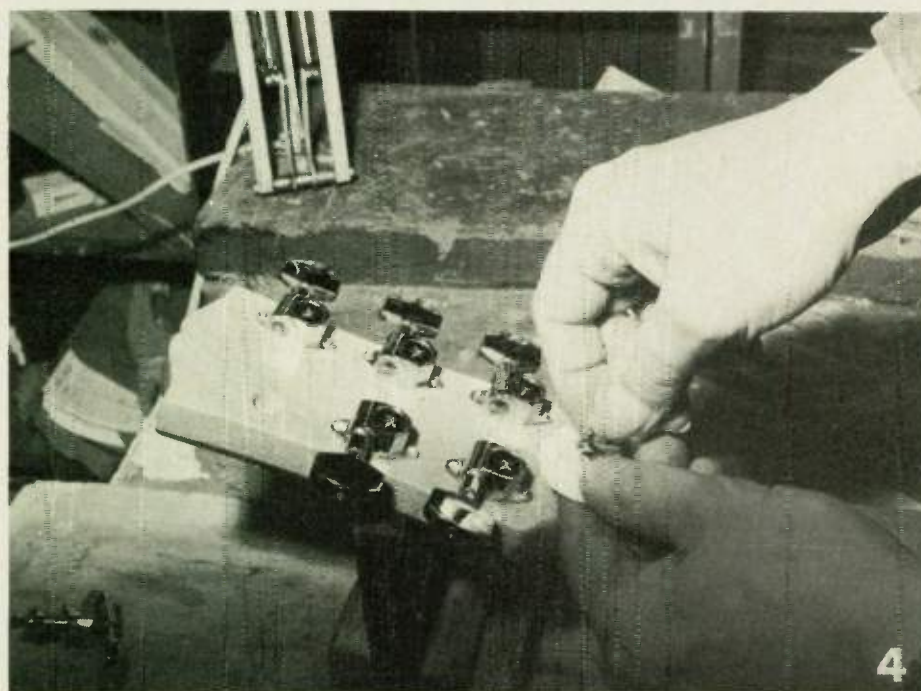
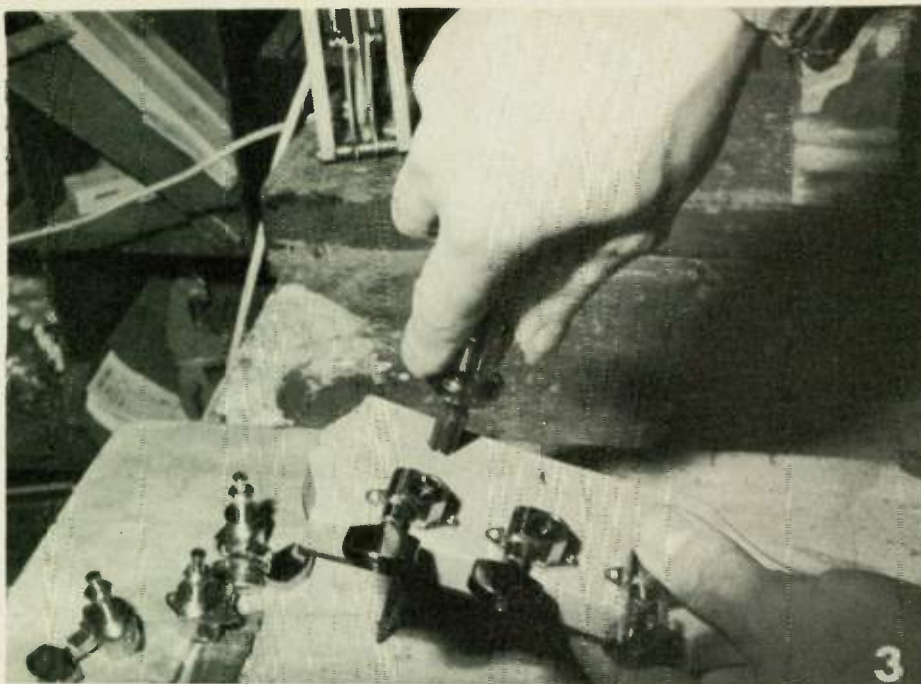
are scratch resistant in normal use, but unfortunately they are also nearly as resistant to the burnishing process. It is possible to do the job by hand with an automobile maintenance product called 'T-Cut', but it can be very hard work. I use an electric drill and some mops and compounds supplied by Howard Wall (Mastral Div.), of 25/37 Hackney Road, London E2. I have no connection with the company, but I have found their advice on polishing 'difficult' lacquers to be helpful and totally correct.

**Photo No.1** shows the rubbed-down guitar, wiped clean and placed on a large, hard cushion, covered with soft fabric. If the technicians make a better job of reproducing the photographs than the did last month, you should be able to see the method of holding the electric drill so the edge of the mop just touches the lacquer. You must keep changing the area of contact, and I try to cover each convenient piece of the guitar in smooth, overlapping strokes. It seems to help if one keeps the face of the mop at a slight angle to the direction of the stroke movements. The coarse cutting mop is a '6 inch by 3-section Special White' and is dressed with a bar of *Witex* which can be seen on the corner of the bench. For this, the drill or polisher should have a speed of about 1500 r.p.m. — certainly not less than 1000 or more

than 2000. The mop has three rows of stitching. I prefer to cut, and unpick the outer row to make it a little 'softer'. If you have to do a lot of large areas, and you have a powerful motor, you could use a similar 4-section mop, but you will need someone to hold the guitar down, unless you want to launch it across the workshop. It is probably safest to polish the insides of the cutaways and the difficult parts of the neck by hand with T-Cut, but I believe one can obtain smaller mops of the same type.

When the body is evenly polished to a dull gloss, I change to a softer glossing mop, which is described as a '6 inch by 70-fold Gloss mop'. This is dressed with a finer and rather dusty compound called *Euklas*, which puts a final gloss on the surface. Although the makers recommend a slower speed, I prefer to use about 2000 to 2500 rpm and a very light touch, for this part of the operation. 'Don't try this sort of speed with anything but Euklas on the mop'. This should leave a good gloss under a slightly hazy surface. I take this off with cotton wadding and burnishing cream. It may be necessary to hold the guitar quite firmly and apply fair pressure as shown in **Photo 2**. I like the burnishing cream made by Morrells. They have unfortunately moved from their convenient premises in Old Street, but they are still some-





where in or near London. Polish off any debris with a clean duster and you should have a gloss you can see your face in.

If you prefer a satin finish, polish the guitar only with the coarse mop and Witex. It is not essential to achieve a perfect gloss as long as the finish has a good depth of colour, and no longer looks opaque like ground glass. Take superfine wire wool, grade 000, and any soft furniture wax which does not contain silicones. Saturate a smooth pad of wire wool with the wax, and lightly rub the finish, along the direction of the wood grain where possible. This will be easier to arrange if you do the sides and corners of the head and body first, then the neck, then the rest. Although the grain direction varies of the edges, just rub straight round the outline of the guitar in the obvious way. Try to use long smooth strokes of the wire wool pad, and keep it well lubricated with wax. If you want to, you can buy wax made for this job from polishers' suppliers: it is usually called 'flattening wax'. From time to time, polish off with a soft duster, in the same direction as the wire wool, until you find you have removed enough of the gloss to suit your tastes.

**Photos 3, 4 and 5** show the fitting of Schaller or similar machine heads. This style has an extension to the gearbox which forms a bearing for the lower part of the string roller. Such machines usually require a 10 mm hole through the head, to clear this bearing, and to allow fitting of the front bushing to support the upper end of the roller. You will probably have these holes already drilled, but there may be some lacquer in the holes or they may need slight adjustment. This can be done with a gently tapering hand-reamer, working from the back of the head (**Photo 3**). (Serious discrepancies may require opening out the hole with a slightly larger drill held in a carpenter's brace, but in this case, start from the front). The machine heads should just slip into place with fingertip pressure only. If they are very tight, they may split the head later on.

**Photo 4** shows the machines being screwed to the back of the head. You will need pilot holes of the correct size and some soap on the screws. **Photo 5** shows the tubular spanner used for tightening the front bushes: on most Schallers and some Japanese copies, they screw in, and form an important part of the machine head fixing. The spanner is a 10 mm 'Draper' which is a fairly cheap imported brand. The blue painted ones seem to fit better than the metal-plated ones. Don't use pliers, they are likely to slip and they will certainly damage the plating on the bushes. Some machines have push-in bushes. If they push in, fit them *fully* before marking out and drilling the screw pilot holes at the back of the head.

If the bushes *screw* in, fasten them finger-tight before marking and drilling the pilot holes. Unscrew them to remove the machines and drill the holes, and then replace them finger-tight before putting the fixing screws into the back of the head. Tighten these screws first and then the front screw-in bushes. In the case of Schallers, the small fixing screws are rather brittle, and should be tightened carefully until their heads just touch the lugs on the machine heads. They do not need to be any tighter than this, the casting usually has spikes underneath it, and in any case, the screw-in bush will almost hold the machine head by itself.

**Photo No. 5** shows the fitting of the bridge support sockets into the front of the body. The holes will probably need to be opened out with the same drill used originally, held in a carpenter's brace. The plain part of the socket should just slide in, so that only the knurled part has to be hammered into place, with a block of wood to protect the plating. Hold the guitar on a pile of telephone directories or on a hard cushion so that the neck and head do *not* rest on anything while you are hammering. The neck may, for convenience, be held gently by another person.



# cont... **MAKING A SOLID GUITAR**

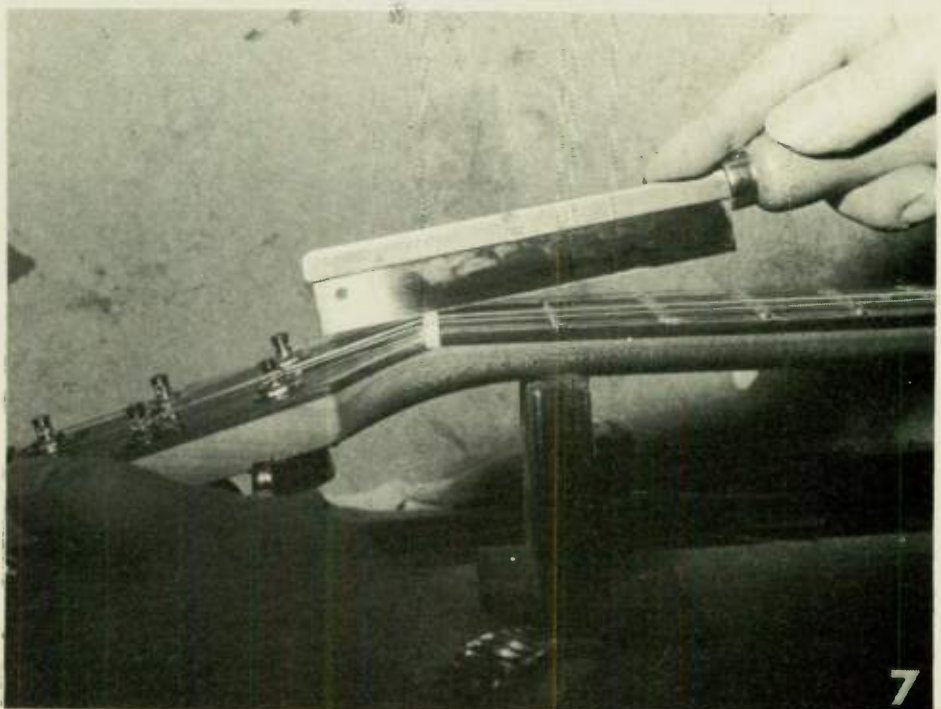
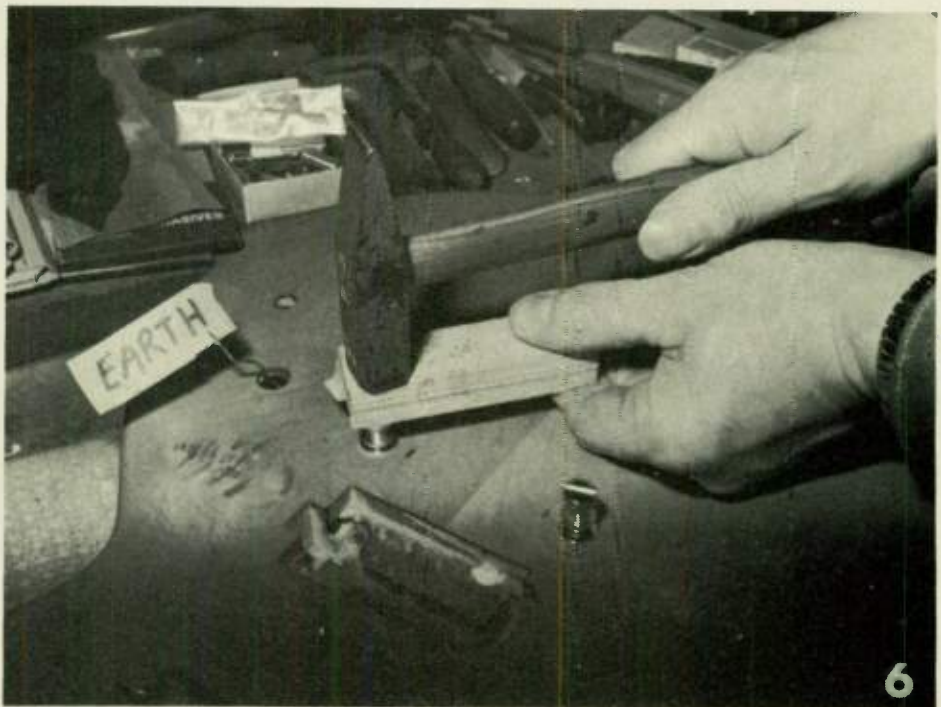
Before fitting the treble-side socket you will need to drill a small hole from inside the mounting hole in the front of the guitar, to meet the control cavity. This needs a long drill and a careful aim. It is probably safest to start from the front and aim for the middle of the nearest part of the control cavity. If this bothers you, you can drill from the bridge mounting hole, into the bottom of the nearest part of the bridge pick-up recess. A hole of 1.5 mm or 1/16 inch is ample, but it could be up to 2 mm or perhaps 1/8 inch. Feed about 200 mm of solid tinned copper wire, approximately 1 mm diameter, through the hole and into the control cavity. (If necessary, via the pick-up recess and the pick-up wiring tunnel). Turn down the end of the wire in the bridge mounting hole so that it bends sharply downwards and extends about 3/4 of the way down the hole.

If the guitar body is made from Maple, Rosewood or other very hard wood, you will need to cut a vee-groove for the wire, as far down as the bottom of the knurling on the socket will be when it is fully in place. The vee-groove should take about 1/2 the thickness of the wire. On soft woods it is not necessary. A small piece of 1 mm copper wire can often be obtained from people who break electric motors for scrap, or preferably, from people who re-wind motors. You can scrape off the varnish and tin it yourself, with 'cored' solder suitable for electronic wiring, and a medium-sized electrical soldering iron. You will soon need these anyway, for wiring the pick-ups. Alternatively you can use a piece of a new, shiny medium gauge plain third guitar string. Anywhere between 14 and 18 thou. will do. This is so thin it will not need a vee-groove, even in hard wood. When the wire is in place you can hammer the treble bridge support gently into place, trapping the wire alongside the metal socket in the hole. It should now be possible to fit the bridge in place.

All that remains to be made is the nut. One of the standard sizes of Japanese moulded nuts will fit reasonably well if you are impatient, or unable to make a nut, but you will still have to adjust it to give the right string heights. Alternatively, you will need a piece of Ivory, Bone, Perspex, Tufnol or Brass about 10 mm by 4.5 or 5 mm, by a little more than the width of the fingerboard where the nut is to fit. Cut the head facing away if necessary to make a flat shelf, a little narrower than the base of the nut, and then deepen and widen this into a shallow recess to take the bottom of the nut. The bottom of the nut should be level with the bottom of the fingerboard and one face of the nut should fit cleanly against the end of the fingerboard. It may be necessary to peel a thin film of unwanted lacquer from the end of the fingerboard before finally fitting the nut.

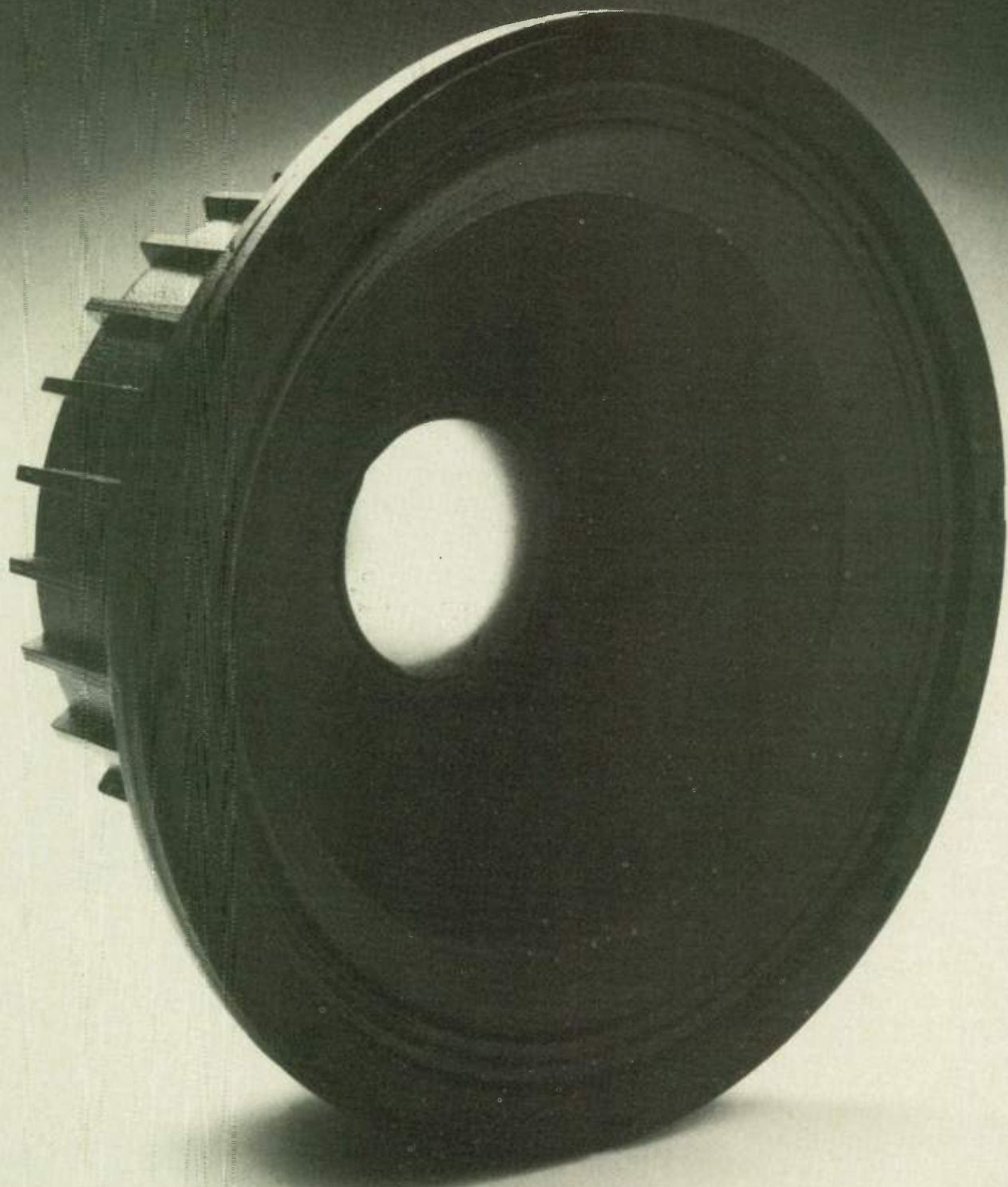
**Photo No.7** shows a suitable saw for cutting the nut slots, and the right sort of angle to ensure that the strings don't buzz. Keep the handle end of the saw over the fingerboard, not over the head. Hold the nut in place, and lightly cut the string slots. The nut should be much too high, allowing some opportunity to re-adjust the spacing of the slots. When they seem right, you can deepen them a little and then fit the strings. Any light gauge electric round-wound strings will do for the moment: they will be ruined by constant tuning and untuning anyway.

Carefully cut down the slots, holding the saw as shown, until the strings clear the first fret by about 0.5 mm. That will be quite close enough for the moment. When you have done this, mark where the nut overlaps the neck each side, remove it, trim it to size, take off most of the unnecessary depth of the slots, and polish the nut with fine abrasive paper and a little oil. It can then be wiped clean and replaced with a few spots of gum or weak glue. Just enough to stop it falling out. Your guitar should now play, when the bridge is adjusted to roughly the right height. Next month I shall deal with the truss rod nut, wiring up and fret finishing.





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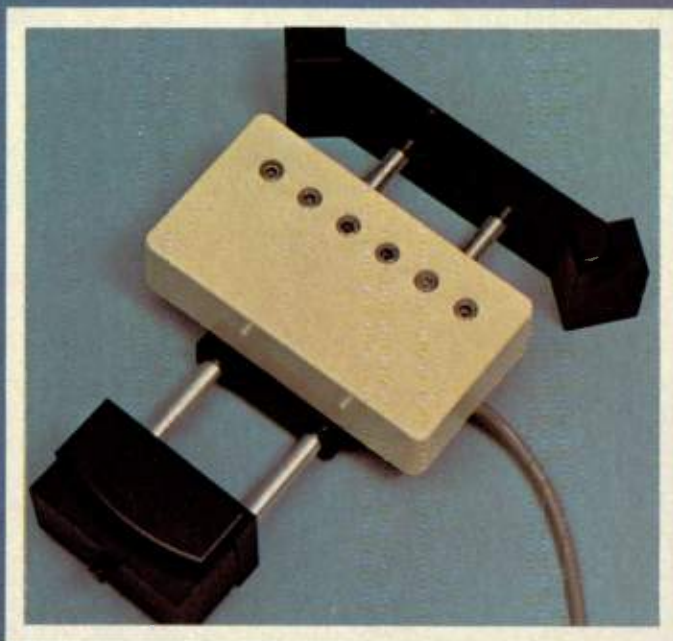
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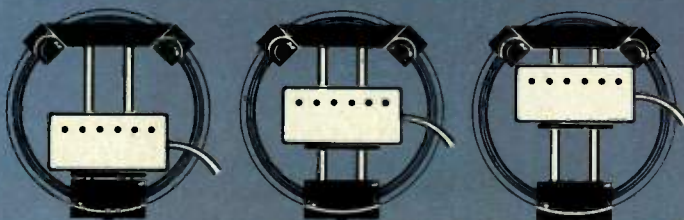
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you'd hear what  
great pickups  
are all about.



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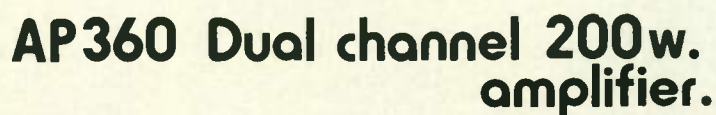
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# simmons' SYNTHCHECK

TEST ON: Crumar Digital DS2

DATE: July 1978

PRICE: £645 (including VAT)  
(\$1,290)

## Introduction

The D.S.2 is two instruments in one, a fairly conventional two oscillator synthesizer combined with a separate generator system which produces a tone for every note on the keyboard (Polyphonic).

The polyphonic section could not be called a polyphonic synthesizer in the pure sense of the words as the envelope, wave shape and filtering of each note cannot be changed individually. It is more akin to an organ, — producing an on/off envelope shape as each note is played, but this is then fed into a single voltage controlled filter and voltage controlled amplifier which can be used to modify the sound and envelope somewhat, and it is possible to obtain quite realistic piano, clavinet and harpsichord sounds. The raw waveform produced by the polyphonic section is a pulse which, unmodified by the filters, sounds rather like a harmonica and because this waveform cannot be changed, brass, clarinet and flutes cannot successfully be programmed.

The pitch of the polyphonic section can be tuned up and down roughly a fourth and can be modulated by one or other (or a mixture) of the waveforms produced by two low frequency oscillators (LFO's) thus enabling you to attain vibrato, automatic trills and pitch sweeping, or the pitch can be transposed up or down an octave from 8' pitch.

## Synthesizer

The synthesizer as I have said is fairly conventional, two oscillators which can be tuned separately by a variable control up or down roughly a fourth or in fixed intervals through four octaves from 4' to 32'. Oscillator 1 can produce one of four wave forms (they are not mixable) Sawtooth, triangle, 50% square wave and variable pulse wave. The pulse width can be varied manually from 5% to 50% or by the wave forms produced by the two LFO's. Oscillator 2 is the same as 1 except that it does not produce a variable pulse.

Pitch bending is achieved by means of a centre-sprung lever at the left hand side of the keyboard, on this particular instrument, maximum bend down was just over a tone and maximum bend up was just under a minor third. It would be nice to have stop positions of the control calibrated, although this may only be a fault on the particular instrument I tested.

As with the polyphonic ensemble, either of the waveforms produced by the two LFO's (or a mixture of both) can be routed to the oscillators to produce vibratos etc. The oscillators themselves seemed reasonably stable and did not

require tuning after the initial warm-up period.

The synthesizer has two separate LFO's — LFO 1 can produce positive or negative sawtooth, triangle and square wave, whereas LFO 2 produces triangle, square wave, sample and hold (random voltage levels) or a descending 'stepped' waveform which when fed into an oscillator produces a series of notes descending the scale. Each LFO has a speed control and LED indicator, and will run between 1 cycle every 3 seconds to 20 cycles a second.

## Voltage Controlled Filter and Voltage Controlled Amplifier

The filter is the normal low-pass type with a resonance control enabling the cut-off frequency to be emphasised. The signal from the VCF is fed into the VCA. Two A.D.S.R. generators are supplied, one of which controls the VCA and the other can be used to open the filter. The filter can also be opened by the keyboard control voltage thus making the sound 'brighter' towards the top of the keyboard.

## Extras

Sockets on the back are Gate In and Out, Filter Pedal, External Audio Input, Polyphonic ON/OFF, Headphone and High/Low Outputs. The Polyphonic section is routed to the output via an

on/off switch and high and low pass filters (tone controls) that didn't seem to do much.

## Conclusion

The layout and looks of the instrument are O.K., tuning is at the left hand side of the three and a half octave keyboard, portamento on the right hand side (the portamento was too slow for my taste even at its fastest setting) and the front panel reading from left to right from sources (oscillators) through treatments (filters and envelopes) to outputs. The front panel is in matt black with two tone green lettering. Some of the controls were very one-endy — nothing much happening between one and seven and everything happening in the last quarter turn. The instrument is built into a flight case with metal corners, and plastic strip protecting it's edges and looks reasonably strong.

When testing instruments like this it is very easy to compare them unfavourably with larger instruments until you realise that it sells for a sixth of the price. The D.S. 2 retails for £645 including VAT. What you get is a good synthesizer that, when used in conjunction with the polyphonic section as a backing can produce a wide range of usable and exciting sounds. There are a few annoying details on this machine but I could put up with them.





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GUITARS

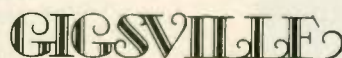
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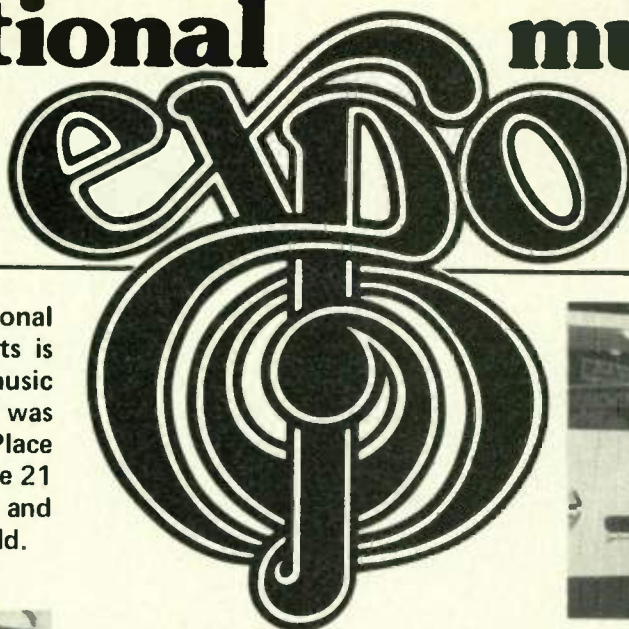


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# international music

## NAMM REVIEW



The annual fair of the National Association of Music Merchants is always a highlight of the music industry calendar. This year it was held in Chicago's McCormack Place Exhibition Centre between June 21 and 23 and attracted dealers and musicians from all over the world.



Through their US distributor Unichord, Marshall launched two new guitar amps quite different from anything they've done before. Particularly interesting was a small combo called the 100 Watt Twin (4140). This has a US retail of \$1,350 and it has the potential of sounding like other amps as well as a Marshall.



Canary mixing desks have been on show in the USA for some years and Bob Birthwright reports a growing interest for Canary of that continent.



Ibanez showed the massive range of new original guitars that they unveiled in Germany in February of this year. Both Billy Cobham (Tama) and George Benson (Ibanez) attended to show.



Morley are the pedals with a difference and as usual their show stand was crowded with visitors the new products. In this case the "Pro Flanger."



Guild are a unique range of instruments placed exceptionally well in a crowded market-place. Their show stand in Chicago was as tasteful as ever and attracted much attention.



Trouper systems look set to come to Europe from their native California and European musicians will certainly benefit. This excellent range of mixers was complemented by the introduction of a sophisticated monitor system this year. The monitor board allows each monitor to receive its own mix and thus provide exactly the on-stage information required.



This is "the other guitar synthesizer" the 360. This unit (which works on a similar principle to the ARP) is huge in the USA but has yet to travel around the world.



Norlin made a great deal of fuss about Les Paul this year (it is his 25th anniversary of working with the company) and his first electric guitar 'The Stick' was on display. It's seen here in the middle (it looks like a cello guitar) beside the new "25th Anniversary" Les Paul.



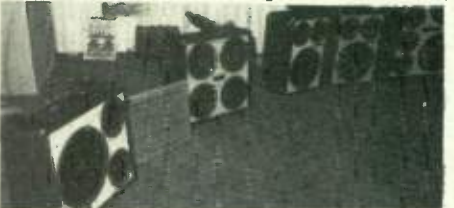
It was an important trade show for Roland as they launched their first polyphonic keyboard synthesizer. This item is set to sell for around £1,500 in Britain and it can be seen that this "four voice" instrument will be extremely popular.



The clever little PA system that Fender launched in California in January was on prominent display in Chicago. The MA6 is built for bands who want to hear themselves. The monitor system is built-in.



Just to prove that being on top needn't stop progress, Rickenbacker produced a new bass guitar which they say is a significant step forward on anything they've built previously. It should be available via Wing Music in Britain.



The ubiquitous Palytone amps were on prominent display offering the "soft look" to passing guitarists and dealers. Very nice.



Our friends Ed and Tim at Amanita sound mounted an impressive display of their polyethylene speaker enclosures.





One of the neatest ideas at the show was the guitar case shown by Stagehand. Apart from standard flight-cases it the first guitar case that's been designed with any thought at all. The case acts as an on-stage guitar stand, work bench and storage area. Very good.



Dynacord systems are world renowned for their reliability and the range is now becoming recognised in the use via their "state of the art" items such as digital delay and analog systems. Boss Hans Tschernig is seen here with a power amp.



Multivox is a new range of synthesizers (soon to be available in Britain) and their sizeable stand in Chicago certainly made an impact.



The products shown by California Switch and Signal can truthfully said to be the essence of professionalism. They make the sort of cables that don't break, and connections that don't fracture. And that means everything.



As wood is so important to Leo Fender's Music Man company, they make a big point of illustrating it with a booth featuring carved wood panels. The new Sabre guitar was the real focal point.



A new range of guitars with Fibre glass backs are being launched by the Kay Corporation. Called the Force series, these instruments have been designed to capitalise of the economy of this material and despite having quality fittings including rosewood fingerboards they are set to retail at around \$150 in the USA.



It was mixer year for the Peavey Electronics company and several big new boards were to be seen. Other items of important on display were the Peavey guitar and driver range.



Crumer were showing their wide range of electronic products in the section of the show organised by the Italian Trade Commission. This portable organ shows that Crumer are staying in the forefront of keyboard technology.



The comparatively new Prophet synthesizer has caught the eye and the ear of many successful musicians in the last year. Thus the synthesizer is now being rated very highly indeed.



Pearl Drums showed a new range of "rotary-adjustable" tom-tom heads on the Norlin stand. Whilst not being a unique concept, the shallow but flat sound of these heads coupled with the resonance of the Pearl Shells offers drummers a unique sound.



To show the strength of construction Yamaha cut through one of their drum kits to reveal the massive "solid wood" construction. The Yamaha booth was as impressive as ever revealing an important item in almost every musical area.



Hamer Guitars are rapidly gaining an international reputation despite being extremely limited in production. Paul Hamer was in attendance throughout the show to proudly show off the results of his custom-turned-production-guitars.



Schecter Guitar accessories are now proving so popular that the range is growing to offer almost everything the guitarist could need.





# NAMM REVIEW



Elka-Orla showed their amazing X705 portable organ in the Italian section and seen here behind the beast are L. R. Fausto Fabi, Mimo Orlandoni and Piero Crucianelli.



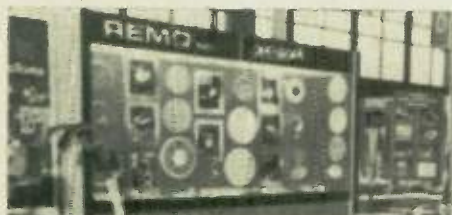
Zildjian Cymbals need only to be seen; they hardly have any market position to gain. Almost the entire range was on display and business, as always was good.



Our friend Robert Letendre was proudly showing his Norman range of acoustic guitars. The popularity of these instruments has certainly spread through most of the U.S.A.



Mr. and Mrs. Trevor Daniels (Crumer U.K.) visited Chicago and were photographed in front of the Dynacord stand.



Remo heads always have an impressive display which includes their pioneering Roto-toms which allow the drummer instant tensioning on flat tom-toms. Also on display of course were the full range of heads and pro-mark sticks.



A.K.G. Microphones have become accepted as a world standard in onstage P.A. (what else would we use for our bass drums?) and most of the range were shown to the American industry in Chicago.



Despite being highly unusual in design, Bunker guitars have many useful design features that commend the instrument for attention. We have yet to play one but it certainly looks interesting.



A new improved W.L.M. organ was shown on the Unicord stand and we heard during the show that Herbie Hancock has agreed to endorse the product. This organ seems certain to do well in the world-wide market.



When you're Altec Lansing you can afford to mount a prestigious stand with walls on three sides (our booth faced one of them) and there's little doubt that these famous speakers attracted as much dealer attention as always.



Both Ernie and Sterling Ball were on hand to greet visitors to the Ernie Ball stand in Chicago. The strings have built themselves a reputation that has spread largely through word of mouth and a discreet advertising campaign to most parts of the world.



ARP's new polyphonic synthesizer was one of the stars of the show and despite the fact that it won't be available until 1979 in Britain it has many interesting features that command attention. Among these is a built-in memory which allows pre-set programmes to be entered or erased at will.



Korg took the opportunity of the Chicago Show to announce several new products. Important among these was the Vocoder which is a middle-priced product offering the public many of the features contained in the pioneer Vocoder produced by EMS in Britain in the winter of 1976. Other products from Korg include new keyboards and sequencer units.



Acoustic amplifiers are always a centre of attention at American Trade Shows and this full range speaker and amp system is typical of the extremely high quality products coming out of the California plant. Our friends Roger Smith and Aspen Pitman were produced to show us the new bass system (you can read more about this in I.M. in the coming months).



It was a long way from London but that didn't stop Amrik Luther intrepid boss of the London Synthesiser Centre, from making his presence felt in the world market. Here he is seen discussing an excellent magazine called Home Organist with one of his long-suffering suppliers, Fausto Fabi. Fausto is on the left.

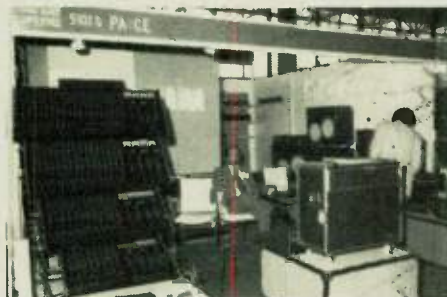




Poised on the edge of a major product announcement Soundout from Britain contented themselves with showing the U.S. market their well-known range of Disco (Ugh!) and Power Amp equipment. Dashing Dave Street played the ambassadorial role.



As well as turning conventional marketing on its head Electro Harmonix managed to produce some exceptionally fine guitar effects at the same time. The De Luxe Memory Man for guitar is especially interesting.



The PA.CE organisation took two bites at the Chicago cherry by having a conventional exhibit to display their intermusic amplifiers and the MM range of mixers. Additionally bosses Tony Gipp and Dick Parmee ran an "English pub" serving genuine warm beer (Watney's Red Barrel) to promote the excellent Redmere range of amplification.



Kramer guitars are a constantly developing line with the latest news being the addition of Di Marzio pick-ups to three models. We hear that British prices are becoming more competitive because of a new marketing structure and this must certainly help these instrument in the important European market.



Rotosound strings are one of the few British products to win through on the lucrative American market. Jimmy and Martin How (the gunners) have become seasoned US travellers and their professional stand reflected their experienced at the game.



The man in the smart French suit is Ron Wilkerson genial front man of the MXR organisation. Despite having produced the ultimate in the sound modification market we hear tell that the company is now developing items to enter the arena of professional and semi-professional audio.



Here's a picture of Dave Martin and Dick Thomas of General Music Strings ready to greet dealers to Chicago. Somehow we always seem to miss Dave at these shows. This time we made it.



British Music Strings boss, George Oistraker is seen here proudly showing America the Phoenix range of amplification. It will be interesting to see how America takes to it.



Soundcraft seem to be on the verge of conquering the American Market with their really excellent range of professional mixing desks. This huge console is intended for either stage or studio use.



Di Marzio rule the world and if ever a company has been the corporate equivalent of a superstar it's them. There was a queue of world famous guitar makers asking Mr. Di Marzio and Mr. Kauffman "please can we build your pick-ups into our instruments" and it was a joy to see the tail wagging the dog.



Despite having a name that implies brilliant light, Sunn build all their amplifiers jet black with just occasional white bits. It looks great on stage but makes photography difficult.



La Bella make guitar strings that have developed world reputations for many guitarists. Here is the La Bella gang proudly showing their range for the camera.

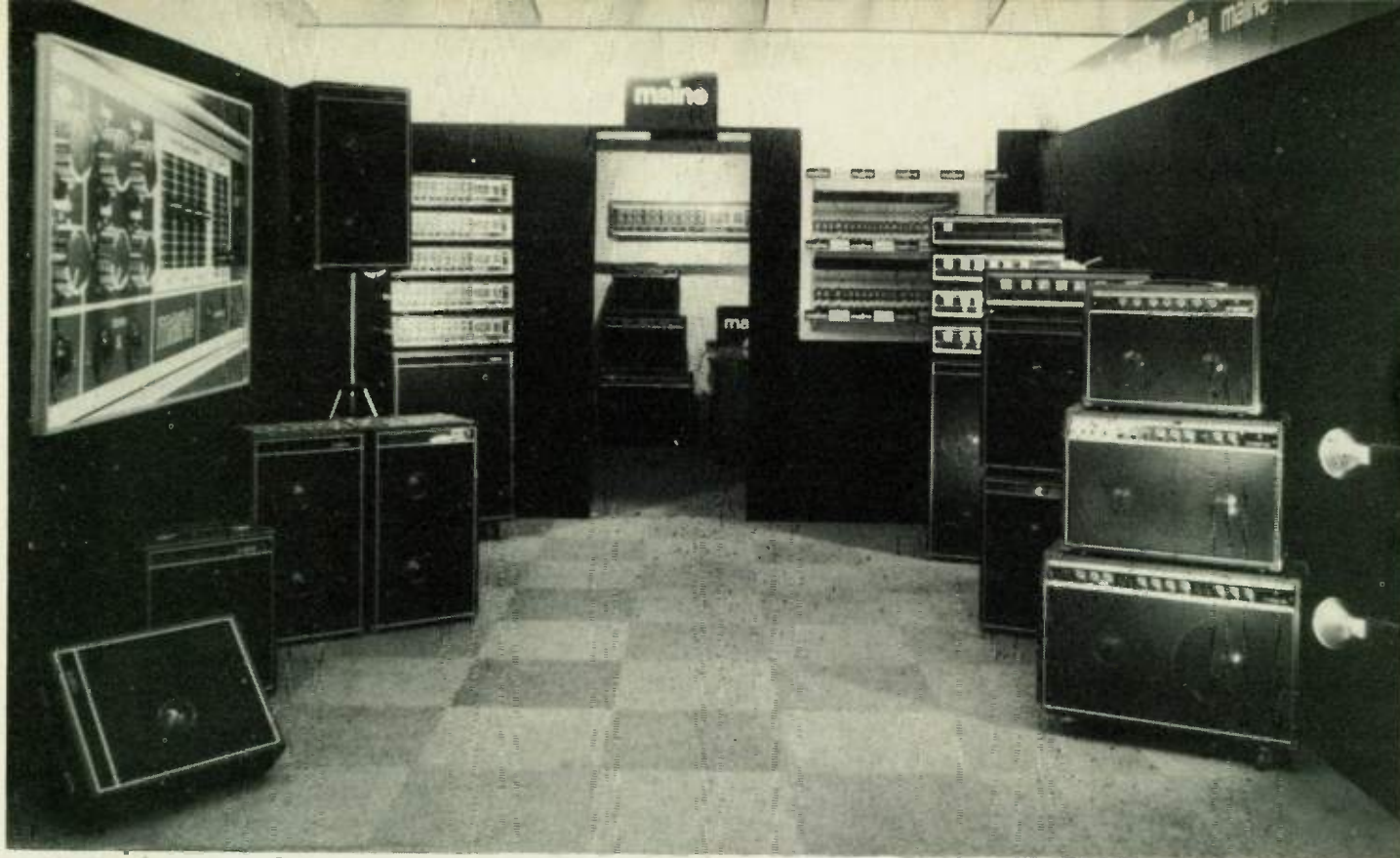


Star piece on the Kaman stand has for the last three years been the graphite-fronted ovation guitar. This year it was a 12-string and just an idle caress revealed breathtaking treble.



Much research has been undertaken at Octave Electronics in the last year and the new Cat synthesizers are now ready for public display. West Coast group Burns, Renwick and Rags were demonstrating throughout the show.





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If you've got it, flaunt it, is a pretty good adage in marketing and D'Addario Strings make a point of being in the string business "for 8 generations". They made prominent displays of D'Addario Strings half Round Strings, Excel Strings, Heritage Strings and Folkmaster Strings.



Calzone cases have developed their range to the point that they mass-produce cases to fit almost every type of musical product. Here you see a mixer cradled snuggler than a bug in a rug.



Electro-Voice make a really excellent range of drivers and microphones and they're gaining ascendancy in most market areas. The display in Chicago was excellent and they are undoubtedly becoming a first choice for build-it-yourself enthusiasts.



The Aria range of guitars is extremely wide and is headed up by the magnificent Pro II electric solid. The entire range was on display in Chicago.



Streele Electronics from Britain brought the Novatron to US shores and despite bearing a different names visitors could see clearly that the Keyboard operated pre-recorded tape loops.



This neat tool box typifies all that is good about ASS cases. This case company produces a range of cases suitable for all musical needs.



Ludwig mounted a fine display incorporating a novel "mezaninne" floor into their booth. Big news this year was a new range of heads available later from the company.



Whirlwind Music produce many items allied to music and they seem to have a knack for releasing what is needed. Their display this year covered everything from speaker cabinet to cubies.



Malatchi make a unique series of mixers and this picture shows their popular performer model.



Kustom amps always mount a big display and their impressive range of amps is seen here to effect photographed from on top of the Ludwig stand



Barcus-Berry proudly showed their new range of PA equipment at the trade show. This equipment features the unique audio-plate developed by the company which offers a high degree of treble dispersion.



The Selmer company made much fuss of the Hagstrom guitar range and Steve Pacelli was kept busy throughout the show demonstrating the Patch 2000 Hagstrom Guitar Synthesizer.



Good guy Chuck Widener did his thing again on the Randall stand showing this incredibly comprehensive range to the world. Seems that no matter what item of amplification you require, Randall has it.

We missed getting some pictures during the show, but we wanted our readers to know about these important items.

Otari's fabulous range of small format multi-track tape machines were a big hit at the show. There's been a big increase in demand for this semi-professional machine in the USA in the last couple of years. Almost every stringed-instrument player must have used string from the D'Merle/D'Angelico company during his career. This comprehensive range of strings was prominently displayed during the show.

Hondo guitars are now fitted with DiMarzio pick-ups — the company has developed specially simplified versions for them — and along with Harmony guitars, Texas pick-ups, etc. they were an important display on the International Music Corporation stand.

Our good friend Larry Knight (of Spirit fame) always brings colour to NAMM shows with his highly artistic Silver Eagle guitar straps and accessories. They represent an oasis of visual art against an indifferent background.

The CF Martin guitar company announced during the show that their Martin/Darco strings have been named the official strings of Opryland, USA. Martin's fretted musical instruments are also designated as the official acoustic guitars and banjos of Opryland.

Everybody in the industry was pleased to see the famous CF Martin company exhibiting this year.

Fretted Industries showed their most famous product — Nashville Straights — prominently this year. They're the strings produced in flat boxes and are not wound during distributing. Fretted claim that coiling a string for packaging spoils it.

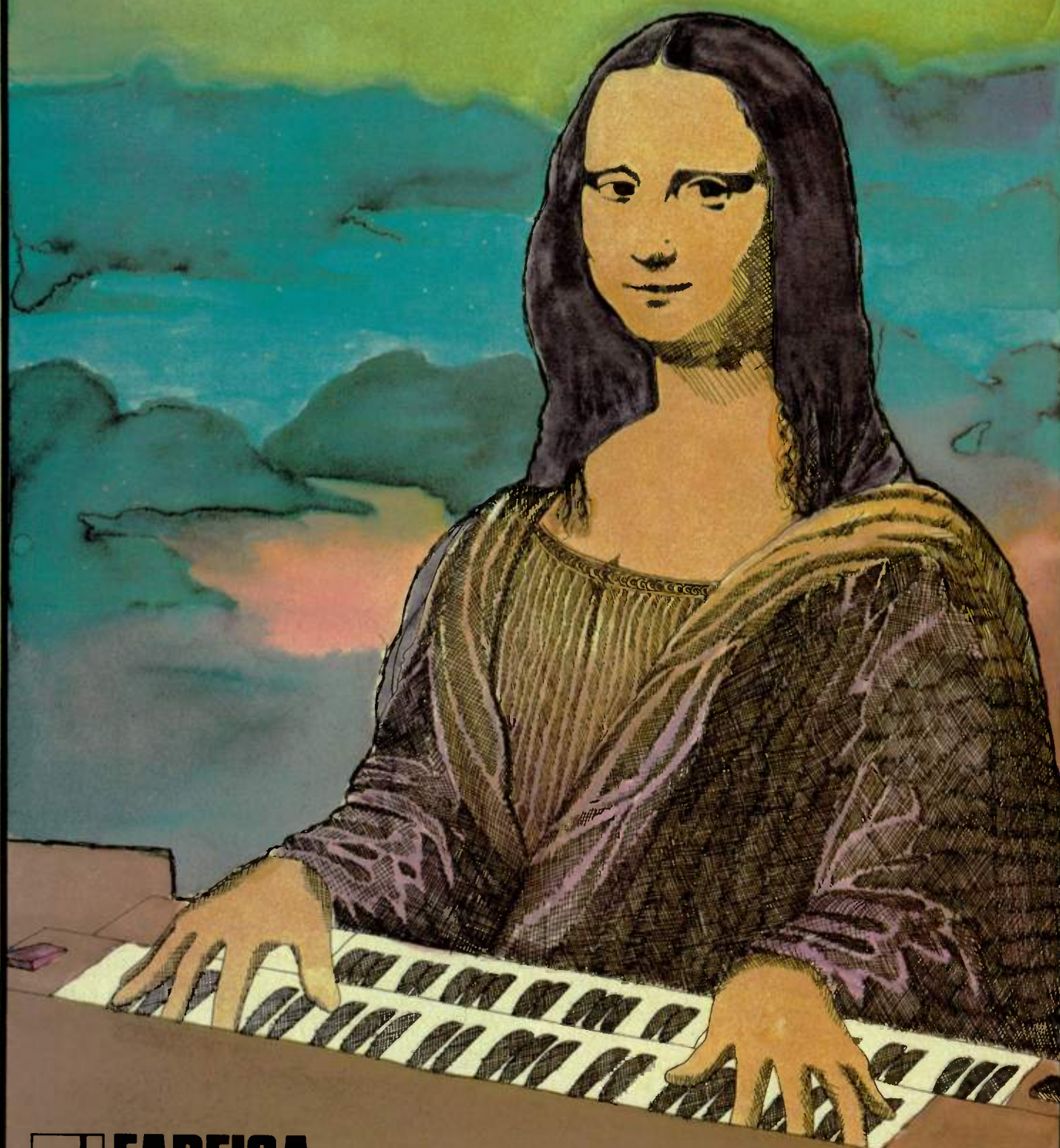
A stunning new range of guitars is called Lado and these are produced in Scarborough, Ontario, Canada. Much use is made of decorative wood and there are seven models of solid body electric guitar in the range.

Roadrunner cases have gained the ultimate accolade of receiving ATA Category I specification. This specification is only awarded after the cases have been subjected to extreme abuse and not surprisingly Cases Incorporated made a bit of fuss about this during the show.

BGW whispered to us that they are looking to improve their market share in Europe and these fine power amplifiers and related products could certainly benefit from increased European exposure.



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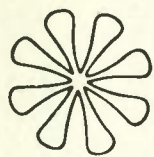
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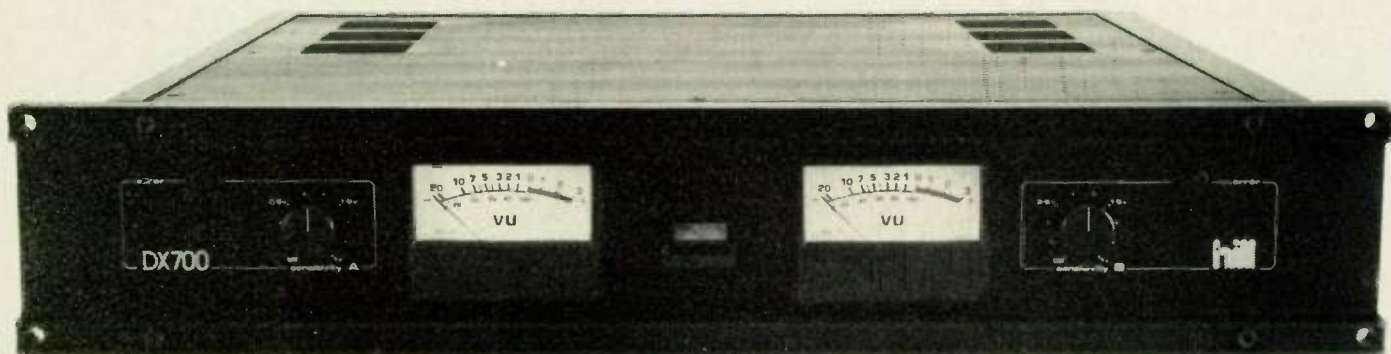
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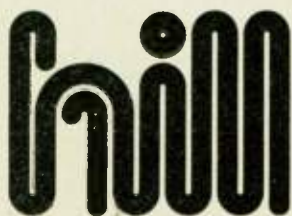
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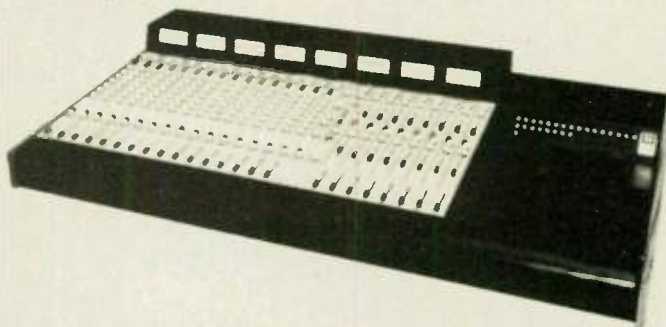
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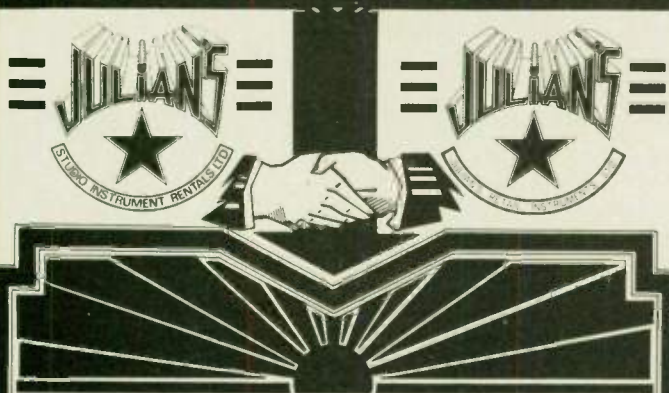
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# Kings of Kingston



John King's staff (l to r): Graham Stack, Mike Brooks and Ian Oates.

When John King opened his music shop 10 years ago in Kingston, he had visions of a rather quiet existence relaxing by the Thames. However, nothing could be further from that image, as a visit to John's present store will reveal.

John began life as a professional drummer, then he moved into the trade end of the business as sales manager for a large company. He spent 15 years "doing the North Circular race track" before deciding to open up his own music shop.

John was living in Richmond, Surrey at the time and decided to set up in nearby Kingston. He said: "The first shop was in Vicarage Road by the river. I had visions of spending my days sitting leisurely by the river, but after six months we moved to Cromwell Road near the station."

Although space was limited at the new shop, it nevertheless established John King's as the main centre for group gear in the area. As business began booming, John secured another shop around the corner in Richmond Road. However, despite the fact that the two stores ran at right-angles to one another in the same block they were not joined in the centre which meant there were two entirely separate premises.

This led to one or two problems as Ian Oates, who joined the business as a shop assistant and is now a director explained. "Often we would get people in one shop wanting something which was in the other and we would have to direct them around the corner. Unfortunately, some would get lost on the way so we ended up having to escort people round

the corner to make sure they got there."

Eventually the lease came up on the Cromwell Road shop, so John decided to move into larger premises next to his Richmond Road shop, which would have seemed all very confusing to customers. However, after much wrangling, John finally got his new bigger premises and set about arranging the store and constructing a special drum room.

Visitors to the new store could be forgiven for thinking that they are in one of the old John King shops at first. There is the same long room with guitars covering the wall and various amps, effects units and variety of instruments set up around. However, the real bonus of the new shop is the purpose built drum room.

Having been a professional drummer himself, John knows a thing or two about drums and has taken care with the setting up of the drum room. At any one time you will find a good half dozen kits set up with every accessory easily to hand. Not only can you see what you want but you can also play it in comfort, and John also has plans for soundproofing which will create a perfect haven for drummers.

You will find all the big names at John King's from Ludwig and Gretsch through to the new Tama kits. John realises that buying drums, or any musical instrument for that matter, is an expensive business and reckons that an average £2-300 kit of a few years ago will now cost about £8-900. Still he believes that instruments are a good investment and tend to hold their prices.

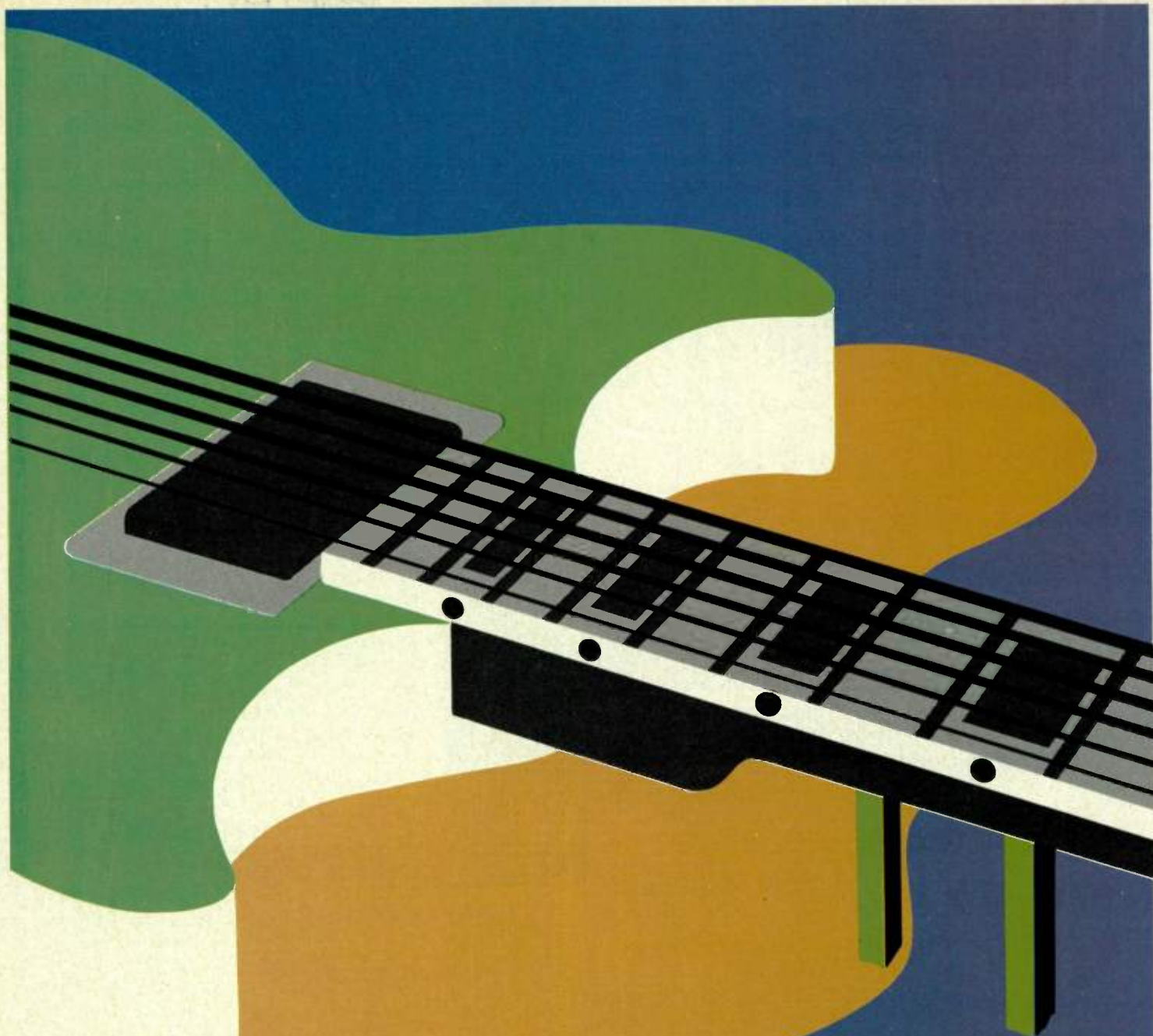
Despite being somewhat "out of town" they still get many big name customers, largely thanks to Ian. He used to play in a band called Blitzkreig but when faced with a choice between a gig in Tunisia and the shop, decided on sunny Kingston.

Customers have included the Moody Blues, The Pirates, David Coverdale and the Blockheads. Ian explained that many of the big bands have regular accounts, and the shop keeps a stock of their particular requirements so they can just pop in and collect what they need.

Both Ian and John agree that the rise of Japanese products over recent years has been one of the major changes in the music trade. Both in quality and price they are virtually unbeatable, although the shop stocks the usual Gibson and Fender as well as Ibanez and Yamaha. In fact John is having a special "Hire and Purchase a Fender month" to mark their tenth anniversary. Customers will be able to take a Fender out on loan for a small deposit and if they wish to purchase then the deposit will be knocked off the price — which according to John will still be a good one!

Completing the line up at John King's is Mike Brooks, manager of the drum department and the resident drum specialist, and the most recent addition, Graham Stack.





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David Essex pictured at the time of collecting the Eurotec Black Box modular effects system from Macari's Ltd.

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New Kings Road, London is a long way from Springfield Missouri where David Kershenbaum grew up and developed his musical talents. Yet A&M's London headquarters is where producer Kershenbaum is spending much of his time these days

He recently finished Elkie Brook's new album and now adds that lady to his list of artists he has produced which include: Joan Baez, Ozark Mountain Daredevils, Hues Corporation, Hoyt Axton, Gallagher and Lyle, Cat Stevens, and Ritchie Havens with the possibility of Art Garfunkel's new album being his latest project.

Kershenbaum began his producing career in Chicago and eventually joined RCA as head of A&R. His impressive record (no pun intended!) led him soon to A&M records and a chance to scout out and produce new talent in Britain.

His experience and ability as a producer has led him to the enviable position where he can afford to only produce artists he respects musically. His philosophy is then to guide the artist "through their own musical processes".

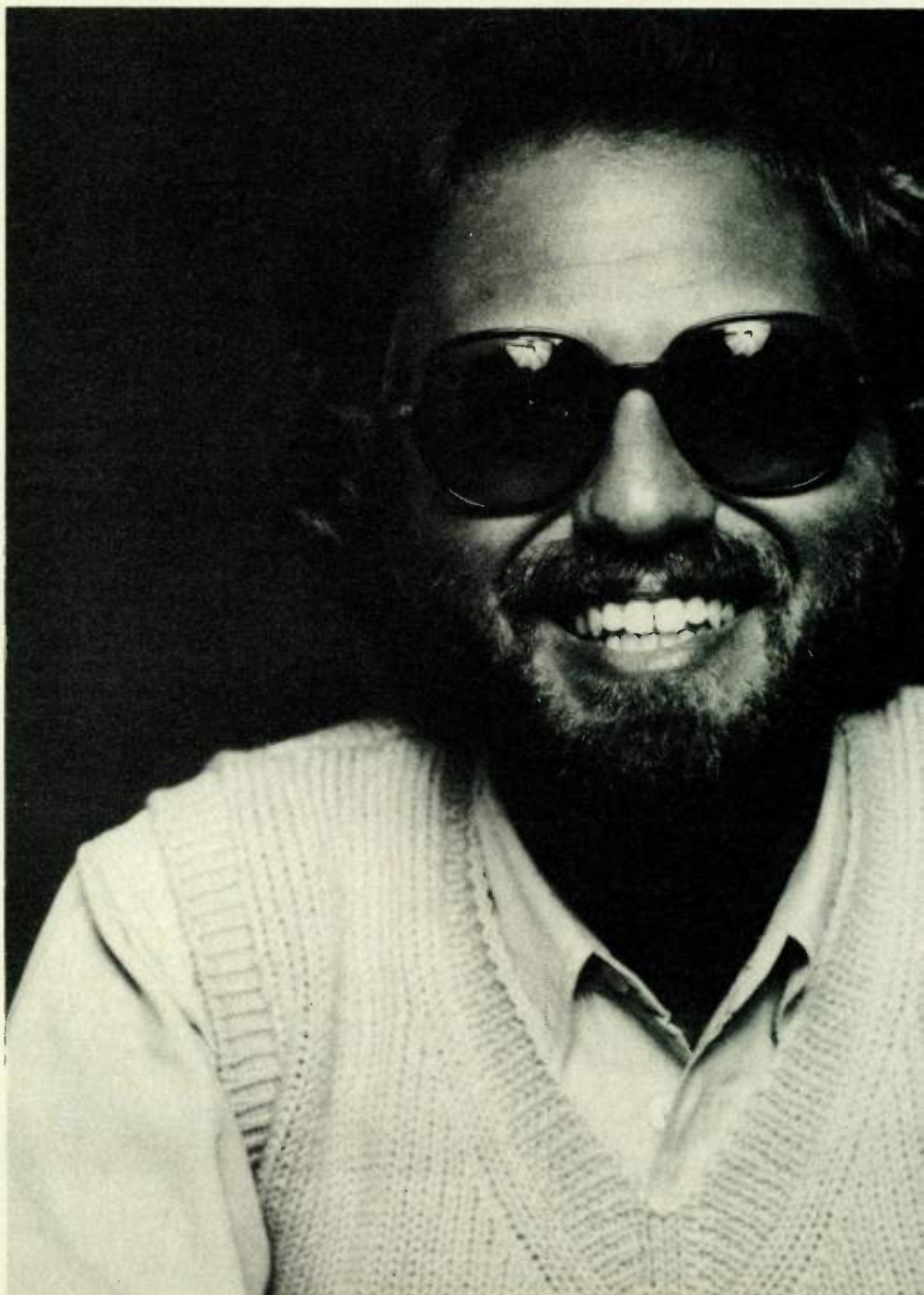
From working both in Britain and in America, Kershenbaum is able to pinpoint the differences in recording techniques and sound between the two sides of the Atlantic.

"The thing that's different between recording here and in the States, is the studios are different, the monitors are different and just the climate is different. It's hard to explain, but you could cut the same record in LA, New York or Nashville and get completely different feels from the musicians and the studios in the way you hear it and the way you feel, it.

"There's a definite difference in Britain in the way the engineers approach the tracks to begin with and there's a difference in the way you monitor in Britain and in the way everything sounds different. I've noticed it a lot in the last two or three albums I've made when I've done maybe 80 or 90 per cent of the album in London and taken it back to the States and mixed it in the studio I always mix in. If I had not done rough mixes here I would have done totally different mixes there because it sounds different there. The rooms for one thing. The difference is also in the whole approach to monitoring and recording. It causes you to place things differently. Like when you've made a record in a room and you've stayed in the same room all the way though, you start to hear the record build up to its finish and when you come to do the last rough mix it's basically finished.

"When you take it back to the States you may want to balance it totally differently. The room may have a little more top or bottom for instance. So you may put the bass in a different place than if you had mixed it here. You try to keep in

# 3 THE PRODUCERS David Kershenbaum





mind the objectives you had when you originally envisioned the record. You may use a whole different echo treatment in the States than you would have used here".

"Different desks sound different. Tape recorders sound different. I've had a suspicion that just the climate and geographical location of London and the humidity has an effect on microphones and echo chambers. On the Elkie Brook's album I used the same drum set and mikes I used in the States placed in exactly the same place and played by the same drummer, and the drums sounded different.

"It wasn't bad but it was different. I think in the States we have a lot of tendency to EQ things and correct deficiencies with EQ. Engineers have been brought up to think if the guitar isn't bright enough or the voice seems a little too thick they'll go back to the board and EQ, whereas an English engineer usually goes out in the studio and makes it bright out there. I like that approach myself because you end up with more natural sound. The less you have to do to it the better."

Wherever possible, David likes to do as much recording as live as possible keeping overdubs and embellishment to the minimum.

"It depends on the act. Sometimes it's not feasible to record it all at once. I think today things are changing. People are getting used to a rougher edge on the sound and like it to be more natural. I think the more you do live the better. In the case of Joan Baez and Elkie's case, and some of the Cat Stevens sessions, we actually did the vocals live with the track. I think it makes an enormous difference if the vocalist is capable of singing along with the track.

"It's a universal problem to go back with headphones and recreate what would have happened if the artist had sung live. It's the singer leading the band, versus the singer trying to act like the singer in the band but being led by the track. It's that difference. If you can do your vocals live you've made great steps in coming up with something that is really a performance rather than screwing around with it later and making it sound as if it was done that way."

David has a healthy suspicion of overdubs and tries to steer as clear as them as he can saying that no matter how congenial the overdub is to the record it changes the sound, for the better or worse. He likes all types of music and can be as moved by Joan Baez with just an acoustic guitar as good loud rock band.

"From my standpoint as a producer, I'm challenged to do things and create certain effects, or set a stage to present a song, which is certainly more rewarding than just accepting something coming out of the monitors and saying 'that's right' or 'that's not right'. As far as challenges

go, it's anything of quality. I really enjoy hearing quality songs from any area of music and the fun of it is how to present it... You always contribute and if you don't you're not doing your job. They don't need you if you don't contribute. It can vary all the way down, from helping with the melody line to reconstructing a routine to choosing the instruments to be used.

"It depends on the artists because some artists virtually just want to come in and sing and that's it. They say 'you do the arrangements you do the tracks' take care of the arrangements do everything. All I want to do is sing and then I'll leave and you finish it and I'll listen to it" and they work that way.

"Other artists want to be involved from the beginning to end all the way down the line. What producers have to realise is it's not their album. They're making the artist's album and if they inject too much of themselves it's not the artist.

"If they have a strong feeling about something about something which works as well as you want, you have to realise it's their album and they have to work every night and play it. I never force an artist to do anything they don't want to do. I never force them to sing or play something which works as well as you want, you have to realise it's their album and they have to work every night and play it. I never force an artist to do anything they don't want to do. I never force them to sing or play anything they don't want to. There would be no feeling in it."

Kershnerbaum describes his whole philosophy as refining the sound an for himself and the act he is producing.

One thing he tries to keep away from is strings. He would rather use an instrument that created the same feeling as strings rather than bring in a string section on an album. Always, David tries to plan things so that there is not one or two standout songs on an album that people buy the record for while being disappointed by the rest of the tracks.

"I found that, in the beginning when I produced, I found that I did do too much and had to make it simpler. I was overdoing it so I did pull back and managed to stay objective. The only time it does get over the top is when you're mixing something and you keep reaching for something that is just not there. Usually the best records are the ones that are mixed in a very short time.

"They are good because the tracks are right. If you have to sit and mix it for hours then your tracks are not right. I have to catch myself sometimes after the track has gone on for a while and just say that I've done the best I can with it. I have pulled out all I can with it and we will just have to re-cut it.

"People say you can solve something on the mix but I don't think so. If the

by Ian White



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basic track is not right there's nothing that can be solved. You can really dress things up and you can use special effects but still people are going to react to the rhythm track to the song. And to the performance of the singer. If those three things are not right then I don't think that I can do anything with it. All the rest of it is for yourself and your friends. Then you can do a lot of mixes because there are people out there who will appreciate. But most people are going to hear it on a 3 inch speaker or a little radio and they're either going to like the song or the performance of the singer."

David explained that, as a producer for RCA in America, union regulations forbade him from touching either the desk or mikes. This was all left to the engineers and it was only through the patience of some of the engineers that he understood some of the technical processes in the studio. Needless to say this wasn't at all satisfactory so he struck out on his own production career teaching himself 'all the nuts and bolts side of things. Now he can mix, engineer and even master an album on his own. Although he doesn't do his own engineering because he feels it distracts him from his primary role as a producer.

"I think that if you want to produce good sounds it is important to know what you can and can't do. Today there are so many devices available you have to at least know how they work to utilise them. But if you are at the mercy of an engineer, when you do a lot of travelling you may have as many as ten engineers working on an album. Some may be brilliant. Others may be not so good. In that case you have to do the work yourself because they are not going to pull it off for you.

"If you're going to control a project from start to finish then you have to have a real strong say in the way the sound is going to come out. Unless you have the ability to communicate that on a technical level you're at the mercy of the guy that's doing it.

"Most producers, if they're honest, will tell you a successful album is the combination of everybody's efforts. If something is lucky enough to work; the right combination, of everybody's efforts, the environment, the song, that's great. I've had years where I've had great success and years when I haven't. But I'm still the same producer. Maybe I get more refined in the things I do, but you don't change.

"Usually by the time I've finished an album, I can usually feel whether the album is going to be a success or a failure. It's not until I've finished the album that I can hear it as a complete record. I can



only hear it as an outsider would hear it after I've done another one in between maybe three or four months later.

"One thing that throws people, and it threw me for a time, is that you get used to hearing it in the studio so much, particularly if you stay in the same room throughout, that it never sounds the same anywhere else. In the studio it is so crisp and clear and enormous and gorgeous that sometimes it is a bit of a downer for the first few weeks when you hear the record because you're losing in the transition from tape to disc.

"By the time you hear it on a lot of different systems and on the radio it's not what you know it to be. You've heard the music in its finest form in the studio and it's real hard to make that transition to how it sounds afterwards."

Where he can, Kershnerbaum likes to work 16-track because of the wider head track. He finds that for what he does 24 tracks are the most he needs and 32-track would only be suitable for situations where a lot of separation is required.

"I'm really at the point where I want to go backwards. I want to go back to stacking stuff on top of each other for older sounds and create room sounds instead of a close-miked sound. It would be nice to try out different things even though I fought for five years to get everything crystal clear like a smack in the face.

"The last ten albums I've done have been with different studios and artists, but if you really study them you can see a pattern in the way I place things. I'd

like to try different things with drums and guitars, and vocals and present them differently. That is what causes your records to sound current. When I was with RCA I used the same engineer and the same studio for two years and all my records sounded the same. It got dangerous because I also used the same musicians.

"I vowed then that I would go to as many different places as I could and try as many different things as I could, because that's the only way you can sound different with your records.

Looking back, David realises the hardest album he ever did was Joan Baez's "Diamonds and Rust" album because it was the first time he had recorded vocals 'live'.

"I had to make sure I did it right the first time. We cut that record in four days and we did virtually nothing to it in the mixing."

He describes live recording of concerts as pretty hair-raising work as well. When doing Baez's live album he admits to the most nervous disposition he ever had in his recording career.

"Out there you have to accept everything that is coming off the monitors. You get to the last night of the tour and you need two tracks for the album and you get a buzz from the grounding or something."

Things can also get nerve-wracking in the studio in America, he adds. Unlike Britain.

"No recording is easy. Everybody has their horror stories of master tapes being erased or tapes falling apart. The first time I was using a tape machine I was doing a Hues Corporation single which had to go out for early sales. We thought it would be a huge hit and we were up all night on it.

"I was using the two-track master and it didn't have the hubs on the spools. It stopped when it shouldn't have and the tape flew all over the place. Luckily we had a disc of the song so we made a tape from that."

"I've never actually broken a 24-track tape but I've had splices break. I'll never forget the time we had probably the best bass performance on a track that I'd ever heard. It was just magic. The engineer put the wrong track on 'record' and we never got it back. When you hit that record button it's committed to eternity."

One of his aims now is to record classical music with a contemporary feel, in miking and sound techniques. Right now he remains happy commuting between America and Britain producing the acts he wants to and searching for new talent and sounds.



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# Playback in the PARK

Just over 18 months ago, a delapidated parish hall in London's St Johns Wood was transformed into a modern studio now known as The Regents Park Recording Company. The transformation was the plan of Duncan Bruce and Steve Lipson who had been regular clients of other studios recording for their radio production company, Quixote.

"We had found a lot of the London studios were either very professional but lacking in a certain personal touch, or cheaper and friendly but not so professional," said Duncan.

"We wanted to combine the professionalism with the friendly, personal touch. When we say professional we mean that the equipment is all new and regularly maintained and the staff know what they're doing."

Indeed, the Regents Park Recording Company is about the closest you'll get to a country atmosphere in the heart of London. Although plagued by that notorious London predator, The Meter Maid, the studios are in a quiet, leafy street just a spit away from the McCartney household and far from the fuming chaos of W1 but just as handy.

Apart from Duncan and Steve, the studio has two full-time engineers: Martin Adam and Grant Arenstein. The day-to-day running of the studio is organised by General Manager

Graham Perkins, assisted by Jill.

Since it first opened its doors, the studio has recorded many New Wave acts including: Soft Boys, New Hearts, Eddie and the Hot Rods, Radio Stars, Lurkers and White Cats as well as accommodating nearly 40 members of the National Youth Jazz Orchestra. The main studio is very big indeed with approximately 1,000 square feet of space. All the equipment in the control room is housed in a custom-built unit which contains the Amek 20/16 desk and various limiters, compressors, and cassette machines. The main tape machine is a 3M M79 multi-track monitored through Tannoys in Lockwood enclosures.

Steve Lipson has found Scotch 256 tape is so good that, with a running speed of 30 ips, he has no need for any noise-reduction system and swears he gets absolutely no hiss at all.

Although the studio is now 16-track, planned additions will bring the studio up to a 38-track capability through the addition of 24-track equipment which can be linked in to the present 16-track set-up.

At the same time, the studio will be undergoing extensive acoustic renovation to bring it into line with the highest acoustic standards. The studio now has, says Graham, essentially a live sound to

it. It is now just one very large room with a separate booth for drums but soon modification will entail building more booths for vocals. As it now stands, a band can just set up and play as naturally as if they were just in a big rehearsal room unhampered by studio paraphernalia.

"One of our success factors was that we were lucky in starting with the advent of New Wave. I think we fitted in nicely by having less pomp and sophistication than many of the other large studios," Duncan added.

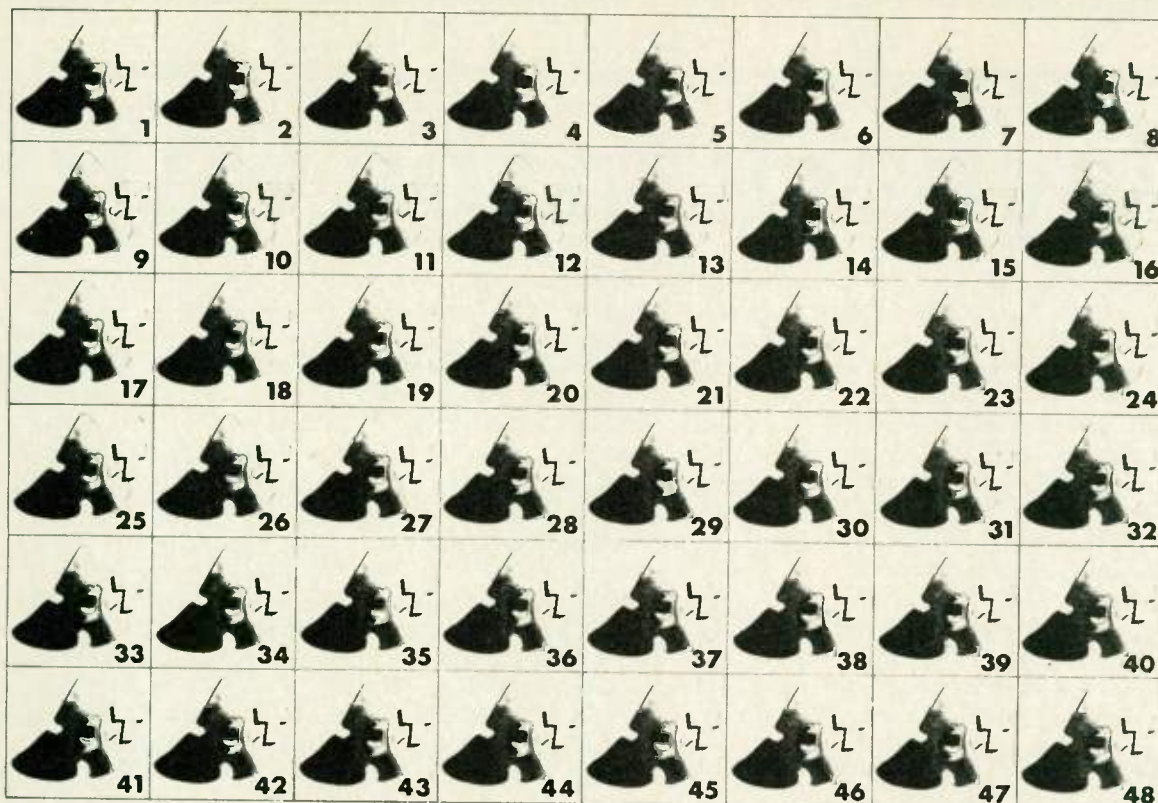
"We want to do things in our own style. But that doesn't mean we are not professional. Everything is bought new and regularly and properly maintained. It's so easy to set up a 16-track studio but we wanted to set up a 16-track studio of pro quality."

One of the big advantages for roadies is that gear can be loaded direct into the studio through a door that links the building with the road outside via a dozen or so steps.

The only problem they've had at Regents Park with the sound was a little old lady who complained a few times about the noise. The lads from Regents Park Recording gave her a bottle of sherry and she hasn't been heard of since.







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### Roger Kennedy, Telecomms

Engineer Roger Kennedy became involved in the business while a student at Salford University. Apart from working the university's own PA system for visiting bands, Roger also gained studio experience with the local Manchester radio stations.

About the time he left university, Mike Devereaux was looking for an engineer for his Telecomms studio in Portsmouth so local boy Roger got the job. The studio does a lot of demo work for rock bands who come from all over the Southern half of the country. In addition to radio and TV commercial work they also specialise in sets of disco jingles. They also run a special radio presenters' course which has proved tremendously popular.

The Telecomms equipment includes: an Allen and Heath Model Two 16 into eight desk, Brunel one inch eight-track, Revox A77, MXR effects, Roland tape echo, Bose 800 speakers, Tannoy/Barclay monitors, Neumann, AKG mikes and four Dolby cassette machines.

### Steve W. Tayler, Trident Studios

Stephen Tayler has been at Trident for four years starting out life as a "tea boy" and working his way up to becoming chief engineer. Trident have been established for 10 years, and have become one of London's leading studios.

Stephen finds himself working mainly with rock bands who recently have included Brand X and UK in addition to keyboard wizards Rod Argent and Robin Lumley. At the beginning of the year, the studio went 48-track which, according to Stephen "really proved to be a benefit".

Apart from the main studio, they also have a remix room and cutting and copying rooms so the whole process is contained under the one roof. The main studio desk is a Triad A range 28 into 48, while in the mixing room there is a Triad 40 into eight, monitors are JBL and Cadac respectively. All the tape machines are Studer, also they have just invested in a new range of mikes and finally there is a nine foot Bechstein grand piano for studio use.

### John Ross Borthwick, B.T.W. Recording Studio

Situated in North London, B.T.W. are already well-known as a demo- and film-sound studio. What is less well-known is that this 4-track studio has recently re-equipped.

John Ross Borthwick designed his 18 square foot studio in conjunction with the B.B.C. Experimental Service and Dunlopilow. There are four 6ftx3ft acoustic screens and these can be used to form an additional cubicle. A drum/vocal booth, 10ftx8ft, is also built-in.

Among the equipment currently in use are a 4-track Teac 3340, A 700 Revox for mastering and an Alice 10-in 4-out desk. A selection of mikes by Calrec, AKG, Beyer and Neumann are available.

Various effects available include Roland Chorus, MXR Phaser 100, Mutron 3, Fuzz Box and Cry Baby and instruments for hire include an ARP synth and a Bechstein upright.



### Stuart Jeffrey, Craighill Studios

Craighill is one of Scotland's premier studios, and chief engineer Stuart Jeffrey has been working there for almost five years. He has played in local bands himself and still finds time to do the odd gig just to keep his hand in.

The studio deals mainly with MOR acts, but get their fair share of rock bands; they recently worked with Rosetta Stone and recorded The Clash while on their British tour. Craighill is 16-track, but Stuart added that they are expecting to go 24-track in the near future and they also have a mobile eight-track.

In the main studio there is a new Neve 8058 24 into 16 desk with a 16-track Studer, Leavers-Rich four-track plus various Revoxes, an EMT plate echo, AKG, Sennheiser, Neumann mikes, Tannoy playbacks and a variety of studio instruments. The eight-track mobile which is constantly in use all over Britain and Europe has a 14 into eight desk.

### John Bassett, Penthouse Studios

John Bassett started Penthouse studios five years ago and has now grown into an operation that includes its own record labels, pressing service and publishers. They are soon to go into production and distribution.

Apart from working with rock acts, John has built up quite a business in jingles particularly for the BBC and Capital Radio. Penthouse is very aptly named because it is actually the top floor of a large house with a large window which looks out on to the Essex countryside. John is soon to open another studio in London, which will further extend the company's operations.

The studio has a one-inch Cadey eight-track, a Teac four track with an Allen and Heath mixer, all the usual limiters, compressors, standard mikes and Tannoy speakers plus a comprehensive range of instruments for use in the studio.

### Steve Foley, Smile Studios

Steve Foley has just transferred his Smile studios from Sale to Chorlton in Manchester. Steve, a writer/producer, began his recording in the basement of his home 3½ years ago and on his eight-track he has worked with a variety of acts including The Smirks and Albertos Y Los Trios Paranoias.

Steve's new studios has a Cadey 16-track, Revox B77 and A77, Solus system desk, AKG,

Calrec, Sennheiser, Beyer mikes and a huge range of studio instruments and amplification.

Smile also have their own label and pressing set up, so they can offer up and coming bands an attractive all-in deal. The new studios will open up even more possibilities for Steve and should enhance his already high reputation.

### Steve Taylor, CBS Studios

Steve Taylor is one of four balance engineers at the CBS studios in London. Steve joined CBS six years ago as a tape operator, becoming a balance engineer after 12 months, and has worked with many of the top international stars including the late Bing Crosby.

The three studios at CBS, which are all 24-track, give the engineers a chance to work with a wide variety of artists and musicians of the highest calibre from symphony orchestras to New Wave bands.

All three studios have Neve 24-track desk and MCI machines. There are four echo plates per room, and also four natural echo chambers which can be hooked up to either studio. All the usual effects "toys" are available, the mikes used are Neumann, AKG, Beyer and Electro-Voice, and speakers are JBL 43/50's and JBL 43/11's. Each studio has a grand piano, plus a huge array of other instruments.

### Gary Lucas, Spacewood Studios

Gary Lucas is another engineer who, together with a partner, formed his own studio. Spacewood studios in Cambridge has been open for six years, during which time they have become one of the major studios in the area.

Their variety of work ranges from New Wave bands to choral symphonies with acts coming from all over the country and Europe to work there. The studio is 16-track with the mixer, tape machines and much of the ancillary equipment designed by the studio themselves. They also have an MCI 16-track, Studer B67, a number of Revoxes, Neumann, AKG, Calrec and some new Electro-Voice which Gary has been very impressed with.

Spacewood are one of the few studios that has its own PA rig which they regularly take out on the road. Gary says this keeps them in touch with what is happening on the live sound scene, recent work has included a tour of Switzerland with the Albion Band and a special concert in memory of Glenn Miller.



# RECORDING WORLD

## Francis Andrews, Ridge Farm Studios

Ridge Farm is very aptly named because it stands in 12 acres of beautiful Surrey countryside and is in fact located in the barn of an Elizabethan farmhouse.

Francis Andrews is the owner/engineer who is busy updating and re-equipping the 24-track studio. It is fully soundproofed, heated and furnished with an isolation booth at one end and a recreation area which offers comfortable surroundings for playback facilities.

The MCI 24-track equipment currently in use belongs to Jon Anderson and they work in conjunction with a number of mobiles including the Rolling Stones, Maison Rouge and Virgin. National Health are currently recording an album, and other clients have included Mick Taylor, The Motors, Wilko Johnson, Roy Harper, Jethro Tull and Steve Hillage. There is also a rehearsal studio and recent users have been Queen, Black Sabbath, Hawkwind, Gallagher and Lyle, Camel and Thin Lizzy.

## Des Bennett and Tony Heasman, BBC Wales (Stacey Road)

Using their spare time, two BBC sound technicians, Des Bennett and Tony Heasman, have turned an old Cardiff church into one of the most technically advanced sound recording studios in Britain.

With equipment extracted from the BBC or hired from private companies, they set about constructing the first commercially used studio in the entire BBC network. Setting up in an old church in Stacey Road, their first success was an ambitious series of half-hour programmes which were networked nationally and Tony Heasman pioneered new technical advances in recording synchronised sound.

At Stacey Road Des and Tony have assembled a Midas 20/16, 16-track and eight-track M79's, Maglink lock up with 22 track capabilities, Dolby and DBY noise reduction with instruments including Roland string synth, Yamaha electric piano, ARP synth, Hammond, Pearl drum kit, Bechstein piano and there is a separate drum booth.

## SWEDEN

### Christer Berg, Marcus Musik

Marcus Musik, the first 24-track in Sweden, is also the first to have automation and 48-track facilities. Situated at Solna just outside Stockholm, they moved there five years ago and their resident engineer Christer Berg has seven years of professional recording experience behind him.

Owned by Marcus Österdahl, this large (120 sq. m.) modern studio is equipped with a Harrison 40 in 32 out desk and Allison automation. There are three tri-amp monitor systems, custom limiters, compressors and erase compressors. The studio is open 24 hours a day and up to 30 musicians can be accommodated in comfort.

Abba cut "The Album" at Marcus Musik and they used the studio to record part of the soundtrack to "The Movie". The studio is actually featured at the end of the film and the track "Thank You For The Music" was recorded there, in fact they were regular customers before they opened up their own studios. Apart from top Scandinavian bands, several British bands including John Miles have worked there.

### Carl Langenskiöld and Ulf Zwedberg, Talkback Studios

Carl Langenskiöld and Ulf Zwedberg started Talkback studios 2½ years ago. The studio is

situated in a quiet part of Stockholm, which is nevertheless close to the city centre and therefore conveniently located for all amenities.

Specialising in sound effects, commercial jingles, classical, rock and background music for films, the studio has been built to the highest standards. The studio is ideal for small groups or up to 15 singers, and quick jobs are a speciality with four sound engineers always on call.

Talkback have their own cassette duplicating plant, listening and capping room. The latter is fully equipped with a Telefunken M10 tape recorder and a new MCI Broadcast two track is to be added. The capping room can be rented without an engineer at reduced rates.

### Bob Stavander and Jan Soderlund Tal Och Ton Studios

The Tal Och Ton studios are situated in an old fortress in Gothenburg with walls a metre thick. The actual studios used to be the dungeons. However, there is nothing old fashioned about the studios.

Bob Stavander, studio manager and chief engineer, and his colleague, Jan Söderlund, not only run an up-to-date well equipped independent studio they are also equipment suppliers to other Swedish studios and are agents for MCI, Soundcraft, JBL and Shure microphones.

On the recording side, Bob and his assistant Peter Wiberg have two studios. The larger of these has an MCI 400, a 3M 24-track minicomp desk, Revox and Teac tape delays and DBX noise reduction. The smaller studio, used mainly by singers, has a Soundcraft console, a Scully two-track and the same effects as the larger one.

### Tore Tamblyche, Arne Bendiksen Studio, Oslo 6,

One of Norway's first studios, Arne Bendiksen Studio, part of Arne Bendiksen Music Productions group, have their own labels, "Sonnet" and "Treola" and have been concentrating upon Norwegian dance records and several children's records this year.

Per Sveinsson and Tore Ramblyshe share the workload of the studio and Tore is respon-

sible for the purchase of new equipment etc. seven years ago the studio was rebuilt, and now it has been decided to rebuild the control room. Seventy per cent of the work handled by the studio is supplied by Arne Bendiksen Music Productions and they are fully booked up till this month, but bookings can be taken after this. The normal charges are 400 Norwegian Kroner per hour, but special deals can be arranged if block bookings are made.

Equipment includes a Rupert Neve control desk rebuilt to 24-track, JBL monitors, 3M tape machine, Crown power amp and is fully Dolby'd. There is also a 16-track mixer and a 2-track Midas studio.

### Ole Ramm and Lars Rosin, Grammofonverket, Kungälv,

Ole Ramm started his recording career 10 years ago at a matrix-plant, where he worked as a quality control checker before moving to Europafilm in Stockholm. There he worked on cassettes and extended his knowledge of the recording scene, becoming familiar with capping etc. He stayed there for 5 years and there he met Lars Rosin who was to become his partner in Grammofonverket.

The studio was the first proper Eastlake studio in Sweden and there are only two (the other is that recently opened by Abba). The Harrison mixing console is something new to Sweden and the fact that Grammofonverket's studio is so well-equipped means that they can offer a well above-average sound for most purposes. It is possible also to rent the studio without an engineer, although one is always on call if required.

### Lennart Karlsmyr and Lars Holm, K.M.H. Studio AB

Lennart Karlsmyr has been a recording engineer for about 10 years. He started out as a musician, but soon became interested in modifying and building equipment for his group "The Moonlighters". With two other members of the group he started a studio called MAB, which in turn gave way to KMH. KMH were the initials of the three partners at the time, Karlsmyr, Malmberg and Holm. Lars Holm is still in KMH as co-partner and he was chosen as Sweden's Songwriter of the Year in 1977.

The equipment includes a custom-built KMH console, 3M 24-track fully Dolby'd Audio and Design Process equipment, Audio and Design sound compressors, and time-delays, Eventide and Pandora harmonizers, Urei sound-compressors and Audio Design frequency-selective limiters. There are MCI-2 track, Studer 2-track, 3 Revoxes and MXR flangers. JBL monitoring is driven by Amcon DL 300 and the treble driven by Swedish IFM power amps. There is a Lyrec 24-track machine in Studio 2 plus a Citatron 16-track. Microphones currently in use are Neumann, AKG, Schoeps, Electro-Voice, Calrec, Sony and Sennheiser.

*Forest Studio: Forest studio in Leytonstone, London is 24-track not 16 as we stated in last month's Meet The Engineer.*





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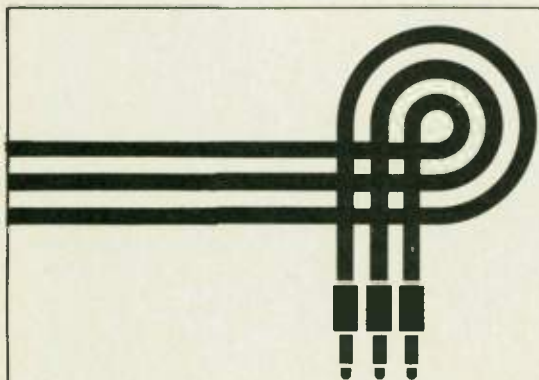


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# STUDIO BOHUS

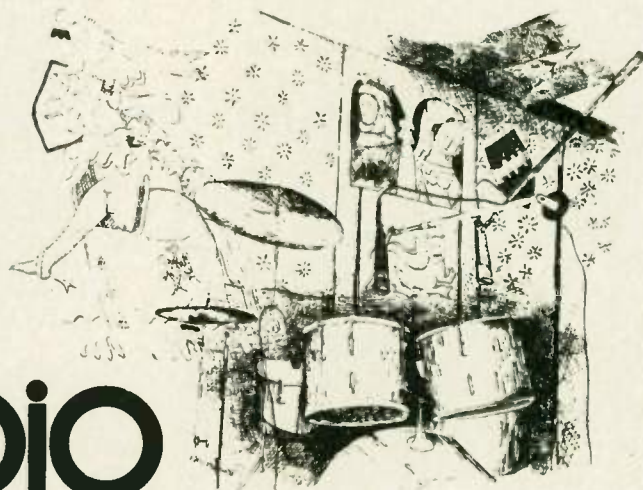
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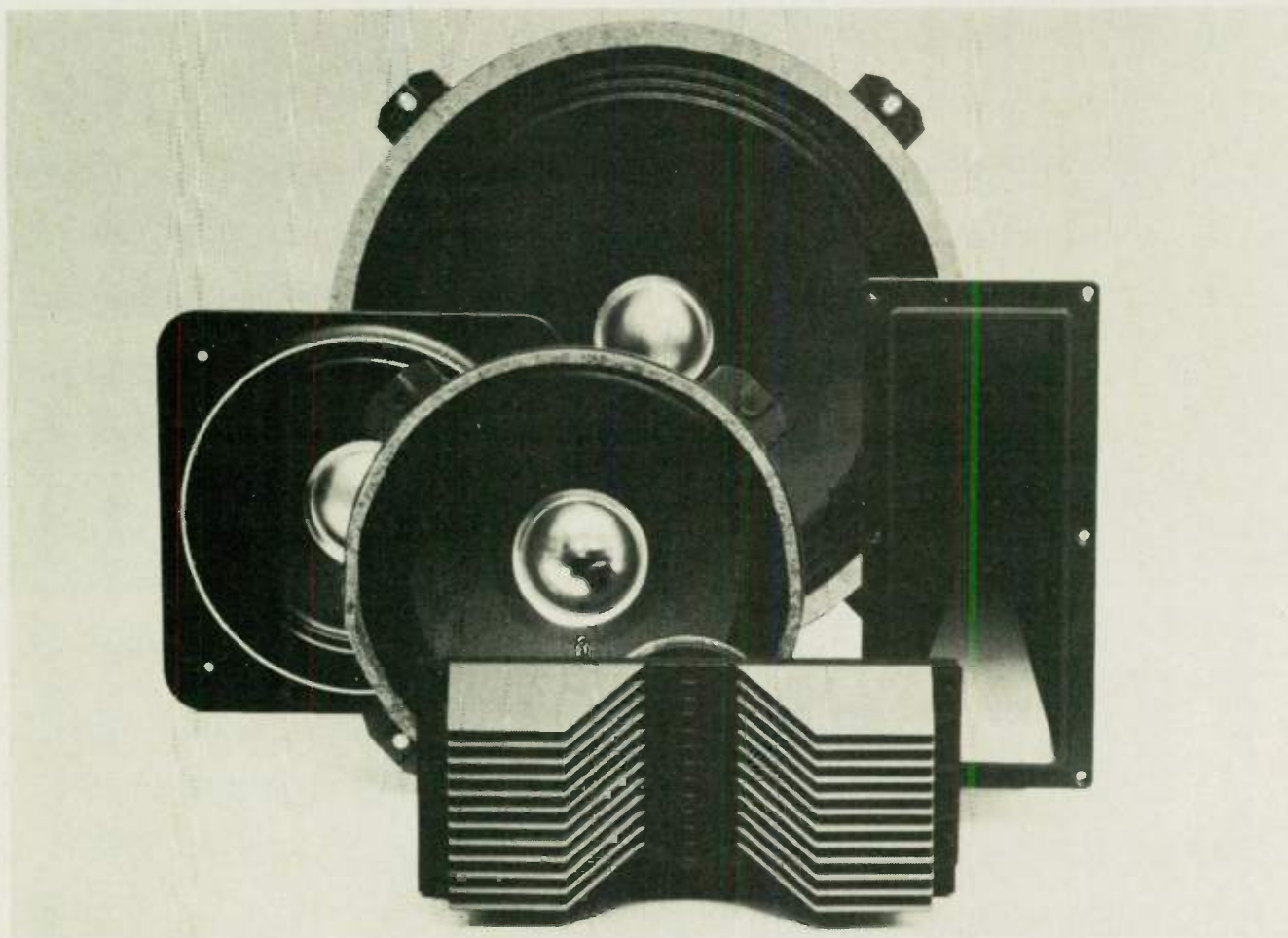
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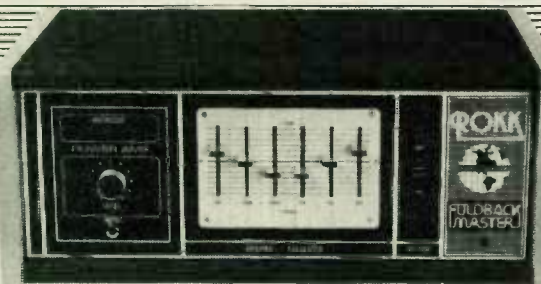
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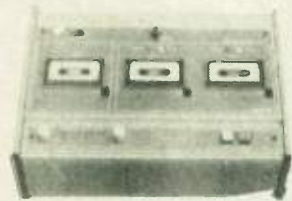
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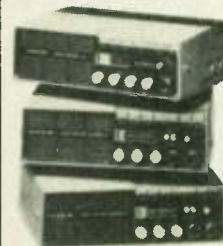
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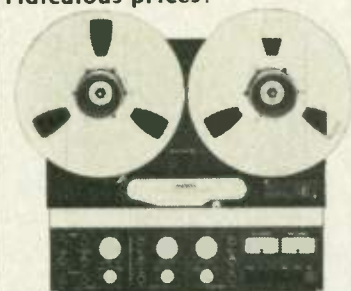
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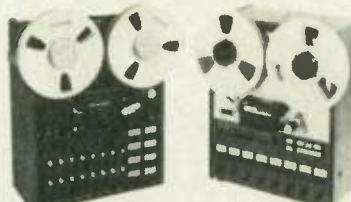


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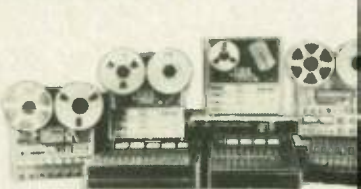
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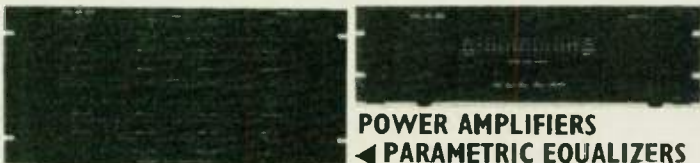
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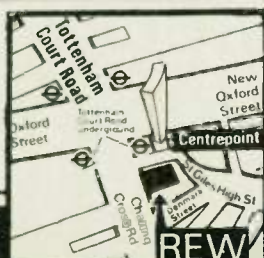
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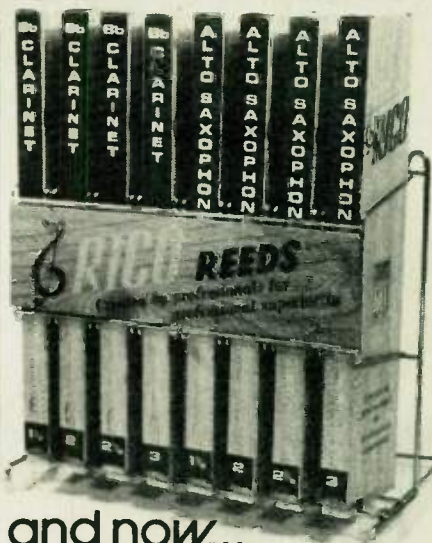
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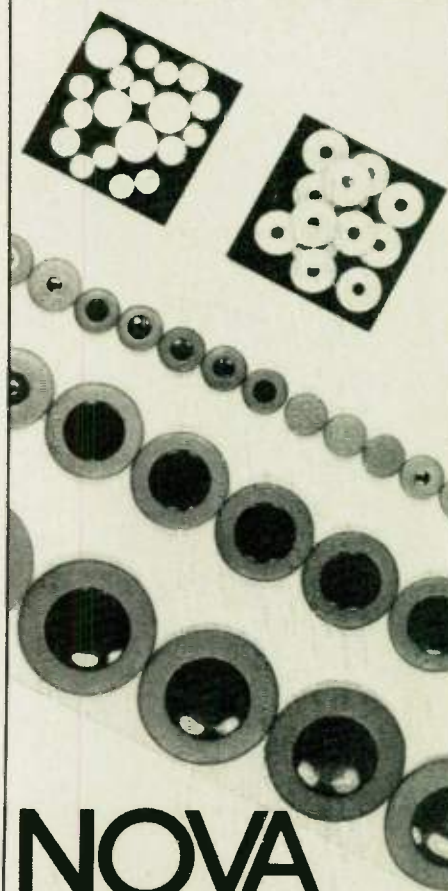


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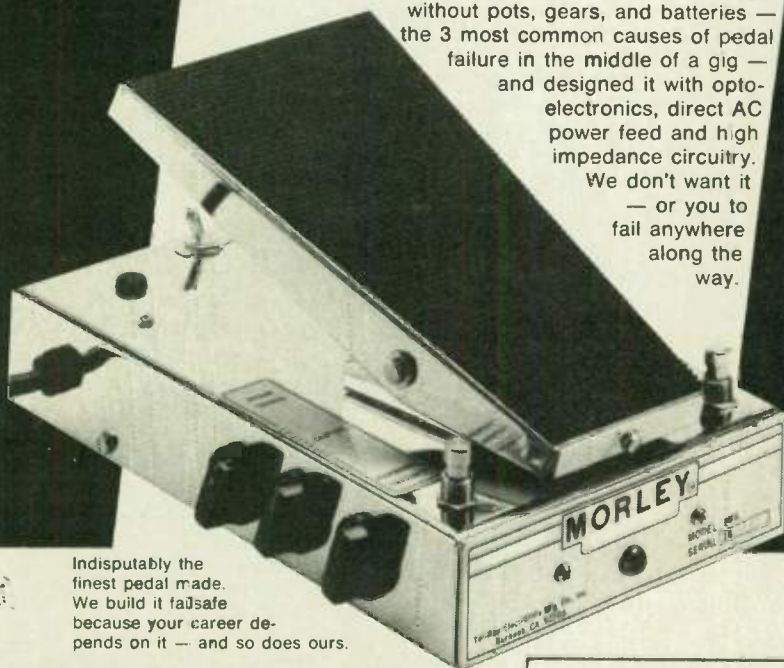
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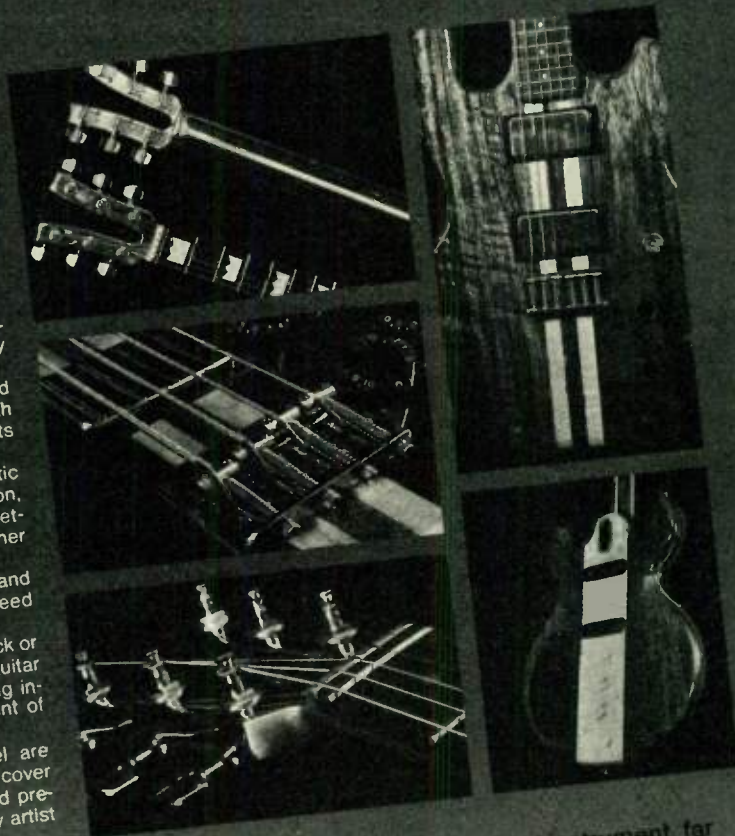
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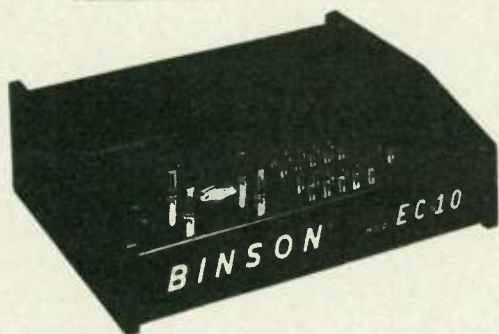
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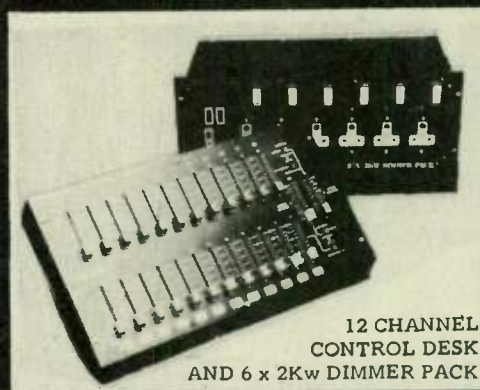
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# SPEAKERCHECK

BY KEN DIBBLE

## Introduction

This month, we turn our attention to the smaller type of horn unit that is commonly employed to extend the high frequency response of an otherwise simple loudspeaker system. Its prime function is to provide some additional bite or crispness in the upper registers rather than to ensure precise control of radiation as is the case with the more elaborate, larger horns found on concert P.A. systems. Even though radiation control is not the prime function of these horns, this consideration is still of importance as, although many 12" and 15" loudspeakers have a frequency response extending well into the treble region, the spread of energy at these frequencies is generally poor and the horn must be relied upon to correct this deficiency.

When adding a horn to a loudspeaker system, it is necessary to employ some form of high-pass filter to ensure that only frequencies that are suitable for reproduction by the particular horn being used are fed to it. The use of an inadequate filter or, even worse, no filter at all, will virtually guarantee the early failure of the horn, while as our results tables show, the use of a filter operating at the incorrect frequency will considerably reduce the performance capability of a horn. Most of the horns in this category, when tested in their raw state, showed some pretty diabolical response curves, but when the curves were corrected for the effect of a suitable filter, we found that some very good results could be obtained with some very low-cost horns.

## The Products

For this review, our broad definition was integrated mid-range horns. This means horns that are supplied as a complete working unit with a built-in drive unit. These tend to be of a certain type in terms of application and performance and so in two instances, we have included horns which, although supplied as a separate horn flare and driver unit, are invariably used together as a pair and whose general application fall into that of the general purpose integrated horns — especially so where there is no separate category into which they could reasonably be included at a later date. As a result of our invitation to manufacturers to participate in this review, we have an interestingly varied collection of horns from leading manufacturers in the UK, from Germany, Italy and from the USA.

## The Tests

As with the 12", 15" and 18" cone loudspeaker units tested previously, we have again used the facilities of the GEC-Hirst Research Laboratories at Wembley, where the complete facilities of the acoustics laboratory, its anechoic chamber and its Bruel & Kjoer instrumentation has been made available to us, along with the services of Roy Brooker, the section head of the Acoustic Dept.

For the purposes of these tests, we have had to estimate the actual power likely to be dissipated by a horn operating only at the upper frequencies. Practically all makers' specifications state only the system power in which the horns can be safely used and this is quite a different matter altogether. If a

horn, designed to operate as part of a 100 watt system were to be subjected to a 100 watt sine wave signal, it would not be unreasonable to expect it to burst into flames! In fact, a study of a spectral analysis of pop music will show that the actual energy present in a musical signal of this type is only between about 5% and 20% of the RMS signal power, depending upon the crossover frequency employed. For the purposes of our tests, we have assumed a figure of 10% for the small, general purpose horns operating at frequencies above about 2KHz, and 20% for horns intended to reproduce the mid-range and crossing over at about 800Hz. Not only do these figures correlate to those of the few manufacturers who publish such information in their literature, but would seem to be borne out by the performance of the samples submitted for test. In fact, our test is, in all probability, on the harsh side and it could reasonably be expected that the actual distortion obtained in practice would be less than our figures indicate.

In the case of the frequency response tests, we have, for various reasons, decided to change over to publishing the sine wave response curve. This is measured with an input voltage calculated to dissipate 1 watt in a resistor of equal value to the nominal impedance as stated in the makers' literature. Besides showing up more of the deviation in response, this will also enable the reader to check the sensitivity and frequency response figures published in the results tables by direct comparison with the published curve. Also, we have decided to tighten up on our frequency response requirements and this will now be stated at -12dB points instead of the -20dB hitherto used.

The figures given for the polar response are taken from complete 360 degree polar curves plotted for both vertical and horizontal planes at the various frequencies stated. These are not dependant upon the frequency response of the unit under test as the 0dB reference point is taken as the on-axis level at each frequency, and the off-axis angle at which the output level falls to -6dB, relative to this reference point is tabulated. This form of presentation gives a good indication of the radiation characteristic of each horn and the selected frequencies are generally in octave bands on ISO standard centres.

## The Results

It is essential that the results tables are read and interpreted with some care — especially in the case of the sensitivity figures, frequency response and power ratings. Some of the sensitivity results and the frequency response figures have been taken from curves calculated to allow for the effect of the crossover filters and, in order to clarify this point, it will be discussed further in some detail.

A glance through the response curves for most of these horns will show a very peaky and irregular response, a feature of which is a very large hump between 2KHz and 5KHz and the amplitude of this hump can be anything up to 15dB above what would otherwise be the average sensitivity of the unit. Apart from imparting a harsh, unpleasant "honk"

to any system in which such a horn might be used, it makes nonsense of any attempt to quantify either the sensitivity or frequency response of the individual unit. Therefore, we have calculated the ideal frequency at which a high-pass filter should start to roll-off the response in order to obtain a reasonably smooth response, and also the necessary slope rate of such a filter. The effect of this on the frequency response curve has been drawn in as a dotted correction curve and it is this corrected curve that has been used in assessing the response and sensitivity figures, and this is the response that will be obtained if the recommended filter is used.

This filter is not, in the true sense of the word, a crossover network and, because a filter at say 5KHz is recommended, it must not be taken to imply that the horn is inoperative below that frequency. As the horn's response rises to its unwanted peak, so the action of the filter will progressively remove that peak and so equalise the response of the horn so that it more nearly resembles a smooth response. The useful frequency response given takes this into account and it can be seen that, in several instances, a response of more than a whole octave is available below the filter frequency.

Not only is the response smoothed out in this way, but the horn will operate under far less stress than it would in struggling to reproduce those excessive peaks at high power levels and accordingly can be expected to either last longer or to handle more power. Therefore, our figures are often at variance with the manufacturers' published ratings and in the interests of performance, we strongly advise the use of the "crossover" points (to coin the phrase) and filter recommended in these test results over those recommended by the manufacturers, in cases where these are at variance.

This approach will necessitate a whole new way of thinking for many of our readers, but it will enable a good, relatively smooth response to be obtained from some very reasonably-priced horn units, that would otherwise sound harsh and honky. To their great credit, it must be stated that Goodmans have evidently already realised this and for these very reasons have included such a filter as an integral part of their Hifax 50HX horn. Fane are also obviously on the ball and offer, at a very low-price, a pair of such filters at two different frequencies to compliment their J73 and J104 horns. We are well aware that, by adopting this line of approach, we are not testing the manufacturer's product in its natural form, but adapting it for a purpose, but that purpose is surely to everyone's advantage — manufacturer and user alike. In any event, the frequency response and sensitivity of the raw horn can be worked out from the response curve published if this were desired.

Suitable filters are readily available from Fane Acoustics and Richard Allan, the latter offering proper two-way crossovers at 3.5KHz (type CN820) or 5KHz (type CN104) which not only provide the required filtering for the horn, but also roll off the top response of the bass unit as well, and ensure that the amplifier



is presented with a reasonably constant impedance into the bargain. The Fane filters cost around £3, the Richard Allan crossovers in skeleton form (i.e. mounted on a pcb) cost about £4 and in a box with screw terminals, about £8, so adequate filtering need not be expensive if kept at this simple level.

## Summary

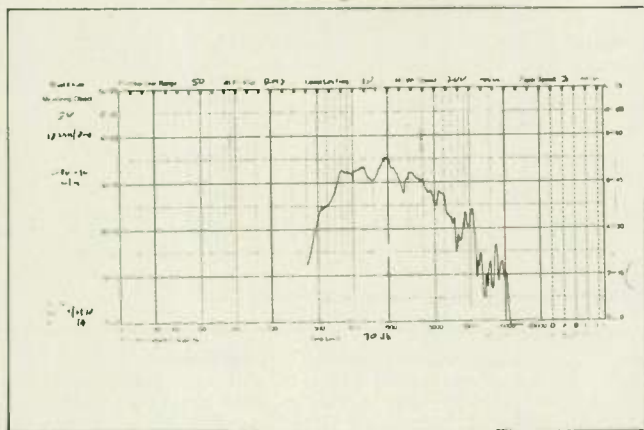
Unlike a 12" or 15" loudspeaker, horns are by no means the same. Choice will be equally dependant upon available space as it will on performance or price. The upper response or sensitivity of the bass unit to be used may well dictate that a certain horn be used and so there can be no 'league table' in this product group. I will say that I am more

than somewhat surprised at some of the results obtained. The two little Fane units performed very well indeed at their prices of about £12 and £17 and, even with the recommended filter, these will cost under £20. The Goodmans Hifax 50HX and the Atlas HR3 both gave very creditable results at prices around the £24 mark although, in the case of the Goodmans, the filter is included at the price. However, the Atlas has the edge on performance between these two in terms of sensitivity and dispersion so you 'pays your money and takes your choice'.

I felt that the RCF TW25/2010 combination was a little on the expensive side, although if our figures are proved right and it is good for use on a 100w system, then it

becomes a viable proposition at £35. The Isophon DKMT/1226 and Electrovoice 1823M/8HD combination are really special units intended for use as mid-range reproducers in a three-way crossed over system and therefore do not really compete in the general purpose market. The EV combination gave a superb performance for this application, although at about £85, so it should! It is essential that you study the individual test reports that follow in order to make any informed assessment between the units tested. Next month, we will similarly deal with a collection of horns specifically intended for use at the high frequency end of the spectrum, as 'tweeters'.

## Electrovoice 1823M/8HD



This is another combination of separate horn and driver unit that we have included in this review category because the two component units are invariably used together and are specified together in the manufacturers literature. Also, although a borderline case for this category, there is no real equivalent in any other category as this is a unique combination of a high power compression drive unit coupled to a comparatively small diffraction horn. Its nearest competitor is the Vitavox S3/4KHz. horn and for similar reasons we will include that combination in next month's review of high frequency integrated units. The 8HD is a cast alloy diffraction horn, made to the usual Electrovoice standards and intended for mounting from the front of the baffle panel. In addition to the front mounting flange, a bracket is provided at the throat end to support the weight of the 1823/M driver. This is a high power, and mid-range compression drive unit of substantial proportions. The 2" voice coil assembly and magnetic structure is housed

within a fluted, cast iron 'pot'. Termination is by means of a pair of .25" 'spade' connectors.

From a performance aspect, this is a 'real' horn, requiring no special filtering to provide a usable response. A 12db/oct crossover network operating at the rated lower frequency limit is all that is required, resulting therefore in a much higher sensitivity. The unit is specifically designed as a mid-range reproducer and although a usable output is available at 10KHz., the makers recommend that the unit be crossed over again at 3.5KHz. into a high frequency horn for optimum results from a three-way system.

As the basic crossover point is well down into the mid-range, the equivalent sine wave power is increased to 20% of the system power and the unit seemed very comfortable at this level. A re-test at 24 watts did not show a great increase in the distortion levels measured and in all probability, the unit would withstand the full 60w. for a short period. The 600w. figure quoted by the

Approx. dimensions:— Horn mouth 380 x 115mm external  
Overall depth 267mm.  
Recommended retail price, incl. VAT £84.24

Parameter	Manufacturer's Rating	Test Result
Power	60w. long term average 600w. short term peak	Confirmed at equivalent sine wave power of 12w. RMS above 800Hz.
Distortion	Not stated	3% @ 12w. RMS sine wave
Sensitivity	105db. @ 1w. @ 1m.	103db. @ 1w. @ 1m. averaged between 800Hz. & 5KHz. from raw curve.
Resonance	Not stated.	800Hz.
Impedance	8 ohm. nominal	10 - 17 ohm.
Recommended c/o frequency	800Hz.	800Hz. @ 12db/oct.
Frequency	800Hz. - 3.5KHz ± 3db.	500Hz. - 10KHz. @ - 12db.
Polar Response	0°175V @ 1KHz) included 0°160V @ 2KHz) by-6dB 0°130V @ 4KHz) points	0°77V x 0°47H @ 1KHz. 0°56V x 0°40H @ 2KHz. 0°37V x 0°40H @ 4KHz. 0°26V x 0°30H @ 8KHz.

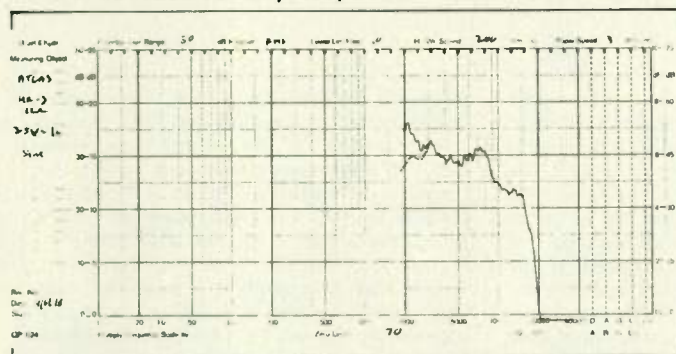
manufacturer applies only to very short duration transient peaks — not more than 10 milli-seconds and we did not test this parameter. To interpret these ratings in practical terms, I would install this unit in a 100/150 watt system, crossed over at 12db/oct. at 800Hz. and expect it to take an absolute caning without complaint. On an actively crossed over system — i.e. bi-amped, I would go back to the makers 60w. rating, but of course, the unit would then be handling more actual power, would produce more sound output, and would probably cope with about 250 watts of low-frequency power — but we are digressing. The overall performance of this combination is very good indeed and it is superbly made and presented. It is a professional piece of equipment as reflected by its cost and should not be compared with other more general purpose horns included in this review — the Isophon DKMT/1226 being the only other horn intended for a remotely similar application and market.



# **ATLAS HR/3** (Imported by Canadian Instruments & Electronics Ltd., Ilkeston, Derbys.)

Approx. dimensions: — Horn mouth 191 x 76mm external.  
Overall depth 166mm.

Recommended retail price, incl. VAT £23.76

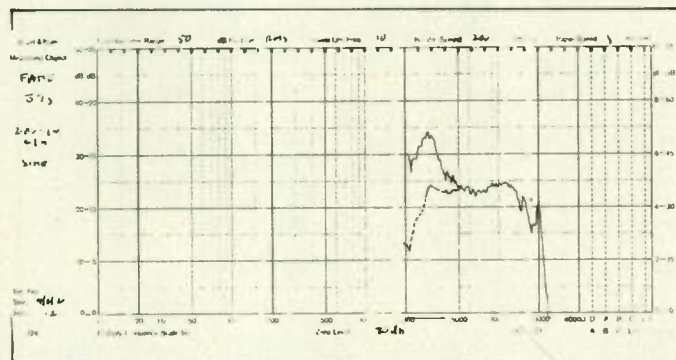


Parameter	Manufacturers Rating	Test Result
Power	35w. programme, above 2KHz.	Confirmed at equivalent sine wave power of 3.5w. RMS above 2KHz.
Distortion	Not stated.	5% @ 3.5w. RMS sine wave.
Sensitivity	'High sensitivity and efficiency'.	100db. @ 1w. @ 1m. averaged between 2KHz. & 10KHz. from curve corrected for 12db/oct. filter at 3KHz.
Resonance	Not stated.	1.5KHz.
Impedance	12 — 16 ohms.	10 — 16 ohms.
Recommended c/o frequency	Not stated. (circuit diag. given)	3KHz. @ 12db/oct.
Frequency Response	2KHz. — 17.5KHz. unqualified.	2KHz. — 16KHz. @ -12db. with 3KHz. 12 db/oct. filter — see graph.
Polar Response	100° unqualified.	80° V x 45° H @ 2KHz.) 50° V x 45° H @ 4KHz.) 32° V x 35° H @ 8KHz.) 20° V x 27° H @ 16KHz.) @ -6db.

## **FANE ACOUSTICS J73**

Approx. dimensions: — Horn mouth 185 x 73mm. external  
Overall depth 165mm.

Recommended retail price, incl. VAT:— £11.75



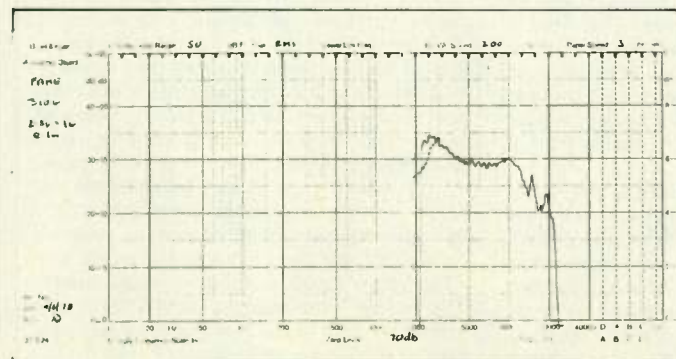
Parameter	Manufacturer's Rating	Test Result
Power	50w. system rating above 3KHz. or 70w. above 5KHz.	Confirmed at equivalent sine wave power of 5w. RMS above 3KHz. and 7w. above 5KHz.
Distortion	Not Stated	3% @ 5w. RMS & 7w. RMS as above
Sensitivity	95db. ± 2db. @ 1w. @ 1m.	94db. @ 1w. @ 1m. averaged between 2KHz. & 15KHz. from curve corrected for 12 db/oct. filter at 5KHz.*
Resonance	Not stated.	800Hz. estimated.
Impedance	8 ohms.	9 - 15 ohm.
Recommended c/o frequency	3KHz. or 5KHz.	5KHz. @ 12db/oct.*
Frequency Response	2KHz. - 17KHz. unqualified	2KHz. - 20KHz. @ - 12db. with 5KHz. 12db/oct. filter - see graph.
Polar Response	Not stated.	70°V x 40°H @ 2KHz. 40°V x 48°H @ 4KHz. 28°V x 40°H @ 8KHz. 17°V x 26°H @ 16KHz. @ -6db.

\*Fane HPX/1 crossover at £2.99 retail inc. VAT

## **FANE ACOUSTICS J104**

Approx. dimensions:— Horn mouth 270 x 102mm. external  
Overall depth 196mm.

Recommended retail price, incl. VAT:— £16,95



Parameter	Manufacturer's Rating	Test Result
Power	50w. system rating above 3KHz. or 70w. above 5KHz	Just confirmed at equivalent sine wave power of 5w. RMS above 3KHz. and 7w. RMS above 5KHz.
Distortion	Not stated	6% @ 5w. RMS & 7w. RMS as above
Sensitivity	103db. ± 2db. @ 1w @ 1m	100db. @ 1w. @ 1m. averaged between 2KHz. & 15KHz. from curve corrected for 12db/oct. filter at 3KHz.**
Resonance	Not stated	800Hz. estimated
Impedance	8 ohms.	9 - 14 ohms.
Recommended c/o frequency	3KHz. or 5KHz.	3KHz. @ 12db/oct.**
Frequency Response	2KHz. - 15KHz. unqualified.	2KHz. - 15KHz. @ - 12db. with 3KHz. 12db/oct. filter - see graph.
Polar Response	Not stated	54°V x 30°H @ 2KHz. 34°V x 40°H @ 4KHz. 24°V x 35°H @ 8KHz. 20°V x 30°H @ 16KHz. @ -6db.

\*\*Fane HPX/2 crossover at £2.99 retail inc. VAT



This is another of the general purpose mid/high frequency horns and is of a very similar form to the Fane and Goodmans products included in this review. Atlas Sound Inc. are an American company, probably better known in the UK for their industrial public address products than as manufacturers of loudspeakers for the music industry. If the sample now under review is anything like typical of their product range, then it is high time that Canadian Instruments aggressively promoted the product — because it is too good to leave kicking around in some warehouse collecting dust! A simple, but substantial alloy casting provides the horn flare, its mounting flange and drive unit face-plate and is finished in a matt black, sand texture paint. A fairly heavy magnet structure houses the voice coil assembly and termination is by means of a pair of solder tag terminals, one of which is vaguely colour coded with what looks like a half-hearted application of red ink. The label clearly gives impedance and power rating information and this is unusual on a unit of this type.

As the table shows, the unit performed very well indeed. The sensitivity is good, the frequency response more than adequate and the dispersion is particularly good for a small horn of this type — although the makers figure of  $100^\circ$  in this respect is totally meaningless as no parameters are given to qualify the figure and they do not even state to which axis the measurement applies. As it happens,  $100^\circ$  is the precise included radiation angle at 4KHz in the vertical plane and it would surely use up little printing ink to say so! One last comment; from the results obtained, I do not recommend the makers' circuit diagram for a crossover unit — it is a crude, 3dB/oct filter and will not smooth out the peak in the raw response curve at 2kHz, nor will it provide sufficient protection for the drive unit. In all probability, this horn would be quite safe to use on a 50 watt system with the crossover recommended in the results table above.



These two horns are intended for mid and high frequency application with 12" or 15" loudspeakers for musical instrument or vocal loudspeaker systems. They are intended to be used with the Fane HPX1 or HPX2 crossover modules — Fane themselves say that either horn may be used with either crossover, but from our results, we have made specific recommendations in this respect as the tables above show. By following this recommendation, a good smooth response can be obtained with the J73 — which otherwise has a rather peaky response characteristic. The alternative combination will allow utilisation of the additional sensitivity of the J104 which has a somewhat more smooth mid-range response. In fact both these horns, used as directed here, represent exceptionally good value at these prices, and gave a surprisingly good account of themselves under test.

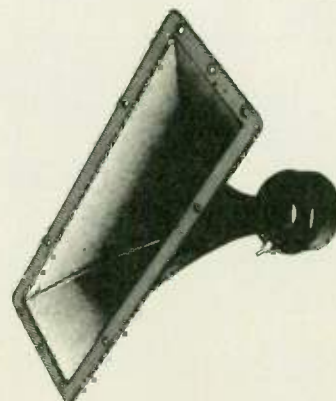
Apart from a slight difference in size, the two horns appear identical. A small,

integral pressure unit is coupled to a rather nice, rectangular, alloy horn casting with mounting flange to facilitate mounting from the front of the baffle panel only. Termination is by means of a pair of very small solder tags and polarity is marked if you look for it. A phase correction plug is fitted to the horn throat and although obviously not an elaborate unit, the overall standard of construction and finish is quite good for a unit of this type. These horns are made for Fane in Japan and although this is not a practice I particularly approve of, Fane must be credited for being honest in this respect, and no attempt has been made to disguise the fact, or to hide the 'made in Japan' labels. I really doubt if this performance could be obtained at these prices any other way.

The results tables show that the units basically complied with the makers' figures, but remember that the sensitivity and frequency response figures have been corrected

to allow for the effect of using the appropriate crossover filter. Without these, the sensitivity figure is about 3dB. higher and the frequency response decidedly peaky — resulting in a particularly harsh, mid-range sound quality. Note that the radiation from both horns is wider in the vertical plane at 2KHz., but wider in the horizontal plane at 4KHz. upwards. I think that generally due to the fact that the bass unit will still be producing a useful spread of energy of 2 KHz., a more useful distribution will be obtained with the long axis mounted horizontally with these particular units. Note that the mid-range distribution is better with the smaller of the two horns, while, surprisingly, the high frequency spread is better with the J104 — which is considerably more efficient than its baby brother.

An interesting test with — quite honestly, some surprising results.

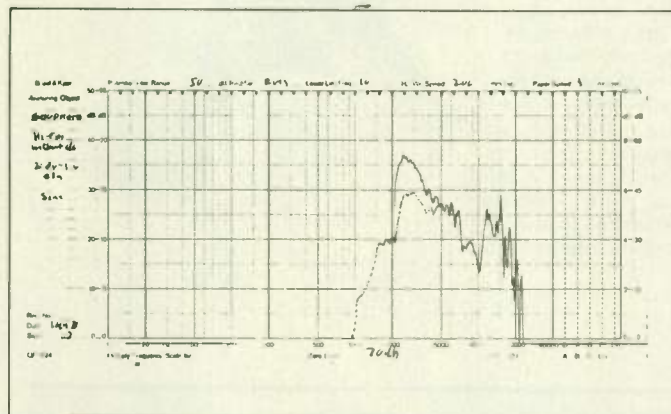




## GOODMANS Hifax 50HX

Approx. Dimensions: — Horn mouth 180 x 100 mm external  
Overall depth 250mm.

Retail Price: — Around £22/£24



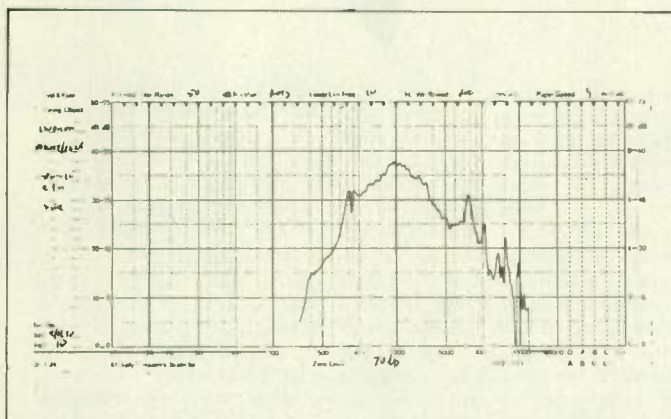
Parameter	Manufacturer's Rating	Test Result
Power	50w. RMS system rating to DIN. 45:573	Confirmed at equivalent sine wave power of 5w. RMS above 2KHz.
Distortion	Not stated.	3% @ 5w. RMS sine wave.
Sensitivity	96db. @ 0.11w. @ 1m.	97db. @ 1w. @ 1m. averaged between 2KHz. & 18KHz. with filter.
Resonance	Not stated.	1.5KHz.
Impedance	8 — 15 ohm. system.	9 — 40 ohm. with filter.
Recommended c/o Frequency	Not stated.	Self contained at approx 5KHz. @ 12db/oct
Frequency Response	Graph given	2KHz. — 18KHz. @ -12db. with filter. See graph.
Polar Response	Not stated	60° V x 37° H @ 2KHz.) 50° V x 32° H @ 4KHz.) 27° V x 12° H @ 8KHz.) @ -6db 27° V x 20° H @ 16KHz.)

## ISOPHON DKMT/1226

(Imported by Hayden Laboratories Ltd., Chalfont-St. Peter, Bucks)

Approx. dimensions: — Horn mouth 265 x 122mm.  
Overall depth 293mm.

Recommended retail price incl. VAT £52.92



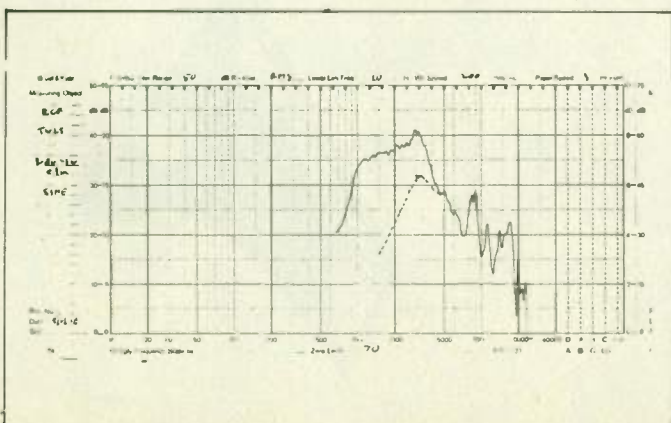
Parameter	Manufacturer's Rating	Test Result
Power	'up to 100w. DIN above 500Hz.'	Confirmed at equivalent sine wave power of 5w. & 10w. RMS above 500Hz.
Distortion	Not stated.	4% @ 5w. RMS and 6% @ 10w. RMS
Sensitivity	106db. average	102db. @ 1w. @ 1m. averaged between 800 Hz. 5KHz. from raw curve.
Resonance	Not stated.	440Hz.
Impedance	4-8 ohm. matching	7.5 - 17.5 ohm.
Recommended c/o frequency	500Hz.	800Hz. @ 12db/oct. - see text.
Frequency Response	500Hz. - 10KHz. Graph given.	800Hz. - 8.5KHz. @ - 12db.
Polar Response	Not stated.	70° V x 55° H @ 1KHz 55° V x 28° H @ 2KHz. 37° V x 28° H @ 4KHz. @ -6db. 18° V x 26° H @ 8KHz.

## RCF TW25/2010

(Imported by Covemain Ltd., Rugby, Warwicks.)

Approx. dimensions: — Horn mouth 200 x 100 mm.  
external  
Overall depth 240mm.

Retail Price: — Around £34

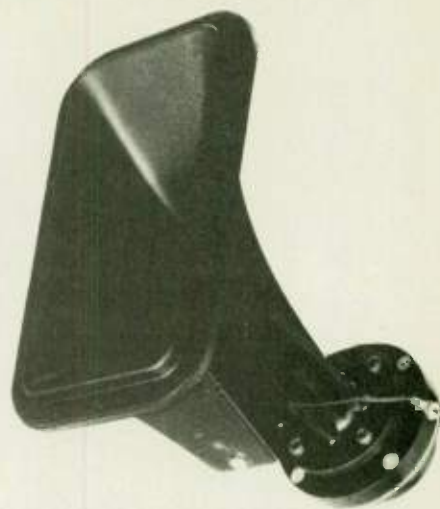


Parameter	Manufacturer's Rating	Test Result
Power	30 watts unqualified.	Confirmed at equivalent sine wave power of 3w. RMS above 500Hz.
Distortion	Not stated.	4% @ 3w. RMS and 6w. RMS as above
Sensitivity	111db. @ 1w. @ 1m.	97db. @ 1w. @ 1m. averaged between 2KHz. & 10KHz. from curve corrected for 12db/oct. filter at 5KHz.
Resonance	Not stated.	500Hz.
Impedance	8 ohm. nominal	7.5 - 12.5 ohm.
Recommended c/o frequency	800Hz.	5KHz. @ 12db/oct.
Frequency Response	800Hz. - 15KHz. unqualified.	2KHz. - 18KHz. @ - 12db. with 5KHz. 12db/oct. filter - see graph.
Polar Response	110° H x 40° V unqualified.	60° V x 40° H @ 2KHz. 37° V x 37° H @ 4KHz. 22° V x 34° H @ 8KHz. @ -6db. 14° V x 28° H @ 16KHz.



A rather nicely-made, cast alloy, rectangular horn coupled to a fairly substantial compression drive unit that, although supplied as an integral part of the horn assembly, is in practice a separate component and can be easily separated from the horn flare by means of four allen-key type bolts. Also included as an integral part of the assembly is a passive high-pass filter unit operating at about 5KHz. at a 12 dB per octave slope thereby enabling the unit to be connected directly to the amplifier output without the necessity of a separate crossover network — although direct access to the voice coil terminals is also available if a more sophisticated two way crossover is preferred. The horn casting is nicely substantial and is reinforced at its throat by four stiffening ribs, and the unit is suitable for mounting from either the front or the rear of the baffle panel due to the mounting flange being set back by a distance to allow the horn flare to protrude through the baffle.

The unit generally performed well and certainly seemed happy at its rated system power. The sensitivity is good — especially considering that the filter was included when the test was carried out. The frequency response curve shows the response of the Hifax 50HX both with and without the filter connected and it can be seen that crossing over at a fairly high frequency has removed most of the 'peakiness' present with the raw horn. Also, without the filter in circuit, the impedance curve is considerably more linear and remains within 10.5 and 22.5 ohms. It will be seen from the polar response figures that this horn has its widest dispersion in the horizontal plane when the horn is mounted with its long dimension vertical, and this remains so at all frequencies. Altogether, I found this to be a rather nice unit, either for instrument purposes or for the smaller P.A. cabinet.



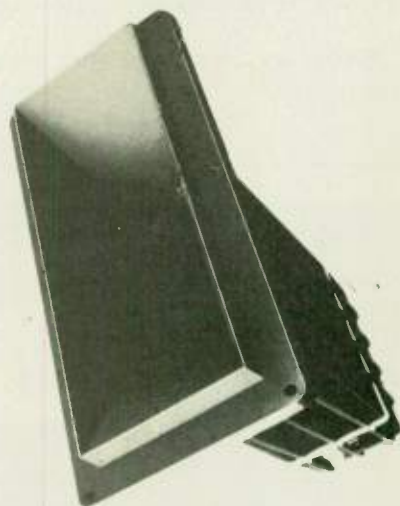
The DKMT/1226 is a very nicely made, it somewhat unusual, mid-range horn from a German manufacturer at present little known on the UK music scene. The horn flare is moulded in grey, heavy duty plastic — possibly ABS, and is well damped against the possibility of 'ringing' by a series of horizontal bracing ribs — giving a visual aspect not unlike a large oblong heatsink with a horn mouth at one end! The horn mouth is flanged in such a way as to permit either front or rear mounting without interference with the polar response by the baffle panel cut-out. Termination is by a pair of rather neat, flush mounted, push button terminals which are clearly colour coded. A phase correction plug is fitted to the horn throat.

The DIN power rating used here is somewhat confusing in that 100w. DIN does not indicate a system rating of 100w. RMS. Whilst our results show that the unit is quite happy at the equivalent of 50w. system rating, at 100w., distortion is rising rapidly to 6%. Also, this is a mid-range horn with a low order crossover frequency and should be de-rated accordingly. I would interpret the results obtained on this horn as indicating that it is good for a 50w. RMS system rating at fre-

quencies above 800Hz — not 500Hz. as the makers recommend. Although intended as a mid-range reproducer — for which purpose it should be crossed over again at about 4KHz, it would make a good mid/high frequency unit if the crossover point were raised to 5KHz. as a 12db/oct filter operating at this frequency would have the effect of bringing down the response 'hump' between 1KHz. and 4KHz. resulting in a fairly linear response up to almost 20Kz. Although this would be at a reduced sensitivity, the horn would in all probability be good for at least a 100w. RMS system rating under these conditions. From the polar response figures shown in the table, the horn has a much wider horizontal dispersion when the long axis of the horn mouth is in the vertical plane, although in common with several other units tested, this condition is reversed at the higher frequencies.

Altogether, I found this an interesting horn to play with, and although at variance with the makers figures in some respects, it gave a good account of itself. It is very well made and somewhat expensive as a result and whether the performance justifies this would depend upon field experience rather than laboratory testing. My own feeling is that for

this market, it would be better used as a wide-band unit with a crossover at 5KHz. as suggested rather than as a mid-range unit in a wide-band system for which it is designed.



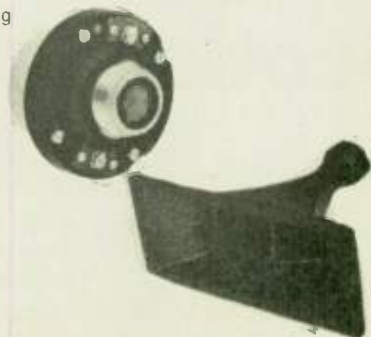
Although not strictly an integrated horn, this combination of drive unit and horn are invariably used together, are specified in the manufacturers brochure as if a single assembly and the general characteristics are of the integrated unit type. The 2010 horn flare is of cast alloy and is of similar proportions to the Fane J104, except that unusually for a smaller horn, baffles are fitted to the horn mouth. These are supposedly fitted to aid dispersion at the higher frequencies and also serve to reduce 'ringing' which is often a problem with cast horns of this type unless some form of bracing or stiffening is employed. The mounting flange is only suitable for mounting from the front of the baffle panel.

The 1W25 compression drive unit is rather nicely made with a large machine turned magnet 'pot' and nicely cast front plate/throat coupling assembly. A gauze grill is fitted to prevent the ingress of foreign particles and colour coded screw terminals are fitted.

As the frequency response curve shows, the performance of the raw horn is very peaky indeed with a massive peak in the response curve between 1KHz and 5KHz. With deviation of this magnitude, it is impos-

sible to state either a sensitivity figure or a frequency response which will be in any way meaningful and therefore, we have based our figures on a corrected curve — shown dotted on the curve, which takes into account the calculated effect of a suitable filter. Whilst this approach is to some extent to be expected with a small, low priced horn, I was surprised to find that the TW25 required such treatment. However, after correction — which moved the recommended crossover frequency from the makers' figure of 800Hz up to 5KHz, a creditable performance can be expected from this combination. In terms of power handling, the makers' figures do not qualify whether it is rated at a continuous 30w. RMS or at 30w. system power. From our tests, with our recommended crossover, I would expect this horn to be good for use on systems rated at up to 100w. — especially as distortion did not increase by a measurable amount at double the assumed 30w. system rating. Despite the attempt at dispersion control, the directional characteristics are much the same as most of the horns tested, and is wider with the long axis of the horn mounted in the vertical plane at mid

frequencies, and wider with the horn mounted horizontally at high frequencies — with the vertical dispersion reducing to just 14° off axis at 16KHz. At none of the frequencies we selected for the polar response tests did the results come remotely near the 110°HX 40°V figure given by the manufacturer. The overall performance of the combination is nevertheless good if suitable filtering is employed, with good sensitivity, generally adequate dispersion, a good frequency response and a power handling capacity from our tests and with our recommended filter, of almost four times the assumed meaning of the makers rating





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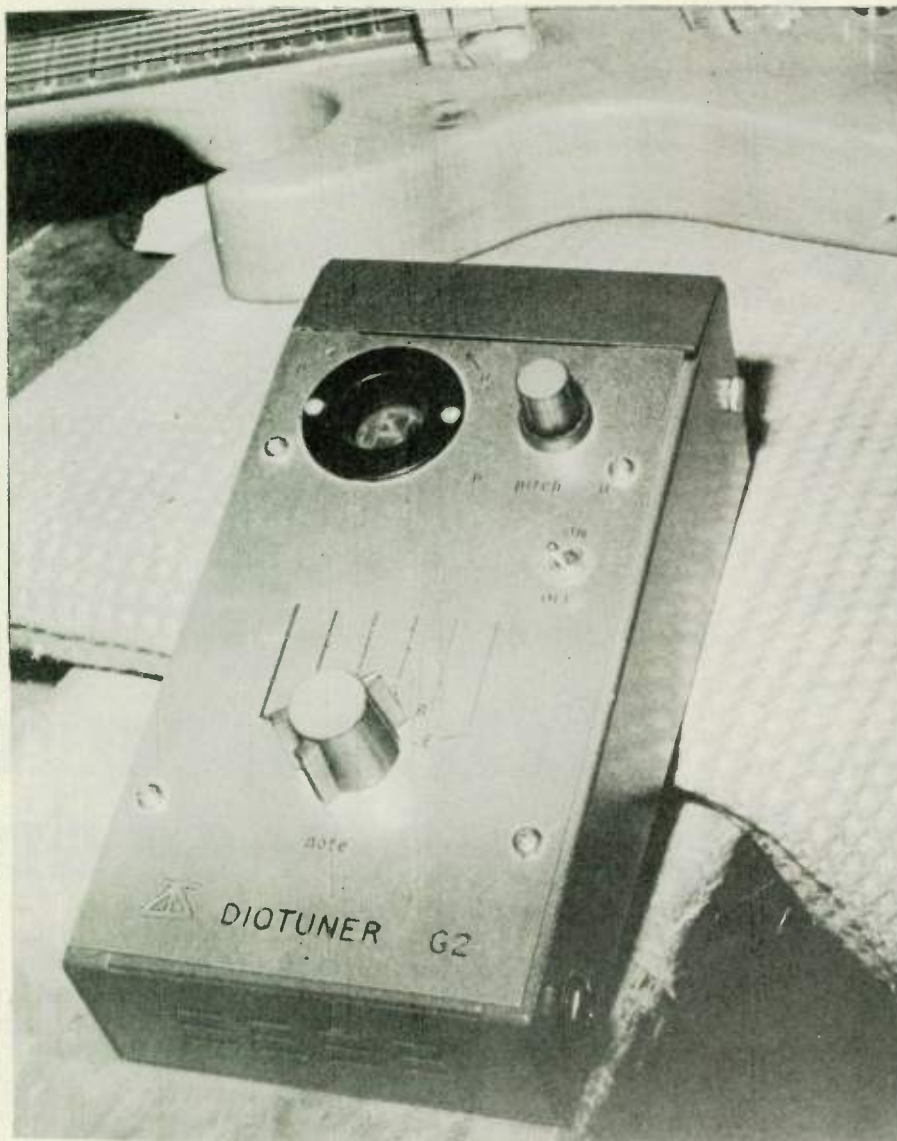
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# SMALL THINGS

by Stephen Delft



The Small Thing this month is an electronic guitar tuning aid. This one is different — it is British. It is stable, accurate, and it is likely to continue to work even if it is treated fairly roughly. The designer and supplier is A.M. Marshall, 3 Doughty Street, London WC1N 2PH, and it is called the Diotuner G2. It has six switched settings for the guitar strings, four of which can also be used for tuning a bass guitar. There is a pattern of lights on the front panel, which appears to rotate one way or the other to indicate 'flat' or 'sharp'. It shows, and finally stops rotating, as the string comes exactly into tune. The tuner will work with acoustic instruments via a built in microphone, or this may be cut out by inserting a standard guitar lead and jack for tuning electric instruments.

Although the tuner is perfectly good for tuning guitars, and many people may want one for this purpose, it will probably be of greatest benefit to Bass Guitar players, who generally have a hard time tuning up off-stage. The other big advantage of this box of sophisticated 'C-mos' electronic tricks is that it can be fine tuned to an off-pitch piano on stage before a show and then taken back-stage to act as a tuning reference for other musicians. It is not an ideal situation, but if you *have* to work with a piano or other complex instrument which has slipped from its correct pitch, it is not much use adjusting your guitars to a tuning fork.

The fine adjustment knob on this tuner operates smoothly, but is stiff enough so that it is unlikely to be disturbed accidentally, once set.

There are other tuners available. I have been using a Korg in my workshop for some time, and very nice it is too. The Marshall tuner is less versatile, equally difficult to 'read' correctly at first, more robust, because it has a steel case, and does not contain a relatively fragile meter movement, and is very much faster if all you want to do is tune up guitars and bass guitars quickly and accurately.

I estimate if I had a shop full of new guitars to tune, it would save me about two hours each time round. Musicians and shopkeepers who are interested should contact Mr Marshall directly. Nice to see something useful which is not Japanese or American.

S.D.

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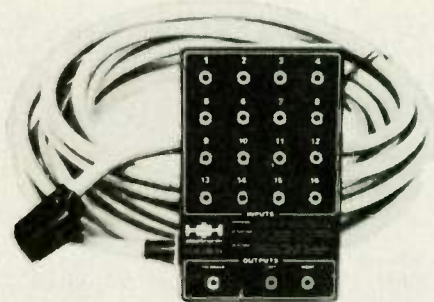
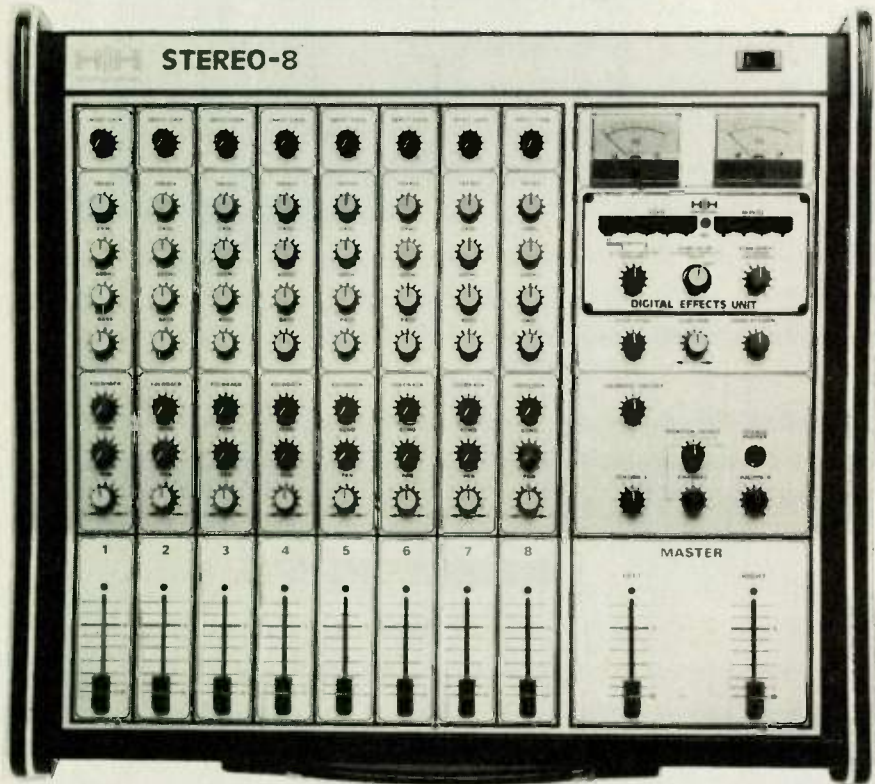


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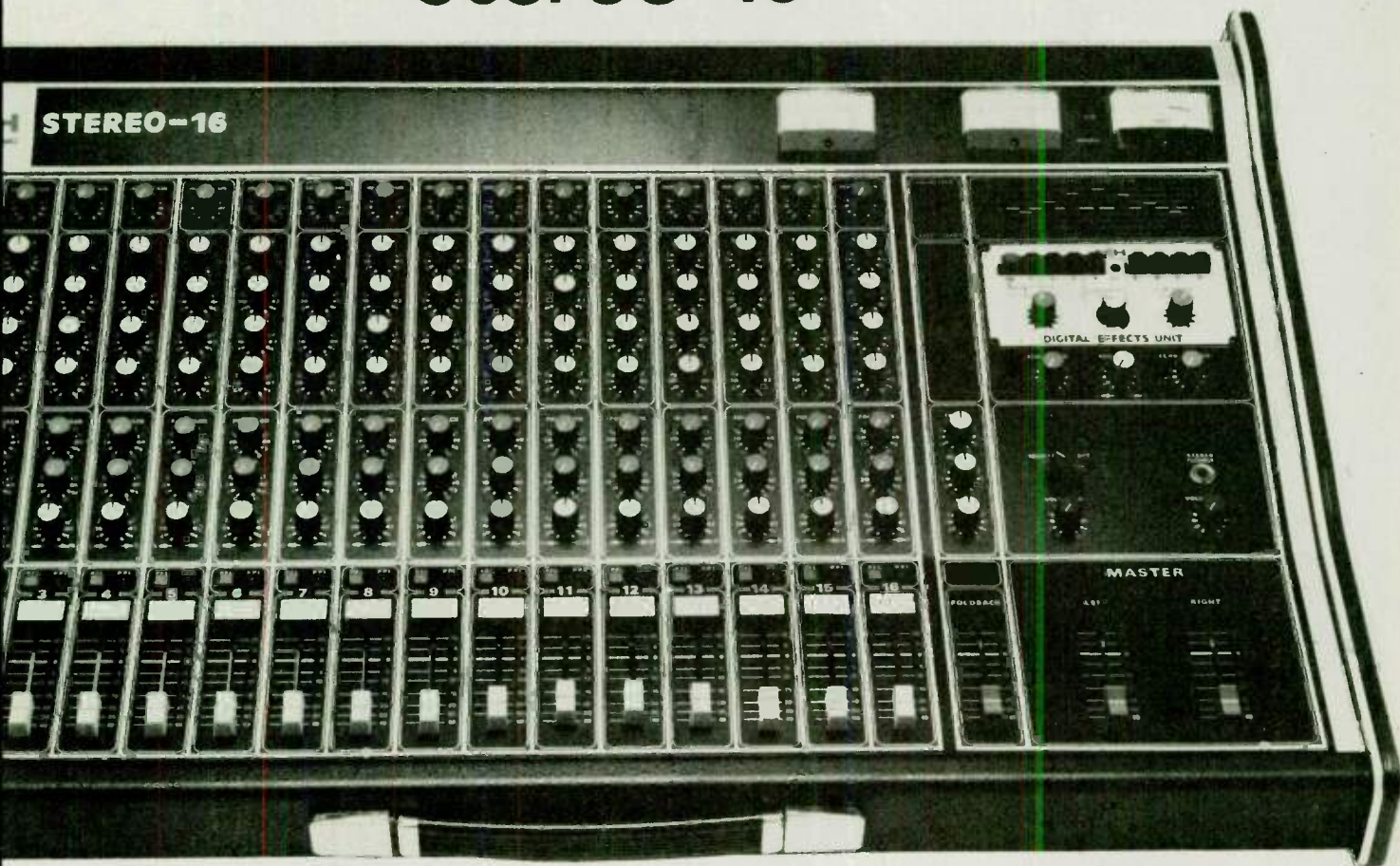
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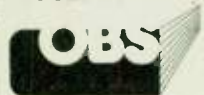
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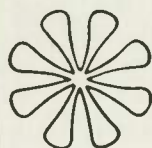
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## MXR plans for UK

MXR Innovations of New York have announced the appointment of a new distributor for its studio products in the United Kingdom. The new Atlantex Music Ltd., of Gravelrey, Hertfordshire, will assume distribution of such products as the MXR digital delay, auto phaser, auto flanger, mini limiter and their two new graphic equalizers.

The appointment of Atlantex is in conjunction with Rose Morris who until now had distributed the entire range of MXR products. The move came about because Rose Morris are directing their market push to the area of live musical performance products, they will continue to distribute the range of MXR effects pedals.

## New Sales Director for Cleartone

Michael Borer, a well known figure in the music industry, has joined Cleartone Musical Instruments as sales director. Michael gained a wide knowledge of the retail trade with Selmers and the Marshall retail shop in Hanwell. It was while working at this shop that he got to know the Marshall family and became involved in the designing of the original Marshall amplifiers.

## McKenzie's speaker improvements

McKenzie Acoustics Ltd. have announced improvements in their Forte range of 12 inch speakers which have made such an impact since their introduction last year. Earlier modifications pushed the power rating up from 75 to 80 watts and pressed steel chassis were introduced.

The problem of the sharp edged chassis, which has prompted some criticism, has been solved by giving the units folded edges — however, there has been no increase in price. Mainstays of the Forte range are the C1275TC which is the cambric surround extended response twin cone speaker and the C1275GP cambric surround aluminium domed general purpose instrument speaker.

This month McKenzie will be introducing a new 15" speaker. All inquiries on these products to Brian McKenzie, (0226) 43894.

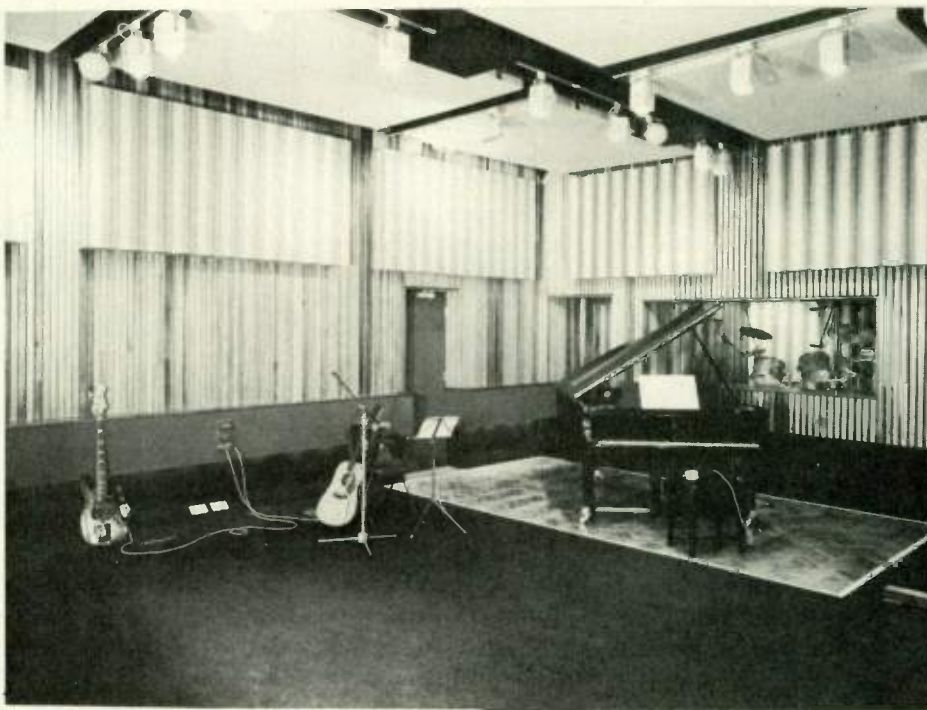
## Swedes in London

London recently played host to 24 Swedish music dealers who visited the city to participate in a conference organised by Stig Brink, chairman of Brink's Musikimport AB, of Eskilstuna (Sweden) and Colin Barratt, export director of Colin Barratt Products.

Among their activities was a demonstration of Carlsbro equipment, visits to Solarsound and CBS Arbitr.

## Morley take on E-Bow

Morley have become exclusive distributors in America for the E-Bow, a hand-held device which produces infinite sustain on the guitar. Morley will also be distributing a new E-Bow designed for use with steel guitars.



## Redesigning at R.G. Jones

The redesigning and rebuilding of R.G. Jones Recording Studios in Wimbledon has just been completed after seven months. A new reception area, complete with kitchen, has been built along with a tape library and additional office space.

A removable carpet over parquet flooring and very large acoustic screens mean that the acoustics can be varied quite considerably in different parts of the studio and has been successfully used to produce very live drum and guitar sounds. Strings and brass sound much brighter and already recordings of film and television music have shown that good separation can be achieved with up to 30 musicians playing together.

Since re-opening, the studio has produced several albums and singles with artists including Cleo Laine, Franck Pourcell and his orchestra, Carl Douglas and Johnny Wakelin. Television music for Mike Batt and Lulu has also been recorded there.



Paul Brown (Hornby Skewes)

## Hornby Skewes appointment

Hornby Skewes has appointed Paul Brown area sales manager covering the Wales, Salop, Staffs, Lincs., Norfolk., Suffolk, and Cambridgeshire areas. Paul Brown has been with Hornby Skewes three years as service manager.

## Harmonica Day

The second regional gathering of the National Harmonica League at Birmingham Centre Hotel on Saturday June 10th was strongly supported by M. HOHNER LTD. — who staged an exhibition of instruments and music for the 120 supporters from the Midlands area but from places as diverse as Hampshire and Durham. Many unusual instruments were on show including the six-sided (six-key) tremolo harmonica and a wide selection of the large Bass instruments as well as the normal range of chromatic, diatonic and blues instruments.

Basic membership of the League is free and leaflets should be available at your local music shop: — alternatively write direct to the Director, John Tyler, at 34 Sweet Briar Road, Stanway, Colchester, Essex.

The next regional meeting of the NHL will be at Houldsworth Hall, Deansgate, Manchester, on Saturday July 8th, and further ventures are planned in the near future for North East, Southern England and Scotland.

## Parker Opens First Shop

J.W. Parker (Sound Systems) have opened their first retail shop at 187 Old Kent Road, London, stocking mainly HH and Carlsbro sound equipment, as well as Citronic disco systems. The company has been involved in installing equipment for ten years and this is John Parker's first retail outlet. A repair service and replacement scheme for Shure mikes is also offered.

## Keith Hand Moves

Keith Hand Music has moved to 219 Walmersley Road, Bury, Manchester. The new phone number is 061 764 1792.





# TRADE NEWS



## Julians Branches Out

Shirley Leigh was hostess at the recent opening of Julian's new retail shop based at the same premises as the hire company. As well as International Musician, a host of stars were at the opening where they ate and drank well courtesy of Shirley and her staff. The new shop will be stocking and selling keyboards, synthesizers and amplification as well as offering hire goods at reduced prices. Julians is already well known as a hire house for top-line equipment.

## New name for "Soundout"

Now that Soundout Laboratories of Surbiton, England have become simply "Soundout" we hear that major new announcements are expected from the company.

In recent years this disco-based company have made moves towards the equipment market with a fine range of power amps and speakers and it's on the cards that we will be seeing more of this line in the very near future.

## Cameo formed

Cameo is the title of a new trade association formed in America by a group of companies working in the creative electronics field. Founding committee members of Cameo include President Ken Sachs (Teac), Dave Friend (ARP) and Ron Wilkerson (MXR). The objectives of the new organisation are many including the improvement of market information.

## Top guitarists choose Aria

Gerry Cott, guitarist with top New Wave band the Boomtown Rats, and ace acoustic player Paul Brett, are the latest axemen to turn to Aria guitars.

Gerry has taken an Aria Pro II PE 1000 on the Rats' current UK tour and describes it as "the greatest guitar I've ever played bar none." Paul Brett, IM's acoustic expert, has just taken delivery of a Pro II PE 800 electric as well as the acoustic 9454 12 string.

## New faces at Chase

Chase Musicians has taken on two new staff members to cope with ever-increasing custom at the London Synthesiser Centre and London Amplification Centre in Chalton Street, NW1. The two new faces are Ian Blake (with beard) and Philip Bishop who will be happy to do business with you.



# Please touch.....



... very carefully

The new ROADRACER electronic piano from CRUMAR has touch sensitive keys. The harder you play the louder the sound – just the same as a mechanical piano. Like its predecessors, the CRUMAR COMPAC PIANO and the ROADRUNNER, the ROADRACER has three distinct piano sounds and two octaves of scintillating bass notes at the push of a button. NOW with the addition of a variable 'CHORUS' effect, rich phasing sounds can be introduced.

## The CRUMAR ROADRUNNER – A touch better than the rest

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# SM 200-The H.H.

## Mixer and Stereo

This is the answer to the creative soundman's problems - two one-hundred-watt power amps teamed up with a fully specified six channel mixer. The new HH sound machine, the SM 200, is packed with every conceivable control feature: Volume, Bass, Treble, Reverb/Echo, Stereo Pan, 3-way Monitor Switch, and an Input Selector switch on each channel. Separate Master volume faders for left and right outputs with output level meters, Monitor output volume, and Auxiliary input channel, keep everything under control.

### SPECIAL FEATURES

#### Two Hundred Watts Stereo Power

Two 100 Watt r.m.s. power amplifiers at less than 0.2% distortion.

#### Reverb

Built-in Accutronics reverb unit, with individual reverb send controls.

#### Graphic Equalizer

Seven band active graphic equalizer for infinite tone control.

#### Input Selection

A 3-way input switch selects optimum matching and equalization for Microphones, (High or Low impedance), Instrument-guitar bass or keyboard, Ceramic record player pick-ups, or audio line input.

#### Stereo-Pan

Pan control enables a true stereo image to be created, particularly when echo or reverb is added.

#### Illuminated V.U. Meters

Illuminated V.U. Meters show output programme levels.

#### Monitor Facilities

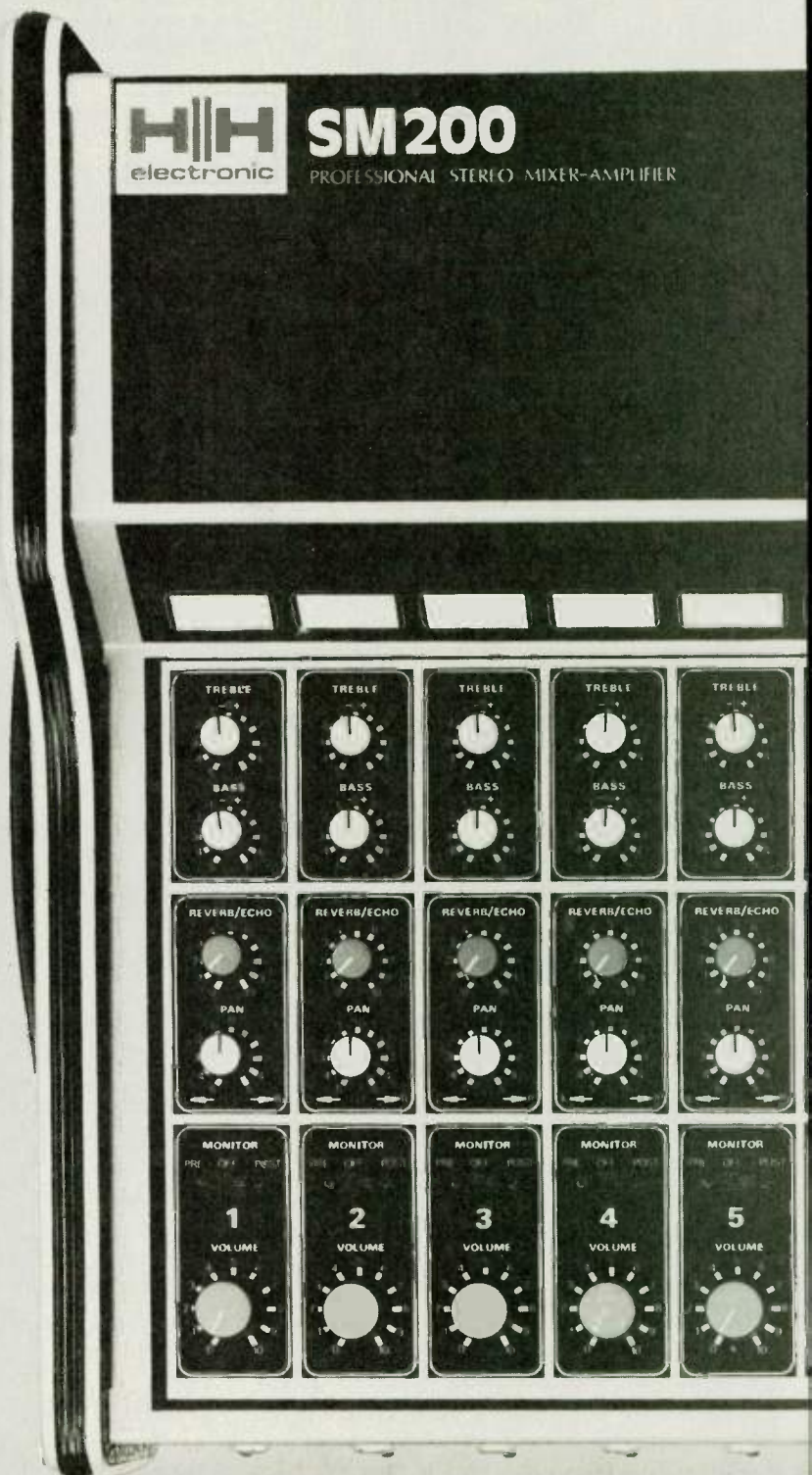
Comprehensive monitor facilities include: Pre-off-Post channel and Auxiliary monitor switches - separate monitor mix with monitor volume control.

#### Headphone Output

Stereo headphone socket, can also be used to drive a separate monitor amplifier.

#### Tape Record Outputs

Stereo tape recorder output sockets facilitate recordings on to tape.

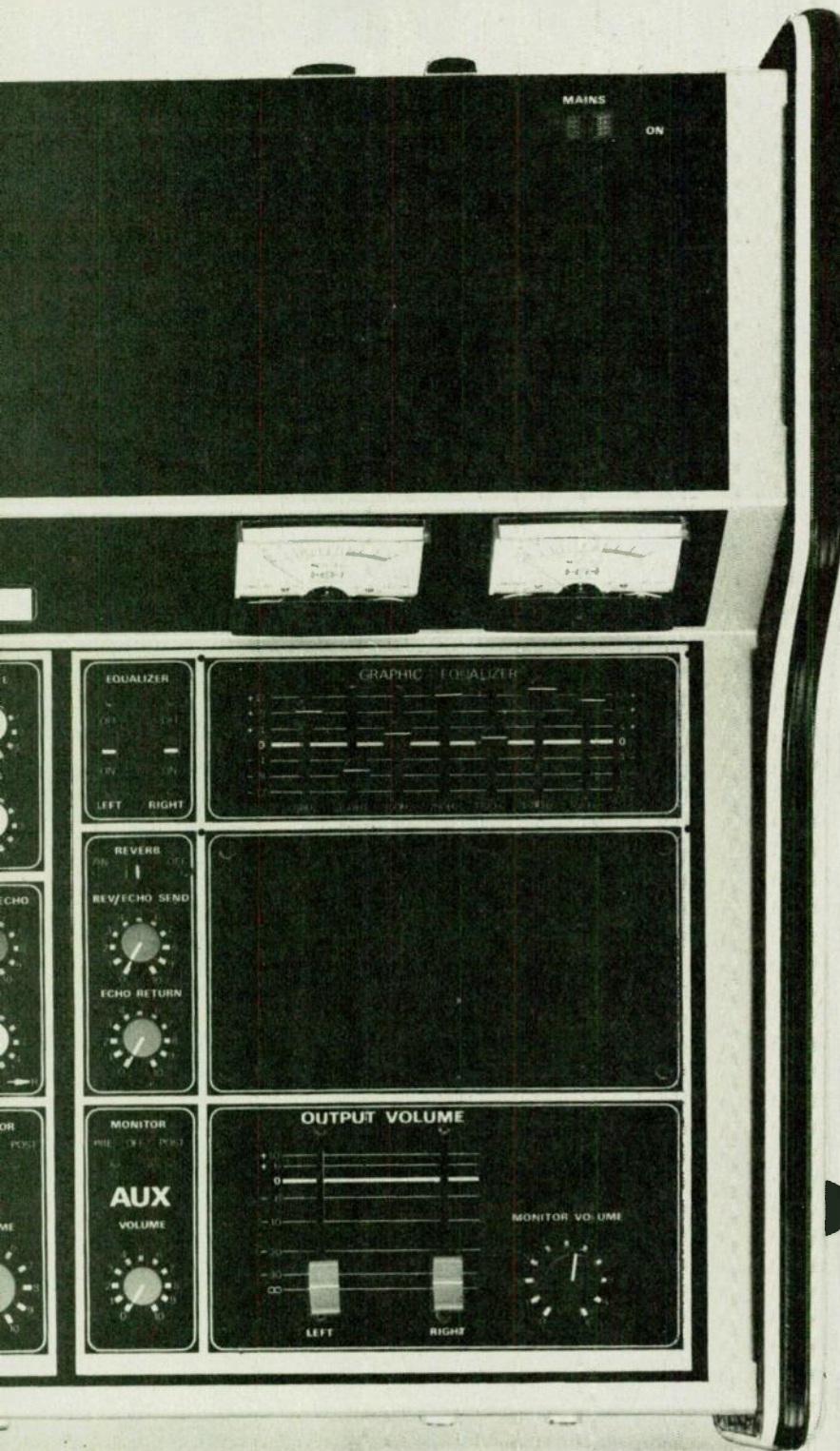


For that Special Sound  
everything in one unit



# Sound Special

## Amps in one unit



### ACCESSORIES:

#### Digital Effects Module (D.E.M.)

The remarkable HH D.E.M. simply plugs into the SM 200 and adds wonderful sound effects at a push of a button.

#### Echo

A wide selection of echo sound with variable delay times and repeat combinations.

#### A.D.T.

Automatic double tracking essential for today's vocals.

#### Reverb

Great reverb sound for adding the extra dimension to sound.

#### Flanging

Adds whirling spatial dimensions by means of a controlled pitch change.

Free yourself of the disadvantages of external effects units with all the inconvenience of connections, mains power leads, etc.

### Plug in the HH D.E.M.

#### Mixer Tripod Stand

The convenience of having your mixer at the right height for easy control is afforded by the fold-up portable HH Mixer stand. The stand fixes to the unit in seconds and folds up to a small size for easy transport.

#### Vinyl Carrying case

The vinyl case is sturdily made from hardboard padded with foam and covered with tough waterproof vinyl material for full protection in portable application.

The SM 200 is the most versatile and effective sound machine that HH has ever produced. It forms a control centre/power house for a wide variety of sound set-ups, including:

- Sound Reinforcement P.A. system
- Keyboard mixer/amp
- Stereo guitar amplifier/effects unit
- Club installation sound system

with the convenience of  
it is the H.H. SM200

World Radio History

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# THE CONTINUING SAGA OF **FREE 'N' EASY MUSIC**

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Oxford  
TEL 0865 721411

Since last month's editorial the staff at FREE 'N' EASY have had their work cut out trying to cope with the steady influx of fans and sightseers who have come on a pilgrimage to witness the FREE 'N' EASY phenomena. Queues of up to a mile long have been reported outside the Hemel Hempstead branch and the shop's "Handle with love" tee-shirts have been fetching up to £30 on the black market.

Kevin, due to the massive increase in customers, has had a field day leg breaking, and as a result is now running our mail order service from Wandsworth prison.

Andy Copar has received numerous offers to play for various bands but is rumoured to be busy giving guitar tuition to John Otway.

Ed has polished up on his lunatic act and is now auditioning for "New Faces" with an act that has been described as a cross between Stanley Clarke and Spike Milligan. While Andy Nye continues to have increasing numbers of women turning up to see him and increasing numbers of strange men as well.

Den and Stu are now looking for other areas in which to establish FREE 'N' EASY music shops. Do you know any? Answers on a postcard, please.

While all this activity has been happening, Roger and John have been manning the Oxford shop and also denying that they had anything to do with Cambridge's sinking in the boat race. Incidentally, John does a lovely line in Elvis impersonations and Rock 'n' Roll fans really ought to see his "Way down" next time they're in the area.

Many of the new customers have been amazed at the amount of gear carried by the shops and the range of goods available. The stocking of a large number of left-handed guitars in the shop, has led to Ed having to go out and buy a dozen coffee cups with handles on the left and not the right hand side.

But I must confess, after speaking to the lads, that all this success has not gone entirely to their heads. They still believe in giving a personal service to each individual customer, and all adamantly maintain that their lifestyles have not been changed. All that is, except Kevin who comes out next month.

FREE 'N' EASY on wheels has also been hailed as the greatest thing since British Rail. Yes, for just £10 you could have the gear of your choice delivered to your home if you live in England, Scotland or Wales and possibly by any one of the celebrities mentioned above (excluding Kevin for the time being). Yes, the "legends in their life times" will actually set foot inside your house and on your front door mat. Why not impress your neighbours? Send £10 today along with your order (not forgetting your name and address, of course) and you too could be rubbing shoulders with the staff of FREE 'N' EASY.

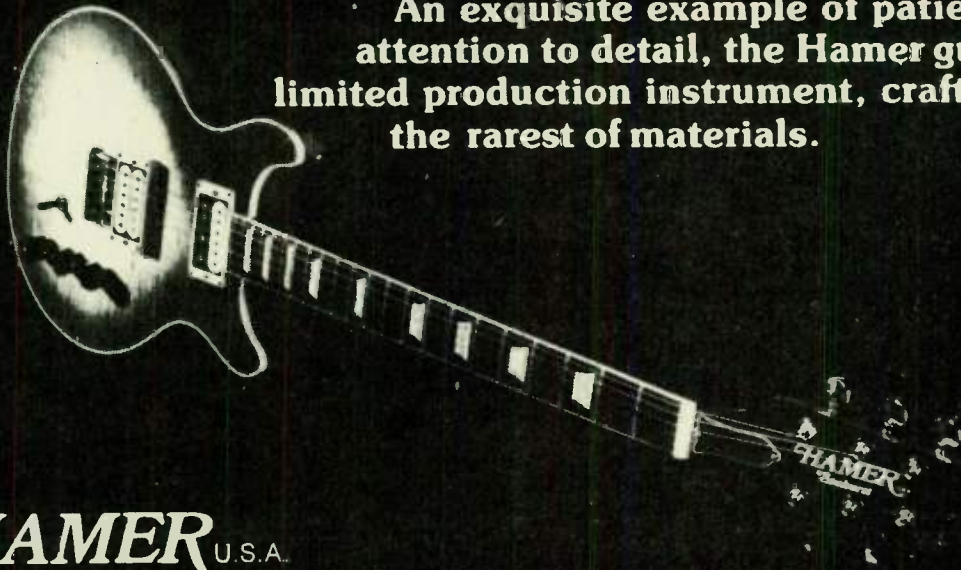
Incidentally, Kevin sends his regards to the lad who walked into the shop the other day and said "Do you sell musical instruments?" We hope he gets well soon.

FREE 'N' EASY is more a way of thinking than a music shop. Why not drop into your nearest branch and see for yourself. Better still, use the door.



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## MARKET REPORT

In the last four years or so, the name Roland has begun to loom huge in the music industry and no longer is the fact that an instrument is made in Japan a synonym for second-best. Roland have made inroads on the market because of highly-advanced technical innovations which are bringing today's technology to instruments which have remained the same for decades. Roland synthesizers for instance are now among the leaders in these instruments. In this second Roland market report we ask dealers how they find Roland synthesizers shape up as instruments in their own right and with the competition.



# Dealers

1. Mel Wesson, Rod Argent's Keyboards, 20 Denmark Street, London WC2.
2. Steve Watts, A. Balaam Music Centre, 69 St. Matthews Street, Ipswich, Suffolk.
3. Malcolm Jennings, Carlsbro Sound Centres, 182/184 Chesterfield Road, North Mansfield, Notts.
4. Pammi Luther, Chase Musicians, 22 Chalton Street, London NW1.
5. Ian Cruickshank, Coventry Music Centre, 3/4 White Friars Street, Coventry.
6. Mr. Gamlin, Gamlin Pianos, 55 St. Mary's Street, Cardiff.
7. Roger Helyar, Bill Greenhalgh Musical Instruments, 125-127 Fore Street, Exeter, Devon.
8. Norman English, Hamlyns Music Shop, 20 Oxford Street, Dolphin Square, Weston-Super-Mare.
9. Bernie John, John Ham Sound Studio, 75-76 Mansel Street, Swansea, Glamorgan.
10. Steve Branhall, Keyboard Harmony Ltd., 82/84 High Street, Redhill, Surrey.
11. Mr. French, Hodges & Johnson Ltd., 37 Botolph's Street, Colchester, Essex.
12. Mr. Shorland, John Holmes Music Centre, 21 Farringdon Road, Swindon, Wilts.
13. Cathy Fisher, Kingfisher Music Co., 20 Kings Road, Fleet, Hants.
14. Larry Macari, Macaris, 102 Charing Cross Road, London WC2.
15. Jack Thompson, Eddie Moors, 679 Christchurch Road, Boscambe, Bournemouth.
16. Jimmy Gibbs, Mr. Music, 7/18 St. Johns Street, Bedford.
17. Peter Corney, O. Nicklin, 45 High Street, Barnstaple, Devon.
18. Martin Cockton, Rock City Music, 3 Albion Place, Sunderland.
19. Peter Angelides, Sheldon Organs, 79 Smallbrook Queensway, Birmingham.
20. Peter Simpson, Simpsons, 68 Watling Street, Gillingham, Kent.
21. Dylan Fowler, Sound Centre, 9 St. Johns Square, Cardiff.
22. Nigel Downey, Sound Pad, 64 London Road, Leicester.
23. Melvyn Taylor, Southern Music, 34 Waterloo Street, Hove, Sussex.
24. Brian Higham, Swans, 84 Oldham Street, Manchester.
25. Michael Woodroffe, Woodroffe's, 5-8A, Dale End, Birmingham B4 7LN.

Alan Hindley. Ess. 230 High Street, Barnet.





# What is the best feature of Roland Synthesizers?

1. Versatility.
2. The comprehensive range.
3. They're designed to do the job. They know what they are setting out to do, and they achieve a result.
4. They are overall very good.
5. They look professional.
6. The fact that they have a good range with distinctive features.
7. The fact that they're laid out well. Our favourite is the SH2000.
8. They're easy to use, especially the SH2000, as it's pre-set.
9. The availability of effects with the player in mind.
10. Their stability.
11. Reliability.
12. Their versatility.
13. Being able to patch them together.
14. The service.
15. They're reliable. They feature more on their synthesizers than any other make.
16. Reliability.
17. Reliability.
18. Easy to understand and well laid out.
19. The quality.
20. The competitive prices.
21. The touch-sensitive vibrato gives you far more expression than any other available.
22. Good sounds, well laid out and easy to use on stage.
23. Everything.
24. They're very consistent.
25. Reliability and the quality of sound.
26. Very rarely get complaints.

Most arise from lack of customer awareness.  
If you follow the instructions supplied with all Roland products there are no problems.



## Do many customers bring back Roland Synth's for repair ?

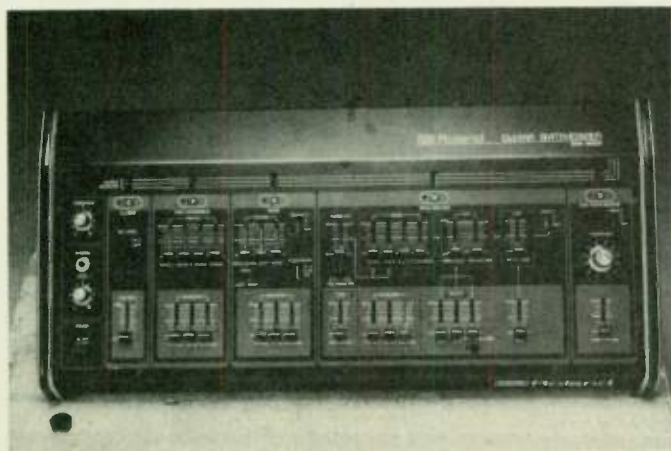
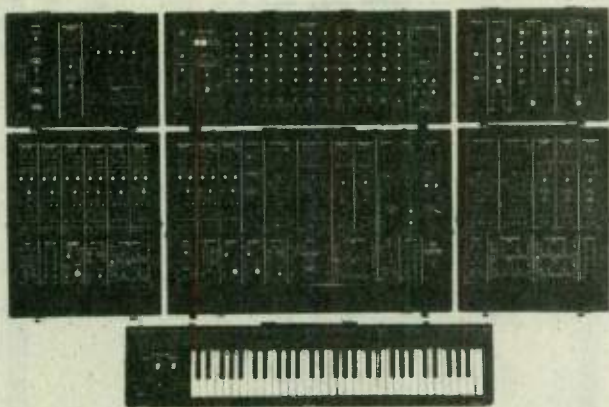
1. On the cheaper models there's a few power supply faults, but we don't get all that many back anyway.
2. No, not really. Generally there are no complaints.
3. No, we don't get many back at all. No specific complaint.
4. They do, in fact. Basically the guitar synthesizer presents a few problems, but no problems with the synthesizers.
5. Actually, very rarely.
6. No, not many do come back for repair.
7. No, not many bring them back for repair. Roland give a very good back-up service if there is a problem.
8. We don't get that many back. The tuning within itself seems to be the most common complaint.
9. We've never really had any back.
10. We haven't had one back yet. No faults whatsoever.
11. No, they don't bring them back. I can only remember one.
12. Very few. Invariably the most popular ones, the SH1 and SH2, come back.
13. Well, not many come back. In fact we've only had three back in the last three years.
14. Very few bring them back for repair.
15. I don't think we've ever had one back for repair.
16. Very few, if any.
17. No they don't come back.
18. In two years we've only had one back.
19. We've never had a synthesizer back for repair.
20. Very few are brought back. Their performance is always very good.
21. Not one's come back yet.
22. No, we haven't had many brought back. The main problem is going out of tune, though this is very seldom.
23. Never.
24. We've never had any back.
25. Can't remember when the last one was brought back.
26. Technically excellent and provide for customer's exact needs.



# How do you rate the reliability of Roland Synth's?

1. Top of the line — excellent, and the back-up service is good. Bottom of the line — not so good.
2. Very reliable.
3. Very reliable.
4. Good.
5. On a par with any other make, definitely.
6. Good.
7. Good.
8. Definitely good.
9. Completely reliable.
10. Very good indeed.
11. Excellent.
12. We've had no problems at all with them.
13. Very well.
14. One of the most reliable on the market.
15. Nothing seems to go wrong — like anything Roland make, extremely reliable.
16. Second to none.
17. Second only to Yamaha and The new ARP.
18. Unbeatable.
19. Second to none.
20. Very good.
21. Excellent.
22. Pretty good.
23. Like all Roland products, they are very reliable.
24. Very good.
25. Excellent.
26. Very well.

## How would you describe Roland Synth's value for money?



1. Generally good.
2. Extremely high quality for a realistic price.
3. They're excellent value for money.
4. Excellent.
5. The SH2000 is the best value for money on the market.
6. Considering the easy control of the smaller synthesizers and the versatility of the bigger models, I think they are competitively priced.
7. The pre-set models are very good value because of their realistic sounds.
8. Bit pricey at the moment.
9. Good value for money.
10. Extremely good value for money.
11. Over the last few months they've become rather expensive.
12. You're getting more specification for less money — Excellent value for money.
13. Very good value for money.
14. They're dearer than they were, but they're still good value for money.
15. They're probably leaders in the field. They're expensive, but the features that go with them are worth it.
16. Very good value for money — the best.
17. I think they're excellent value for money and they offer the kind of features our customers want.
18. Compared to American makes, again unbeatable.
19. Pricey, but worth it. You get what you pay for, so people tend to pay the extra.
20. Very good value.
21. You get top quality for what you pay for.
22. Very good.
23. Very good.
24. Very good value.
25. As good as its competitors.
26. Amazing value for money.



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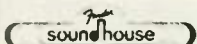
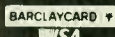
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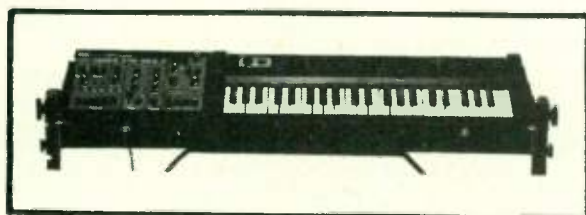
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RSD 16/2	£585	12" D/Cone	£21.95
RSD 16/4	£825	12" Soft Suspension (for monitors)	£20.95
AMPS		A T C	
MM 250W per channel	£185	9" standard	£68
MM 125W	£65	12" standard	£78
RSD 500W per channel	£525	12" L/ Coll bass	£82
Turner 340W per channel	£415	15" Standard	£136
Turner 150W per channel	£275	15" L/ Coll bass	£136
JPS 100W per channel	£195	MICS	
Quad 405	£185	Shure Unidyne III	£54.50
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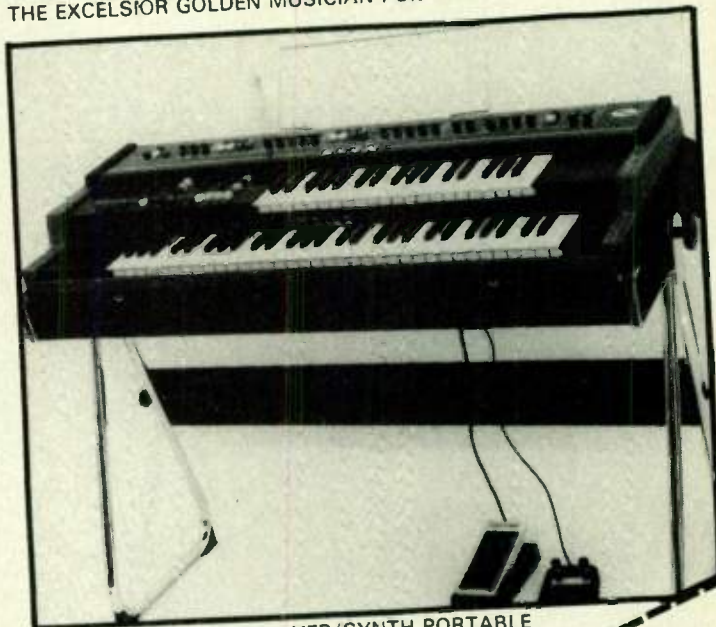
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## Entry details

This month, International Musician and Recording World offers you the chance to win a fantastic line-up of prizes to the total value of £2,000! Just take a look at the fantastic gear to be won from this special Cleartone competition — a Park 6-channel mixer/amp with two mini-bins, a Park 100 watt valve amp plus 4 x 12" cab, a Park 50 watt reverb valve combo and a Park 50 watt solid-state combo in Competition A. Percussionists also have the chance to win a pair of fabulous Latin Percussion congas and stand in Competition B.

All you have to do is to fill out the entry forms on page 257 and post it to: Cleartone Competition, International Musician and Recording World, Cover House, 7a Bayham Street, London NW1.

All entries must be received by the last day of September and the winners will be announced in the October issue. The Editor's decision is final and legally binding. No correspondence can be entered into.



# COMPETITION

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### COMPETITION A

Park amplification

1st prize: Park 100 watt mixer/amp plus two mini-bins (100 watts per bin). Worth £525.

2nd prize: Park 100 watt valve bass amp plus 4x12" bass cabinet. Worth £397.

3rd prize: Park 50 watt valve combo with reverb. Worth £274.

4th prize: Park 50 watt solid-state combo. Worth £196.

### COMPETITION B

Latin Percussion

LP Tumbadora LP252/1 Conga (12½") plus LP259/1 Conga (11¼") plus LP290B double conga stand. Worth £548 total.



# 3 - 6 - 15 - 50

## WATTS OF POWER



First class amps for practice or club use ...



British made and built to last, the combo amps in the new JHS range look and sound like units costing much more.

The 3 and 6 watt models produce a loud, clear tone and are ideal for home practice. The 6 watt unit has the added refinement of a tremolo circuit.

The 15 and 50 watt amplifiers deliver a really beefy sound and are ideal for use by the pro or semi-pro musician.

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# REDMERE Soloist

## Tomorrow's amp today

Come and see us at the London Trade Fair  
13th-17th August '78  
Conference Suite A, Royal National Hotel, Woburn Place, London WC1.

The Redmere Soloist is an amp of very advanced design and concept. It has been produced only after the most extensive liaison between musicians and research engineers. The aim of Redmere in producing the amp was to give musicians all the advantages of transistor amplifiers and valve amps in one solid-state package. Now at last the great Valve or Transistor debate is over. Redmere have proved that correctly designed transistor amps can actually sound better than valves.

Now, after months of continual testing, redesigning, and rebuilding, the Soloist Superamp has arrived. Here is a list of features it contains: sustain/compressor with colour control, flanger, chorus, reverb, graphic equaliser, touch switches, direct injection socket, noise gate, foot switch, three independent channels.

Channel One of the Soloist simulates a familiar American valve amp usually bought in a "twin reverb" form. This amp is ideal for country music and keyboard instruments; the Soloist simulates the clean sound with controls for treble, bass and middle.

The second channel gives you the sound of the top British rock valve amp used by practically any big rock band you can think of. This channel gives the Soloist's rock sound. The sound is clean up until 25 watts and then distorts more and more. Once you reach a certain volume, the sound changes and distorts dramatically to give a familiar raunchy blues sound which you'll recognise as soon as you hear it.

If you were a fan of the Beatles, and who wasn't, you'll be familiar with the 30-watt combos they used. The Redmere Soloist gives you the sound of the Sixties Beat Boom with Channel Three. At low volume you get a lively sound with lots of top and bass but high volume increases the distortion giving amazing treble projection and powerful bass.

Having chosen your sound, you can modify it extensively with the collection of effects built into the amp. The Sustain/Compressor allows you to control the amount of distortion you get when you pick your guitar.

A special Colour Control acts like a manual wah-wah pedal and works by boosting certain frequencies before they reach the sustain circuit. You can adjust the level control which allows you

to get any sound you want at either high or low volume. These controls all give you any sound from a gentle distortion to an indefinite fuzz.

Flanging has become a very popular effect recently, and the Soloist gives you flanging at the touch of a switch with full control for speed and depth. If you combine a slow speed with a high depth setting you'll get the familiar "skying" effect. Different settings will give a rotating Leslie speaker effect.

The Soloist can also change a six-string guitar into a 12-string with a touch of the chorus control. This adds three extra signals to slightly different pitch and delay to create the sound of more than one instrument playing together. The Chorus can be modified for speed and depth. You can even hook up a slave amplifier via a stereo output on the Soloist and get the sound of two instruments from two sources even though you are only playing one guitar.

Reverb is a familiar enough effect. Naturally the Soloist's reverb will give you everything from slight depth to a big empty hall type of reverb.

Once you have selected your sound, the five-band graphic equaliser covers your final adjustment of sound by offering 15dB cut and boost which can change your Fender into a Gibson or vice versa. This means that your control of sound is practically infinite. You can go from clean country, rock and roll, or heavy-metal at the touch of a control.

In fact the Redmere Soloist is practically a studio built in to an amplifier. What other amp do you know has studio-type facilities like a 600 ohm direct injection socket and noise gate? The Noise Gate in particular is a useful feature. It cuts off the effect units when no signal is present and so removes hiss and noise generated by effects circuits. This means that if you have your flanger and chorus on there will be no unwanted white noise whilst not playing.

The switches alone are something out of the 21st century. Gone are clumsy mechanical buttons and knobs. To operate a function on the Soloist you merely touch the appropriate control section. There is nothing to wear out or get damaged so your Soloist switches will operate indefinitely.

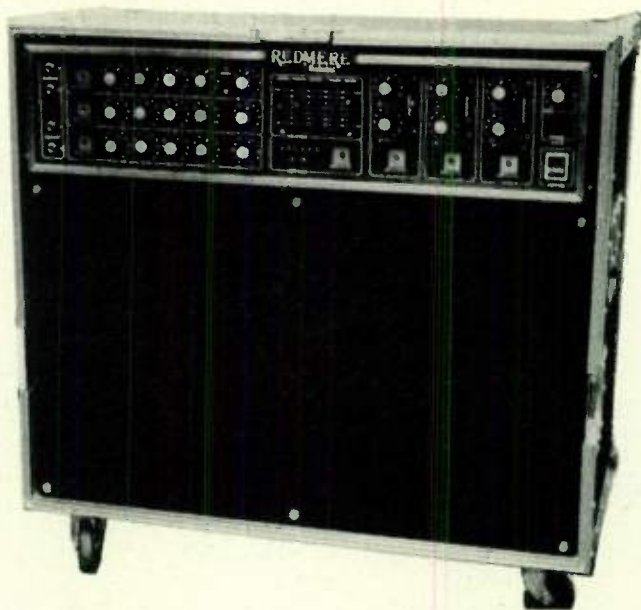
We're living in the Space Age. Redmere are the first makers of music amplification equipment to really bring musicians into the 1980's with the Soloist.

## REDMERE

Kneesworth Street, Royston, Herts.  
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Finally the only thing that is important in a drum kit is the sound. Whilst this is important they must be built well and have sufficient durability to stand the punishment that you hand out to them. The sound is the most important thing. At Pearl this has been long recognised.

Each drumkit is built to produce the warm sound Pearl drums are so famous for. Each kit is checked out before it is distributed. This ensures that the unique sound that Pearl craftsmen build into every kit is maintained.

It is extremely difficult in stage conditions for the drummer to judge his own sound. For this reason very often the first time he is aware of the shortcomings is when he enters a recording studio. At this point he should breath a sigh of relief if he is a Pearl drummer. There is a very easy way you can find out about Pearl drums that is to listen to any of the drummers currently playing Pearl. Regardless of whether you like the band or not, listen to the quality of sound coming from those Pearl shells.

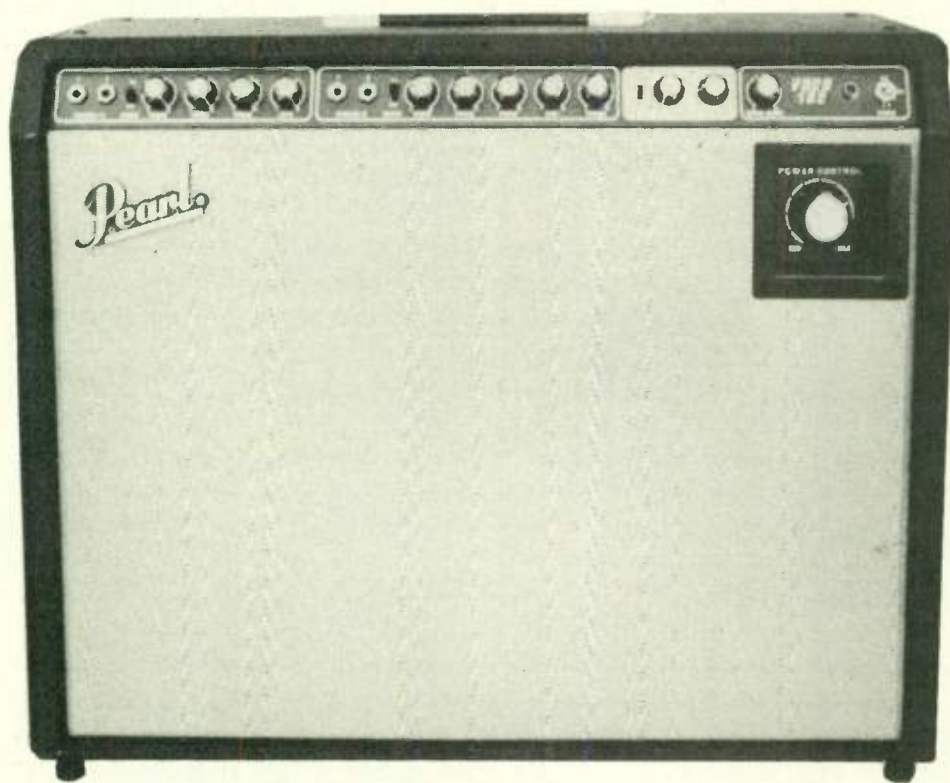
*Pearl*

Pearl Musical Instrument Company, Tokyo, Japan.

BE SUCCESSFUL WITH PEARL



# LOUD. CLEAN. CLEAR. IRRESISTIBLE.



Every guitarist has at one time or another experienced the feeling of elevation when plugging into a really good amplifier. Unfortunately that feeling is only too rare.

Try one of the new Pearl amps. You'll be surprised.

If you want it loud, Pearl give it to you. If you want it clean, Pearl give it to you. If you want it clear, Pearl give it to you and that combination is certainly irresistible.

It is hardly worth mentioning that if you want to play dirty Pearl will give you all the bite you need but it is far harder to build an amplifier that has high volume and clarity than it is to build an amplifier which distorts.

If you haven't got round to inserting your jack plug in the right place. Check out Pearl extremely quickly. It could save you making a terrible mistake.

BE SUCCESSFUL WITH PEARL

## *Pearl*

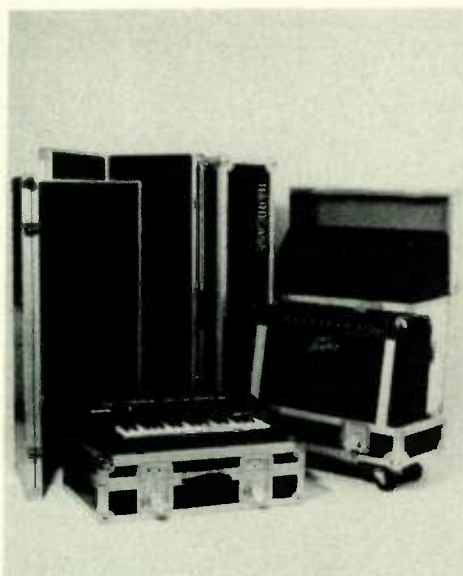
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# Super Swedes

By Ray Hammond

The story of the Hagstrom retail empire typifies all that is best about small family businesses and free enterprise. Musicians who travel to Scandinavia or who live in the territory will be very familiar with the Hagstrom retail shops. There are 39 Hagstrom stores altogether selling a wide variety of musical merchandise across the face of the three countries; Sweden, Norway and Denmark.

Visitors to the very modern Orkester Terminal in Stockholm might be forgiven for thinking that the Hagstrom outlets are an entirely modern concept. The Orkester Terminal is a professional drive-in music store which allows touring musicians to pick up precisely the items they need with the minimum of fuss. But elsewhere in Scandinavia Hagstrom has a different face.

The Hagstrom chain of shops was started in the late 1920's by a Swedish farm hand called Albin Hagstrom. He went into business when he was only 19 because he loved the piano accordion. At that time there was a major boom in accordion music and in addition to playing the instrument he also sold and repaired them. This led to the establishment of an initial retail store and in 10 years he had built up two separate businesses. The first was an extensive chain of retail shops selling accordians and other musical instruments around Scandinavia, the second was a major manu-

facturing and export company sending Hagstrom piano accordians to most parts of the world.

The second World War caused a contraction of the business especially on the exporting side but it quickly recovered in 1946. Unfortunately Albin died suddenly at the age of 46 when he was about to go on a business trip to the USA. He was inoculated against smallpox and complications set in following the injection. He died soon afterwards.

Today his eldest son Karl Eric Hagstrom runs the Hagstrom empire. The manufacturing and exporting business is no longer concerned as much with piano accordians but it is now internationally famous for the range of Hagstrom electric guitars. The flagship of this range is the stunning Patch 2000 Hagstrom guitar synthesizer.

Hagstrom retail stores are different to other retail stores in that the managers are given very clear and precise incentives to ensure a better type of musical instrument dealership. In most of the stores — there are 28 in Sweden, 4 in Norway and 7 in Denmark — the managers are allowed to run their own small accessories department. Essentially this means that the managers are running their own small business within Hagstrom's larger one. The managers are allowed to purchase for themselves the accessories they intend to sell and obviously the service and standard

of the dealing that the shop provides to musicians influences how well or badly the manager does in his own business within the business. This unique marketing approach has resulted in an evergrowing chain of shops which even in individual outlets is capable of handling the requirements of either the fully professional musician or the home organist.

Stockholm's Orkester Terminal is the brain child of Karl Eric Hagstrom's younger sister Justine. It is her specific responsibility to ensure that the Hagstrom retail chain can provide the type of instant facilities international professional musicians require. Invariably major touring bands visiting Scandinavia call into the Terminal to check out the very latest equipment and musicians will find synthesizers, guitars, amplification, PA equipment, drums and accessories all housed under one roof. The fully equipped service centre within the Terminal provides musicians and road crew with a rapid turn around. It is to this centre that most problems in the city and environs are referred.

It is to the company's credit that Hagstrom is a many faceted business and for that reason has far greater strength than any one of the parts. One thing that is sure, however, is that musicians of all types can find the service that they require under the Hagstrom banner wherever they be in Scandinavia.

Albin Hagstrom



Hagstrom's Orkester Terminal in Stockholm — staff and visitors



# EUROTEC Colorsound



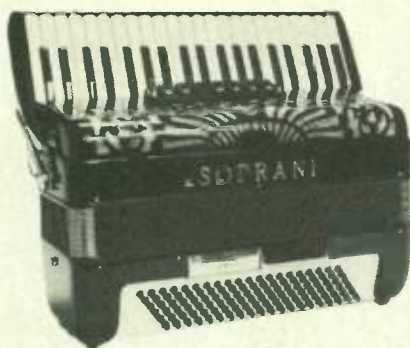
**THE EUROTEC DUTCH GRAND**

There is a whole range of Eurotec mini grand pianos available and this Dutch Grand offers typical value for money including in the basic specification a transposing switch allowing the pianist to play in any key and a built-in amplifier and speaker.



**THE COMPACT PIANO**

This Eurotec piano has been designed for use by professional musicians. It is easily portable and is suitable for use in all locations where a small size and a big sound is required. The Compact Piano utilises a full size piano keyboard and sockets for connection to external amplification are provided.

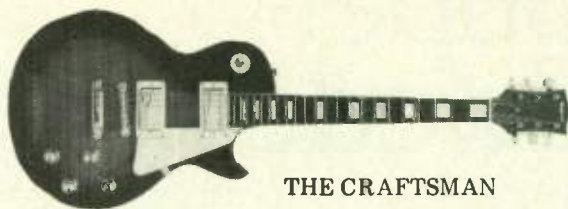


**SOPRANI**

Soprani accordians are perhaps the most famous name in accordians in the world. The entire range is available from Sola Sound and these fine instruments provide the perfect vehicle for both the full professional accordionist and the earnest student.



With the high price of rotary tone cabinets today, it is not surprising that so many organ enthusiasts are keen on building their own. This spinning speaker is just part of the range of components available from Coloursound for building such a cabinet. Available are treble horn units, woofer units, etc. and for many players this is providing the perfect answer to the need for that famous "Doppler" effect.



**THE CRAFTSMAN**

The Craftsman range of solid guitars represents the best value for money available in Britain today.. These carefully crafted solid electric guitars follow traditional lines and offer both the beginner and the experienced musician a fine instrument at a price that is extremely attractive.



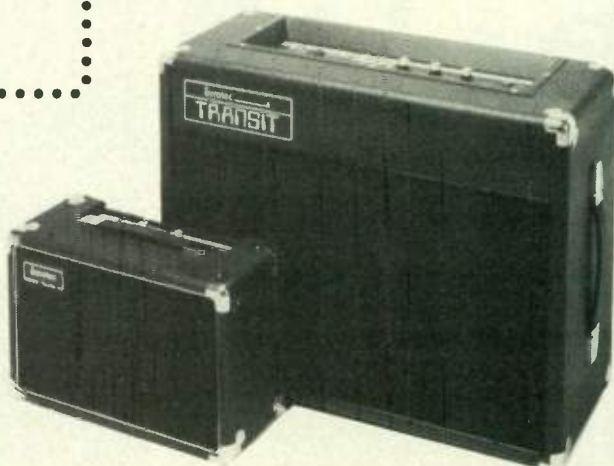
**THE CONCORDE**

Whether a beginner or an accomplished player the classical guitar player will find delight in the mellow tone of the Concorde series of Spanish style guitars. These nylon strung instruments feature spruce tops, deep bodies to provide a rich full tone provide the economic answer to the problem of choosing a reliable instrument.

## EUROTEC COMBO AMPS

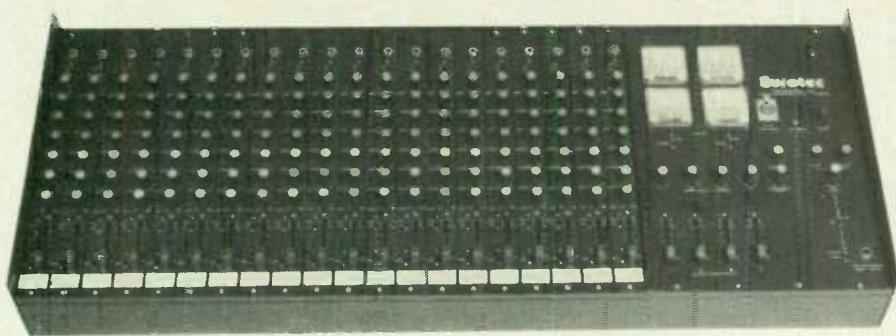
The name Eurotec, has since its conception, been linked with fine quality and value for money amplifiers. The new range of combo amps spanning both the Eurotec transit and the Eurotec traveller has one common advantage. High power and a high degree of portability.

The amplifiers are attractively finished in black vinyl with steel corners to protect the units from damage while in transit. The recessed controls are hidden away thus preventing accidental damage before, during or after a performance. The Eurotec Combos prove to be the answer to many guitarists complaints. The tiniest amp made by Eurotec is the "Mighty Atom." This sub-miniature amplifier is capable of delivering volume levels despite being so light it can literally be on a guitar strap and carried around. The power is provided by an integral battery supply.





★★★EUROTEC★★★  
Coloursound



#### EUROTEC MODULAR MIXERS

Rapidly becoming one of the most popular mixers on the group scene, Eurotec Modular Mixers offer the working band the perfect format on which to base their PA mixing system.

The big advantage with the Eurotec mixing system is that the band can buy a small mixer initially and later build up channels by adding them to their original mixer as and when they can afford them.

As well as this immense flexibility, Eurotec mixers provide all the control over each and every sound offering a complete range of equalisation and volume control.

Perhaps the most sensible approach with the Eurotec mixers is to look at the long term requirements of any particular given group or musical combination. In many instances one of the smaller modular mixers will suffice offering perhaps

8 or 12 channels dissolving into 2. Should the needs ultimately be greater the operator can also choose to change the format making a 12 channel mixer into a 20 channel mixer for instance without the expense of having to trade in his initial mixer. For those with the initial ambition but lacking the budget it is possible to buy the full frame for a 24 channel Eurotec mixer but with only 12 channels or even 8 channels, fitted. The remainder of the channels are fitted with blanks. As time passes and the Eurotec mixer improves the financial performance of the band, so individual modules can be added building up the number of input channels available to the musicians.

This ultimately flexible mixing system is currently helping musicians solve their financial problems all across Europe.

## SOLASOUND

102 Charing Cross Rd.

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#### THE CHESTROM



Chestrom is a new musical instrument essentially combining the best part of a piano accordion with the best features from the electronic organ. It has a built-in amplifier and speaker and as it is battery powered it is completely cordless. 120 bass and chord buttons provide harmonized chord sounds and a newly developed hand expression bar which allows you to play a dynamic range much as an organist would with his foot pedal.



#### COLOURSOUND TRANSDUCER

Coloursound have solved the problem of miking up those difficult instruments like violin, piano etc. The new Coloursound Transducers offer true dynamic difelity with the absolute minimum of amplifier matching problems and by the employment of these new transducers the musicians who previously have suffered from these problems within a given instrument line up can amplify themselves to any level they choose.



#### COLOURSOUND EFFECTS UNITS

Star of the new Coloursound range this year is a unique flanger foot pedal. In the last year or so flanging has become "the" sound the musicians are looking for. The Coloursound flanger has been especially developed to provide the very best flanging effects at a price that makes the facility available to all guitarists.

The main range of Coloursound effects is well known and it includes the phase pedals, compressor unit, wah wah pedals, fuzz tones etc. One of the most useful items in the range is the reverb unit.

This item allows musicians to add that extra dimension to their playing and being battery powered for complete portability.

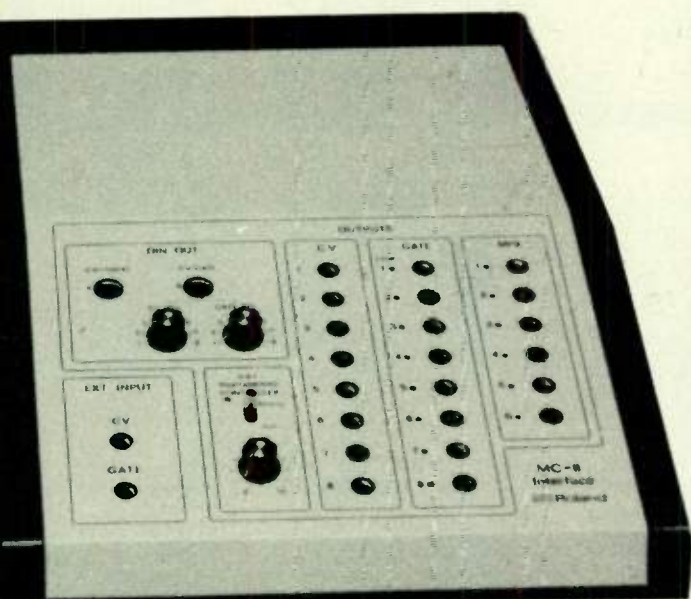




Programming the Micro-Composer has deliberately been made easy. If you think of a tune that starts with (for example) C, E, G as the first three notes you punch in the code for C, E and G. The code is so simple you can understand it immediately and learn it by heart in a couple of days. To give you an idea how easy it is middle C is **24** (that's the code number you would push on the calculator-type panel) and because the notes are numbered to correspond with the notes on a keyboard the next note, E, is **28** because that's four semi-tones up. The C above middle C is **36** because that is exactly one octave higher which is 12 semi-tones. So you punch in **24** because you want the first note to be middle C. If you want it to be a crotchet (one beat) you punch in the crotchet code which is **32**. Deciding how long you want the note to last is as easy as the pitch choice. A crotchet is **32**, a minim is **64** and so on. The only thing you've got to decide now is how loud you want the note to sound. Naturally there's a code for loudness (it starts at **100** and goes down to **30** for very soft). So by punching three numbers in, you've chosen a note, decided how long you want it to sound for and decided how loud it will be.



# HUM A TUNE, —COMPOSER IT FOR YOU!



You can programme each note in about one and a half seconds. Having put in a complete passage, push the button and the synth that is hooked up to the Micro-Composer will immediately play what you have just written. If you don't like a note, or think any note is too loud or too soft, you can alter that without affecting anything else in the memory. There's no recording tape involved, all of the information is held in electronic memories. If you've written something in the memory you can transfer the information to an ordinary cassette tape in a cassette recorder and use the memory again. You can then put back the original piece by playing the cassette recorder back into the Micro-Composer.

Because the Micro-Composer has multi-channel output it can be used to control as many as eight independent voice lines at the same time.

If you will give yourself ten minutes with a Micro-Composer you will change the course of your creative life. See your local Roland dealer to arrange a demonstration.

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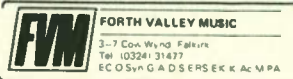
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T	Track
Cap	Capacity
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p/d	per day
D	Dolby
tf	Transfer facilities
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CP	Copying
tba	to be advised
Ka	Keyboards available
R-C	Reel to Cassette
R-Cr	Reel to Cartridge
Dc	Disc Cutting
d-t	Disc to tape
Q	Quad
OTC	Overtime charge
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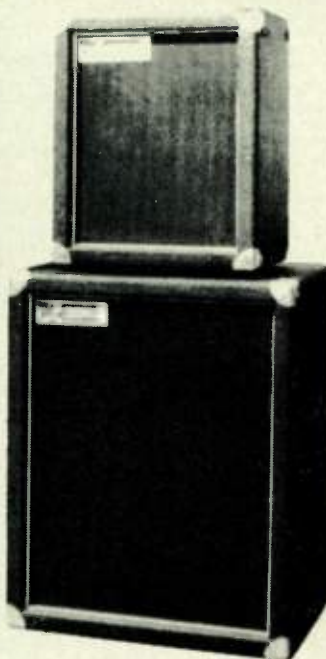
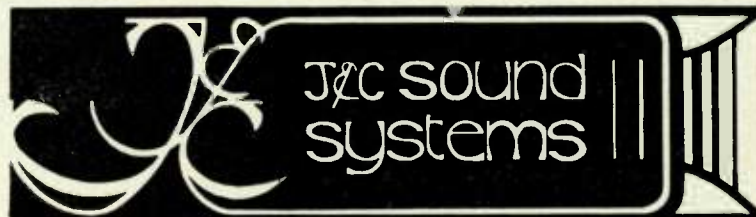
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# The MACARI CHRONICLE

## No. 3

## ONCE A CUSTOMER ALWAYS A CUSTOMER ~AT MACARI'S

Customers keep returning to the Macari Musical Superstores on London's "musical mile" in Charing Cross Road.

The reason is simple, once Macari's have supplied a musical instrument or item of equipment they don't relinquish their service to the customer. Service has been a by-word at the Macaris store since Larry Macari and his brother Joe first went into the retail musical instrument business nearly 20 years ago. In that time musical instrument stores have opened and closed with almost monotonous regularity in central London but one store — Macaris' — has continued virtually unchanged. There must be one single reason behind this. There is, service!

In the hunt for the very cheapest, the musician often confuses economy of purchase with overall economy. Having bought an unseen instrument in a cardboard box the musician is then faced with several problems. Is the instrument fully playable? If the instrument does require setting up or any form of servicing how will he have to deal with this? Whilst legislation does exist to ensure some consumer protection the musician hardly wants to resort to the law to get what should be an automatic service. Unfortunately, all too often this is precisely what he has to do.

Larry and Joe are friends with most of their old customers. They are friends because their customers know that whilst most music stores exist to sell musical instruments Macari's is different from most in that after the sale the musician feels confident of being able to return to get the help and advice that he needs.

"We are very happy for musicians to call in and see us at regular intervals after they have bought their synthesizer or guitar or whatever it is they may have chosen," says Larry Macari. "In fact we are very pleased to hear from them just how they are progressing with the instruments and talking with our staff — who have all been professional musicians — is certainly a very valuable way of gaining advice and experience."

For the many who have experienced the Macari service philosophy buying decisions are very straightforward. They know that a complex item of equipment like a polyphonic synthesizer may be subject to certain difficulties. This is certainly true of polyphonic instruments which are essentially a gathering of many monophonic instruments and the sorting out of teething problems during the first few months of ownership makes the difference between playing satisfaction and sheer despair. The Macari brothers do everything possible to ensure that this is the case.



*Always service with a smile from Larry (left) and Joe Macari*

## Face-lift for Macari shops

The atmosphere of a musical instrument shop is vital. Musicians need to feel at home before they can comfortably try out a new guitar or keyboard. The Macari brothers have always realised this and in their two musical superstores in Charing Cross Road they have insisted that change for the sake of it does not arise. Visitors this summer, however, are in for a surprise.

Without altering the fundamental intimacy of either shop both have received an impressive face lift which enables service to be speeded up and instruments displayed better. In addition to complete re-painting the stores have been re-planned and exhibits moved.

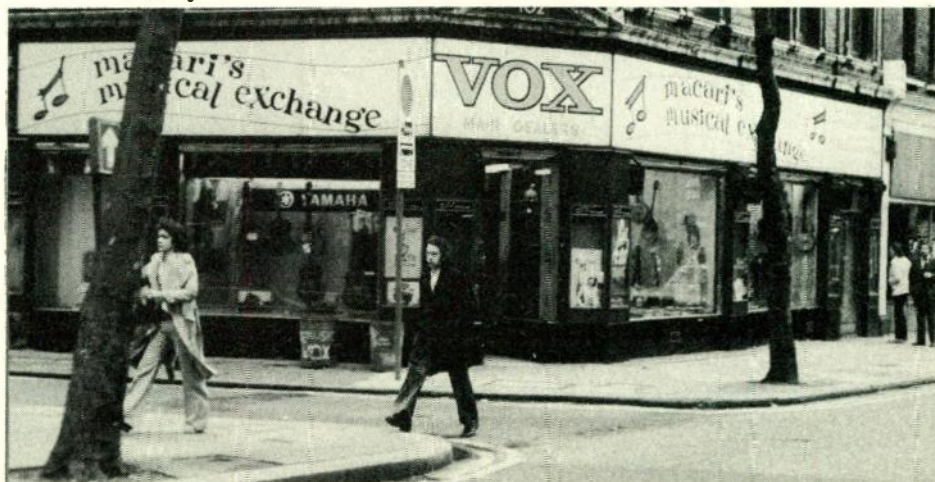
One of the main features at the shop at 102 Charing Cross Road is saxophones today. Larry Macari reports an unprecedented demand for these instruments.

"We have always sold a respectable quantity of saxophones just as we have almost all types of musical instruments," says Larry. "But in the past 6 months the demand for saxophones has been incred-

ible. It suits my brother Joe because he was for many years a professional saxaphonist and he enjoys talking and selling saxaphones more than anything else. Quite why there has been this upswing in demand for saxaphones is beyond us but we are pleased to see that these under estimated instruments are enjoying a new surge of popularity."

Visitors to 102 Charing Cross Road will see a complete display of all types of saxaphones and Joe Macari is always on hand to answer any questions that you have regarding the instruments.

There really is no way to explain the difference between real economy and false economy. The only final way is to look at the bottom line. Buy two similar products one from a store offering after sales service, one that does not make a speciality of this aspect and after one year add up what the item has cost in total. If only every musician could do this the queue to visit Macari's would stretch from London to Scotland.



*Macari's spacious premises at 102 Charing Cross Road.*



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