

# INTERNATIONAL **MUSICIAN** AND RECORDING WORLD

July 1978 50p

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Catalogue Inside

George Benson · Tony Visconti ·  
Jaco Pastorius · Les Dudek ·



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## LONDON

International Musician & Recording World is published monthly by Cover Publications Ltd., 7a Bayham Street, London NW1 0EY. TELEX No: 24676. TELEPHONE: 01-388 2011. Distributed in Great Britain by Independent Magazines Ltd., Bridge House, 181 Queen Victoria Street, London EC4V 4DD. Tel: 01-248 3482 (10 lines). Printed by Carlisle Web Offset, Carlisle, Cumbria, England. International Musician & Recording World is a trademark of Cover Publications Ltd. All rights reserved. Cover Publications Ltd., 1978. Whilst every care is taken in the publication of the magazine, the publishers cannot be held responsible for any results arising from the contents thereof. Subscriptions, 12 months only: U.K. £10.50. Worldwide (surface mail), £12.00. U.S. (includes 12 issues, shipping charges to New York, N.Y. and mailing costs from N.Y.) \$20. Second class postage paid at New York, N.Y. and at additional mailing offices. Air mail rates Europe, £17.00, S. America and S. Africa, £25.00, Australia and Japan, £31.00.

## NEW YORK

**Executive Offices:**  
 The Gulf & Western Building, 15 Columbus Circle, N.Y. 10023 U.S.A. Tel: (212).  
**Editorial & Advertisement Offices:**  
 277 Old Nyack Turnpike P.O. Box 414, Spring Valley, New York, N.Y. 10977, U.S.A. Tel: (914) 356 6797. Telex: 131566  
**POSTMASTER:** If undelivered, please send form 3579 to International Musician and Recording World, PO Box 414, Spring Valley, New York 10977.  
**Sole International Distribution Agents:**  
**Gordon Gotch (Canada) Ltd., 55 York Street,**  
**Toronto, Ontario, M5J 1S4, Canada.**  
**Gordon & Gotch (Australia) Ltd.,**  
**Melbourne, Sydney, Brisbane, Adelaide, Perth,**  
**Gordon & Gotch (NZ) Ltd.**  
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## SAWICKI'S SOUNDCHECK

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## DELFT'S GUITARCHECK

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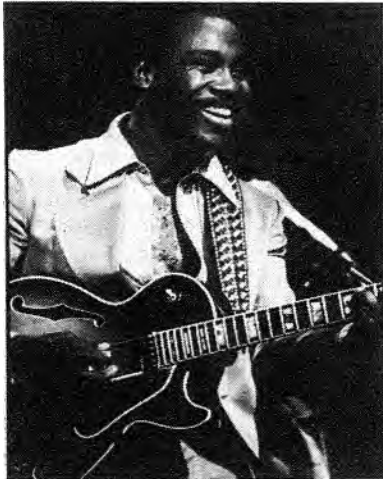
## BLINDFOLD TEST

*Brian James and Dave Flett give their reaction to the Custom Sound amp.*

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You know what they do. Now synth expert Tony Horsman tells you how the instruments do it.

## Editorial

Musicians will be dying unnecessarily in the next two or three months. In the Northern Hemisphere the coming of Summer means that outdoor concerts get into full swing and inevitably half a dozen players will die in addition to those fate has singled out to be electrocuted in the normal course of events.

**BE SAFE.** Each year electronic equipment becomes more complex. Some items require connection to an earth route of a mains supply, other items do not. The connection of various complex bits of gear easily results in mains hum being broadcast. If this happens do *not* cure it by removing one of the earth links. Not only will this cure the hum, it will cure all of your small problems for all time.

Playing out of doors requires very special attention to mains supply. Whether you are working on 110 or 240 volts, lack of care during the tense pre-performance period can kill you.

Two years ago this magazine published details of a "hum-loop eliminator" which isolated equipment, cured hum and protected the player from that particular electrical problem. If you need details of this write to our head office in London and we will let you have a copy of the article.

Whatever you do, make sure that your roadie or electronics engineer is in no doubt that his living depends on keeping you alive and unburnt.



VOL. 4 NO 7  
JULY 1978 (UK)  
AUGUST 1978 (USA)

## Vexed by a Vox

Dear Sir: After reading Ken Dibble's interesting and enlightening report on speakers, I would be pleased if you could give me some help concerning my speaker set-up.

I use a Sound City 50 watt '50 Plus' amp into a Vox, AC 30-type, 2x12 cabinet. The speakers are original Vox 'blue magnet' types and are in very good condition with good taut cores as they have been used little up till now. They are rated at 30 watts each and are wired up to give 4 ohms. I have been told that these speakers are the forerunners of the present Celestion G12s as reviewed last month. In that review you stated that one 30 watt Celestion G12 gave as much sound output as a 60 watt Goodmans, which leads me on to my questions: will my 2x12 successfully take the Sound City at max. volume at the 'high gain' setting into 4 ohms without packing in?

So far, I have not pushed the amp beyond 2 on the volume control at high gain and the actual volume was, quite frankly bloody loud; loud enough certainly to fill the hall we were playing in. I am worried as to whether the speakers can take much more power, even though they showed no signs whatsoever of breaking up or 'flapping' and the sound was really good. What I'm really getting at is, does the rated wattage bear any relation to the actual volume (taking into account the varying acoustic properties of various halls etc.) and at full volume, what sort of wattage is the amp likely to be pushing out and can these speakers safely take it? Did Vox produce many of these 2X12 cabs, as I have not seen any others around, only in the AC 30s themselves.

Patrick Knowles  
Orpington

Ken Dibble replies: Before answering your main queries, I must first offer an apology — to Goodmans as well as to readers, in that the statement made in the Celestion G12/H test report in the February issue, in which I stated that the G12/H would give as much sound at 30w. as the Goodmans 12P/G at 60w. is an error. It should have compared the G12/H with Celestion's own G12/75 featured in the same review and not with the Goodmans 12P/G — which as the results tables show, is quite as good as the G12/H in this particular respect, at 97dB.

Having cleared that up I would entirely agree with your high opinion of the Vox 2X12 cabinet. It does have a nice characteristic sound all of its own that does not seem to be attainable with modern loudspeakers. This is probably one of the reasons that Brian May in 'Queen' still plays through Vox AC30 combos, and back in my own days of playing in a rock band, we used a pair of these very cabinets for PA with a great deal of success for several years.

Your informant is quite right. The units fitted are the forerunner of the present G12/M and were actually made by Rola-Celestion for Vox. Only the magnet assembly is significantly different from today's version of this loudspeaker. The power rating is however 15w. each, not 30w at you seem to believe, giving therefore a rating of 30w. for the complete cabinet. I am, however, surprised to learn that your cabinet is wired for 4 ohm, as from my recollection, two 7.5 ohm units were normally wired in series to give a 15 ohm cabinet. I wonder whether you have still got the old Amphenol 3 pin connector that Vox used to fit on this cabinet, or if it has been changed for jacks at some time. From my experience with these cabinets, you should be quite safe using a

50w. amp — even the old Vox AC30 for which these cabinets were originally intended could deliver between 40 and 50 watts when driven hard and speaker breakdown was rarely a problem with Vox gear.

I think you may have the wrong idea of the function of the volume control and high/low gain inputs on you amp. These only serve as a means of regulating the signal level that is fed to the power amplifier, or output stage — they DO NOT dictate the power output available from the amplifier. If you are using a high output guitar in the high gain input, then it is quite likely that the amp is already delivering its 50w. even though the volume control is set at 2. If this is so, then any attempt at increasing the volume control setting further will probably result in both the amplifier and the loudspeaker cabinet being overloaded. Your ears are the best guide in this — if the sound is badly distorted, or the speaker cones can be heard 'flapping', then it is turned up too far and being overdriven. Forget the numbers on the volume control, they are there for reference only and bear no relationship to amplifier output power.

To your last point, as far as I am aware, there were quite a few of these Vox cabinets about in the hey-day of Vox gear — back in the early Shadows, Beatles and Rolling Stones era. We had three in our band alone — two on PA and another on lead. As a matter of interest, all our gear was Vox — including an AC50 Foundation Bass and I cannot remember blowing any speakers at all, or amps either for that. It really was good gear in my opinion and served us very well indeed, as well as giving the band a good clean sound.

I hope that this will answer your queries, and thank you again for your interesting letter.

## Futurama Fanatic

Dear Sir: In the article on Albert Lee (I.M. April '78) he refers to his first guitar as a Hofner Futurama. This reference is queried by Tony and Jane Larnie of 'First Aid' in the May '78 U.S.A. issue who claim that the Futurama was in fact made by Vox.

However, in your magazine's article on Hagstrom (January '78) the Futurama model is claimed by Hagstrom! Could anyone confirm who actually made the Futurama guitars as I own a bass model (circa 1963) as illustrated in the aforementioned Hagstrom article.

Although I always understood that my Futurama was a Hagstrom, I seem to remember that it was possibly made under licence by Hofner.

Colin Routledge  
Tyne and Wear.

The Great Futurama Mystery is solved in the next letter: read on.

## Ad Fad

Dear Sirs: First of all congrats on the continuing success of I.M. I've bought it since the first issue and in this month's Editorial of the 2nd U.S.A. Issue (where did the first one disappear to?) you ask for any suggestions on layout and interviews, etc. Presuming this is applicable to the English issue as well, I think your general balance of interviews, instrument and technical write-ups is about right, (I'd be happy just to read about guitars, amps and guitarists) but as it is it's O.K. Fair for all, though your last month's issue contained a ratio of about 3:1 in favour of advert content as against actual

write-ups. Your worst one by far.

Still we can appreciate the ads. have to pay for the book. Also:

Why not throw the market Report dealer list open to the readers. The dealers are not going to criticise too much, the goods that they have been appointed to sell, who knows how honest their remarks are, so instead, let the readers know what gear is coming up in the future then we'll get a real idea of what is O.K., what goes wrong etc. from the players in the field.

Regards the letter concerning the Futurama guitar. These arrived around 1960-61 and were, I believe, imported by Selmers. The catalogue states "Once again Selmers lead the musical field with the exciting Futurama double cutaway Solid Guitar." Though they were always referred to as a Hofner Futurama, as the guitar was in the Hofner catalogue (I've got one). They had a peculiar rocker-switch arrangement for pick-up selection and was the first 'cheap' guitar (55gns.) with a tremolo arm (which used to break very easily).

If you couldn't afford a Strat you bought one of these.

The machine head was changed (Strat style) and called the Futurama 3.

The Futurama 2 was a 2 pick-up narrower body cheaper version at 35gns. These were followed by the re-styled Futurama 2 de-luxe and Futurama 3 de-luxe Two and Three pick up respectively, Fender Strat style bodies and machine heads selling at 35 and 39gns. Accompanying them was a Futurama Bass de-luxe. These models all had what was called a Kings neck expandable stretcher. Maybe this was another name for an adjustable truss rod.

A Futurama Duo was introduced as well. A cheaper model still, with tremolo arm and twin pick-ups going at 25gns. The cases for these machines were either 1/3 or 1/4 of the total price. The Hofner Galaxy was styled on the Fender Jaguar, 3 Double Pole pick-ups. A flick down damper on the bridge, Tremolo Arm. Slide switches and rotary thumb-wheel tone controls, priced at 55gns. Strat type machine head. It was accompanied with the Professional and Artist solid basses 40gns. and 50gns.

Hoping that this bit of information may have been of interest. The Futurama, whoever produced by, was *not* made by Jennings (Vox). They had their own range, mostly Fender type copies.

E.H. Tuil  
137 Drayton Road  
Sutton Courtenay  
Nr. Abingdon,  
Oxon.

Thanks for your comments and interest. You are right when you say the ads. pay for the book. Without them, your copy of I.M. would cost a lot more. Nevertheless, we are acutely aware of the problem of ad. versus editorial ratio and we try to work things out for the best. Thanks too for your information on the Futurama debate.

## Swede's Sweat

Dear Sirs: I was rather amused by a letter in your April issue from Richard G. Lecar in which he stated that "It would be nearly impossible for a band to play anywhere near" 5 hours per night.

I'm an English guitarist playing with a Swedish dance band, and I personally do precisely that — play 5, and sometimes 6, hours

cont. on page 17

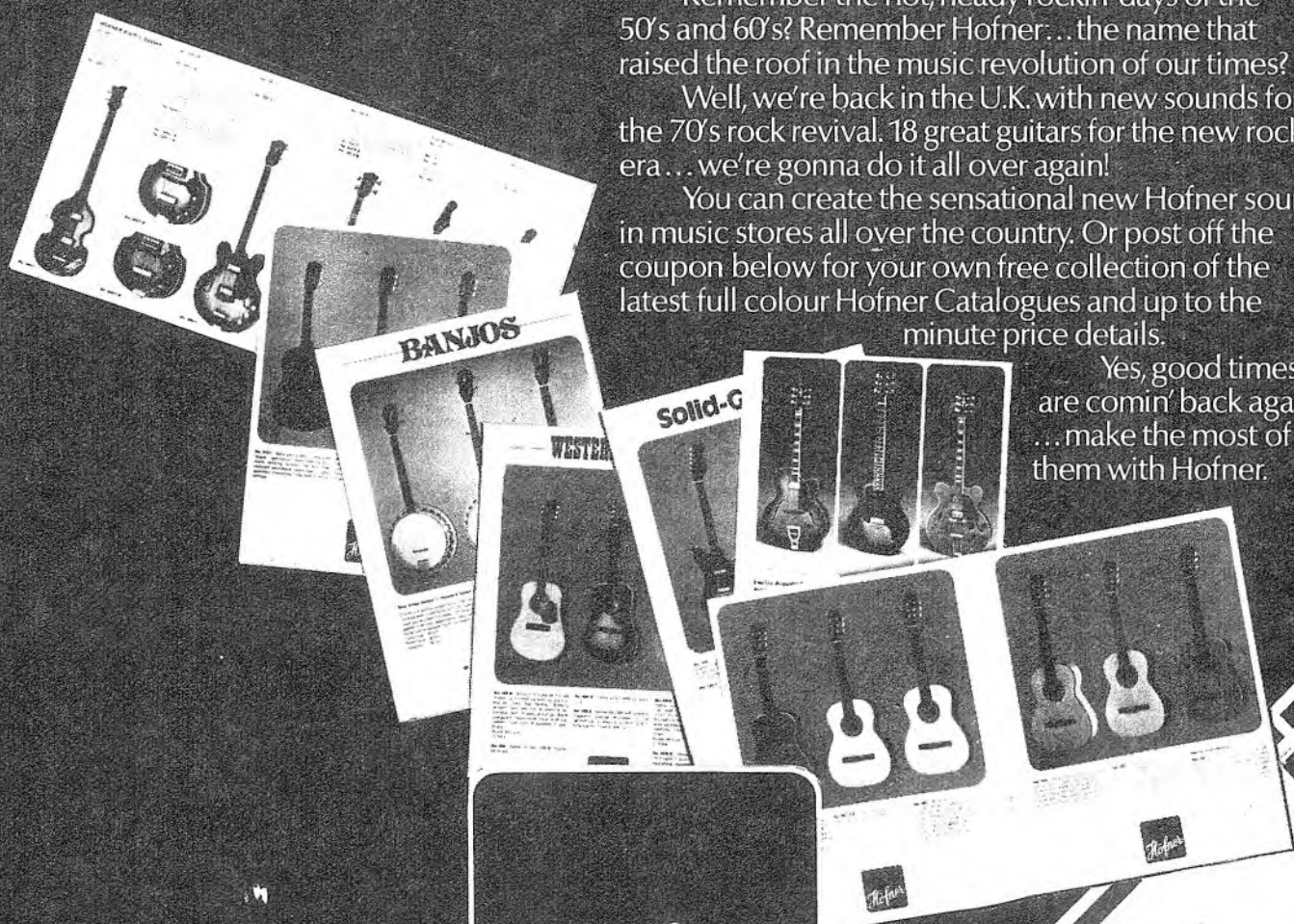
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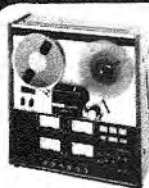
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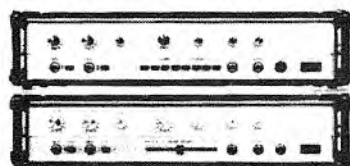
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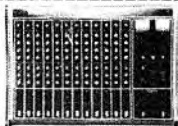
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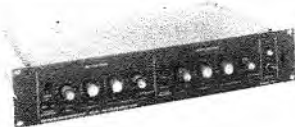


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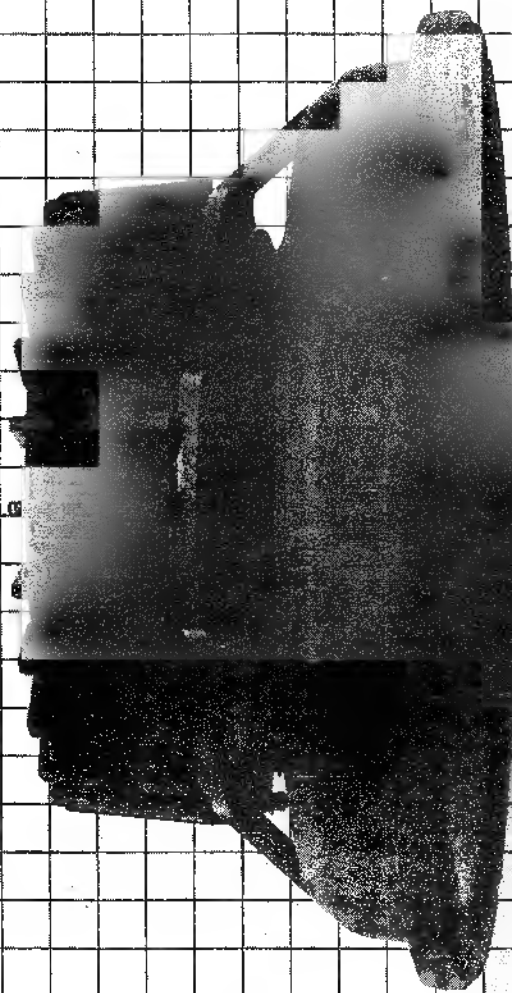
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# The Namedropper



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When we are asked who uses them, we have to say:

**Supertramp**  
**Joan Armatrading**  
**Tangerine Dream**  
**Cleo Laine**  
and **The Stranglers**

Even with hire companies we have to admit that:

**Martin Audio**  
**MEH**  
and **Entec**  
employ them.

Then Ken Dibble tested it for his speaker survey  
in the March issue of *International Musician*.

He found it not only exceeded the specifications of all  
other manufacturers, it even exceeded its own specification.

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100 High Street, Aylesbury, Bucks  
TEL 0296 86913

Chapel Way, Botley, Precinct,  
West Way Shopping Centre  
Oxford  
TEL 0865 721411

## THE STORY SO FAR .

If you enjoy going into a music shop and being ripped off by some Smart-Aleck salesman who gleefully rubs his hands together as he assures you that the crackling sound coming from that over-priced amp you are about to buy is caused by bad reception in the area, or that the deposit for a new Gibson Les Paul is a pound of flesh, then FREE 'N' EASY MUSIC is definitely NOT the store for you.

But, if on the other hand you like going into a music shop where there is absolutely no pressure to buy, where you can sit and chat with other musicians over a cup of coffee, play the instrument of your choice, or seek advice from the friendly assistants who, being experienced musicians themselves, understand the problems you are faced with in everyday band life, then FREE N'EASY MUSIC is JUST the store for you.

FREE N'EASY MUSIC now has branches at Hemel Hempstead and Oxford, and with the continuing success of these stores, should soon be expanding to fully understand the idea behind FREE N'EASY, you have to get to know the people who run it. Take, for instance, the owners Denis and Stewart who, after years of playing in a band and getting thoroughly disillusioned with the attitudes of music shops towards musicians, decided to start their own store and provide a service to musicians that was second to none.

### AND IT WORKED

Within months of their Aylesbury branch being opened they had to open another shop at Hemel Hempstead, to cope with demand, Oxford was the next place fortunate enough to have its own FREE N'EASY shop. But what is it about FREE N'EASY that has led to it being one of the most popular music stores in the country? The answer can only be found by visiting one of their branches and meeting the staff. Take, for instance,

the Hemel shop. There's the manager, Kevin, who despite having the outward appearance of a man who would break both your legs if you disagreed with him as to the best type of string to use, is really a very lovable and friendly guy who will only break one of your legs. He will always put himself out to help others and especially himself. (Incidentally for would-be visitors, he uses Ernie Ball!)

Then there's Andy Couper, who is the greatest guitarist that ever walked on God's earth and the reason why Clapton and Page are too embarrassed to visit the shops, or at least that's what his mum told me.

They say there's a thin line between madness and genius and we all know which side Ed is on. His lovable humour, funky Bass Riff and dishy bird immediately makes you feel relaxed and at home, especially if you happen to come from an asylum.

And finally there's the manager of the keyboard department, Andy Nye, who's so good-looking that the store is always full of women wishing to learn to play the piano and strange men wishing to learn anything. And, of course, Roger and John, who man the Oxford shop, and provide a marvellous service for the local musicians.

FREE N'EASY carry a wide range of stock, firmly believing that musicians are entitled to have as great a choice as possible. They also offer a mail order service, called "FREE N'EASY ON WHEELS", in which they will deliver gear anywhere in England, Scotland and Wales for a tenner without obligation to buy. This is a marvellous chance for people who live in rural areas to try out gear in the comfortable surrounds of their own home, and credit can be arranged.

So there we have FREE N'EASY MUSIC. Not just a music store, but a way of thinking. But don't just take my word for it. Why not drop into your nearest branch and see for yourself?

# Marshall make the bass more perfect

The new Marshall 1992 bass amplifier and 1984 bass cabinet are the good news bass players have been waiting for! In effect, the famous Marshall bass stack has been re-vamped and improved to cater for the changing needs of today's bass players.

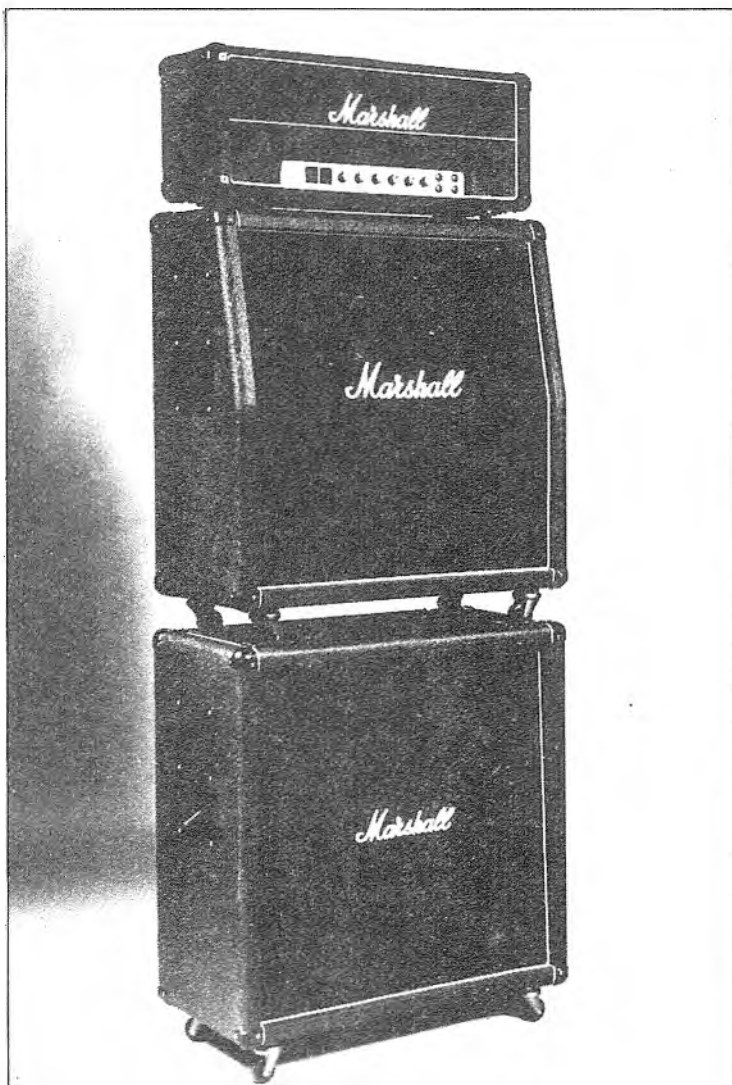
Cosmetically, the appearance of the stack hasn't changed. It still looks like the Tower of Power it undoubtedly is! However, advanced technology plus Marshall's lively research and development programme has meant that the circuitry of the amplifier has changed considerably – all for the better of course!

Reduced sensitivity in the circuitry means that you can obtain a much cleaner sound at higher levels, without losing that famous Marshall "bottle". The tone circuit has also been dramatically re-designed and upgraded. The top and bottom ends of the tonal range are now much cleaner and the mid has been dropped slightly. In effect, this means that a lot more of the natural harmonics will come out. This eliminates the rather middly sound usually associated with bass amplifiers.

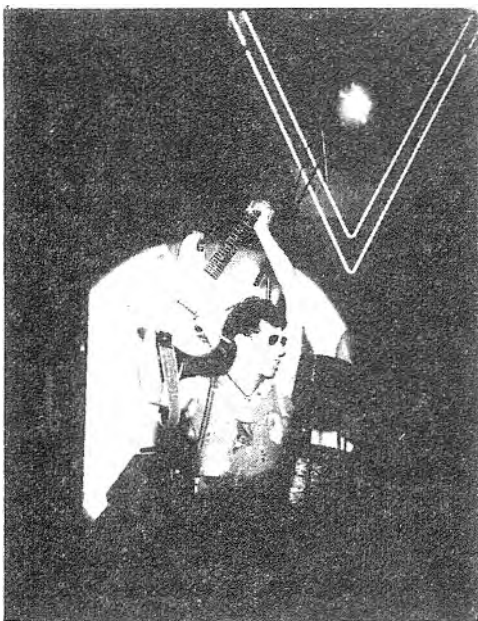
All the controls you'd expect to find on a Marshall are still there – volume, bass, middle, treble and presence controls together with the new design rocker switches for Power on/off and Standby. With the fabulous 1992 bass amplifier, you can now get the bass sound YOU want.

The 1984 bass cabinets have been designed specifically for use with the new bass amp. Each cabinet houses four specially-developed 12" heavy-duty Celestion loudspeakers. Each cabinet has a fantastic handling power of 120 watts and the drivers' sensitivity has been increased so distortion occurs at a much higher level.

The design of the new Celestion speakers means better response on top and bottom ends of the tonal range can be obtained so they match the 1992 amplifier perfectly!



## New Wave roll with Marshall



When Marshall gear first appeared in the Sixties, the big names of that period immediately latched on to the fantastic sound the equipment produced. Hendrix used the beautiful "overdrive" tone to provide that famous controlled distortion and sustain he used to such incredible effect. Townshend utilised four 4 x 12 cabinets and two 100 watt tops linked together for his powerhouse "wall of sound". The list was endless... and still is.

Times change, music changes, but musicians today still find Marshall the gear for them. New Wave bands like The Motors, Vibrators, Tom Robinson Band, Depressions, Wire, Dr. Feelgood, Ramones, Blondie and hundreds more all use Marshall equipment. Although a lot

of the New Wave bands may reject the Sixties superstars, they still cannot find any substitute for Marshall, which proves that a timeless winner Marshall gear is!

Brian James of The Damned rates his Marshall 100 watt valve top as the best money can buy. "It's got a gutsier sound than other amps", he says, "and there's loads of power there. Mine's about five or six years old and it's still going strong. The sound is just what I'm looking for. It distorts easily but it's a clean distortion. I can adjust the amp for any tone or sound I want".

The Vibrators are another band who rate Marshall equipment. Rhythm guitarist and lead vocalist Knox uses a 100 watt Master Volume amp through a Marshall 4 x 12

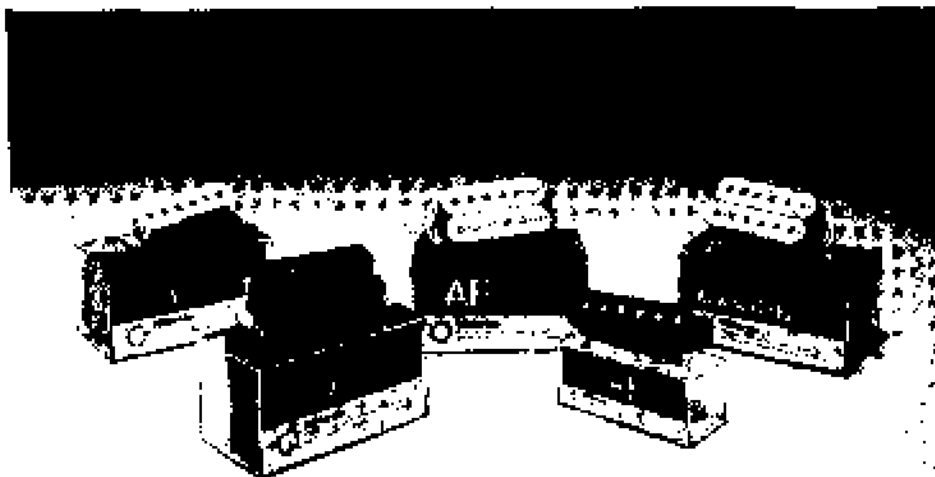
cabinet.

"I've been using Marshalls for years now, I've always used them", he says, "because they give the sound I'm looking for. They've got quite a dirty sound, and it's a fabulous sound when it's wound up high. I nearly always use the same settings no matter where we're playing. The joy of it is that the road crew can set the gear up for me and I can just plug in and know I'm going to get the same sound. It's ideal for me".

"They're very powerful amps. It's nice to know that you've got all the power you want. I usually have the pre-amp all the way up and then set the m.v. on 3 or 4. With the pacing of our show, I go for simplicity and that's the best thing about Marshall. It's easy to get the sound I'm after".

A Rose-Morris Advertising Feature

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



Mick Ronson and Martin Barre. Many other musicians in the DiMarzio hall of fame will use no other pick-up.

If you're a rock guitarist who lusts after the vintage sound, look no further than the Super Distortion Humbucker 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.

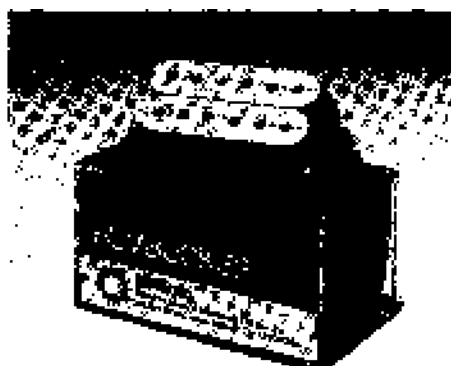
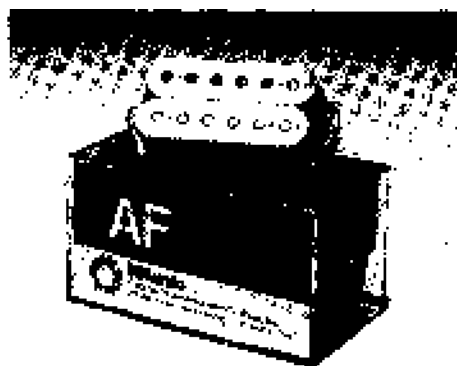
Developed from the SDHB is the Dual Sound Humbucker. The difference is that a second sound becomes available at the flick of a switch. Imagine changing instantly from a soaring Les Paul raunch to a clean bright "Strat" sound instantaneously. Both sounds come from both coils in the pick-up so you are not merely changing from humbucking to single-coil mode, with a corresponding drop in power output.

If you've ever played a gig where your sound has failed to cut through, the Super II is the DiMarzio pick-up to try. This will turn the dullest 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.

You know how guitarists everywhere are always after the old guitars from way back in the Fifties. They say these instruments had a sound that isn't found in new instruments. Now DiMarzio have solved the problem with the Pre B-1 replacement pick-up for Telecasters. These potent devices can be fitted to the bridge position and give the guitar increased output and more mid-range. Now you can get a hot vintage sound from your new guitar.

British guitarists can now purchase DiMarzio at a price they can afford; as the sole distributor for DiMarzio products in the U.K., Rose-Morris are providing, through dealers all over the country, the ultimate in pick-ups at the best prices.

**A Rose-Morris Advertising Feature**



In a business as competitive as the music industry, where discriminating musicians have to choose from an increasingly extensive range of different products, a true innovation speaks for itself.

Larry DiMarzio and Stephen Kaufman gave birth to a new industry — the replacement pick-up — and in an incredibly short period of time the name of DiMarzio has become the leader in a field of many. Now it is accepted that a guitarist who strives for the ultimate sound will replace his pick-ups with the appropriate DiMarzio for an immediate improvement in his guitar, however expensive the instrument may be.

Already, the top axemen in the world use DiMarzio pick-ups: Al Di Meola, Steve Hackett, Earl Slick, Roy Buchanan,

2700 SDHB	£29.95
2701 Dual Sound	£31.95
2702 Super II	£26.95
2703 PAF	£29.95
2704 FS-1	£24.95
2705 Pre B-1	£24.95
2706 Acoustic 1	£19.95
2710 Mounting Rings	60p
2711 Hardware Sets	70p
2714 Mini DPDT Switch	£4.20
2715 3 Way Switch	£4.70
2716 5 Way Switch	£6.80
2717 250K Pot	£2.10
2718 500K Pot	£2.10
2721 Brass Nut for Fender Style Guitars	£2.10
2722 Brass Nut for Fender Style Bases	£2.10
2723 Brass Nut for Gibson Style Guitars	£2.10

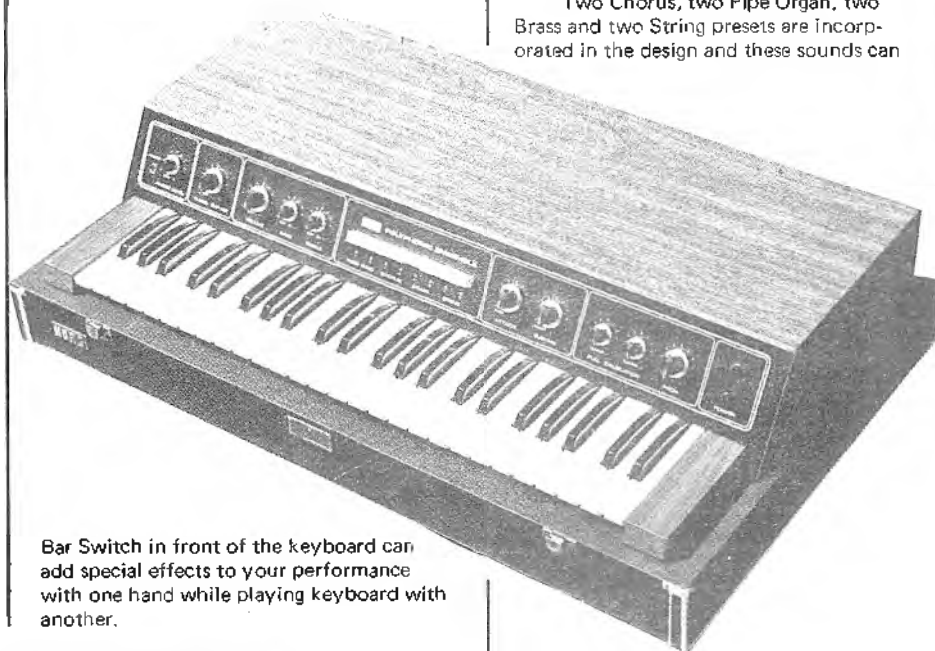
Prices are inclusive of V.A.T. at 12½%.

# Synths for all the music you'll ever need

Korg is the name that is about to set the synthesizer world on fire. Korg is rapidly becoming a world-beater in the synthesizer industry and this year's new models are more exciting than ever. Rose-Morris has promised to bring to musicians everywhere the full range of Korg products.

Whether you want polyphonic or mono synths, VCO's or envelope followers, Korg offers everything you need and more. Take the fabulous **PS3300** polyphonic synth. This dream machine is one of the most impressive synths you can buy anywhere. Where else can you find an instrument which has three polyphonic systems, signal mixers, and controls that produce thousands of sounds from fuzz guitar to barroom piano.

The **PS3100** is a younger brother of the **PS3300** and its brilliant layout and design makes it a joy to play on stage and in the studio. Imagine having virtually 48 synthesizers at your control on one keyboard enabling you to play chords and melody lines at the same time.



Bar Switch in front of the keyboard can add special effects to your performance with one hand while playing keyboard with another.

a volume pedal and use a bass amp.

For a new breed of synthesizer check over the **Korg Polyphonic Ensemble 1000**. Here you have individual tuning for each note and a mix of synthesizer and piano qualities. Preset controls give you String, Pipe Organ, Brass, Electric Piano, Harpsichord and Piano sounds at the touch of a button.

A whole new world of orchestral sound opens up with the fabulous **Korg Polyphonic Ensemble "Orchestra" 2000**. After much experimentation and research, Korg have come up with yet another winner in the world of string synths. Even the most demanding keyboard player will sit up and take notice of the outstanding features of the **Orchestra 2000**.

Two Chorus, two Pipe Organ, two Brass and two String presets are incorporated in the design and these sounds can

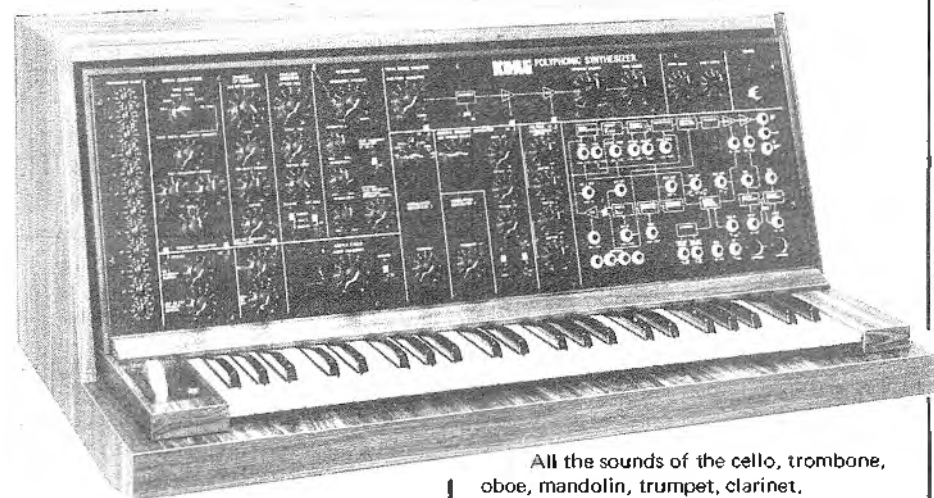
be further enhanced by the bass and treble controls. Attack and sustain are also controllable and a master phasing control adds that extra "magic".



Whether you're a professional keyboard wizard or a player just entering the world of electronic keyboard instruments, you will appreciate the versatility and compactness of the **Micro-Preset M-500**. All the controls are laid out on a raised panel to the left of the keyboard so it's easier than ever to play. Thanks to advanced integrated circuit technology, the **M-500** is one of the lightest and most compact pre-set synths.

The pre-sets which include Trumpet, Violin, Recorder, Whistle, Flute, Cello, Oboe, Clarinet and a whole lot more, are linked to five different footages from 2' to 32'. Other controls provided include Vibrato, Repeat, Portamento Modulation Speed and Depth, Pitch, Attack and Sustain. In fact, all you would expect from a much larger synthesizer. Like the rest of the Korg range, it only needs tuning once after being switched on — the pitch stays accurate to the end.

A Rose-Morris Advertising Feature



For a wolf in sheep's clothing, look no further than the **800DV**. This is basically two synthesizers in one! This amazing machine has two completely independent Hi/Low Traveler filters twin voltage controlled oscillators and twin envelope generators. Each function on the upper section can be operated completely independently from the lower section.

Appearances can also be deceptive with the **Korg Mini 700S** which is reckoned to be the ultimate in note stability with more than enough effects and controls to give the musician an entire spectrum of sounds. The **700S** quite simply gives you the sound of any instrument you desire.

Another top Korg model that is always in tune is the **Korg Preset**. This wonder machine takes the sounds of everyday instruments and introduces them to your audience at the touch of a button. A Touch

All the sounds of the cello, trombone, oboe, mandolin, trumpet, clarinet, accordion and many more instruments are yours with the **Korg Preset**.

Want high performance for a low price? Look no further than the **Korg 770** synthesizer. Two built-in oscillators give you not only two different tone colours simultaneously but also two sounds with different intervals and three to five parallel tone colours. The **770** eliminates the embarrassment of an out-of-tune performance. Although most synthesizers are notorious for going out of tune, the **Korg 770** gives you perfect tuning as soon as it is turned on. Plug in any mike, guitar, piano or second synthesizer to the **770** for added versatility.

If you're looking for a strong synth bass line, the **Synthe-Bass** is the one to go for. This Korg product gives specially tailored sounds ideal for bass synthesis. If you want even more sounds, just plug in

# 17 Snares to Choose From

To drummers the world over, the ultimate drum kit means one thing — Ludwig. But to many drummers, a dream kit may still be only a dream. If you can't make the step up to a Ludwig kit, the next best thing is to consider the 17 alternatives available — the range of Ludwig snare drums.

Because Ludwig realise that the snare drum is the basis of a good sounding kit, as much care and craftsmanship goes into the making of a Ludwig snare drum as a complete Ludwig drum kit. The range of Ludwig snare drums is extensive; from the Supraphonic, probably the most widely used, to the Supersensitive 'Black Beauty', probably the most exclusive. The full range includes drums in 3", 5" and 6½" depths, in Chrome, Vistalite, six-ply wood and seamless brass shells, and in a multitude of finishes.

Your nearest Ludwig Percussion Centre will be able to help you in your choice of Ludwig snare drums, and with a range of 17 drums to choose from, every drummer will find one to suit his style and pocket.

Eventually, of course, you'll own the ultimate drum kit, but in the meantime make sure you play the ultimate snare drum — Ludwig.

## 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  
031-558-5748

### ENGLAND

**Drumland**  
Dartford  
32-24449

**Simon King**  
Tollworth  
330 3709

**South East Ent.**  
Lewisham  
690 2203

**Gig Sounds**  
Mitcham  
769-5681

**Blanks**  
London  
01-624 1280

**Percussion Services**  
London  
01-607 8383

**Sounds**  
London  
01-437 2458

**Music City**  
London  
01-439 3866

**Charles Foote**  
London  
01-437 1811

**Buzz Music**  
Hereford  
0432-701054

**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**  
Leytonstone  
539-0288/9

**Rushworth & Drepper**  
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**  
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0483-38212

**Rose-Morris**  
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**Bennetts**  
Portsmouth  
0705-61730

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

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061-236-4843

**Mamelok**  
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061-834 1946

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0553-4026

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0222-20828

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## 6 Ply Kits



Anyone who has held a pair of drum sticks seriously will know the name "Ludwig". To many top drummers, Ludwig is the only equipment they will consider using. Now more drummers will be changing to Ludwig thanks to the startling new range of drums being made. At the moment the exciting news from Ludwig is the advent of the six-ply kit.

Imagine a bigger and warmer sound for the same price as a conventional 3-ply kit and you'll have some idea of how Ludwig research has worked to the advantage of the musician.

The new 6-ply kits are produced by a futuristic method of manufacture called the "di-electric" process. This arranges the seams of the drum in a staggered pattern and then bonds the shells together so the seams become invisible. This process gives you drums which are stronger, virtually warp-proof, and giving hitherto unheard depth and tone.

Not only do you get an improvement in sound, but the Ludwig six-ply kits are practically roadie-proof, being able to withstand all the pressures and dangers of touring with good gear.

Take a look at the picture of the 2001P Octa-Plus natural maple kit and you can see how Ludwig six-ply kits give you beauty in looks as well as sound. These drums are the ideal tool for both studio and stage drummers; a kit designed by drummers for drummers.

To: Rose-Morris & Co., 32/34 Gordon House Road, London NW5 1NE, 01-267 5151  
Please send me details on: (Please tick box)

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# HONKY-TONK MUSIC

# CRUMAR

# ORGANIZER-B

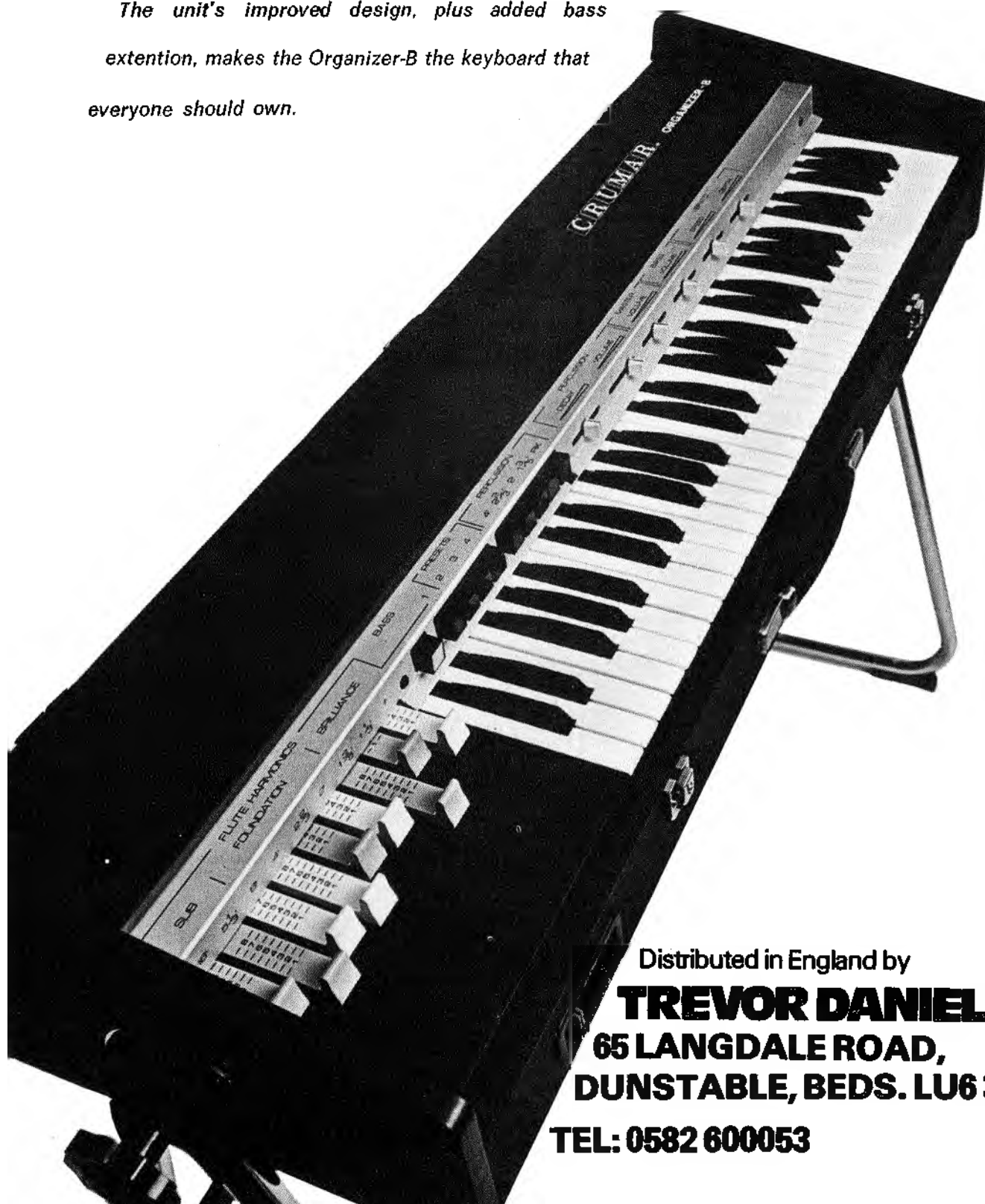
*CRUMAR's Organizer-B Organ - the portable organ  
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*Kgs. It features nine individual drawbars, electroni-  
cally produced tone wheel generation, lighted tabs,*

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per night, 6 nights a week, month in and month out. I've been doing it for years. There are thousand upon thousand of bands playing all over the Continent and Scandinavia — and all over the world, for that matter — who do the same. And a very large proportion of them hold a very high standard indeed.

It necessitates having a repertoire of over 100 songs covering a broad range of styles. Those of use old enough to remember can speak of the early 60's in Germany, when the Beatles, among others, played *7 and 8 hours a night* in the Hamburg Star Club! "Nearly impossible", my ass! If more English bands were prepared to play music that people can dance to, and to *work*, the disc jockeys would have a bit more competition!

Come on English bands, get your fingers out, get a decent repertoire together, and give the DJ's a run for their money! It's up to you, you know. Sure it's hard work, but it pays off.  
Paul Guy,  
Stockholm,  
Sweden.

## Fender Buzz

Dear Sir: Firstly, thanks for the best music publication in Britain. Secondly I have a Dhama sound phaser that is 18 months old; it has given nothing but trouble in that it has failed to work or works very badly. I also have a Grant fuzzbox that although sounds good when switched on, makes the guitar sound like the lead's made out of cotton wool when switched off, also adding an unnerving amount of hiss.

Is the Dhama sound phaser a dud or is it just a bad quality phaser? Taking into consideration that it has been back to the shop three times. If it is not a dud it will lead me to the conclusion that if you want reliable effects pedals that don't effect noise levels, hiss and sound quality you have to pay for them (i.e. MXR, Morley and such like). I also have a Fender combo that is giving out a large buzz that comes through even when playing loud. The buzzing decreases slightly when I touch any metal part, directly connected to the electrics on my guitar. Has the screening or

earth gone somewhere in my set-up if so is it dangerous?

David Marsden,  
Fomley, Merseyside.

**Ken Dibble replies:** I am afraid that I do not have personal knowledge of either the phaser or the fuzz box you have, but it sounds very much as if there is a fault with the latter. When switched off, most fuzz boxes simply bypass the electronics, giving what should be a clean feed direct to the amplifier. This is obviously not happening in your unit and I suggest that you have the unit checked over. If you are not happy about the ability of your local dealer to do this, try sending the unit back to the manufacturers or import agents for service — but send it by recorded delivery so that you have a record of its being delivered to them — just as a safety precaution to avoid any arguments.

You certainly should not have to use the very expensive, professional effects units in order to get a reasonable standard of performance or reliability. Any item you buy must under the law, be fit for the purpose for which it is sold. If it is not, then you can demand your money back.

Concerning the buzzing from your Fender combo, this does sound to me like an earthing problem — in which case it could indeed be dangerous and you should get a competent service engineer to locate the cause of trouble and rectify it. Fender amps do have a rather odd earth polarity arrangement with a switch at the back of the amp. This connects the chassis — via a high voltage capacitor — to either the live or neutral side of the mains and is intended to provide an AC path when the amp is used on 110v. un-earthed supplies in the States. I have known this arrangement give trouble of the type you describe in the past.

Another possibility if this buzzing is only in evidence when your effects units are in circuit, would be the faulty fuzz box. If it is not bypassing the signal, it might also not be bypassing the earth to your guitar. Also, check your guitar lead, and the interconnecting leads between your effects units and the amp.

I hope that this will be of some help, but if you are not a competent engineer yourself, I strongly recommend that you take your gear to someone who is, and have the various jobs done properly — in your own interests.



Beatles-slaving at the Star Club?



**Basic II** are a five-piece Liverpool rock outfit with an average age of only 16. Their music ranges from Black Sabbath heavy metal, through to Pink Floyd and contemporary jazz. Material is all original, the line up being Norman Fisher-Jones (lead, bass and vocals), Jiimi Gardner (keyboards, synth, bass, vocals), John Smith (drums), Abo Gray (acoustic and rhythm guitars), Mark Zio-Sephton (vocals) . . . **Rednite** are a hard working London-based band who since their formation at the beginning of

the year have done literally hundreds of gigs. They play Little Feat-influenced numbers and are certainly worth catching live . . . **Jason Caress** describe themselves as the first London/continental band to play New Wave "energy" music, which is totally original . . . budding jazz musicians would do well to note that a two week comprehensive jazz course takes place from July 31-August 11 at Pimlico School in London. The course, organised by the **Jazz Centre Society**, offers students the chance to develop their jazz playing under the guidance of well-known professional musicians. Tutors include Roy Babbington (bass), Alan Wakeman (saxes) and Gary Boyle (guitar), the fees being £35 for under-21's and £40 for over-21's. Further details from Barbara Ind at the JCS office at Third Floor, 35 Great Russell Street, London WC1.



Gary Boyle



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ADDRESS \_\_\_\_\_

*What was your first guitar?*

I had a Stella that I paid 14 dollars for. I don't really remember what happened to that guitar, it was such a cheap instrument. But I was so glad to get it.

*You went into R&B rather than jazz originally?*

R&B was the natural music for the environment that I was in. R&B and pop. Singing was the big thing until my late teens. I only had a guitar in my hand because it was cute and I had pretty good ears. I could play chords but nothing serious. I wasn't a threat to nobody.

*What brought you out of R&B into jazz?*

I hired a guy in my band once to replace a saxophone player and unfortunately he didn't play anything that we knew anything about. He was always playing something that sounded so completely different to what we were playing. He was playing be-bop and I didn't know it. I never paid any attention to be-bop music. I really love it and in my concerts I just add my total experience and everything I know I bring to my music.

*Who influenced you to get into jazz?*

It was a guy in my band. He reaffirmed certain things I was feeling. When I was a kid no one gave us any inclinations about distinctions of music. I guess it was because it was a natural thing for black people to play blues or R&B, which was called race music in those days, so nobody bothered to label the music; it was already labelled by my colour.

Later, when be-bop became popular, it became a different thing altogether. Modern jazz started picking up and then they started adding the title. Then when this guy that I hired had me listen to a Charlie Parker album I had never heard anybody speak like that. It was like his horn was a voice. And I thought that was the most incredible thing that I'd ever heard.

*What album was that?*

It was called *Charlie Parker with the Strings*. "Just Friends" was the song. I suddenly wanted to practise my guitar for the first time. Before that it was a matter of hearing a song and being able to play it. I could hear a simple song just one time and I could play it. But you couldn't

*George Benson has popularized jazz. While bringing it to the concert stage, he has often been criticised for his slick, MOR approach to a form of music that has seldom found its way out of the small clubs. But despite his method, he remains a dedicated guitarist who has forged a style of jazz guitar that has become a strong influence on newly emerged musicians.*

*He began playing the guitar at eight and soon began playing the music of his environment of Pittsburgh, Pennsylvania, rhythm and blues. But he was initially recognised for the quality of his voice. It wasn't until he began a progression to jazz that he became a serious guitarist. He has also developed a scat-singing style that has brought him wide acclaim.*

*Benson has recorded 21 albums with his "Breezin'" being the most popular. The popularity has taken him from the clubs known to jazz fans, to a string of sold-out nights at the Albert Hall and an audience that ranges the music spectrum.*

by Bill Stephen

# Breezin' with Benson



play "Just Friends" even if you heard it a thousand times.

**Do you feel playing jazz has helped you musically?**

It helped me to hone in on my rhythm. It helped me to hone in on harmonics. Now I know a little bit about harmonics. Before I was just so basic that it hurt. I didn't know anymore than the next man knew about harmonics. I was like a first grade student.

**How did your technique develop out of that?**

You have to have a technique to play jazz music. One tune may be a medium-bounce thing the next tune may be a high tempo that needs giant steps. Brother you better be a tenth-grade student to know something about taking some giant steps, and hope that you can still make it good.

**Do you find it difficult to work with time?**

I've never had any problems with time, I've always been pretty good with rhythm. When I first started going to jam sessions that's how they used to get rid of you. They would play a tune in up-tempo.

**Did you play at 'cut' sessions (jams where musicians tried to outplay each other for the top position)?**

Oh yeah.

**They're pretty much obsolete now, aren't they?**

Well, yeah, but that's why a city like New York is so important because a lot of that goes on. That is, they don't cut each other so much now they just get together and play. In the olden days... I mean the 30's, 40's and 50's, they used to get together and if a guy like Charlie Parker walked in you knew it was all over. He might have been unknown at the time and gone right in and cut the top man down to size. Those things used to go on quite regular. The unions don't allow that now. Isn't that something? People talk about environment. Environment means a lot. It shapes us. All music talks about is lifestyles. Rock talks about the music in the 60's, be-bop talks about life in the 50's and dixieland music about the 20's and 30's.

**Do you think your music talks about the 70's?**

Yes. It talks somewhat because it's beginning to change. The relationship between the artist and the public. They know that music is being mis-labelled. It's like going into a cabinet and getting aspirins and ending up with something else.

**Do you think jazz is a bad label?**

A lot of the music labelled jazz is not jazz. Unfortunately the critics didn't inform the public. They put those bad labels on and now people don't want those labels on.

**How did you develop your scat-singing style?**

Surprisingly enough there are a lot of musicians that do it, but they don't do it

out in the open. They don't have a mike up to their mouth. If you notice, you hear a cat playing a piano and he's scatting; you can hear Erroll Garner just as clear as day grunting in the background. Some cats don't have the range in their voice to keep along with the range of their instruments. Fortunately I can do it. It comes from the same brain so there is no problem.

It can be developed. First of all, you've got to remember that all of it comes out of the same brain. If you can play something, your voice — depending on its range (and you have to have voice lessons to be able to sing in tune) — can do it. Plus you practise some rhythm and you got most of it down. If you can make your guitar say it, it's just a matter of honing in on your voice.

**How do you feel you can expand your particular style?**

There's always something new to do. If you can't hear it, invent it yourself. People are always looking for new leaders.

**Do you think you've popularised jazz?**

I've brought attention to jazz people. And that would depend on who's playing what and whether they take advantage of it or not. Certainly people's ears are open now. They say "Hey there's one boy, let me see if there's anyone else."

**Your live performances are heavily jazz orientated. Do you try to educate your audiences who may be used only to your more popular pieces?**

Well I play it because I have so many albums out doing all kinds of things and I try to put a little bit of each into the show. Part of my audience may have heard me play something five years ago and they may not want to hear anything but that one song, so at least they can go out of there saying I heard one cut from that album. Unfortunately, when you have 21 albums out you can't play all that material in an hour and a half.

**How do you decide how to pace your set?**

I don't plan anything. I have a pretty good idea what I want to do; I just don't have any order together. Unless I find something that works in a particular theatre; I try to stay close to that format because it works. But I never know until I get out and feel the vibes of the public. I never know what the balance is of an audience. I do it on a number to number basis because it really works for me. You can start a downward trend in a concert and not be able to recover from it simply because you've designed it from the start and didn't know what you were doing.

I have people from 8 to 80 going to my show so if I design a show that leans too much to the young people the older people are unhappy. First of all I don't want to come out and shock anybody with the first two tunes.

**On stage how much of your work is improvisation and how much is planned**



**out because jazz is highly based on improvisation and it's a pretty slick show.**

Keep in mind the approach of my band; once a tune becomes a classic (i.e. 'On Broadway', 'Nature Boy') it can't be messed with. I learned that from the masters.

**But within that classic frame you should be able to do a lot of improvisation, especially in your solo work.**

Yeah, as long as it doesn't extend the tune until it becomes boring. If you noticed, our tunes are so simply based in structures, opposed to a lot of groups that go home and practise those long played out numbers. The guitar players do their whole number and that is not jazz music. Jazz music is improvised on bar one. That's why you very seldom find anybody playing the melody with me, because I want it open to play by myself. I want the option to be able to change it around in time. That way we can play for 15 years out there on the road, without getting boring. Much of my band has been with me for five years and every night is fresh and new.

**How do you compare jazz musicians to rock musicians in terms of their musical abilities?**

Well I think we're all after the same thing. One demands different things from us. In rock music there are certain laws rock players are expected to keep; volume and distortion being part of it. Some of them are resolved to doing that and some of them grow out of it. When they get older they begin to feel different about it and to discover other things. It happened with me. When I was doing R&B I played loud and a lot of times very wrong. I played mostly by instinct and that's alright. But when you mature you want to feel, within yourself, I believe, you're maturing in age and musically too.

**Do you feel it takes more to be a jazz musician than it does to be a rock musician?**

Well it takes more knowledge of harmony and theory, and you've got to have a lot more rhythm. You've got to

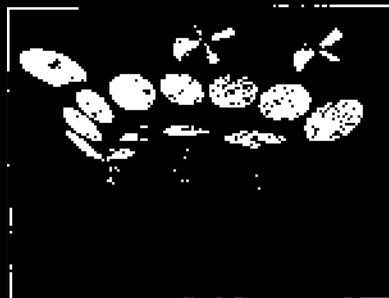
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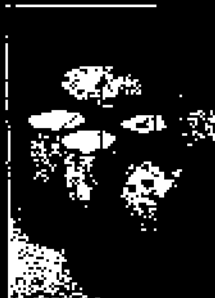
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***That has a lot to do with manipulating time (Rubato), doesn't it?***

Yeah. When you've got a certain amount of bars and a certain amount of chord changes within those bars, there's no way to get around it and you're out there by yourself improvising and the whole audience with the big ears, the real jazz fans, are criticising you and they know you did not make it, so goes you. They put you in the lower echelon.

***Do you read music?***

No, I'm not a reader. I never had any opportunity to read music.

***Do you practise often?***

Well, I'm fortunate because my hobby is also my profession. I have a guitar in my hand at every opportunity — when I'm on the telephone, as I'm talking to you — I often forget that I'm playing.

***Did you study theory?***

No. But I can hear an orchestra and I could write for a hundred piece orchestra, 'cause that's mathematics.

***Who arranges the pieces for the band?***

I mostly do them. The basic five-piece arrangements.

***Who beyond Charlie Parker really influenced you?***

I was influenced very early but I didn't make a distinction between the sounds. I didn't know Charlie Christian was playing jazz music, I just knew he was a great player. I loved Charlie Christian. The first music I ever heard in my life was him with Benny Goodman. I was four years old.

***What instruments do you use now?***

I use an Ibanez which I feel will become a very important instrument. It's been designed to my specifications. It's very small and it's something I've been wanting all my life. Nobody would make a guitar like this so I decided if anybody asked me to design a guitar it would be small and compact. Twenty years later somebody finally asked me.

I play it through a Polytone amplifier. It's about 180 watts but I don't like too much power. It reproduces the sound of my guitar probably as well as any other amplifier. I used the same amp on my "Breezin'" album and all my Warner Brothers records have been made with Polytone amplifiers.

***What other instruments did you use?***

Before the Ibanez I used D'Angelicos but I used all kinds of instruments at various times — Guilds, Gibsons and such.

***In your live performances you play a heavier rock sound, how do you adapt your jazz guitar to it?***

Well, first of all, I don't want to sound like everyone else. I want my own sound and that's the idea of this box (Ibanez) that you can play both jazz and rock.



***How do you adapt your sound to play such places as the Albert Hall?***

The Ibanez guitar is designed for large halls. A regular F-hole guitar would give you a humming fit. It wouldn't for me because I've learned to control it but most guys would have trouble with it. My band plays with high energy. Not the regular high energy stuff because I don't want to play to that degree; it turns off a lot of people. But with an acoustic guitar you would be a humming sensation up there. This guitar was adapted for big hall sound. It projects much further than other guitars but the tone stays more constant. With an acoustic guitar, the further you get away from the amp the thinner it starts sounding.

This one doesn't come together until you get a few feet away from the amp and then I can feel this guitar much better. Even though the larger guitar has a much broader frequency response which is good for recording, on stage you can hear this guitar clear as a bell.

***What have you done with this guitar besides significantly decrease the size of the body?***

First of all I made it so it wouldn't fall apart in my hand and that's a blessing. Guys won't have to go running to the shop all the time. You don't need any screwdrivers for adjusting the heads and I have an adjustable back pick-up. I've developed a rubber edged volume knob to easily manipulate for vibrato. I have no pedals, special effects or gimmicks on stage. But anyone can use all that stuff with this and it will work perfectly.

I've also designed it so you can adjust the action on the top or bottom three strings separately for stiffer or lighter

action without changing the strings. A particular hall you're playing at may turn your strings to rubber. Sometimes a hall makes it difficult for me to feel the strings and I need stiffer action.

***The hall does that to your strings?***

Yeah, the environment of the hall changes it. The way the sound comes back has an effect on the guitar. I use D'arcos.

***What would you suggest musicians who would like to play like George Benson do?***

They should get into an environment where they're around players who are doing what they want to do. They should get as close to that as they can because they will learn so much more — they will learn all the things that would otherwise take them years to learn. At least they will learn the concepts and once you've got the concepts it's just a matter of sitting down and playing. When I wanted to play I started hanging out with Wes Montgomery, Kenny Burrell and Pat Martino. Martino was just a baby. We all came up together, he was younger than me. He was just a kid but he could out-play all of us.

***You can't go to a small club and hang out with George Benson***

I admit that. I'm not saying it's easy. It wasn't easy for me to hang out with Wes and those guys either. Especially when they knew that I could get on the bandstand and make them sound funny even though I couldn't play as well as they could. I had a lot more energy than they had and much quicker fingers. I was only 20 and Pat Martino was only 17 and he was quicker than all of us. He could make a man sound very slow on the guitar.

# PORTRAIT OF JACO

Jaco Pastorius, at 26, has developed bass playing capabilities putting him at the top of the technical ladder. He combines an R&B feel with strict jazz lines to produce a style like none other. Using a distinctive muted sound and employing harmonics in a nouveau fashion, he is in constant demand as a session player.

He was born in Norristown, Pennsylvania, and moved to Florida at age 7. Just a few years later he picked up the bass and as he himself puts it, "Hasn't been out of work since."

Pastorius is a reluctant interviewee. He has done very few in his career and takes no pleasure in them. But once talking he is a fountain of knowledge and while his replies are usually short, they are always to the point.

In the midst of working on a new album with Weather Report, the bassist gave a few minutes of his time. "I don't usually do interviews but since you're here, I may as well" was his initial comment and after much self-control this interviewer decided to remain. The following is what transpired.

*Were you involved in high school bands?*

I was never in a school band but lots of high school bands with friends, just R&B bands and dance bands. We'd play at parties and night clubs. I started playing at night clubs on bass just before I turned 16. I kept doing that until almost joining Weather Report.

I did all my learning in the clubs. Playing eight sets a night. It was real killer stuff; going in at 9pm and leaving at 6.30 in the morning without days off. Doing that for a year and a half is always fun.

**Did you ever take any lessons?**

No. I just kept my ears open. I heard good music and that's about it. I've heard music all my life. My father was a singer, and he's still working, but my family broke up when I was young. I heard my father when I was a young baby so it sort of genetically stuck.

**Can you read music?**

Yeah, self-taught. It's easy, all you've got to do is be offered a show gig when you don't know how to read anything and that's the only way you can make money. Then you learn how to read overnight.



You concentrate and learn by ear and trial and error. That's how I learnt.

**Was Weather Report the first real professional assignment you had?**

Oh, no, I've done tons of professional things. But this is the first notoriety with a jazz band, or whatever you call this kind of music. I wasn't going to come out with anybody playing records until I did something on my own. I made my solo record (*Jaco Pastorius*) and then I decided I'd come out and work.

I've done lots of gigs. I played with Wayne Cochran and the C.C. Riders for a long time but never recorded with him, and I played with Paul Bley. In Fort Lauderdale, Miami, I played with; Temptations, Nancy Wilson, Johnny Carson, Bob Hope, anybody, comedians, show gigs. That's where I learned all my reading, in show gigs. I just went out on all gigs.

*Have you always played a Fender?*

Yes, I have a '62 fretless bass and the one with frets is a '60. I took out the frets myself and refinished it. I have a few other basses for practising and stuff. A lot of times these will be on the road or maybe they'll be over in Europe so you've got to have an extra one if you want to play at home.

*What do you use at home?*

Just Jazz basses. I don't like Precisions.

**They're too muddy plus they don't have that back pick-up which you need to get the sound**

**Have you changed the basses in any other way?**

No, they're exactly the same. My fretted bass that I play on stage has three pots in it; one for each pick-up and then a tone control. But it's one of those basses that had procenteric knobs. Really old Fender Jazz basses had just two knobs and outside of each knob was a tone control.

That's the way that used to be, but I just put on regular stock knobs because they're louder; those old pots were too soft. They sound great in the studio but when you're playing on stage I just had to change the settings too much every time.

I was usually in groups where we did lots of original material or I was doing arranging or something. You get a real good workout; it's another way of going to school. A lot of kids went to school, I just went to clubs. I hit the street and that was it.

**What kind of amplifier do you use?**

I use an old Acoustic 360. One of them is the very first one I bought just about ten years ago. I use two bottoms, both stock.

*Have you ever tried an Alembic bass?*

I don't have any time to play other basses. When I'm not working I've got to go home, I've got kids at home. Last year I was on the road nine months and the year before that I was out ten months. So it doesn't give you much time for listening to stuff and checking things out. I'm just more or less doing the same thing I was doing eight years ago; that's essentially what I'm doing. That's probably about the last time I bought a record; eight years ago.

Do you listen to your record (Jaco Pastorius) often?

No. never.

*It's good.*

Oh, I know it's good. I'm sure it hasn't changed since I last heard it. If there were some new notes on there or something I'd want to check it out. No, it's real good music.

*Do you have any plans for a new album?*

Possibly, yeah. I had no plans at all for the first album, it was just something I felt like doing then and I just did it. I felt the time was right to put out some

music like that. I might have to do one again around this fall, do another solo record.

I have a lot of music and I'd like to record it while it's still sort of fresh.

I've got music dating back so many years that still sounds good but I like to come up with new stuff too and then you keep writing new stuff and you have a ton of music that never gets played.

It doesn't really make that much sense. It's like you do so much work and there's a cause but no effect it doesn't go out and people don't hear it. I don't write the music for myself, I write it to get played. But this year I think I'll have some time in the fall to do a record. It's going to be nice.

*Do you use the Acoustic 360 in the studio?*

Yes, mostly direct. On my solo record I used the Acoustic and direct. On most other records it's mainly direct.

*Do you aim for a certain sound when you play live?*

Yeah, I turn the bass on the amp all the way up because I only use the back pick-up on the bass. I never use the bass pick-up on the front so I have to compensate quite a bit with the amp. I have a sound that's like an R&B-type sound which is real punchy and hits. An Acoustic never distorts which is why I like to use it. It really just comes out. I've gone through a direct box through the PA and I've distorted the whole PA. But the Acoustic can take it, it can take anything.

*Where do you set the volume?*

I don't play very loud. I just play about 2½ or 3 on stage and that's the same volume I play with everybody.

*Do you use pedals and effects?*

No. Last year I started experimenting with something on stage. A couple of times on records I've played the bass twice; I play it and then I play it again and get it to sound like two basses. It almost sounds like it's being phased but it ain't, it's like natural phasing. On stage sometimes I want to get that sound so I've had a little digital delay hooked up so I can get that.

You have the echo through one amp and then have the straight amp. I like to use that when I'm soloing because it really puts a nice ambience on. I don't use it for much of anything but I just like having it. I like it on harmonics.

*What inspired you to start working with harmonics?*

I've always done it, nothing inspired me at all. When I first started playing the bass I did it. In fact someone played me a tape recently of what I was playing eight, nine years ago and it sounded like now. All the harmonics were there and everything. I just thought they were all part of the instrument. I didn't question it because I had no one to judge by. There were no records I could turn on and hear someone doing that. So I just tuned up and 'Hey, man, that sounds good.' So I hit that and there were some notes and hit a bass note here and hit a couple of those (harmonics) and got some chords going. It was that simple.

*Could you explain in theory what you're doing in 'Portrait of Tracy'?*

Well, the main melody is in C. The first thing I did was, I was holding down a C with my first finger and with my third and fourth I'm getting a G note on the D string which produces a D9 up top and on the G string you're getting a 3rd which gives you a major 7th and then you come down and get the A on the D string.

It's very tight but it's all right there. Everything but the Eb has a natural harmonic; you have to press down on the A string at the B note (second fret) and then you have to touch the string on top of the Eb.

If you don't have big hands you won't get this. You touch the string on top of the Eb or it's really a D sharp and you get the D sharp on top of the B. So it's like you're using your first finger as a capo. So then you get the D sharp and pick the open F sharp and B right from the D and the G string and you hit a low E and you also touch it a bit and you get a G sharp or a minor 3rd. So you've got the five, the nine, the three on the bottom, and a major 7th in the middle. And you've got the bass note because you're hitting the bass note and the G sharp.

I had never thought about doing this. For instance I was monkeying around with 'Portrait of Tracy' for years and then if I wanted more notes it was just common sense.

I said, 'If I've got an open A string and if I hit the harmonic on top and get a C sharp, if I press it down on the B fret I've got to get one on D sharp. I mean

it's that simple, that theory has to continue to work. And on the very end of the song I put my finger down and play F sharp and B and E and hit my open E and then I press down my other finger and I've got a high G sharp, D sharp and A sharp on the bottom which gives you a major 7th flat five chord. So it's just stuff like that. I mean all that stuff is right on the bass, it's just a standard tuned bass.

*Have you ever done anything with other tunings?*

A couple of times, yeah. I've got some original music written like that. I'm saving that stuff, that stuff is really out. It sounds really good, too. I have some really out sounding stuff at home. But there's enough happening with regular tuning, that's rough enough.

*What kind of strings do you use?*

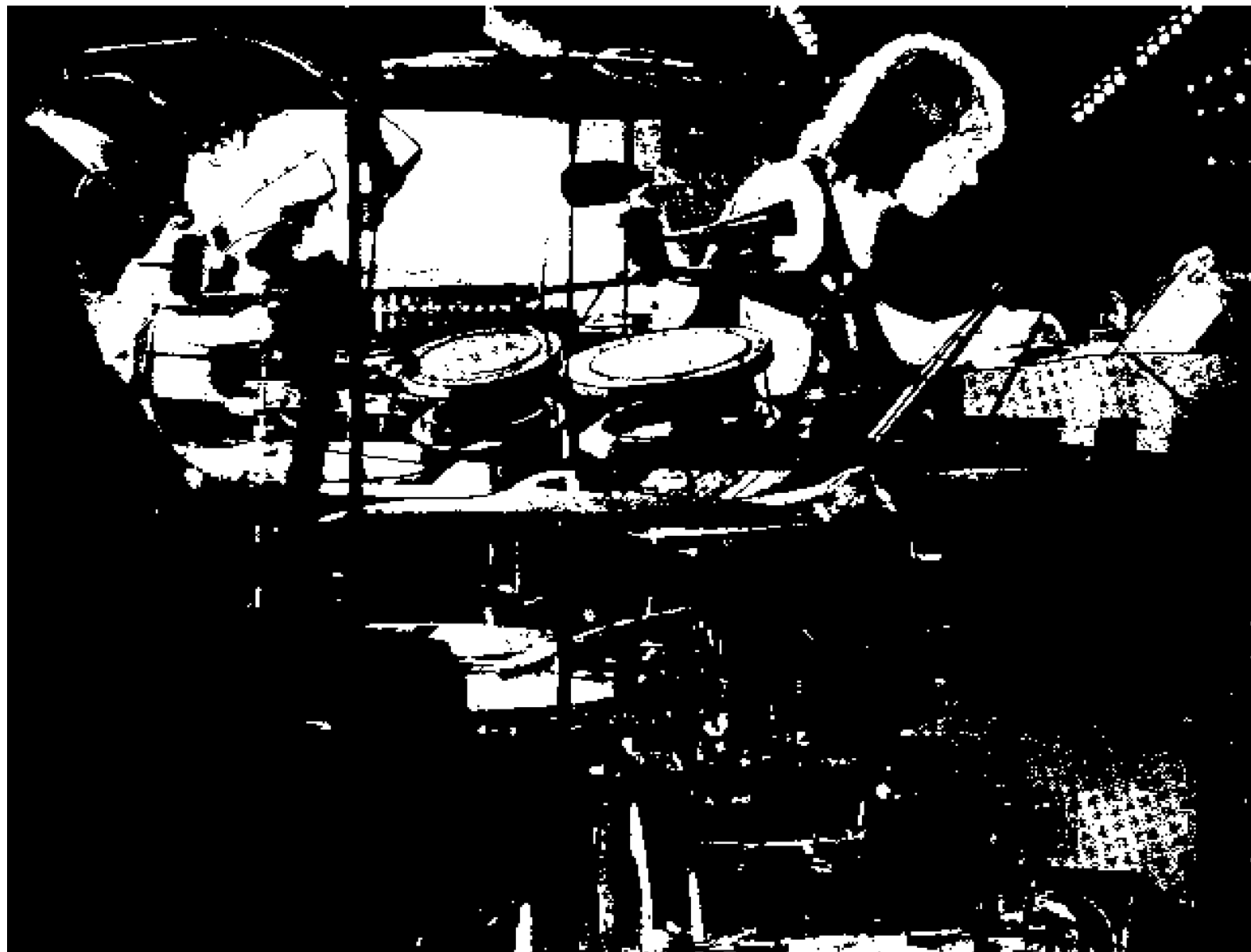
Rotosounds.

*Have you tried Fender strings?*

Oh well of course I had to when I started because that's all they were really making at the time. To me Rotosound has what no other string has and that's pure harmonics and the closest to playing harmonics in tune. All harmonics are flat on the bass and the higher you play a note the flatter they get. So when you play something like 'Portrait of Tracy' I actually tuned the G string a little sharp when I recorded and the D string a little sharp.

Because I was playing most of the bass notes on the E string and then a couple on the A string, the top two strings had nothing but harmonics so I could tune them up sharper. In that way





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I get closer to the actual intonation you want to hear. But on stage I don't have time to do that so I won't be hitting too many harmonic chords and stuff. If you've got brand new strings it comes out pretty close.

*When you first started playing did you ever use a pick?*

No, I used my thumb first. I used my thumb for about a month and then I went right to my fingers.

*How did your right-hand technique develop?*

I never practiced with my right hand at all. It just naturally goes. I use my first two fingers to pick and I use the other two fingers to mute as well as my thumb if I'm jumping around. The hardest thing to do is just to get the strings I'm not playing to shut up. If you've ever heard Don Lee or any of that stuff you can see I've put in my time because I don't think I make too much noise.

*What do you think of someone like Stanley Clarke?*

I really don't know his music. I don't know anybody's music. I don't know anybody's music since eight years ago, I don't know people at all. I didn't know Weather Report's music before I joined them. Because I just didn't have the opportunity to hear it and I didn't have the time.

*What goes through you when you're playing a solo?*

I don't really think of scales. There are certain things you have to learn all your life and apply them. I never think of scales I just think of the chords. If I'm in Ab7 I think Ab and F sharp, Gb actually, and C. I think tri-tone a lot depending if they're dominant chords because those are your key notes. That's about it. Outside of that I just think melodically.

*Charlie Parker was your main influence?*

I wouldn't say he's my main influence but he's definitely a big influence on me; he definitely can play some great lines. I really like the way Charlie Parker plays. Herbie (Hancock) is a big influence on me, James Brown, people like that. The people I said before; the Beatles, Sinatra.

Sinatra is a killer. He was a real big influence on me, because that tone of his voice is the same range I play in. It's a sort of baritone tenor sort of a range. I'll just be sort of playing in there; when I get in that range I'm just really singing and concentrating on the quality of each note. That's what's hard. No matter how fast I'm playing I'm thinking of each note as it goes by and really trying to get the most out of each note.

*Is that what you practice?*

Well, through the years you've got to practice all sorts of scales. But mostly practice triadic stuff. This is what bass players haven't practiced therefore it sounds like I'm doing something sort of new. Which in fact it probably is but I just know because I would hear piano players warm up or you hear piano players take a solo or anything and they're just really playing triadically. And that's the hardest thing to do on the bass; play in triads. To play fast in triads. Because it's so physically hard to do.

So you work in triads scale wise. You practice dominant triads or major 7th triads. You can just run through any diatonic scale just running arpeggios off every chord member of that scale. That's some of the hardest work that you're going to get on the bass and just the different ways you can do it. Going across all four strings and trying to keep your hand in one position as long as possible and of course then knowing the best place to change over. There aren't any books you can buy to learn how to do that.

It's physically hard and when you get the strength you can start to play. That's what's so good about playing every night. For years when I put in all these ridiculous hours where I'd hate to think I'd ever have to do that again but if I hadn't done that I definitely wouldn't be able to do what I'm up to. You've got to have that strength and you don't get that practicing at home. That's just on the job training.

And then you think about it - I went all the way until after playing with Cochran which was six years ago and I quit Wayne's band and I had never practiced. And I was already playing all sorts of stuff. I have never practiced. Maybe right at first trying to figure out what the notes are on the bass. Outside of that I had never really practiced; outside of knowing where the notes were and playing in different keys. That was it, man, I just went out and worked. And that didn't take but a couple of days to do that; all you have to do is think mathematically. Everyone is always trying to think too musically. You've got to get the basic mathematics down and then you can go anywhere from there.

After Wayne I practiced for a couple of years, maybe even just one year but pretty hard. A couple, few hours a day; anything from one to four hours a day. I put in some real strong time.

But I concentrated in such a way where other people would probably have to put in 20 hours to every one of mine. When I concentrate nothing else even exists. You get so involved and then it's like a motor skill, it's completely bam! in your hand and there's no way of really losing it. You might lose the adeptness or just really having a good technique but you really won't lose the moves. And

then after you've got the motor skills down you can start thinking melody. Because you know how to go everywhere. *Is it difficult to play a fretless bass?*

The hardest thing is worrying about intonation. That's really when the good strong technique comes in because your hand is just sort of molded into the right spacing.

*Is it two different techniques playing a fretted and fretless bass?*

Not really. The fretless is just having to hit the notes in tune. That's the only difference. But the technique itself is pretty close to the same. The vibrato on a fretless is legit, you have to play like a cellist, you've got to roll it. And then on a fretted you've got to pull the string like on a guitar.

*Do you play cello or acoustic bass?*

I can play acoustic bass a bit but I don't like to. I'm a soul man, I like to play R&B or at least have fun with it. I like the acoustic bass, I love the sound of it, and I can play it pretty good actually. But first of all living in Florida the weather is so bad humidity-wise. I had a real good bass once and it just fell apart, I mean literally fell apart in a million pieces. I woke up and it was in a pile in the corner because the humidity just pulled it apart. At the time I really couldn't afford to buy a really great bass to stand up to the weather and being a pragmatic guy I did the best I could and I took my Fender and just kept playing that.

So when everyone else is saying that isn't music and you've got to play the big bass and all this bullshit I say, 'Well, dig this.' And now I can play and everyone else is sort of crying. It was just that sort of positiveness, it was just being pragmatic. I had to work, I had babies on the way, and to hell with that ego trip. That ain't jazz? Bullshit! This is jazz and I'm playing the jazz.

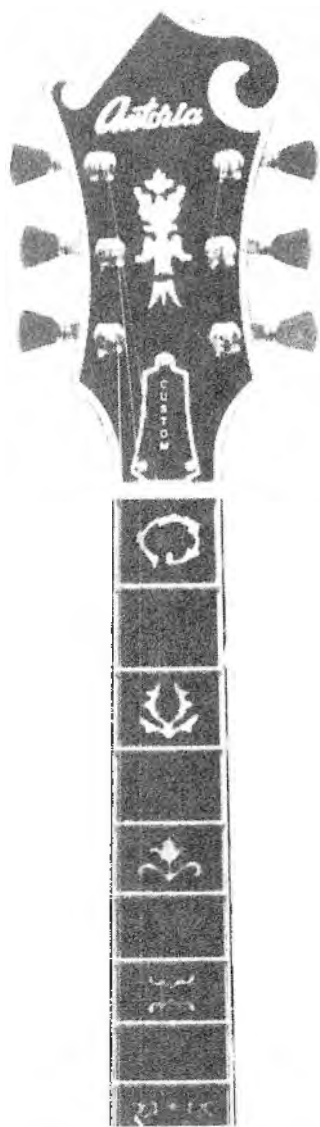
Because I can improvise and I can play new stuff and I know tradition pretty well too. And I think those are pretty good ingredients to be called a jazz musician. I ain't hanging on to the past. I ain't putting people down that do that, don't get me wrong, because lots of people aren't capable of doing anything else but hold on to the past.

Steve Rosen



Pastorius (far right) with Weather Report.

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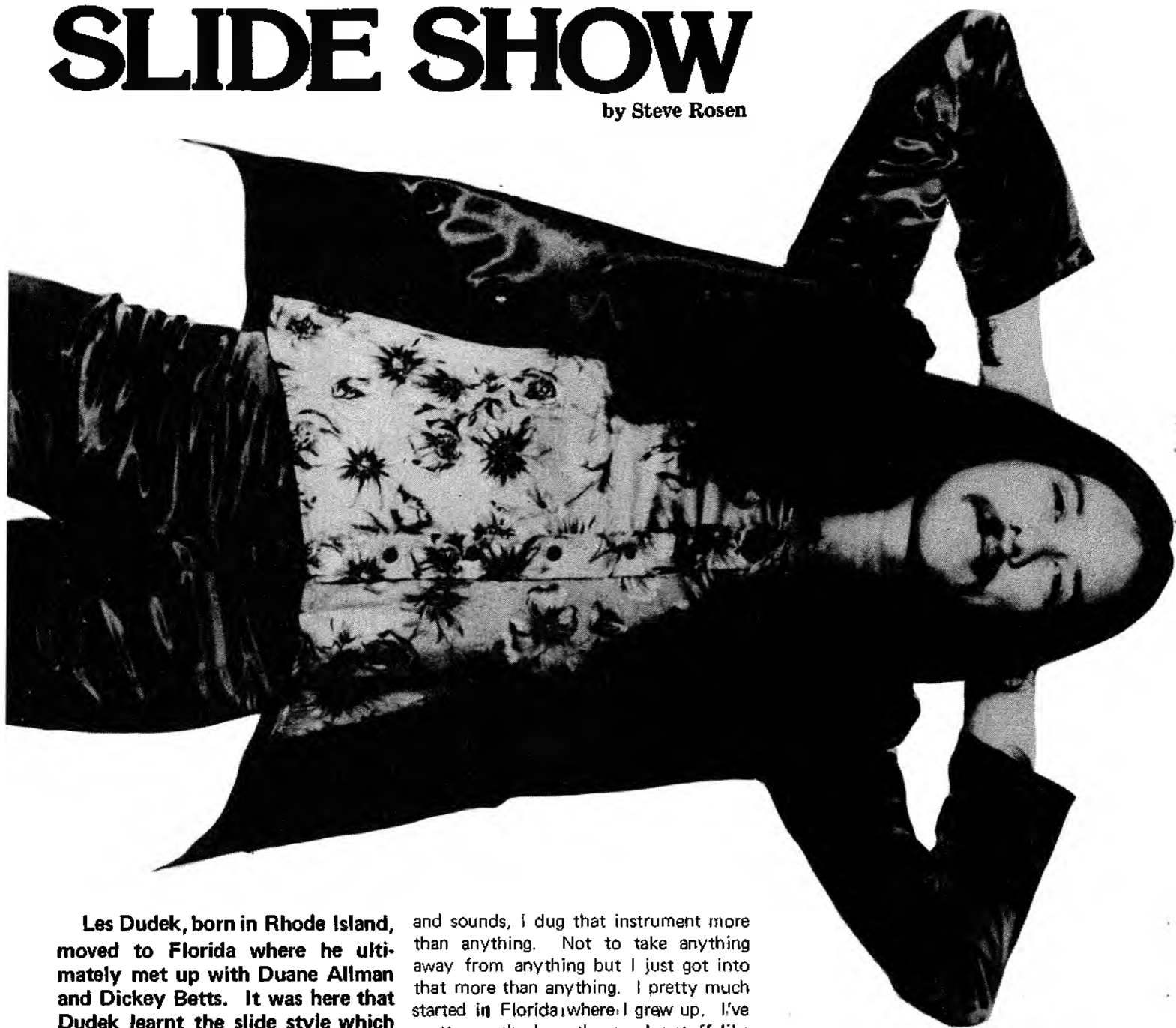
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# The Les Dudek SLIDE SHOW

by Steve Rosen



Les Dudek, born in Rhode Island, moved to Florida where he ultimately met up with Duane Allman and Dickey Betts. It was here that Dudek learnt the slide style which makes him one of the most sought-after session men in the business. His lead style is that same sort of flowing technique and one need only listen to his latest solo album — "Ghost Town Parade" — to hear this playing. In the midst of hectic rehearsals with his new band which includes Mike Finnigan and Jim Krieger (both formerly with Dave Mason) Dudek took the time to talk about his playing.

#### Give us a little bit of your background

Well, the guitar was the main axe and the only instrument I was interested in because it had so many different variables you could get into. As far as techniques

and sounds, I dug that instrument more than anything. Not to take anything away from anything but I just got into that more than anything. I pretty much started in Florida where I grew up. I've pretty much done the regular stuff like playing bars, teen centres, colleges and just kind of doing the shuffles. Then I ran into the Allman Brothers. Dickey Betts invited me up one weekend and we kind of did a jam. I went back to Florida and then he called me back up and told me he was going to start a band; this was while the Allman Brothers were still together. The idea was to do a solo album even before Gregg did his first solo album. We did some rehearsing and some kicking around but there were just some conflicts about Dickey having his own band, so that never materialized. Out of the whole situation I ended up playing on the *Brothers and Sisters* album which was 'Ramblin' Man' and 'Jessica' which I co-wrote but never got any credit for on the album.

Out of that whole mess I got tied up with Boz (Scaggs) and we hit it off really well. We toured for three years together, all the while him knowing that I wanted to do my own thing. Then we did the tour with Steve Miller and I ended up coming out at the end of Miller's set along with Boz and James Cotton to do a big jam at the end of the set; we toured the whole country doing that. At the end of that I did some recording with Steve Miller which appeared on *Fly Like An Eagle* and *Book Of Dreams*; he did one of my songs on there which I did get credit for. That put the new Porsche in the garage. It was co-written by me and Curlie Cook and it's called 'Sacrifice'. It was on my first album and was originally called 'What A Sacrifice'. It was kind of

## "I always liked Strats to record rhythm with"

an FM cut but it got a lot of mileage. It helped me a lot. I was living in Macon, Georgia at the time and Miller just laid a bunch of bucks on me to help me move out. Essentially, Miller helped me move out here and get rolling out here; all the while he also knew that I wanted to get my own thing going.

I moved out just before the *Fly Like An Eagle* album came out; before the *Silk Degrees* album even and Boz and Miller both decided to take a break. I did a short tour with Boz when I moved out for about 2½ weeks and then I started immediately negotiating my contract with Columbia. This was in '75 and they both decided they wanted to take a year off and get their albums together which were *Fly Like An Eagle* and *Silk Degrees*. It took me about nine months to negotiate my contract with Columbia and right in the middle of that I got a phone call from Miller wanting to know if I could take a week off and go to London. So I did a few things with him at that time.

I did the album and put that out and played on Boz's album, *Silk Degrees*. Then I put a band together and went out on the road and it was really funky. I didn't have a whole lot of money to work with and it was sort of the struggling solo artist scene where you're getting going and everything and going through the movements. Basically, I just kind of did the boogaloo and ended that by disbanding the band because it was really not what I had in mind but it was essential at the time.

Then I started working on my second album which was *Say No More* and did that whole cha cha and all the while learning more and more about what I'm doing with it instead of just playing around with it. I was going to put a band on the road but it was the same situation where it was hard to put a band together because I couldn't really afford to pay good musicians. I was going to go out with Boz and I even did a month of promotional touring saying I was going to go out with him.

### When did you get your first guitar?

I got my first guitar when I was 10. My folks got me a Roy Rodgers guitar. I graduated up to a Silvertone and then I had a Fender Jaguar that got repossessed. Then my folks bought me a Mosrite which I ended up playing for a while and then I got an old Strat. I played it for about two days and then I had to get rid of it because it was just completely out of order. Then I ended up getting an old cherry Gibson SG. I traded it in on a Les

Paul which is a real sweetheart.

It's stock except for the pegs. It's got everything original on it, even the toggle switch is original. It wouldn't stay in tune with the old pegs so I put on Schallers.

My mother bought it for me so it's kind of sentimental to me. It's a '67, the end of '67 right into '68 when they started remaking them again. It's one of the first ones that came back out, the first bunch that they started remaking. It had the old blueprints and was made really solid just like the very old ones. I got it new so I broke it in and it was really great. I got a lot of offers from people wanting to buy it. Even back in my Florida days a lot of people offered me a lot of bread for that guitar. I didn't alter it at all, I just bought an Anvil case for it.

### What kind of amplifier were you using on your first album?

On that I was using a Super Reverb and a Twin (Reverb). I had the Super Reverb top with the Twin bottom with two 12" JBL's and then sometimes I'd just use a straight Super with the four 10" JBL's. Now I'm having a guy modify my Twin and my Super for the studio. They have a Mesa Boogie dealership and they're really hip to that kind of stuff. In fact I think the guy even worked for Boogie for a while and he's really into modifying Fenders.

I don't really know what he's doing, all I know is it works. It's kind of set up like a Boogie but it's got more speakers and more power. It's kind of neat, it's a Fender but a modified Fender; it's kind of like having two extra Boogies around. He put a midrange button in and a power boost button. I haven't used it yet so I don't know what the hell it does.

### What amps are you using on stage?

I'm using a 60-watt Mesa Boogie amp with a DC300 A Crown which powers it so I'm pretty much using the Boogie as a preamp. The Boogie has a preamp within its own amp so it's like I'm using a pre-amped preamp through the Crown with two Marshall bottoms and JBL speakers.

### You replaced the Celestions?

Oh yeah I don't like those; they're corny speakers. I don't really get off on those. I blow 'em, they don't stand up to my rude stuff.

### What type of amp were you using with Boz Scaggs?

During those days I was just using a Marshall (100) stack with JBL's. That was kind of in the boogie days when Boz was still playing blues. When I did the

Paramount dates with him (club in San Francisco where Scaggs was accompanied by an orchestra) I was just using a Super Reverb or a Boogie, mostly a Super Reverb. Because when you have all those strings and stuff you can't really play too loud because you have to blend with it.

### Were you using the Les Paul?

Yeah; I've always used Les Pauls live up until this band and now I'm using Stratocasters. It's mostly because of Michael's stuff and some of my other stuff has that kind of Hendrix-type feel and some of it like 'Central Park' on my new record. I always liked Strats to record rhythm with on my records and other people's records because they get such a clean tone. But I never really got off on the gutsy loud kick-ass playing lead stuff until I discovered one of those Alembic preamps; Stratoblaster they call them. You put it in the Strat so it's like a preamp through a preamp through a preamp through the DC300. It kind of boosts the sound more for lead stuff and it gets real warm and real fat sounding. And then you can back it off and play really nice rhythm stuff. And Michael plays some R&B sounding stuff with a lot of good rhythm chink stuff and they don't sound quite as muddy. You can get a much better sound. I'm finding out that a Strat is just an all around rock and roll guitar and I'm starting to use it.

### What year is the Strat you're using?

Brand new; I don't like the old ones. I like playing the maple neck Strats, I don't really like the rosewood. I don't like a fretboard on a Strat; it's like they're trying to be a Gibson but they'll never make it. They (maple necks) are a lot treblier, they've got a lot more bite. The rosewood neck is kind of in-between a Strat and a Gibson; that's what it kind of feels like. And if I'm going to use that I'd rather use a Gibson.

### Did you find it difficult changing from the Les Paul to the Stratocaster in terms of playing lead?

It's a little funny because I think there's one or two less frets on a Strat than there is on a Gibson so there's a few notes that I'm not able to play now but I try and stay away from up there anyway. I'm finding it pretty easy to make the switch. The body feels kind of weird on my body as opposed to a Les Paul; I'm used to having a fatter guitar. But it's just a matter of getting used to it.

### You use the Strat for lead on Ghost Town Parade?

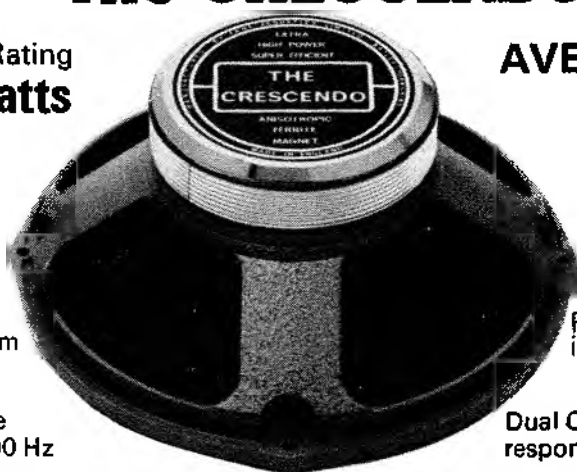
Yeah, I use it on 'Central Park'; I use it on the vamp on 'A Friend Of Mine'. I have a 1960 Les Paul SG when they were

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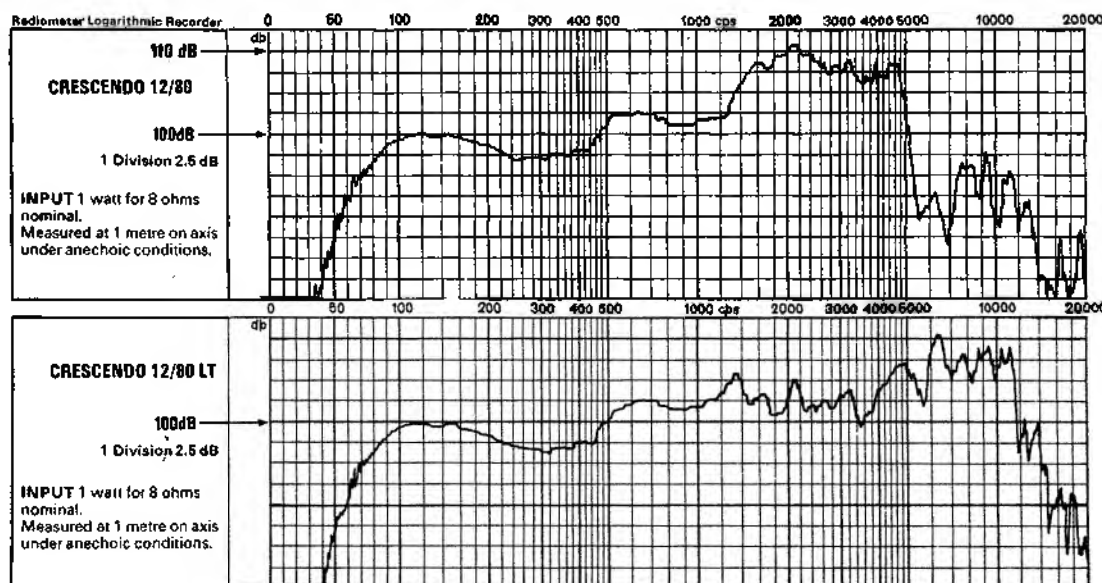
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# The Les Dudek SLIDE SHOW

calling them Les Pauls for one or two years. I still have the tailpiece for it and that's what I use for slide on my stuff. And the rest of the leads are done on this other Les Paul that I have, a 1956 Les Paul which is on my first album cover.

**Other than the preamp in the Strat, is that stock?**

No; usually when I go to buy a Strat I figure out what kind of body I like, what colour I want and I pick out a colour body. I always use the Gibson speed knobs on a Strat because they're a lot easier for me to control. And then I have the toggle switch notched so it's 5-position in and out of phase.

I'll generally go to a shop that has five or six or more Strats so I can pick out a neck I like. Then I put the neck on the body I like and put Schaller pegs on it. That's pretty much it. I also put a little piece of wire in because in Strats, for some odd peculiar unknown reason, the treble pickup doesn't have a tone pot connected up to it. All it takes is a little piece of wire and soldered on. Then you've got a tone control on the back pickup.

**What amps do you use in the studio?**

On the new album I used the Mesa Boogie just by itself, with the JBL's and reverb in it. That's pretty much what I used. On 'Central Park' I wanted to get that real kick-ass double stack Marshall sound so I rented two Marshall heads. I already had two Marshall stacks, and I set that up and tried to do it and it sounded terrible. It sounded so bad, it was the pits. So I pulled out my little Boogie amp, set that up and it sounded like a stack of Marshalls. The cartage bill is down to zero because you can just throw it in the back of your car. Every now and then I'll take the Boogie and just use the Boogie top, unplug the speaker and put it into a Marshall bottom. This gives a little bit more of a warmer sound using four speakers.

**Do you use any pedals or effects?**

The only thing I use is the Strato-blaster in the guitar. Now and then I'll use a space echo or a phase shifter. But I pretty much keep it solid and play it loud. I really haven't gotten any gadgets. I find that the more gadgets I use the more noise and hiss I get. I'd rather have a loud clean sounding guitar than a loud noisy guitar. There's a guy at the Record Plant (recording studio) who made up a pedal system for Steve Cropper that's unique. It has a whole bunch of different gadgets on it and I was thinking of having him make me up one and seeing if I could make any sense out of it.

**What is your choice of picks and strintgs?**

I use Ernie Ball strings for my electric stuff and just a Fender stock medium pick. The gauges I use I make up and that's a .009, .011, depending on my

moods a .015 or a .016, also depending on my mood a .024 or a .026 wound, .038 and .044. I like them heavier on the bottom because they stay in tune better. When you're doing rock and roll things they sound better, more solid. When I use a smaller gauge on the top, the 5th and 6th string, it has a tendency to go out of tune because I pull them so hard. Especially on a Strat.

**You've started working with the vibrato arm?**

Oh yeah, I use the vibrato arm a lot. I have a brand new Strat so I still have to adjust it and break it in and slap it around a few times and throw it against the wall. Strats are really temperamental; which is probably one of the only reasons why I've never used one because they're such a pain to me. They sound so good when you can get them in tune.

**How is a Les Dudek solo different from other guitar solos?**

I don't know, I've got a combination of things. I never really defined it down into scales or anything. That's more like Larry Carlton's riff there really and I really wouldn't mind playing like that. Larry's a big idol of mine; I really get off on listening to him play.

Essentially I kind of like the old Southern kind of scaling, the stuff I used to play with Dickey and Duane. The thing that was kind of going around at the time that people are trying to do now and aren't doing it so well. It's essentially like pedal steel guitar licks with a little bit of Chet Atkins stuff. I guess you'd call it Western Swing. When I get some time I'm going to call up Larry and see if he'll give me some guitar lessons.

**How about your right-hand technique?**

I twist my pick a lot for the funky things and I use it flat a lot; I'll use my ring finger a lot too. In fact when I'm not using my pick I'm always using my ring finger. When I'm playing slide I don't use a pick at all. Which is an old trick that I learned from Duane and Dickey. He never used a pick, that's how he got the clean sound. That's an old Southern secret. You use a glass bottle of some kind and your fingers and you always get a much cleaner melodic singing sound as opposed to a raspy picky type of fretboard sound. Something that I really admired with Duane's playing was that he really had a sweet sound that I really admired. Dickey Betts showed me a lot of that, he really inspired me a lot. My main inspiration over Duane is Ry Cooder. Slide is probably one of my heavier fortes now and I think the only other cats who are doing anything with it is Ry Cooder, Dickey Betts and Lowell George. Lowell is probably the only guy I know who plays with a pick and makes sense with it; he's got a really great feel.

**Do you use a special tuning and what type of slide do you use?**

I use a bottle on my ring finger and I use an open E tuning. Sometimes I'll futz around with it and I'll pull a Lowell out and use my pick on the Strat. Just for that edgy sound. Most of the time I never use a pick. I never use a pick on record. I keep it regular tuning and use a pick. Because it's real hard for me to play a Strat with my fingers when the strings are low on the neck and set up for fingerpicking. Because it has a tendency to sound like all those other cats that are trying to make it sound good. If I'm going to use a Strat for slide I prefer to set it up for slide which means raising the strings so I don't have to use the pick. The action is raised on the SG and I use a heavier set of strings. I make up a set with .011, .012, wound .024, wound .026, .038 and .044.

**Do you use special settings on the amp live?**

Right now I don't know because it's the first time I'm going to use a Boogie with the Crown and I haven't gotten my Crown hooked up yet. Before, I used my Super Reverb preamped into a Crown and I pretty much just kept everything wide open. Except for the Crown. What I do now is with the built-in preamp in the Mesa I usually keep the master volume on 5 and I pull out the treble and gain boosts.

The first channel and second channel play off each other when you're plugged into the first channel as preamps. When I'm doing my stuff I kick it up to around 7 or 8 on both of them and when I'm doing Finnigan's stuff, more rhythm stuff where I don't play a lot of lead, I'll run it on 5. I always keep the bass, treble and middle all the way up and the presence on about 4 or 5. I keep them even when I'm doing rhythm. A lot of it comes from the guitar. I find that you can have an amp cranked up pretty loud and still get a really nice tone by turning the volume down on the guitar and playing it like that. When you really want to kick-ass you crank the volume up and flip in the Strato-blaster and singe your eyebrows.

**You like playing with a second guitarist?**

Only if he's good, hot and listens and is an intelligent player and Jim Krieger fits all those bills to the T. As far as Krieger goes he's one of the best; I really enjoy playing with him. He listens really well, we listen to each other and basically we've just been rehearsing together. We haven't done any live stuff together; he recorded on my album, I didn't play on his. He's a real knowledgeable player and I really respect the way he plays a lot. And I think between the two of us we're gonna have a bunch of guitar stuff to lay on the people.

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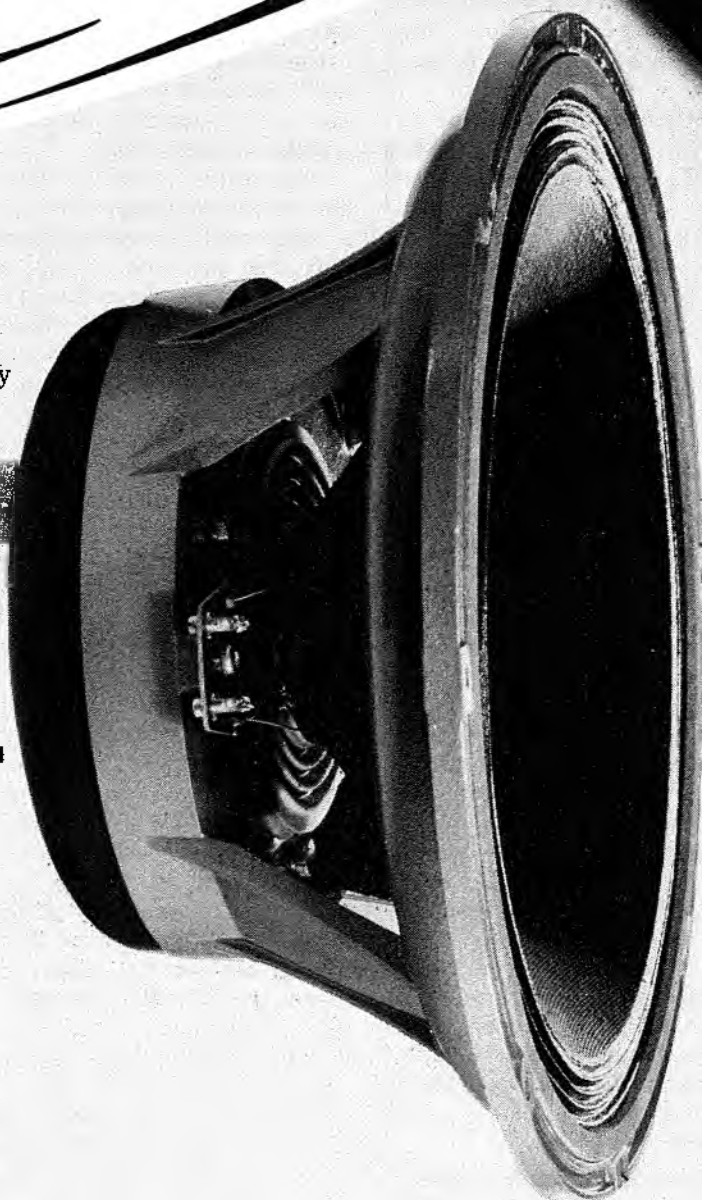
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## Introduction

Since I have been doing the synthesizer reviews for *International Musician* there have been two pieces of equipment that have particularly impressed me. One is the Roland Guitar Synthesizer and the second is the CS80 from Yamaha. As with the guitar synthesizer, I could easily have played for weeks with the CS80, but because of large demand for this instrument, the only one available for review belonged to someone else and so I was unable to take it out of the warehouse, or try it out in a band situation. However, because of the block diagram of the synthesizer functions (excellent idea that!) on the front panel, I could find my way around the instrument with no difficulty.

## Construction

The internal routing of the control voltages and oscillator tones are as you would find on any variable synthesizer, i.e. the various wave forms produced by the oscillators (VCO) are fed through voltage controlled filters (VCF) which can be opened and closed manually, or by an envelope generator. The filtered sound are then fed to a voltage controlled amplifier (VCA) which is opened by another envelope generator (Attack, Decay, Sustain, Release - ADSR) which gives the final 'shape' or envelope to the sound.

Where the CS80 does differ is that, instead of having one of all the above components (as is the case with most small synthesizers) the CS80 has 16, with the variable controls common for two banks of eight. This enables the musician to program two completely different and separate sounds simultaneously.

Each of the two synthesizer channels can be switched to one of 11 preset sounds; these are indicated by illuminated push buttons arranged along the front of the synthesizer. The presets range through all the normally used synthesizer textures i.e. strings, brass, flutes, organ, guitar, electric piano etc. The front panel controls are switched in when the panel button is depressed.

Under a hinged cover at the left hand side of the synthesizer are four copies of the synthesizer controls in miniature. These can be set up in exactly the same way as the front panel controls, thus enabling the player to store his favourite patches for instant recall by pressing the 'Memory' button.

Each of the two synthesizer channels can be tuned to one of six fixed intervals 16', 8', 51/3', 4', 22/3' and 2' or by a variable pitch control to + and - roughly a fifth, or channel two can be detuned up to a semitone from channel one enabling some interesting 'honky-tonk' and phasing effects to be achieved.

The sounds from the two channels are fed via a mix control to a final output filter with variable brilliance and resonance

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.

and thence to standard 1/4" jack sockets on the rear of the instrument. The output can be phased at two speeds by three organ-type rocker switches on the left hand side of the synthesizer marked chorus, tremolo and on/off. The speed of phasing speeds up slowly when switching from slow to fast phase - rather like leslie speakers - and can be taken to two amplifiers for a stereo 'panning' effect.

Separate low frequency oscillators for VCO pitch modulation, VCF timbre modulation, VCO pulse width modulation and ring modulation are supplied with various wave shapes, square, positive and negative sawtooth and sine.

There are more facilities and refinements on this instrument but to go into them in more depth will only bore you, so I will move on to the most important part - the sound.

## The Sound

At the risk of being accused of being on the Yamaha payroll, I've got to say that the CS80 is the best synthesizer I have ever played. Many claims have been made for polyphonics including 'throw away your other synthesizers' - well, I think you can do this if you buy a CS80. It gives you all the advantages of being able to play chords, without sacrificing the attack and bite of single voice synthesizers. You can 'Jan Hammer' away to your heart's content, bending notes and adding vibrato, without the notes blurring on fast runs, portamento can be added and Yamaha have included a 'quantised' portamento called glissando for spectacular semitone runs between notes. Play

a chord low down followed by a high one, all the notes run up the scale until the top chord is reached.

All the preset sounds are good and usable, although most could be improved upon by using the variables to adjust the sound to one's taste. The textures that this instrument can produce are almost infinite, from smooth and mellow through to harsh and biting, they're all there!

The feel of the keyboard is excellent, each key is grand piano length and mass (gravity return - no springs) and is touch sensitive, the harder you hit, the louder the sound. There is also 'second touch'; this enables the player to bring in various effects by pressing harder on the keyboard after the note has been struck. This is again separate for each note i.e. a chord can be held down and by pressing harder on the top note, vibrato can be added just to that one note.

It is possible using this feature to emphasise any note in a given chord making it 'sing' above the rest of the notes, like a solo violin in an orchestra.

## Conclusion

The CS80 has many more interesting and subtle features which cannot be explained easily in words. It is a superb instrument with no drawbacks in its performance. But two things might effect us ordinary blokes - weight and price. It weighs 220lbs and costs as much as a good car, but even if you can't buy (or lift) one - go along and bug a few shops and have a play with someone else's. You won't regret it.



The Yamaha CS-80 Synthesizer

# SPEAKERCHECK

BY KEN DIBBLE

## THE STORY SO FAR . . . . .

In the first Speakercheck review, in the February 1978 issue of I.M., we tested a fair cross section of the 12" general purpose loudspeaker units in the lower price bracket, available to the musician over the counter in any respectable retail shop. The following month, we looked at the more expensive end of the 12" market. In the April issue, we scrutinised the up-market 15" units, followed by the lower price bracket 15's in May, and we have now concluded our reviews of cone loudspeakers with a feature on 18" units in last month's issue.

That is, concluded for the time being, as we plan to do an up-to-date review later in the year and it is hoped that this will include new models that have come onto the market since our original review — such as the new HH Acoustics loudspeakers, the new high power Celestion units, the new Goodmans and Fane higher power versions, the new ATC 15" unit, the new Rean Products loudspeaker range etc. We will also include any units that may not have fared too well in our tests and that have been improved or altered during the course of the year.

We really must thank the manufacturers for their support with this Speakercheck project, in submitting their products for our tests — especially so in cases where the first tests on 12" units were not too encouraging. In almost every instance, the manufacturers who continued to submit samples for testing even after a not very complimentary review of a given product were well rewarded when other products from their range turned up trumps in later reviews.

The whole project seems to have created a considerable market reaction and has certainly highlighted the difficulty of direct comparison between units from different manufacturers, where differing methods of rating are applied. For our reviews, all loudspeakers of a given basic

type were subjected to identical tests, in identical conditions, and the results obtained were compared with the makers own figures, and with those of competing products — and as the reviews have showed, some quite startling results were obtained from the exercise.

Consider by way of an example, the up-market 12" review in the March issue, when a loudspeaker from a small British manufacturer selling at under £80 simply upstaged the entire field — which included many of the big name American products selling at up to £140! There is just no way that a prospective buyer could have deduced the difference between the many possible choices by means of the maker's published literature. Similarly, an Italian manufacturer, whose products have hitherto been viewed with some scepticism, has consistently had its products up among the very best in our reports, and with prices up to one third below those of the competition, this has got to be good news for the musician and for the speaker cabinet builder alike.

Our thanks are also due to Ray Brooker of the GEC-Hirst Research Laboratories at Wembley who actually carried out the tests and 'drove' the formidable-looking array of test equipment necessary for this project.

For each group of tests, a specially made enclosure was used, and this was fitted with a quick-release clamp arrangement to permit the rapid change of units necessary if a complete group of tests were to be completed in a single day at the Lab.

This month, we have not published any test reports. Before going on to reviewing horns, lenses and compression drivers — which start in the August issue, it seemed to be a good idea to stop and analyse the results so far obtained to see if there are any emerging trends, or whether

we can come to any general conclusions concerning cone loudspeakers as far as the musician is concerned.

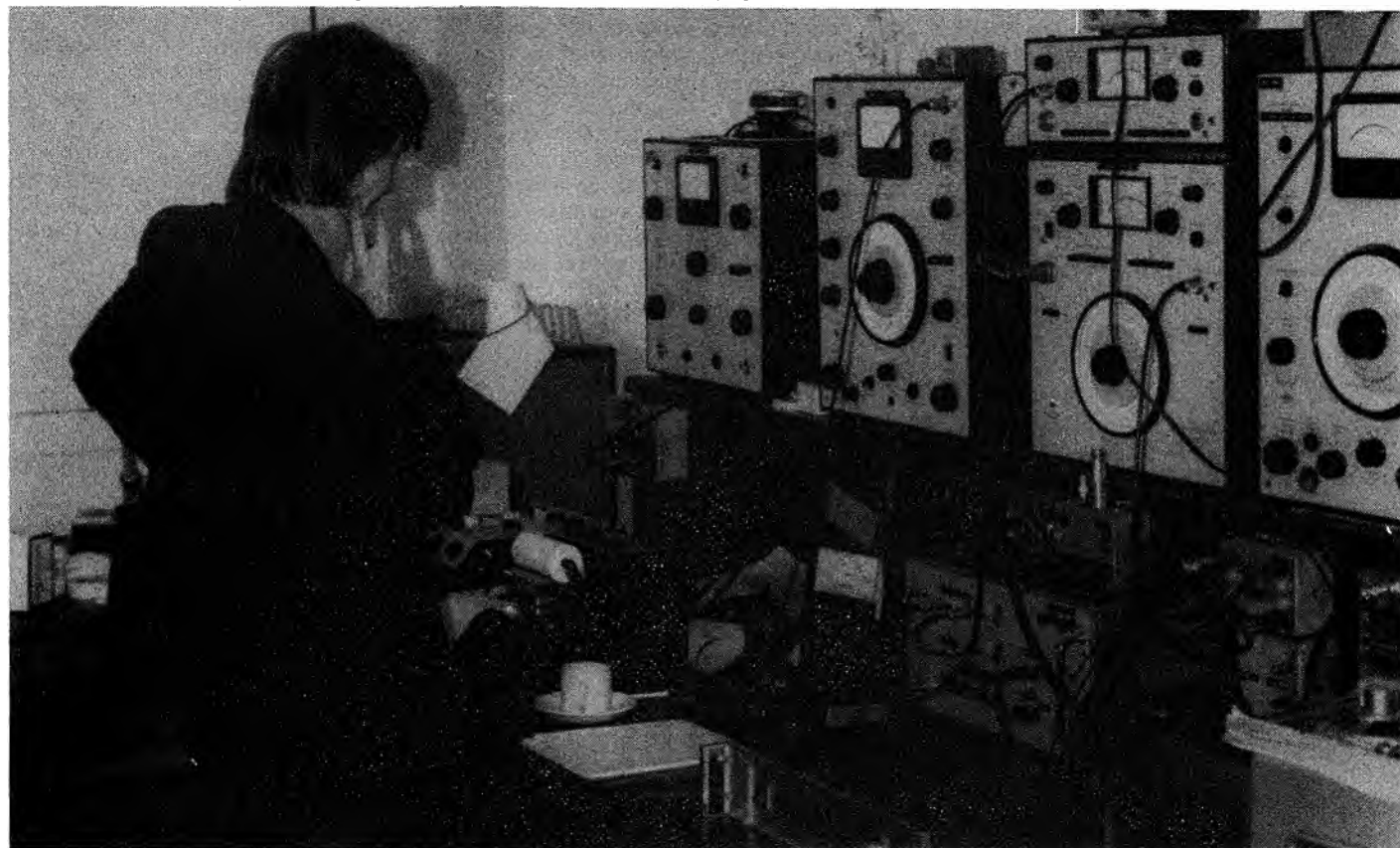
To my way of thinking, one of the most important questions must be — what do I get for my money? Are these expensive, super loudspeakers really all that they are cracked up to be, or will I be just as well off with a standard 4 x 12?

We could start to answer this by considering the sensitivity figures obtained for the various types, and if the results of the standard 12" units are averaged and compared with those of the 'special' twelves we find figures of 95db. and 99db. respectively. In terms of practical advantage, this means that generally, a loudspeaker from the 'special' category can be expected to do the work of two units from the 'standard' range, or that only half the amplifier power will be needed to achieve a given sound level.

Put another way, one watt into a 'standard' unit will produce a sound pressure level of about 95 decibels, while just half a watt into one of the 'special' twelves will produce 96 decibels. Conversely, one watt fed to a single 'special' unit will produce about 99 decibels, while it will be necessary to feed 2 watts into a 'standard' unit to produce 98 decibels.

Differences of a similar order are found if the sensitivity figures for the two categories of 15" units are averaged and compared. In this instance, we find figures of 97db. for the 'standard' units and almost 101db. for units in the 'special' category.

Notice that in this case, while we still have a difference of about 4db, the actual figures are some 2db. higher than those for the 12" units, giving a comparative difference of some 6db. between the 'standard' twelve inch units and the



Roy Brooker of GEC-Hirst Research setting up the Bell equipment for another test run.

# SPEAKERCHECK

'special' 15" units. This, in practical terms, means that a single 15" unit in the 'special' category can be expected to produce as much sound as four 12" units from the 'standard' group!

All this is of course the general situation, as certain individual units from the 'standard' 12" group returned sensitivity figures of up to 99db., while certain 'special' units are as low as 97db., and in one case in particular, even down to 93db. It is therefore vital that you carefully study the actual sensitivity figure for each individual loudspeaker before deciding which will give you the best performance within your price range.

Another interesting feature to emerge from our tests is the pattern of distortion associated with different types of loudspeaker. From the results obtained, the average distortion for standard twelves is just over 3%, while for the 'special' twelves, this rises to almost 5½%. Similarly, the 'standard' fifteens come out at just over 4%, while the 'special' versions are again at just under 5½%.

However, upon closer scrutiny of the results tables, the higher distortion figures are not necessarily connected with loudspeaker categories as such, but in general, seem to be related to the type of cone fitted. With very few exceptions, the higher order distortion figures are associated with the more shallow cone profiles fitted to very high power handling units, while units fitted with a more conventional, deeper type of cone are usually returning much lower distortion figures.

The notable exceptions are the Celestion G12/H, RCF L12/10, McKenzie GP/15 and RCF L15P/03, all of which are conventional cone loudspeakers with higher order distortion figures, and the ATC PA/75 std., which stands alone among the shallow cone designs with a

particularly low distortion figure. If we average our results on this basis, we find that the average distortion for all conventional cone units is 4.6% while for all shallow cone designs, the average rises to 6.2%. It so happens that all 'standard' category units, without exception, are fitted with the deeper type of cone, and that while some 'special' group loudspeakers are also fitted with this type of cone, most are fitted with the shallow type in one form or another — hence the similarity between the two groups of average figures.

Whilst we found that in most instances, the manufacturers power ratings for their products — arrived at by a variety of methods, were usually confirmed, the same conformity was not extended to frequency response figures. Because several makers were obviously stretching their claims in this respect, we set a very tolerant attitude to this and set out acceptance limits at the point where the sound output fell to 20db. below the peak level measured. This really is a very generous margin, and personally, I would much rather have seen a limit of -10db. in this respect.

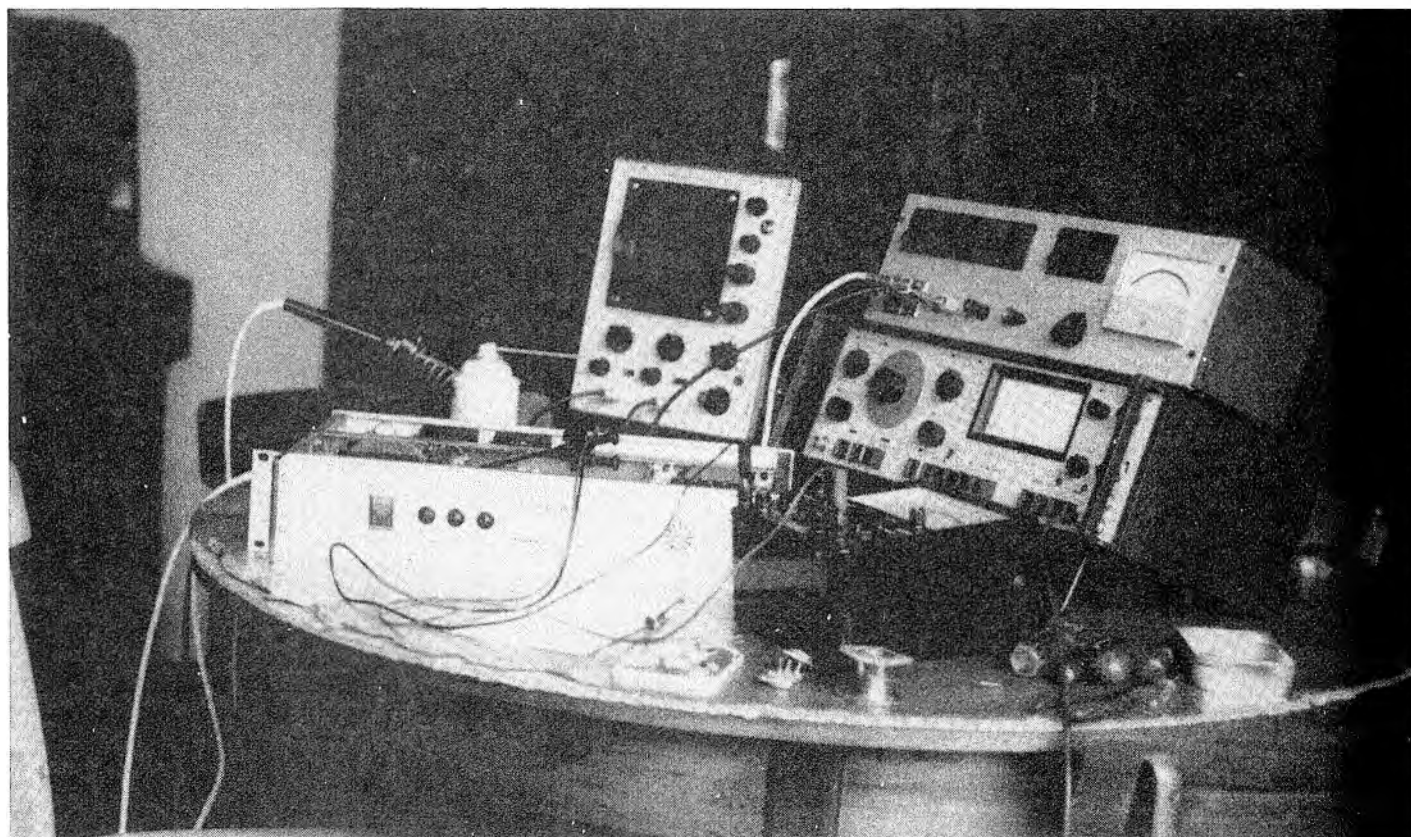
However, even at -20db., we found that our results were still falling short of the maker's claims in very many cases — often with differences of more than a whole octave, the prime offenders in this respect being *Fane Acoustics* and *Rola-Celestion*. In a few instances, we found that the makers figures were more conservative, mainly with some of the American manufacturers who had used -10db. as their self-imposed limits — *Gauss*, *JBL*, *RCF*, *ATC* were among these. I really cannot see why there is a tendency to over-stretch these figures on specification sheets, as anyone buying such a loudspeaker will not be expecting a Hi-Fi frequency response from a musical instrument

product, nor will he expect a unit with a cone of 12" or 15" in diameter to cover the whole of the audible range in one go — not that that would be desirable in any case.

Without exception, all of the loudspeaker units tested exhibited a respectable frequency response if the application of the unit is taken into account. One trend that I am very happy to see in the presentation of frequency response figures — being spearheaded by *ATC* and *McKenzie Acoustics*, is a statement that the product has a useful response up to a certain higher limit, followed by a statement to the effect that the lower limit will be dependant upon the enclosure design.

This puts the whole matter into the proverbial? nutshell, it is honest, and brings home the all-important matter of enclosure design to the intending purchaser. In practice, the lower response limit could be anywhere between the in-cabinet resonant frequency and an octave or more below that, dependant entirely upon the cabinet parameters. As a final word on frequency response, we have found several general purpose loudspeakers of 12", 15", and even 18" cones, with on-axis responses extending well beyond the maker's figures and in some cases, reaching beyond 10KHz.

I advise caution in the interpretation of these results, as the likelihood is that this will be a narrow beam of energy audible only on the central axis and for possibly a few degrees on either side. It is most unlikely that any useful dispersion will be available at these frequencies from cones of this diameter. Such a response would indicate to me that a really bright mid-range and lower top-end sound can be expected. This does not of course apply to the twin-cone twelves tested in the February issue, as in this case, the parasitic cone will take care of



Calibrating the H.H. TPA-100 amplifier used for all "Speakercheck" tests.

# SPEAKERCHECK

dispersion of the upper frequencies as the polar plot shown in Fig. 3 of that issue clearly illustrates.

What can we tell about the actual sound quality likely to be achieved, by looking at the frequency response plots? This can be a tricky question, but there are several pointers that will serve as valuable indicators in this respect.

It is first important to realise that a flat response is not necessarily a desirable feature in a loudspeaker intended for use primarily as a musical instrument reproducer, as this would result in a flat, somewhat boring sound quality.

Most musicians prefer a bright, crisp sound. For this reason, a 'presence peak' is normally designed into the speaker's response, and can be seen on the graphs of almost all the units tested between about 1KHz. and 5KHz. If however, the application is for P.A., then such a feature is not desirable, and one would either select a unit that did not have the 'presence peak' in its response curve, such as the Electrovoice EVM/15, or else, use a crossover network to filter out all frequencies above say 500 or 800 Hz. so that the loudspeaker is used only to reproduce the lower frequencies.

If a thin, particularly crisp sound quality is desired, then look to 12" units rather than fifteens, select a unit with a fairly rapid roll-off below about 150 or 200Hz., and mount this in a small, infinite baffle enclosure without too much cabinet lagging. Increasing the size of the enclosure will enrich the sound at the bass end, while adding lagging to the cabinet walls will reduce the effects of the 'presence peak'.

Almost all the general purpose 12" units tested are basically suitable for such an application, and an enclosure volume of between 40 and 70 ltrs per unit is suggested depending upon the amount of bass timbre required. If a heavier sound, with an enriched bass character is sought but the crisp mid/top sound is to be retained, then select a 15" unit with a roll-off below about 100Hz, and with a 5 to 10db. 'presence peak', dependant upon the actual degree of 'brightness' required.

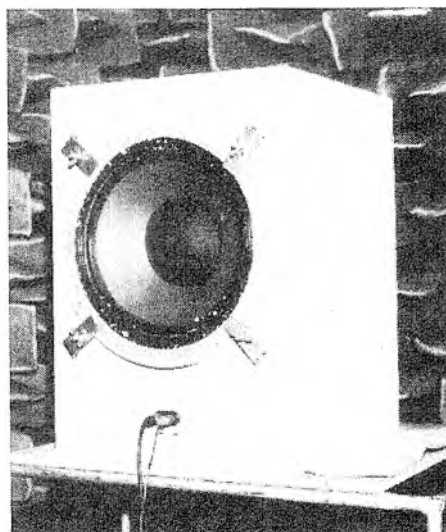
Adopt a similar procedure as just described for the 12" unit, but use an enclosure of between 70 and 120ltr., depending upon the richness of bass sound preferred. A study of the responsive curves of the 15" units tested will show that practically any unit would meet this requirement, with the exception of the Electrovoice EVM/15. This particular unit would be expected to provide a particularly adequate bass sound and a smooth, peak-free reproduction up to about 5KHz. Such a unit would in all probability be coupled with a horn via a proper two-way crossover network at about 1KHz. to provide a full range system for PA, as a keyboards reproducer or for bass instrument use.

On the matter of cone resonance, it can be seen that as soon as a loudspeaker is placed, inside an enclosure, the resonant frequency shifts considerably from the maker's free-air figure. This will be so with any type of enclosure, although a larger infinite baffle, or the use of a ported, or tuned reflex type of enclosure would reduce the in-cabinet resonance to a figure closer to the stated free-air condition.

We have also seen some interesting impedance curves recorded. While an average impedance range for an 8 ohm. unit would seem to be between about 7 ohms just after the resonant peak (see Fig. 1, Feb. 1978 issue) and about 25ohms at 10KHz., some units have shown an impedance curve that ran off the top of our pen-graph recorder at about 5KHz., giving an estimated figure of 40 or even 50 ohms in some cases at 10KHz. Several units, however, from the RCF stable in particular, showed what

amounts to a constant impedance condition by remaining within a range of 7.5 - 12.5 ohms. throughout the frequency range. This does not however apply to all the RCF units tested as the results tables show, and the Goodmans Audiomax 15AX was almost as good in this respect with a range of 5.5 - 17.5 ohms - although 5.5 ohms is a little on the low side for an eight ohm nominal rating.

It should be remembered that if a loudspeaker with a particularly high impedance at the higher frequencies is connected to an amplifier as a full-range unit - in other words, with no horns and crossover network, then the amplifier is virtually unloaded at the upper frequencies. Apart from considerably reducing the high frequency energy that can be fed to the loudspeaker, and hence reducing the upper frequency response of the unit itself, this condition can also lead to amplifier breakdown under certain operating conditions.



*Our test enclosure, with 12" unit fitted in the anechoic chamber for testing.*

Whilst on impedance, it should be realised that the cabinet loading conditions can have a small effect on the measured impedance of a loudspeaker. This is due to the dampening effect of the cabinet on cone movement, which in turn dampens voice coil travel, which then reduces the back e.m.f. that can be generated by the coil to oppose the current flow through its windings - resulting in a lower impedance. The nett effect however is rarely much more than about 10% and need not therefore be of any great concern. The figures we have published in this respect were measured with the unit mounted in the test enclosure and are therefore relative to actual working conditions.

In the interests of the reader, we have had to base our comments on the various products submitted for test on performance against cost, and this might at times have been a little hard on some of the big name American products. With one or two odd exceptions, most of these American loudspeakers returned very good performances indeed and are superbly finished and presented.

In many cases, extended guarantees are offered - often of up to five years, and in the case of JBL, a lifetime guarantee is offered both to the original purchaser and to subsequent owners. I have two observations to make in this respect, one being the obvious attention - and hence cost, expended on finish and presentation which cannot be appreciated once the back has been screwed onto the cabinet, and secondly, on the pricing structure which immediately places any product from The States at a

disadvantage.

By the time the export agency in the States, freightage, import duties, import agents profits, overland delivery to the UK distributor, the UK distributor's profit, carriage to the retailer and the retailer's profit have all been accounted for, these products are bound to be very much over-priced on the UK market - and there is little that can really be done about it. We have seen that similar products manufactured in the UK and in other countries where currency exchange rates are more beneficial to trading, are well able to equal - and in certain instances surpass those of established brand leaders and these must represent better value to the purchaser.

Reference to our test reports will confirm that apart from the odd product that has fallen short of our requirements in some respect, our only real complaint of the American big names has been on value for money considerations, where in every case, an equivalent product with a more or less equal performance has been available from manufacturers such as ATC, RCF, Fane, Goodmans and Celestion at between half and two-thirds of the price of the American counterpart. As a case in point, in the March issue, we had a situation where the ATC PA/75 Std. at £78.30 in the shops not only equalled but out-performed the JBL K120 at £123.00 and the Gauss 2841 at £137.00. Similarly, in last month's review of 18" units, the RCF L18P/100A at £98.33 out-performed the JBL K151 at £259.20. In both cases, the American products are excellent loudspeakers, but it is the problem of cost against readily-available alternatives.

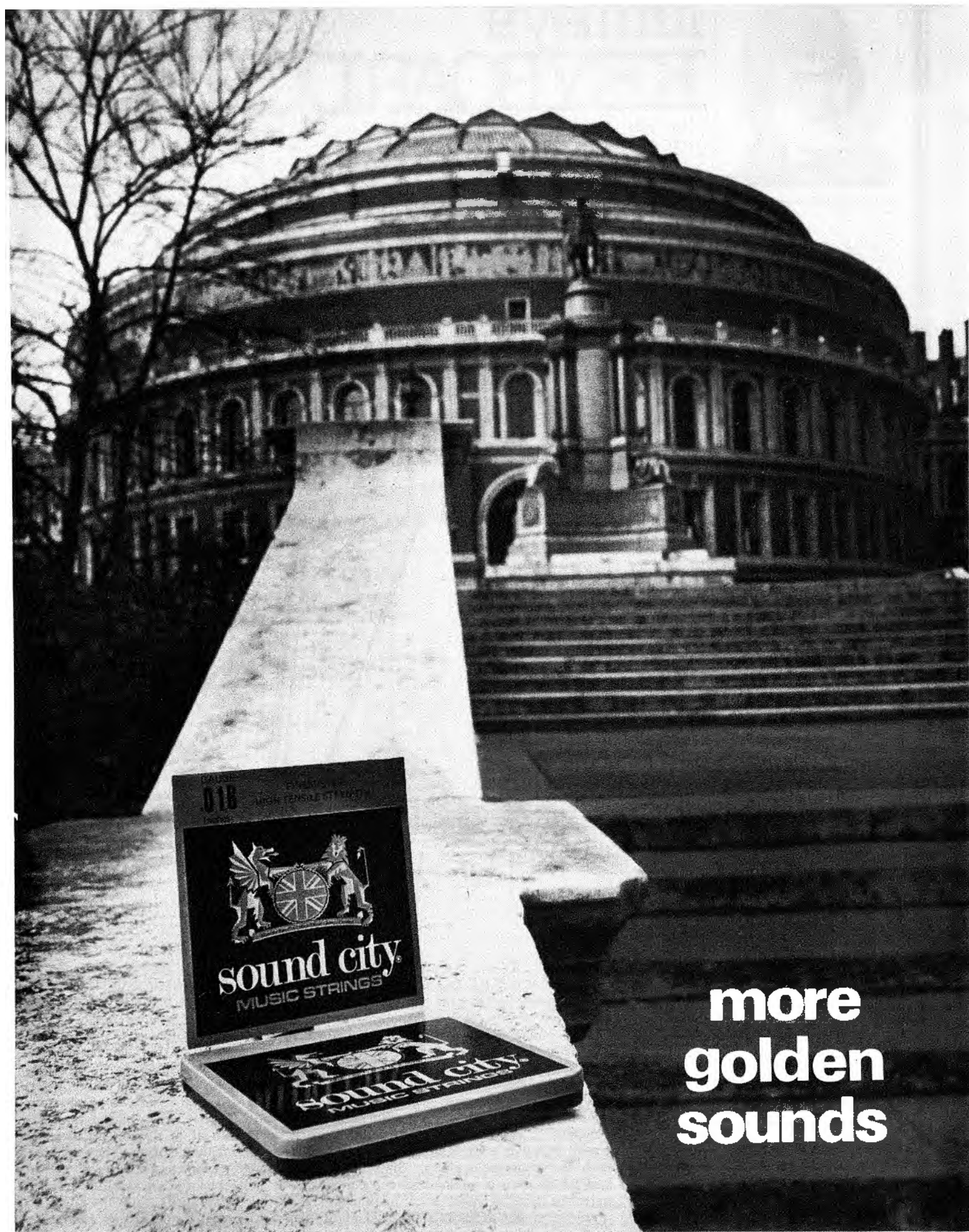
For the time being then, this summary concludes our tests on cone loudspeakers. Next month, we commence an equally comprehensive series of reviews of mid-range and high-frequency horns and compression drivers. As an additional feature to our original programme, we are planning a special feature on acoustic lenses, in which we shall explain the principle of operation and use of these somewhat mysterious animals and review a handful of the few such products available in the UK. Next month, we shall get this underway with a review of integrated horn - i.e. the smaller type of horn with a built-in pressure unit, sold primarily as a complete assembly rather than as separate components.

## Addendum

*We must apologise to readers and Fane Acoustics Ltd. for misprinting the recommended retail prices of their Pop 150 and Crescendo 18/A speakers. The Pop 150 is £55 including VAT, not £65.80 and the Crescendo 18/A is £106.95 including VAT not £10.95 as published. This in fact turns the Pop 150 speaker into a very competitive speaker as it comes into line with Goodmans Audiom 18P on price whilst at the same time offering 50 watts more handling power over the Audiom 18P.*

*The subject of painted linen domes has been mentioned both by Fane and Celestion. As you know we have been critical of this practice, fearing perhaps that users would be misled into believing that their speakers behind the grill cloth were in fact fitted with metal centre domes and there reproducing brighter mid range signals.*

*We have perhaps been a little unfair with our criticism as we have not pointed out that the manufacturers (i.e. Fane and Rola Celestion in the main) have been requested to do this by the amplification manufacturers that they supply. It is really the amplification people who started the trend purely for cosmetic and commercial reasons. Engineering wise the painted domes are invalid.*



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sounds**

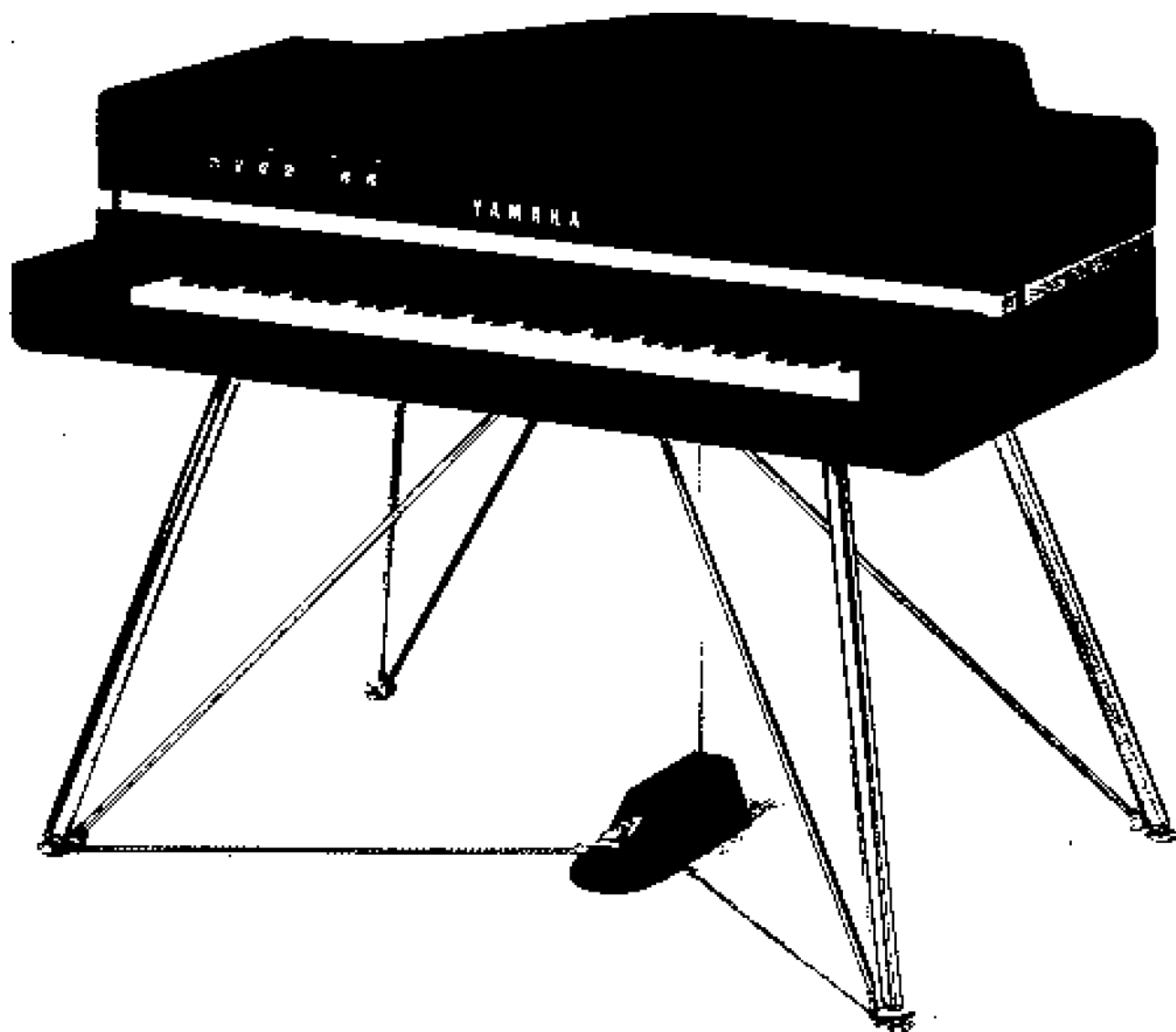
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# Lumley's KEYBOARD CHECK

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:** CP70B Electric Grand Piano

**DATE:** June 1978

**PRICE:** £2,500 approx. \$5000

The CP70B electric grand piano from Yamaha represents a significant breakthrough for electric keyboard instruments, and it was with delight that I wandered out to deepest Bletchley to visit the Yamaha depot, and to play around for a while with this marvellous new piano. The CP70B is the second mark in the CP70 series, and is not visually different from the CP70. Some improvements have, however, been made in the circuitry. For those of you unaware of what a CP70 is, or does (it's quite new and you may not have heard of it yet), let me give you a brief resume:

The CP70 is the first attempt by any manufacturer to provide an instrument which has all the feel and sound of an acoustic grand piano, yet still be portable and light enough to be used in a gig situation. It is basically a hybrid acoustic/electric piano with very nearly the sound and feel of an acoustic grand, yet it is considerably lighter, smaller and more compact. The instrument is built to travel, but it is conceived as much more than just a portable piano. Sizewise, it will fit on even a small stage, and eliminates the need for mikes or complex pick-up systems that acoustic pianos demand. So, with this instrument, you are no longer at the mercy of "house" pianos of doubtful quality. What is more, if you choose, the CP70 can deliver much more in the range of sounds than just that of an acoustic piano. Any effect can be plugged

straight in, from phasing, to flanging or echo devices. The brochure quotes the instrument as a "problem solver", but I would tend to think of it more as an instrument in its own right, because it expands on the applications of the conventional piano by combining acoustic piano stringing with fairly sophisticated electronics so that, when played through a good amplification system, the electric grand sounds as acoustic as a conventional piano fitted with pick-ups.

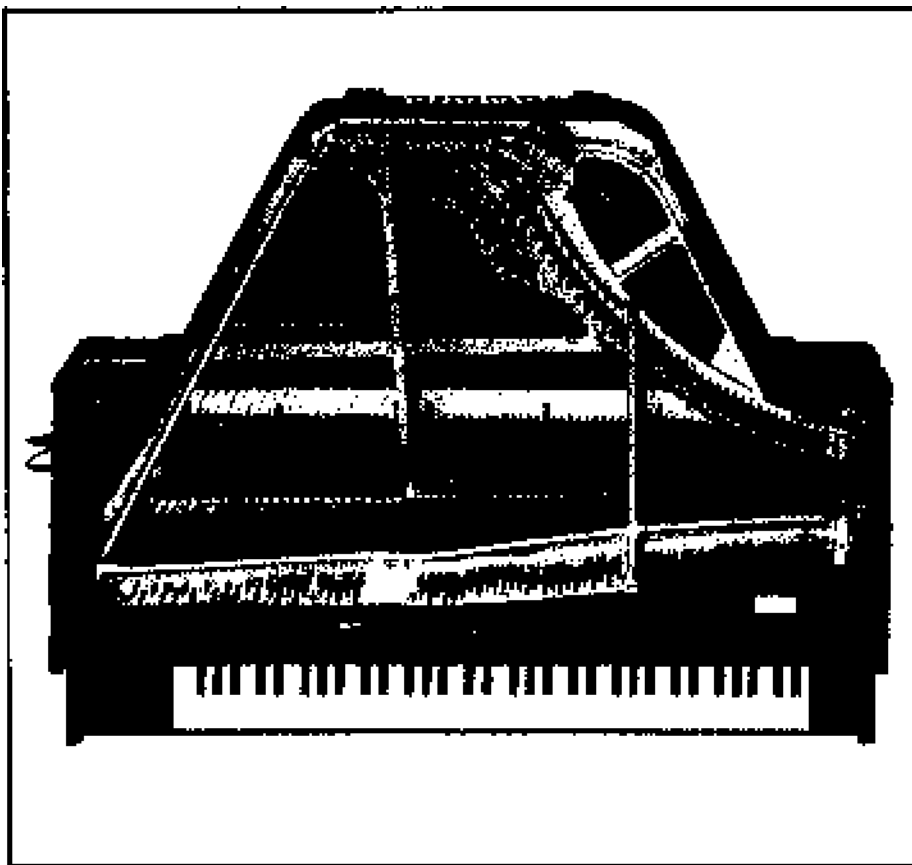
If you open the lid and look inside, you find what appears to be a grand piano, with steel frame, strings, dampers, hammers and all the features of an acoustic piano, both in weight and touch sensitivity. This is because the action is almost identical in construction to a full sized grand piano, but with improved dampers and buckskin-covered hammers

for longer wear. The CP70 also uses the strings of a Yamaha concert grand for the treble and middle notes. But the manufacturers have scored well with the bass strings. In order to build the instrument within the bounds of touring size, the bass strings had to be considerably shorter than a normal acoustic piano; this problem was researched and shorter bass strings that really retained a full bodied tonality were developed and fitted.

Since the instrument appeared on the market a short time ago, the only real criticisms that appear to have been levelled at it are those of tuning stability. On tour, one-nighter after one-nighter, many users, although keen in every way on the piano, have complained that it goes out of tune too fast, or won't hold its tune for long. But Pat Archer, of Kemble Pianos (who are the distributors for Yamaha in Britain), told me that just as many users tell him that they are very pleased with the tuning stability, and can't understand where the complaints come from. So that remains an open question. But Yamaha have developed their own means of string anchoring, unlike an acoustic piano. Because there is no soundboard, and because the strings are anchored to a unique ((Humid-a-seal" block, the tuning stability should, in theory, be excellent. The Humid-a-seal idea is a laminated maple pin block which has a strong resistance to humidity and atmospheric changes. When, however, tuning is necessary, it can be carried out by any competent piano technician employing standard tools.

Now let's look at the specification, the controls and the keyboard layout. The keyboard is a 73-note configuration, running from a bottom E (41.20 cps) to a top E (2637.02 cps). On the control panel, situated top left on the front panel, you find an overall volume control, Bass, Middle and Treble controls, as well as the tremolo switches. The tremolo has two out-of-phase outputs so that you can obtain a rotary effect from a pair of speakers. The jack socket bay contains two 600 ohm balanced output jacks, one for each phase of the tremolo, plus two unbalanced jacks carrying the same output, but subject to the overall volume control. There are also patch in and out jacks for the insertion of devices or pedals into the system.

The piano is mains-operated, rated at 2.5 watts. The pick-ups themselves deserve a special mention, as they are an intrinsic part of the successful design concept. The electronics system has built-in pick-up pre amps, and automatically mixes the notes in the correct proportion. The pick-ups themselves are



piezo pick-ups, which are highly accurate, in my opinion, with wide and even frequency responses that do not appear to "colour" the sound. Everything is permanently mounted, so you never have to worry about re-alignment of the pick-ups. And, since no microphones are used, you can turn up monitors or amps with no fear of feedback occurring.

Here's a nice paragraph for the roadies: The piano splits into two parts for transportation, a 63kg bit, and a 48kg bit, and does not take long to set up or take apart. Recessed carrying handles and slip metal fittings should cheer up the roadlets, who, although will probably curse any muso buying one of these instruments anyway, should find that it's not half as bad as they thought to cart around.

I always like to get all this descriptive stuff out of the way first, so as to write the fun bit last, and that is, how it plays. I spent a very happy hour or so thoroughly getting into this piano, and routing via various effects and graphics to see what it could do. Furthermore, I've recorded the CP70B in the studio on several occasions, and tried it through studio effects boxes, and in all respects I have nothing but praise for a superb new keyboard instrument that is excellent in every respect. It's a dream to record, as it has a high

output that is clean and free from noise, and it is a delight to play, as it behaves just like an acoustic grand piano for the player.

Of course, its main scoring point is its portability, allowing acoustic piano sounds to be available to players even on small club dates without the benefit of large PA systems. If it's any further recommendation, Herbie Hancock and George Duke have both been using them for some time, as has Tony Banks. Also, Rod Argent is a fan of them, and is on the waiting list to purchase one. So, if you play keyboards, I know you'll love this piano and want one soon after you've sat down to play it. Unfortunately, an instrument of this quality and sound does not come cheap, and will see off about £2,500 of your pocket money, or paper round earnings. So it's really an instrument for those chaps with a bit to spare in the wallet department, or those with generous managers.

But there is no doubt that this piano represents a great development in keyboard instruments for the modern recording and performance specifications, and successfully combines old world skills embodied in acoustic pianos with electronics and technology to produce an instrument to bridge the gap between these two diverse poles.



# sawicki's SOUNDCHECK

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

**TEST ON:** H.H. 'Stereo 12 Mixer'

**DATE:** June 1978

**PRICE:** £344 + VAT \$688

## Introduction

H.H. Electronic of Cambridge have had a strong grip of the amplification market for many years and ventured comparatively recently into the mixer market. Up to the beginning of 1977, H.H. had a limited selection of P.A. products, the MA 100 mixer power amplifier being the mainstay of their range. In 1977, the Stereo 12 Mixer was introduced to the market followed in the same year by the Stereo 8 Mixer. 1978 saw the introduction of two more mixers to the range, the SM 200 and the Stereo 16.

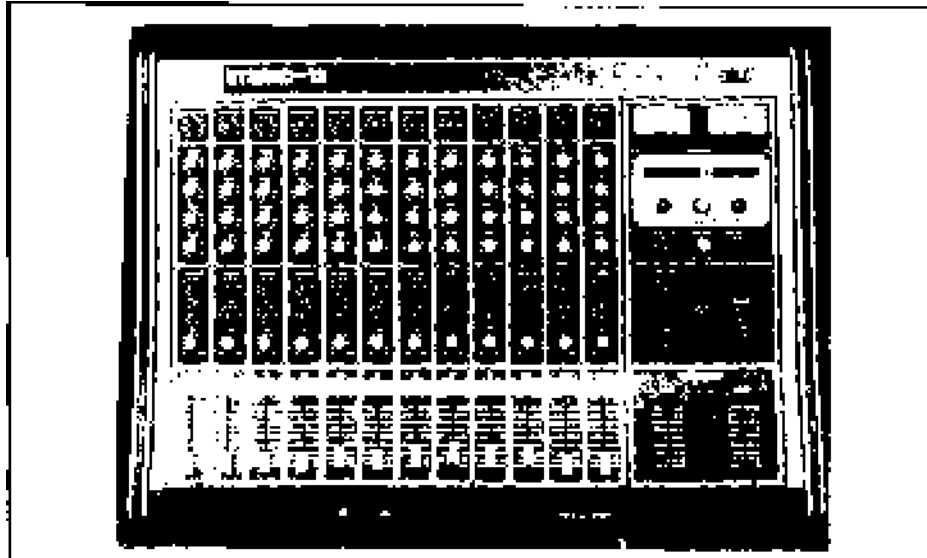
The demand for mixers has grown tremendously over the last few years and is still on the increase as smaller bands continually up-date their P.A. equipment and adopt a more professional approach to their sound systems. We have reviewed two other brands of mixers this year (January and February, Soundchecks), and thought it was about time we had a closer look at the H.H. Stereo 12.

## The Mixer

One's first impression of the Stereo 12 Mixer is that of a well-finished and well-designed compact mixing console. The mixer provides professional standard microphone mixing facilities and works to a high specification as you can see from our table of test figures. The unit is also very well laid out internally and uses top grade electronic components. The circuitry is also quite advanced.

The Stereo 12 came supplied with the H.H. Digital Effects Module (D.E.M.) which is an accessory that one can purchase for £172 and in fact plug in to any of the mixers in the H.H. range. The module appeared to be a Charge Coupled Device (C.C.D.) based effects system which interfaces directly with the mixer taking power from the mixer's power supply, and adds effects such as A.D.T., Echo, Reverb and Flanging. The module simply connects via a plug and socket arrangement into a space beneath the V.U. Meters. The space is covered normally by a small panel which can simply be removed by undoing four screws.

H.H. worked in close conjunction with a major semiconductor manufacturer to produce its own integrated circuit C.C.D. device for the effect unit which is described as the H.H. CC 100D.



## Construction

Each of the Stereo 12 Mixer's identical input channels incorporate three groups of rotary controls. Looking from top to bottom of the channel strip there is, in the first group, a single rotary control marked Input Gain. The second group contains a four-band active equaliser with four knobs marked (top to bottom), Treble, 2kHz, 600Hz and Bass.

The third group contains three rotary controls marked: Foldback, Echo and Pan. The Echo pot is an echo send and the Pan pot gives stereo pan to left or right in the normal way. Below the third group of rotary controls is positioned the channel slide potentiometer or fader.

The fader groups are coded with channel numbers. Coloured knobs are used to distinguish the various groups, for example the tone controls are grey and the Input Gain controls are red. This of course is a common practice with many mixer manufacturers. A nice touch is the addition of a marker strip or scribble strip above each fader which is a useful thing to include and prevents the mixer ending up looking like a blackboard in the region of the faders.

The Master and Monitor controls are grouped to the right of the console and include; Echo Send, Echo Pan and Echo Return (rotary controls) at the top, Foldback Volume, Monitor Select and Channel Select rotary switches with Volume Left/Right controls and a headphones monitoring socket in the centre and the two Master output slider controls at the bottom.

At the very top of the unit above the panel provided for the effects module are two illuminated V.U. meters and the mains On/Off switch. The V.U. meters

are calibrated to the usually accepted standard of (-20; 0; +3) V.U.

On the circuitry side there are only two integrated circuits (14 pin type) in each channel and each channel's PCB comes with its own rotary controls soldered into four basic carrier busses; Left o/p Bus, Right o/p Bus, Echo and Foldback Busses. All the cable looms are nicely made and tied with black lacing cords.

The PCB's are legended which helps to identify components and is nice attention to detail. Components are of high tolerance and come from top quality component manufacturers. The Cannon type connectors which are available as an extra (£35) are Swiss-made by Neutrik.

## Power Supply

On the power-supply side H.H. have provided a mains voltage selector allowing for mains inputs of either 210/240V. or 110/120V. A.C. 50/60 Hz. Obviously H.H. have the export market in mind.

## Effects Module

The effects module produces a wide range of effects from Echo which has a wide selection of delay time and repeat combinations, to Reverb with a rather nice 'Hall' sound to A.D.T. and Flanging. All these effects are achieved with simple functional controls. Four Isostat push buttons control Echo selection and another four control the Repeat functions. Three rotary pots (Red, Grey, Red) looking from left to right control Flanging/Vibrato Frequency, Flanger/Vibrato Depth and Echo Repeat/Flanger Resonance. A complete summary of the effects unit is shown in table 1.

## Effects

Multiple echo effects can be produced

by selecting more than one Echo button, for example 1, 3 and Repeat D will produce a very fast initial echo followed by a medium echo and then a slow repeat of the previous echoes.

It is highly recommended that the sound engineer should experiment for a while beforehand with different settings of the Echo Delay and Repeat controls remembering that it is vital to have the correct adjustment of the Master Echo Send and Echo Return – something that can never be over-emphasised, unless of course you happen to like cacophony.

Visual controls of the overload effect is finalised by means of a miniature Red-Coloured L.E.D. Indicating the onset of distortion. There are 240 different combinations of settings of the

Echo and Repeat buttons and in addition a whole range of Special Effects relying on the use of the delay sweeping facility (Red button IN - localised in the Echo 1-4 array).

### Conclusion

The performance of this mixer can be said to nearly match the manufacturer's specification to the dot. Its actual sound quality in practice bears out all the tested figures, and in addition to this the workmanship that has gone into this mixer has really paid off for H.H. Its visual appearance which can be described as first class graphic and ergonomic design is achieved by keeping the lines simple and nicely balanced, with only two or three basic colours.

My only objection, if it can be called that, is that in my view the VU meters could be larger, the quality is not contested but the ability to read figures off at a glance is.

For your information the Stereo 12/2 Mixer comes with Jacks as standard, but Jacks and a Multicore connector, or Cansons can be supplied as extras. Two forms of protection are available for the Mixer, at additional cost; firstly, a vinyl transport cover with padded protection for the top controls and rigid sides and secondly a flight case giving full protection. The Stereo 12 comes with an 18 month guarantee and from the literature I have seen their after sales service is impressive.

PARAMETER	RESULT	TEST CONDITION	COMMENTS
<b>Input Impedance</b>	100 Kohms 1200 ohms	High Impedance (unbalanced line i/p) Low Impedance (balanced microphone i/p)	Selected on the rear panel. The high input is suitable for normal line applications including guitar, electric bass, high impedance mikes, tape recorded outputs, electret mikes. The low input is suitable for ribbon mikes and standard 200 ohms and similar transducers.
<b>Max. Input Level</b>	Approx. 5.0 V, RMS Approx. 500 mV, RMS	Ref. 100 Kohms (high impedance i/p) Ref. 1200 ohms (low impedance i/p)	More than adequate for all standard applications.
<b>Maximum Gain</b>	74dB – typically 54.0 – typically	Low impedance i/p } overall voltage High impedance i/p } gain @ 1.0 kHz	Very good. Individual Channel Gain Control cover 30 dB range of control of microphone amplifier gain (+6 to +36 dB)
<b>Total Harmonic Distortions (%)</b>	0.05% – typically	Ref. 0 V.U. i/p into 600 ohms @ 1.0 KHz	Manufacturer claims 0.08% T.H.D. Ref: Hz – 20KHz at 0 V.U. output level. Predominance of the 2nd harmonic component with 1.0KHz THD test.
<b>Frequency Response</b>	+0db, -2, dB	Ref. 20 Hz – 20 KHz; 0 V.U. – i/p	Very good. Testing with square waves also gave quite impressive results with absolutely no "ringing" when all tone controls set flat (mechanical centre positions)
<b>Tone Control Range</b>	35.2dB – swing 28.2dB – swing  25.4dB – swing 35.0 dB – swing	Treble at 10.KHz; pres/midd/bass – Flat. Presence at 2.KHz; treb/midd/bass – Flat Middle at 600 Hz; treb/pres/bass – Flat. Bass at 50.Hz; Treb/pres/midd – Flat	Four stage E.O. with lift/cut. Nice & quite symmetrical. Manufacturers claims: Treble $\pm 18$ . dB @ 10. KHz 2.0 KHz $\pm 12$ .dB @ 2.KHz 600 Hz $\pm 12$ .dB @ 600.Hz Bass $\pm 18$ .dB @ 50 Hz
<b>Max. Output Level</b>	Approx + 25.dBm	Ref. 1.0KHz into 600 ohms	Fully balanced Left/Right group outputs Minimum load impedance is 600 ohms
<b>Hum &amp; Noise</b>	-124.dB	Ref. Input 200 ohms termination.	Excellent hum & noise performance are achieved by the use of high grade low noise operational amplifiers (4739CP) throughout the STEREO-12 mixer circuit as well as advanced BALANCED INPUTS design (reduction of hum & interference). Fully balanced output. Minimum load impedance is 600 ohms.
<b>Max. Foldback Output</b>	Approx + 25 dBm	Ref. 1.0KHz into 600 ohms	Fully balanced output. Minimum load impedance is 600 ohms.
<b>Echo send</b>	Approx + 25 dBm	Ref. 1.0KHz into 600 ohms	Fully balanced output. Minimum load impedance is 600 ohms.
<b>V.U. – Meter(s)</b>	(-20; 0; +3) V.U.	OV.U. = +4.0 dBm; Ref. 1.0 KHz.	Two moving coil H/H – Electronic type V.U. meters fitted with full wave rectifiers. (being 4 x 0A 47 – germanium gold bonded) Illuminated with 4 x 12 VAC/0.1A sub – miniature pilot bulbs.
<b>Multi Input Priority</b>	Satisfactory on actual experiments.	12 – channel test + variations	Very good.
<b>Headphones Output</b>	Plenty of "Stereo" power	Ref. any stereo headphones with impedance 8 – 600 ohms	Push – Pull (2N3440/2N5419) STEREO headphones monitoring amplifier 3 pole, 1/4" jack socket with separate LEFT/RIGHT rotary volume control potential meters.
<b>Max. Auxiliary Input Level</b>	Approx. 10V RMS	Ref. Input Impedance of 1.0Kohms	Also balanced input, for auxiliary signal sound.



# sawicki's SOUND CHECK

**TEST ON:** Custom Sound — 700 Series

**DATE:** May 1978

**PRICE:** £258.85 + V.A.T. \$517.

## Introduction

The last decade has witnessed a substantial increase of interest in the combination amplifier, combining in its most popular form a 2 x 12" speaker system and approximately a 100/150 watt driver amplifier. Usually equipped with more than one instrument input channel, and sometimes with additional facilities it is suitable for both the guitarist or the keyboard player as a versatile extension of their instrument.

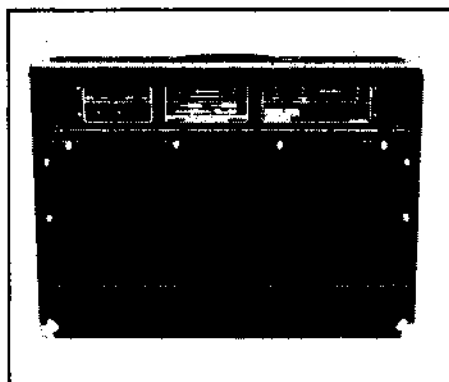
The Custom Sound Model 705 Combination Amplifier provides the musician with a high quality amplifier giving in excess of 100 W r.m.s. of audio power into its own enclosure and can be connected to further cabinets to deliver in excess of 150 W r.m.s. if so required.

Basically, the amplifier possessed two channel (four inputs) facilities with various types of tone controls, Reverb (spring type), Overtone (harmonic overtones) control, Master Volume and both the Overtone and Reverb circuits can be operated via an external footswitch.

## Construction

The 705 Combination Amplifier has two separate channels. The first channel is very straightforward in construction with Volume/Bass/Treble controls and a choice of two inputs on ¼" jacks, there is also a tiny toggle switch acting as Reverb On/Off control. The second channel provides: 4 band equalisation (Bass/Middle Lo/Middle Hi/Treble), Gain, Overtone, Two input (Bright/Normal) ¼" jacks and a similar Reverb toggle switch as before. Both No.2 channel inputs are highly sensitive and designed for electric guitar application — the Bright input provides increased sensitivity to the higher frequencies i.e. + 13dB boost @ 6 KHz and should be used mainly for lead guitar work when a strong penetrating sound is required to cut through on stage.

The tone control circuit is incorporated as mentioned earlier with two middle controls at 600 Hz and 2 KHz which have been carefully chosen to enable a great variety of sound character to be achieved. The settings of the tone controls will influence the degree of effect of overdriving in conjunction with the input gain control and the Overtone circuit control.



The "Overtone" circuit: the manufacturer claims this is to vary the level of harmonic overtones introduced by the amplifier as colouration to the input signal. Higher settings will increase the degree of harmonic distortion and the sustaining characteristic of the amplifier. For heavy rock sound this control should be used in conjunction with high settings of the input gain control.

Turning to the back panel, divided into three boxes from left to right, there are 3A. mains and 5A. Output fuse holders with a 3 pin "Euroconnector" type of mains socket. Two ¼" jacks acting as additional loudspeaker outputs with a minimum external load impedance of 4 Ohms in the "middle" box and on the right side auxiliary outputs for power boost as well as line application. In addition a headphone set jack is fitted.

The line output provides approximately 250 mV r.m.s. signal for recording, direct inject etc., and the Booster O/P (slave) of 775 mV r.m.s. can be used to drive further amplifiers when increased power levels are required. Basically this combo is internally wired for 220/250 volts 50/60 Hz operation. When 110/125 V mains supply is available there is the

possibility of internal adjustment, but it is advisable to consult your dealer as the manufacturer's User Instruction claims.

The 705 Combo cabinet is covered with a black rexine to match the rest of the Custom Sound range of products and its external dimensions are (72cms x 305 cms x 52cms) with a weight of nearly 40 Kilograms. This amplifier is an example of a very strong sturdy construction but the weight is actually more than a valve amp that I recently used of similar output power! I was surprised to find no cooling vents on the amplifier but the manufacturer claimed they were unnecessary. Electronically, it is very simple in a positive sense. All the PCBs and their small components are sensibly planned, professionally soldered, with tidy wiring, and all looms finished with black lacing cord. Even the ICs are inserted in holders — rarely found — and can be classed as a luxury point.

Both the power supply and output stage components are rather conservatively rated and the whole modular power stage PCB card can be disconnected from the circuit in seconds, as the only connection between the other circuitry is by an octal plug/socket which obviously simplifies any maintenance or breakdown operation. The quality of the components, (including plenty of metalised film resistors and capacitors made in the USSR) are of a high international standard. Both hardware and electronics look highly reliable and will surely last for many years to come.

## Reverb

The reverb is a standard spring type built into the amplifier section. The reverb operates on both channels by simply moving the toggle switch provided to the right. The depth of reverb is controlled by the Master Reverb control to the right of the amplifier control panel. This works effectively on both channels and a high degree of reverb depth can be obtained. With the reverb master control way up the sound is a full 'shatter' sound and a trifle heavy. Rarely would one need to use the full depth control.

Channel 2 offers an extra facility of mixing the delayed signal from the master reverb circuit from virtually total reverb to a mixed reverb plus direct signal sound. On channel 2 you can adjust the input gain to the level that you require and after setting the Reverb Depth control you can then vary the settings between the Master Volume control and the

channel gain control to get total reverb or mixed reverb to direct signal sound. With the master volume down the mixed signal is reduced to basic or pure reverb.

The Presence control is quite effective and adds a good degree of bite to the sound. This only works on channel 2, but this is not clearly marked on the amplifier panel although it is covered by the handbook. There should be some tie in on the panel graphics to make this clear to people who do not read handbooks!

## Speakers

The speakers are both 12"/16 Ohms

(CS 1214 type) drivers which make up a very effective loudspeaker section. The speakers are frontmounted and can easily be removed by unscrewing four 5mm pozidrive screws.

## Conclusion

At £258.85 this amplifier is certainly value for money. The amp goes out as standard with a mains lead, four castors, vinyl transit cover, instruction booklet and two years labour and parts warranty. The amplifier from the quality of sound, tone variation and power, does its job well and for the benefit of custom users

the combo uses the well known and proved Custom Sound modular power stage.

We contacted Custom Sound about the discrepancy between the figures that we measured on the tone controls in channel 2 and discovered that we had the very latest model with amended circuitry. Custom Sound had in fact supplied us with plenty of data which is to their credit, although their specification data was not quite 100% up-to-date. Their quoted figures for channel 2 are almost identical to our measured figures.

PARAMETER	RESULT	TEST CONDITION	COMMENTS
Specific power Output (Watts RMS)	156.35 W r.m.s. 97.30 W r.m.s. 76.56 W r.m.s.	Onset of clipping into: 4.0 ohms Onset of clipping into: 8.0 ohms Onset of clipping into: 16.0 ohms	Higher than specified 150 Watt r.m.s. into 4.0 ohms load (2 x 12" speakers) The output stage employs four 2N3442 and two 2N3055 silicon power transistors and is professionally protected against short circuit operations. Additionally Output Fuse is provided (5A — quick blow)
Ref. 1.0 KHz			
Total Harmonic Distortion T.H.D. (%)	0.23% 0.241% 0.185% 0.195% 0.20% 0.20% 0.24%	@ 150 W r.m.s. @ 120 W r.m.s. @ 100 W r.m.s. @ 70 W r.m.s. @ 40 W r.m.s. @ 20 W r.m.s. @ 10 W r.m.s.	Manufacturer claims: THD — better than 0.1% @ 150 Watt r.m.s. Mainly 2nd harmonic distortions. The Custom Sound "Overtone" circuits control the level of harmonic overtones introduced by the amplifier as "Colouration" to the input signal. Higher settings will increase the degree of harmonic distortions and the sustaining characteristics of the amplifier.
Ref. 1.0 KHz			
Input Sensitivity for 150.0 W r.m.s. = 24.49 V r.m.s./Output Signal — mV r.m.s.	56.09 mV r.m.s. 271.12 mV r.m.s. 3.85 mV r.m.s. 5.73 mV r.m.s.	"High" i/p Channel 1 "Lo" i/p "Bright" i/p Channel 2 "Normal" i/p	Tone controls — flat 1.0 KHz Tone controls — flat Overtone — min. Presence — min. Master — at 5.
Ref. 1.0 KHz			
Tone Controls range Swing in [dB]	41.12 dB — Swing 39.85 dB — Swing 13.85 dB — Swing 17.37 dB — Swing 15.74 dB — Swing 16.2 dB — Swing	Bass @ 80 Hz Treble @ 5.0 KHz Bass @ 170 Hz Middle "Lo" @ 600 Hz Middle "Hi" @ 2 KHz Treble @ 6 KHz	Channel 1 Channel 2
			Ch. 1: Nice & symmetrical and quite efficient. Ch. 2: "Mid" — Low and High are extremely valuable for guitarist, however I could not confirm on my test Ch. 2 — manufacturer specification figures i.e. Bass: +16 dB — 10 dB @ 170Hz Mid-Lo: +10 dB — 10 dB @ 600Hz Mid-Hi: +10 dB — 8 dB @ 2KHz Treble: +10 dB — 8 dB @ 6KHz
Signal/Noise Ratio in dB	Better than 80 dB	All tone controls — flat "Overtone" circuit off.	Satisfactory. Unweighted r.m.s. reading, with reference to nominal power output.
H/Set Power Output	Approx. 500 mV r.m.s.	Ref. 1.0 KHz into 8 ohms	Provides, via a standard stereo ¼" jack, an output signal for any headphones down to 8.0 ohms impedance enabling the amplifier to be used for "quiet" practice and tuning up.
Slave Output Level	Approx. 775 mV r.m.s.	Ref. 1.0 KHz into 600 ohms	Provides a signal to drive further amplifiers when increased power levels are required.
Line Output Level	Approx. 250 mV r.m.s.	Ref. 1.0 KHz into 47 ohms	Provides a connection at the high quality pre-amp stage to provide for direct inject, recording, etc. at the signal.
Open Circuit Stability Test	O.K.	Dummy load — removed vol./master — max. Tone controls/overtone/presence — flat	Very good stability margin.
Short Circuit Test	0.5 min.		No ill effects. Worked when short was removed.

# SMALL THINGS

by Stephen Delft

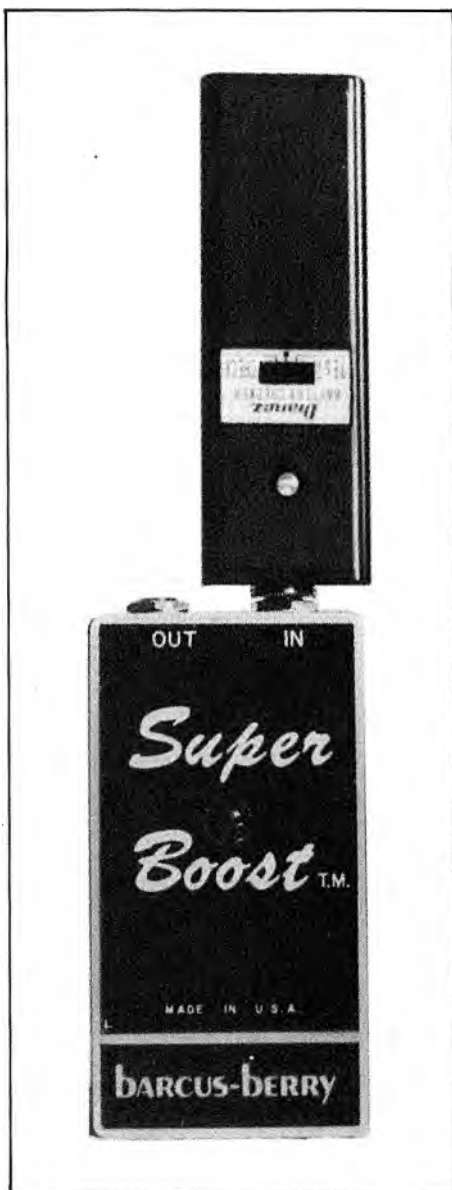
I should like to bring to your attention a small device which could save time for shopkeepers, for busy musicians and for road crews. Many effects boxes, and pre-amp boxes for acoustic guitar 'bugs', are powered by one standard 9 volt battery. Many of these use a re-arrangement of a 'stereo' jack socket to serve as a socket and also to switch on the battery when a lead is connected to that socket.

If a guitarist owns several such 'boxes' and/or pedals, or if a shop has a large number in stock, it can be very difficult to keep track of which ones have batteries fitted, and which of these batteries are in good condition.

A small battery-check device imported by Coppocks of Leeds makes it possible to check the condition of the battery in many common effects boxes and pedals in seconds, without any need to unscrew the back of the unit, or take out the battery. The Ibanez battery checker has a light, a switch and a jack plug at the end. Move the switch to the right and the device checks its own battery. Move the switch to the left and plug the unit into the sockets on the 'box' or pedal.

If the red light glows, it is almost certain that the effects unit contains a battery in good working condition, and you have also identified which socket operates the on/off switch. This checker should not be used with devices having two batteries, or any battery other than the common 9-volt types. This tester will work with most Ibanez effects units.

I have also found it to work with Barcus-Berry Hot-dot boxes, Super-boost boxes and the new Barcus-Berry standard pre-amp with 4 control knobs. It does *not* check Dan Armstrong boxes and is unlikely to work with any unit having the English type of plastic-body jack sockets. It does *not* check a 'Small Stone' phaser, although it would if it had a polarity reversal switch. It may not check some of the older Barcus-Berry guitar or violin pre-amps. There may be others with which it is not compatible, but it does nevertheless check a fair proportion of the commonly-used electronic gadgets, and is worth having in spite of its limitations. Almost any units, using one or



two 9-volt batteries could be fitted with separate battery-test jacks, wired to suit the Ibanez tester, and for any band with a lot of pedals and boxes running off batteries, this could be a great time-saver.

On the subject of last month's Rick bass copy, I am grateful to Rose-Morris for pointing



out that this Gherson model was not the first Italian Rick bass copy. Some years ago, Rose-Morris imported a similar instrument, probably made for them by the Eko company. The later 'Shaftsbury' Rick bass copies were made in Japan, as are most other copies of this instrument.

## Phoenix amplification dealers

### LONDON

W1 Sounds, Shaftesbury Ave.  
WC2 F. D & H Music, Charing Cross Rd.  
W12 Maurice Plaquet, Shepherds Bush  
W13 Tempo, Ealing  
E11 Freedmans, Leytonstone  
N17 Nth London Organs, Tottenham  
SE13 Eastern Entertainment, Lewisham  
SW17 Session Music, Tooting

Ashford (Middx) Accent Music  
Barnsley Kitchens  
Bath Assembly Music  
Bexhill-on-Sea Birds  
Birmingham Yardleys  
Boscombe Eddie Moor's Music  
Bradford Kitchens  
Bristol John Holmes  
Bury St. Edmunds Albert Ballam  
Canterbury Socodi  
Carlisle Studio Music  
Chester Dawsons  
Coventry Sound Centre  
Dudley Modern Music  
Exeter Greenhaigh Music  
Fleet Kingfisher Music  
Guildford Andertons  
Hanley/Stoke-on-Trent Chatfields  
Helston Tottles Music Shop  
Hereford Picton Music  
Hove/Brighton Southern Music  
Huddersfield Dandelion Disco

### Hull Cornelis

Ipswich Albert Ballam  
Launceston Tottles Music Shop  
Leeds Kitchens  
Leicester Sound Pad  
Lowestoft Morlings  
Luton Luton Music Centre  
Maidenhead The Sound House  
Maidstone Sharon Studios  
Manchester A.J. Music  
Mansfield Carlsbro Sound  
Middlesbrough Cleveland Music  
Newton-le-Willows Newtown Music  
Newcastle Rock City Music Co.  
Norwich Cookes Band Instruments  
Northampton Alan's Music Centre  
Oxford Taphouse & Sons  
Portsmouth Courtney & Walker  
Reading Rumbelows  
Rochdale Shorrocks & Shorrocks  
Romford Soundwave  
Salisbury Mitchell Music  
Scarborough B. Dean  
Sheffield Johnsons Soundaround  
Southend Christ Stevens Music  
Southport Dawsons  
Sunderland White Sound Equipment  
Tunbridge Wells Sharons Music  
Wallasey Rumbelows/Strothers  
Warrington Dawsons  
Wigan Dawsons  
Winchester Whitwams

### SCOTLAND

Aberdeen Bruce Miller  
Bathgate Music Box  
Glasgow McCormacks Music

### NTH. IRELAND

Belfast Marcus Musical Instruments

### WALES

Carmarthen Picton Music  
Cardiff Sound Centre  
Colwyn Bay Memphis Music  
Merthyr Picton Music  
Newport Sound Centre  
Swansea Picton Music  
Tredegar Sound Centre

### EIRE

Dublin McCullough Piggott

### Isle of Man

Island Music Centre



### SALES + SERVICE

Phoenix is only available from these dealers who have the experience and facilities to sell and service quality amps

who's inside

# Phoenix?

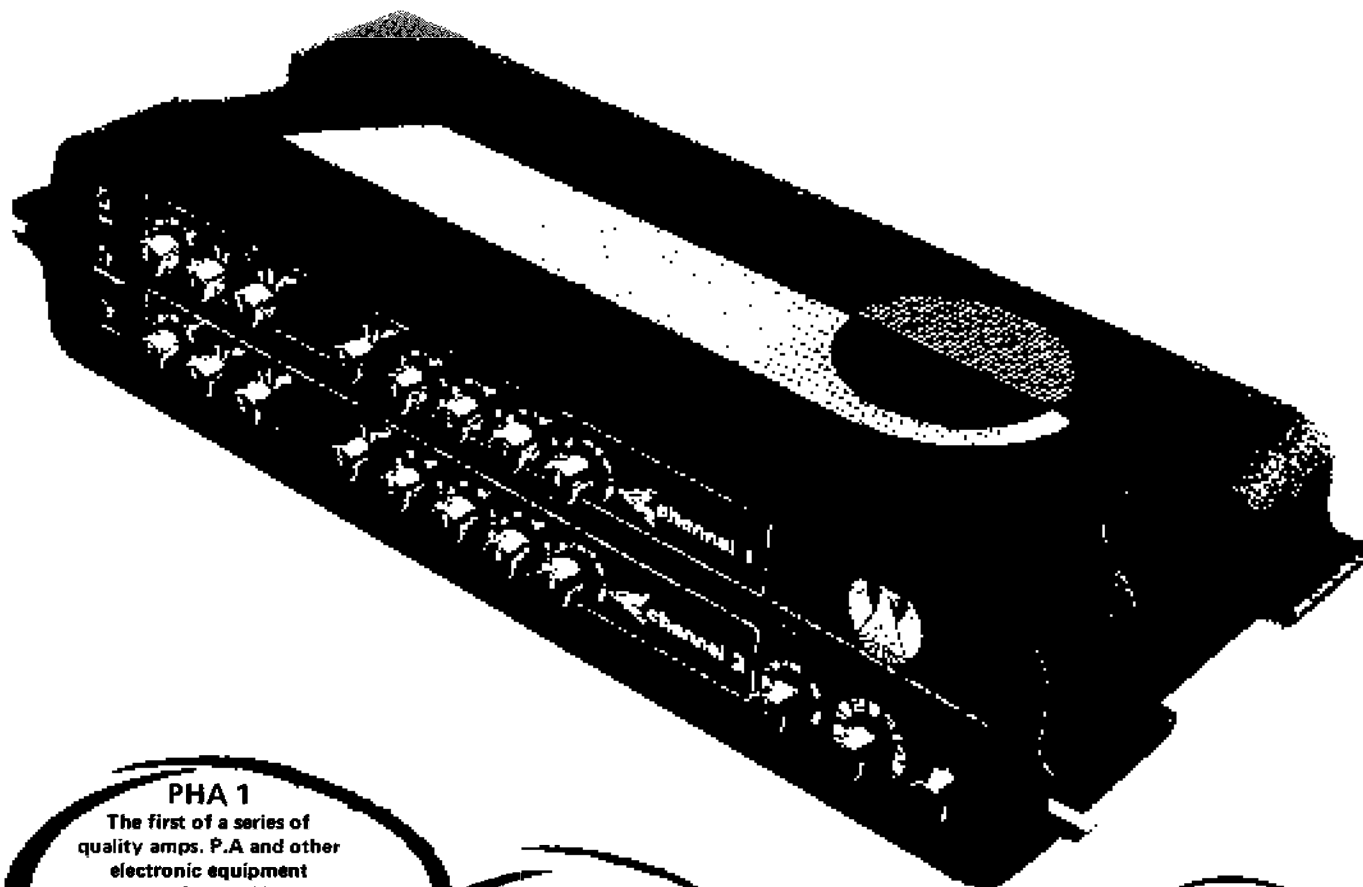
Steve Miller?  
Ritchie Blackmore?  
Carlos Santana?,  
You?



With Phoenix they (and lots of others) are inside just waiting for you to release them. With its unique system of using valves in the pre-amp you have versatility at the lowest level . . . never before possible using valves.

But remember you are not going to master Phoenix in one session . . . or even two. Phoenix is an amp to grow with . . . the more you develop the further Phoenix will go. So together you could find yourselves at the top. Quite a thought eh? See your Phoenix Dealer very soon.

*P.S. Phoenix Reverb Unit is now available – the PHA 1R . . . also pedals.*



## PHA 1

The first of a series of quality amps, P.A and other electronic equipment manufactured by British Music Strings Ltd., Pontygwindy Industrial Estate, Caerphilly, Wales, UK.

## GUARANTEE

For your protection Phoenix is patented, registered and the design is copyright . . . so nobody can pretend to be Phoenix. The equipment has a two year guarantee



Send SAE for literature, specifications etc.



# 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.

## Introduction

Ludwig have been making Vistalite drums in various shapes, colours and sizes (single/double headed, striped/plain shells, etc.) since the mid-seventies, but only last year brought out their "Sound Projectors". The actual "Sound Projector" is a scoop-shaped piece of moulded plastic which fits very simply and easily onto the bottom of any size single-headed tom-tom and helps to throw the sound out from the drum.

The rise in popularity of single headed drums (or concert toms) has effected the exploration of methods to improve and project the sound, especially for "live" situations. North drums and Remo's own "half-shell" projector for their Roto-toms are two of the more far reaching in this search. On one hand, this desire to improve the single headed drum is under-

standable; on the other hand, I'm convinced it won't be long before some bright spark says, "How about if we put . . . er . . . another tunable head on the BOTTOM?"

The Sound Projector kit isn't just a concert tom kit with projectors fitted; four of the five toms have deeper shells. The idea behind Ludwig's new "Ariel" range of longer shelled concert toms is that with deeper shells plus projectors the head tension can be increased to improve playing response while still retaining tonal depth. The kit is comprised of the following drums: 14 x 16½ Vistalite snare drum; 10 x 9, 12 x 11, 13 x 12, 14 x 13, 16 x 16 Vistalite toms with Sound Projectors; 14 x 22 Vistalite bass drum; 2 concert toms stands; 2 boom cymbal stands; hit-hat; bass drum pedal and snare drum stand.

## Sound

The projectors certainly make a difference to the drums. While the drum was being played, I removed the bowl from underneath the drum and stood back and listened. The change with the projector was tonally not unlike the difference a C.S. or Silver Dot head makes to a drum; i.e. the high overtones seem to be reduced and the drum sounds thicker and "tubby-er".

As for the sound being projected, well, standing in front of the kit I noticed a lot of definition to convey exactly what happens on paper; I recommend you try them yourself when you get the opportunity and listen while someone else plays with, and then without, the projectors, as I did. They undoubtedly enhance and "define" the sound. On thing they didn't do, in my opinion, was "make the drum



louder". They didn't make it quieter, either. I was pleased to see a single (not double) headed 16 x 16 supplied with the kit as I've never quite understood the logic of a row of concert toms with a double headed floor tom at the end.

It seems to me that it's not unlike a keyboard player playing a grand piano and then switching to a Wurlitzer or something whenever he gets below the upper five octaves. The bass drum was fitted with a felt strip damper and gave a solid, big sound without much work from me. The last time I tried a Vistalite snare drum I was less than taken, but this 6½" model sounded a lot better. The sound of the kit as a whole was, I must admit, very good — hard and definite. I say, "I must admit", because I frankly don't like plastic/Vistalite/fibreglass shells — a quality wood kit is unbeatable in my opinion — but I make it plain that it's a prejudice and there are enough excellent drummers playing non-wood kits to prove that "one man's meat..."

### Toms

The 10" is fitted with 5 lugs, the 12" and 13" with 6 and the 14" and 16" with 8. All toms have clear Silver Dot heads, triple flange hoops and square headed tension rods fitted. The kit I saw was plain white and my only reservation was that the join was just visible on the toms and bass drum, not on the outside but from the inside — especially the bass drum. This join isn't so visible on the darker colours. I don't know why Ludwig don't make their Vistalite shells in one piece — a moulded tube.

I can only assume the reason is either excessive production cost or problems with shell strength. One other small point: the rivet holding the felt part of the damper to the "V"-shaped piece of sprung steel on the floor tom-tom was loose. When the damper wasn't screwed up tight (when it was "off") the thing rattled when you hit the drum. This damper, however, was an exception; a similar one fitted to the snare drum gave no such problem. Check the rivet tightening machines, someone!

### Bass Drum

The 22 x 14 had 20 self-aligning lugs with the usual "T"-shaped handles and claws, and wooden hoops. The drums had a clear Silver Dot head on the back and a clear head on the front. The spurs are the curved square-section fixed circumference type that retract into the shell. They're uncomplicated and work perfectly.

### Snare Drum

The 10 lug 6½" Vistalite drum is fitted with triple flange hoops, Silver Dot batter head and 18-strand snares. The damper — like the one on the floor tom — has a small reinforcing plate on the inside

of the shell. The cast side-drop cam action snare release has been around for a long time and is still one of the best strainers available. As I mentioned earlier, this drum gave me a far better sound than the last Vistalite I tried — maybe the deeper shell had something to do with it.

### Stands/Accessories

All the stands with this kit are part of Ludwig's new heavy-duty range. The tripod bases of the cymbal stands, double concert tom stands, snare drum stand and hi-hat all have very wide angle bases, tubular legs and very large solid rubber feet.

The two-tier concert toms stands take the four mounted toms; the 10" and the 12" on one, and the 13" and the 14" on the other. The 16" x 16" is fitted with its own wide angle legs and eye-ring and wing nut type brackets. The actual method of attachment to the drum is that two oblong/"spade"-shaped pieces of metal fit into appropriate clips bolted to the drum.

This "spade"/clip method is fairly standard nowadays for concert toms. The two side by side "spade" parts sit on a short arm at the bottom of which is a ratchet-type angle adjustment. A couple of improvements have been made to the clips which bolt to the toms. First, four (instead of two) bolts keep it in place and second, a small piece of sprung-steel has been fitted just inside the slot that receives the "spade" part and thus prevents wobbling and rattling.

Another change is the first (lower) height and adjustment method on the stand. Instead of two vertical splits at the top of the tube and a wing nut and coach bolt squeezing the two halves together, Ludwig have changed completely to an enlarged version of their "upper" height adjustment/retainer method.

A wing nut tightens onto a small curved piece of metal retained in a block and applies indirect pressure to the "next stage". Not only did this work very well — a definite improvement in efficiency — but it also looks a lot smarter and aesthetically fits in better with the rest of the stands. This new height adjustment method is also on the boom cymbal stands and the snare drum stand. Because the width of the bases is adjustable, it was possible for me to move the two pairs of toms very low and close together over the bass drum without any loss of stability.

The boom cymbal stands worked beautifully as well. The bases have the new height adjustment method and tubular legs and the angle of the boom section is adjustable (in a similar way to the angle on the snare drum stand) with two large "T"-shaped wing nuts tightening against each other. The boom section is telescopic enabling you to get your

cymbals right over the drums and the opposite end is weighted to help counter-balance the cymbal. The angle for the cymbal itself is adjustable by a large wing nut/ratchet-tilter arrangement. The hi-hat is a heavy duty version of the Atlas. The action is very smooth and the spring tension is adjustable by turning a nylon disc just beneath the centre tube. A nylon link is used between the end of the footplate and the centre rod/centre pull assembly to cut noise and improve the action and the two piece footplate has a spur lock underneath the heel plate as well as a spur tip underneath the toe. I did feel a larger wing nut could be used to keep the toe spur in place — I couldn't get sufficient pressure to stop it slipping in its housing. The snare drum stand is the Atlas/Buck Rogers type.

A large locking nut is turned to screw up the basket arms onto the drum and, once in place, didn't budge at all. Definitely a tried and tested stand — straightforward, stable and effective. There's not a lot to say about Ludwig's Speed King pedal — it seems to have been around for ages. Despite the chunkier and cheaper pedals coming onto the market, it's still a very popular pedal with many drummers. I'm personally not keen on pedals with metal links between the footplate and saddle, but there's no denying it has a fine action. It has adjustable twin compression springs and a one or two-piece footplate (owing to a reversible heelplate). Finally, nearly all the wing nuts have been changed to very large black plastic "T"-shaped ones with the metal thread set in. They look good and do their job very well indeed — the first plastic-handled wing nuts I've liked!

### Summary/Conclusion

Visually the kit is great, although I must admit to always having liked the look of Ludwig drums. As I said earlier, despite my reservations about non-wood drum kits, I have to admit the kit sounds good. What is interesting is that the sound projectors will fit on any drum and, yes, Ludwig will sell them separately.

Like the Vistalite kits, they come in black, white, clear, blue, yellow, green, amber and red. They fit on the drum by three small strips of Velcro tape stuck to the drum and to the projector, and are easy to fit and/or remove for packing away. The prices of the projectors themselves are as follows: 10" — £12.25; 12" — £13.20; 13" — £14.10; 14" — £14.95; 15" — £15.80; 16" — £16.70 and 18" — £17.55. All prices include VAT. I'm hoping to try them on a Ludwig wood kit at some stage! This is an expensive kit (not that Ludwig have ever been "middle-price range"), but if you like the sound of Vistalite, want a quality five concert tom kit with the bonus of the projectors plus first-rate hardware, this is the one.

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# 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 ON:** Martin D 28; two samples

Serial Nos. 319627 and 336858.

**DATE:** June 1978

**PRICE:** £450 (approx.) \$900.

## Introduction

At the moment, Martin guitars appear to come into England by some sort of 'Direct Import' system. While they are certainly available in a wide variety of retail shops, there is no individual wholesale distributor with a reserve stock and a particular interest in promoting Martin guitars in this country. In addition, I am advised that at least some Martin models are in fairly limited production at the moment. Either, or both, of these factors may be behind the considerable difficulty we have experienced in obtaining a suitable new Martin for this month's review.

As a temporary solution to this problem, I decided to review the first two recently-made Martins which arrived in my workshop as this seemed to be as good a method of semi-random selection as any other. It happens that both instruments are D 28 models, and of approximately the same age. They both seem to have been played frequently and maintained in good condition, and in both cases the frets are about ready for replacement. This is quite reasonable after two or three years of hard use.

It also happens that one instrument requires only normal maintenance, whereas the other guitar plays consistently sharp on the higher frets and will require some modifications to the bridge, even after refretting. The owner believes that the guitar has had this problem since it was new and from my examination of the instrument, I see no reason to doubt this. These observations are consistent with my own experience that some Martin guitars are sold in an easily-playable condition, while others would benefit from additional careful adjustments. It is possible that some of the larger Martins are adjusted to suit players who prefer a relatively high action, but I feel it is unlikely that such players are in a majority in England. The position may be different in other countries.

## Sample A. No. 319627

By the time an acoustic guitar has badly-worn frets over the entire fingerboard, one can usually gain quite a good idea of how it is going to sound eventually. Both the instruments under review already sound good, and show every sign of becoming better still. Both have a tone which is representative of a good D 28, but as with any fine instrument, there is some variation between individual samples.

This one tends towards a very full bass with a treble which is smooth sounding and has a faint drum-like percussive effect at the start of each note. This is a characteristic part of the tone of large Martin guitars, and incidentally is a feature which is not adequately reproduced in many 'Martin' copies.

When fitted with Guild Medium Bronze strings, this guitar is well-balanced in volume between the bass, middle and treble strings. I expect that similar strings of other makes would produce a similar result. With very light strings, the result is not so satisfactory; both volume and carrying power are reduced rather more than I would have expected.

Although some of the larger Martin guitars will work very well with strings down to extra-light gauges, they are probably not intended for this sort of use. In general, the smaller and lighter models are likely to be more satisfactory.

Nothing seems to have warped or distorted in this guitar so far. There are no signs of shrinkage cracks in the woodwork, the neck and fingerboard are within acceptable tolerances and the front is still slightly convex. I do sometimes see Martin and other guitars in which the soundboard is beginning to sag inwards between the bridge and the soundhole. On a relatively new guitar this is usually a cause for concern, and some makes are regrettably more prone to this problem than others. However, both review samples appear to be quite stable in this and other respects, so far.

## Finish

The overall standard of finish and fittings on this sample is very good. The machines are the usual chrome-plated enclosed Grover units used by Martin and they seem to be standing up to wear very well. Nut and saddle have been carefully made and fitted, although the slots in the nut seem to have been re-cut at some time and I cannot be certain of the original string height at this end of the fingerboard. I have been told that Martin use a white Acrylic plastic for nuts and saddles. This appears to be what has been used on both review samples.

There is a slight tendency for the plain strings to 'creak' when tuned, but it can be overcome by rubbing a soft pencil into the slots. (2-B grade pencil graphite makes a very good dry lubricant for Acrylic plastic). The frets, where not worn by use, have a smooth rounded profile and are well finished at the ends. Even after some years, there are no noticeable fret ends projecting from the edges of the fingerboards. Although easily put right, this is a common and annoying problem with many guitars in the first

year or two after completion.

This sample, like other D 28s has a mahogany neck, ebony fingerboard and bridge, rosewood body and a spruce front. All are of good quality and pleasant appearance. The soundboard appears to be Canadian spruce of a type which I find tends to give a more mellow sound than the European variety. With large guitars and conventional strutting patterns, it can produce instruments which balance better when played with a plectrum or fingerpicks, rather than with fingers or fingernails. I think Sample A could be placed in this category. It can be played adequately without fingerpicks, but compared with Sample B it can be rather hard on the fingers if the treble is needed to be louder than the bass.

There is one feature of the guitar which could possibly cause trouble in the future. The holes in the bridge which take strings and bridge pins are too small to allow the pins to slide fully into place. Although I have heard various explanations for this arrangement, and have encountered it before on various makes of guitar, it does not seem a very good idea. A bridge pin may be designed so that it will hold both string ends and pins securely, without any need for the pins to be a tight wedge-fit in their holes. Indeed, if the pins can be wedged into place, they may conceal the fact that a string end is wrongly fitted, and then fly out without warning at some later time. I have also seen several bridges which had been split through the line of the pin holes, either by the long term pressure of over-tight pins, or by the efforts of the owner to force them down into place. Most owners of such guitars are sensible enough to leave the pins alone, but the greater projection on the outside means that one is relying on the relatively weak end of the pin to hold the string ball-end in place. The pins will become bent more quickly, and it may eventually become difficult to remove them in order to change strings. I would prefer to enlarge the holes a little until the pins just fit neatly into place.

## Sample B No. 336858

Although this guitar does not appear to be as nicely made as the first sample, both the timbers used and the sound of the instrument conform more closely to what I would look for in a good D 28. It suffers from a high action, in spite of having an adequately straight neck, and has intonation problems around the higher frets which are greater than could easily be accounted for by the excessive action.

Apart from its present state of adjustment, and a lacquer finish on the

neck which is beginning to give up, it is in my opinion a better instrument than Sample A. It is certainly more responsive to light strings and a complex fingerpicking style. Sample B is also probably less suitable than Sample A for producing a solid rhythm sound. There is a place for both sorts of instruments, but it would be preferable if there was some way in which the prospective buyer could distinguish clearly between them when they are new and not yet played in.

It is possible for a dealer or a player who has come into contact with many examples of a particular model to predict with fair accuracy how the tone of any particular guitar will develop. The process is not infallible, but I would strongly recommend anyone planning to buy an expensive guitar to take such advice from a reliable person, so that their new guitar is not only of good quality, but of a type which will continue to please them as its tone develops. Tastes vary, but Sample B please me more than Sample A. When it is working properly, it is likely to please me rather more.

This sample has a bright and very responsive treble and a bass which is full but has a slight 'reedy' edge to the notes. The most pleasing tone at the bass end is between A and C on the fifth string. I feel that with a typical set of light strings, the notes from the lower frets on the third string are lower in volume than the rest of the guitar's range. The difference in level is slight and is only likely to be significant if one tries to obtain the maximum possible volume from the instrument under critical listening conditions.

These circumstances do not arise very often, and at other times the slight drop in level on the third string is likely to be perceived as a variation in tone quality rather than loudness. As there is usually a considerable difference in tone between the second and third strings anyway, this is unlikely to attract the listener's attention. The loudness could be balanced by a slightly heavier G string, but at the cost of a probably greater difference by a feel and tone quality between strings 2 and 3 as soon as the strings become a little worn.

### Neck

The neck on this sample has a slight forward bow, probably from the tension of the strings. While not as straight as the neck of Sample A this does not make playing difficult, and is easily put right during the process of re-fretting.

I appreciate that Martin prefer to have a very slight bow on their necks, and make out a strong argument for the advantages of this situation on an acoustic steel-string guitar. I would not argue with this, but the necks on these two samples are quite different. Considering the precision involved in the argument for slightly curved necks, I find it difficult to believe that both necks can be right. The back of this neck is a little slimmer and more rounded than the other sample, and I happen to find this more comfortable. The frets are well fitted and finished off, and as with Sample A, the ends do not project from the edge of the fingerboard.

In retrospect, most Martins seem to be quite free of this trouble.

### Finish

The lacquer finish on the body is to a very high standard and makes the wood look very attractive. However, the finish on the neck has started to blister at edges and on internal corners. There is also a lack of transparency about the finish on the neck which suggests that some of the wood-grain filler may not have been rubbed off the surface before lacquering.

As with Sample A, the soundboard is still slightly convex and shows no signs of instability. The internal construction of both guitars is neat, well designed, and has the appearance of long-term reliability.

The fittings on this sample are the same as those on Sample A, and no further comment is necessary, except that the nut on this guitar does not appear to have been modified and the string slots are not adjusted as finely as I would like. The second string, particularly, is higher than necessary above the first fret, and this contributes to the intonation problems on this guitar. This six strings are at varying heights above the first fret, I would prefer to see the nut slots adjusted more evenly, and preferably lower.

The relatively high action height measurements for Sample B are in part caused by the present setting of the nut slots. Even with these set lower, and the neck straightened out, the action will still be higher than average for a good D 28, and the intonation on the higher frets, while improved, will still tend towards being sharp on most of the strings. I expect to have to fill in the saddle slot in the bridge, and cut a new one a little further back.

### Conclusions

Both these guitars are good sounding instruments. I prefer the second sample, but it does not seem to be quite as durable as the first one. I suspect that it has never been quite right, and if the action has always been high, this could explain why its neck is not now as straight as the neck of Sample A. Both guitars sound better than they are likely to have done when new, and their tones are developing in slightly different ways.

If you wished to use very light strings, Sample B would be a better choice, although it requires more work to bring it to optimum performance. Although neither is actually for sale, both instruments are representative of the better sort of recently-made D 28 available on the secondhand market. If we can obtain a new D 28 later on in the year, it would be interesting to review that also, and see how it compares with these two.

### New Martins versus old ones

Many of our readers have asked whether I think new Martins are as good as old ones. I feel I would be doing them a disservice if I avoided answering this question. I have left this until the end of the review because I prefer to treat each instrument at its own face value. I do not think it fair to review a recent guitar under the disadvantage of constant comparison

with 'vintage' instruments, simply because the Martin Company happened to make rather a lot of guitars between 1900 and 1940, many of which have matured into superb examples of their kind. These reviews stand on their own, and may be compared fairly with reviews of other recently-made instruments in a similar price range.

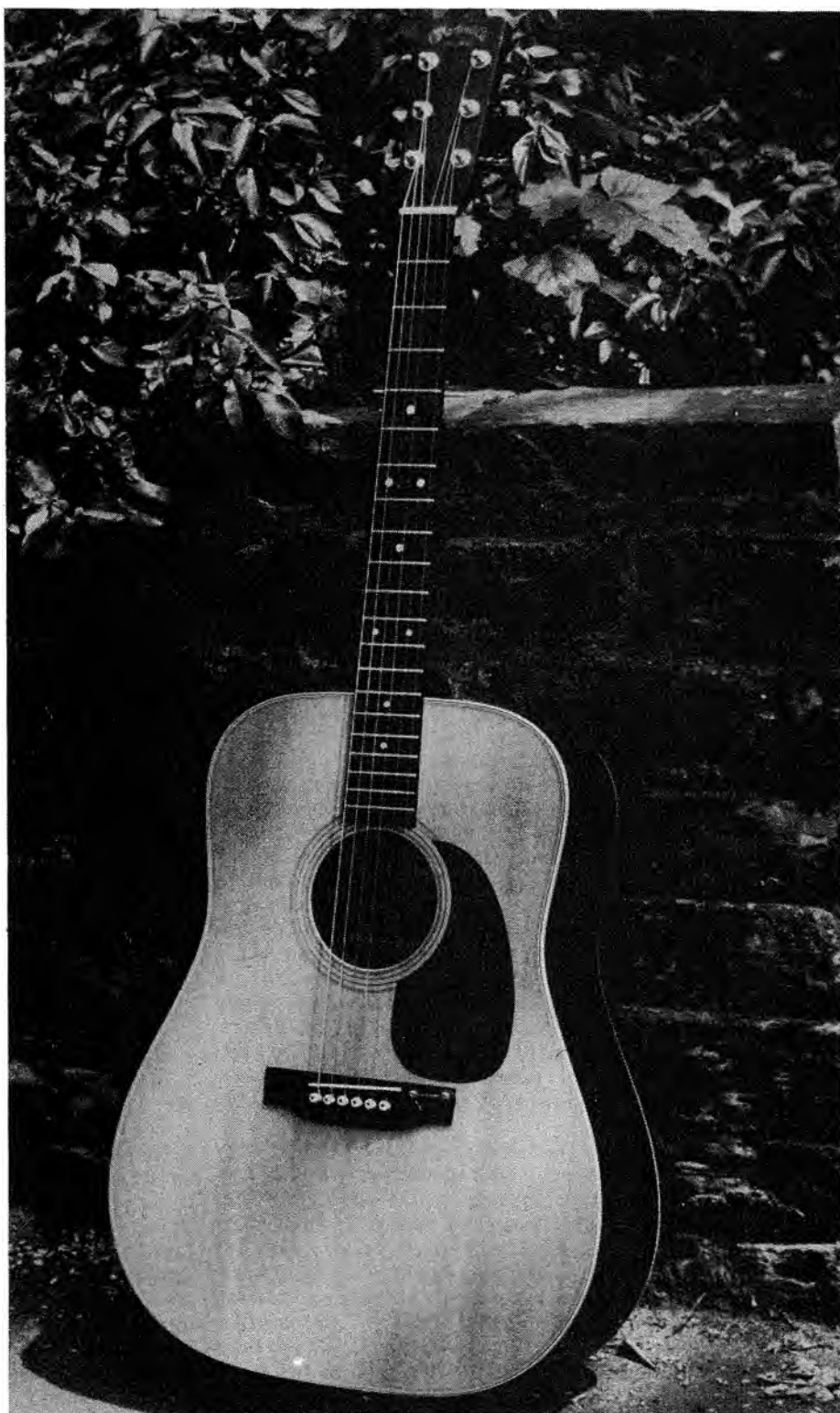
It is my opinion that the present equivalent of the old 'vintage' D 28 guitars is not the present D 28, but a recent Martin model with the number of D 28 H, or HD 28. This has old-type 'Herringbone' inlays, and an internal construction which is a little different from the present D 28s and closer to some of the 'vintage' D 28 models.

I have played one of these recently-made HD 28s and its tone is immediately and distinctly different from recent D 28s. It is also a more expensive guitar than the standard D 28. If your dream guitar is a D 28, made about 20 years ago, by now well cared for and well played in, you may be able to acquire an equally good guitar by carefully selecting a new D 28 and playing it for 20 years. It won't look exactly the same, but it should sound comparable.

On the other hand, if your dream guitar is a pre-war D 28 of the so-called 'Herringbone' style, then I doubt whether a modern D 28 is ever going to sound exactly the same. It is possible that the new D 28 H or HD 28 may be what you want, but it is still not going to perform at its best until it has been played for a few years. (Incidentally, this model should not be fitted with heavy strings, because of its more delicate soundboard construction).

Of course newly-made Martins are not going to sound as good as old ones which have been well played for many years. The degree of highly-skilled hand-craftsmanship in the new Martins which I have seen, cannot compare with the best of the surviving 'vintage' instruments. Some of the materials used in the old instruments are either not available, impossibly expensive or prohibited in order to protect certain endangered species of animals. None of these factors prevent Martin or anyone else from continuing to make really fine guitars and the new "Herringbone" D 28 is a case in point. Similar instruments are available from some other makers. New instruments which approach pre-war quality do exist, they are being made today, and in time some of them may sound as good as instruments which are now considered to be 'vintage'. However, they can only be produced in very small quantities, and they are very expensive. This is not much help to the average musician wanting to buy a good steel string guitar.

Apart from the question of cost, if everyone applied pre-war standards and techniques to present day materials and workmen, I doubt whether even one hopeful customer in a hundred would ever see his guitar. There simply would not be enough to go round. As an alternative to guitar rationing or monthly auctions in which new instruments are sold to the highest bidder, I think they



have probably made the best of a very difficult choice. This does not mean that the new guitars are as good as the old ones, but they are probably as good as they can be under the circumstances.

I do feel, however, that almost every major guitar manufacturer could usefully tighten up quality control procedures at various points in the construction and fitting up of their guitars. This could produce a better average standard within the same limitations of skills and materials which exist at present. It would also hopefully remove a small minority of instruments which should never have been left out of their respective factories.

The opposing view is that more thorough and more stringent checks would put up prices and that most people would rather have cheaper, if less perfect, instruments. Is this true? What do you, our readers, think?

#### Measurements on two Martin D 28s

##### Sample A

Serial number 319627  
Scale length 645mm  
String spacing at bridge 54.5mm  
String spacing at nut 37.5mm  
Fingerboard width at nut 44mm  
Depth of neck at first fret 20mm  
Depth of neck at 10th fret 26mm  
Action as found (probably modified)  
2.7mm treble 31mm bass.

##### Sample B

Serial number 336858  
Scale length 645mm  
String spacing at bridge 54mm  
String spacing at nut 37mm  
Fingerboard width at nut 43.5mm  
Depth of neck at first fret 22mm  
Depth of neck at 10th fret 26mm  
Action as found (probably original)  
3mm treble 3.4mm 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 ON:** Lowden S22 guitar.

**DATE:** June 1978

**PRICE:** £302 inc. VAT \$604.

## Introduction

It is possible that you may not have seen a Lowden guitar before. Indeed it is very likely that you have never even heard of George Lowden or his guitars until now. For the last two or three years, practically all the production of this small workshop has been exported to one particular shop in Paris.

With the help of an excellent Government training scheme the production team at the Lowden factory has now been doubled, and George tells me that both of the new trainees are happy in their work and rapidly acquiring his skills. As you will appreciate, with a total staff of approximately four, this is not a very large factory, and the instruments which come from it are not typical of factory-built guitars.

I have seen several Lowden guitars, from different batches, made at different times, and it is my impression that a large proportion of the work is done by hand, by people who understand what they are doing. The instruments look, and sound, like individually hand-made guitars, and although George Lowden assures me that he now uses some machine processes and a large number of production jigs, I really cannot be certain which parts were made by machine and which by hand. The most significant change I have noticed between early instruments and present ones is that the present ones are, if anything, more neatly made and finished. Also, instead of making two or three at a time, the factory is now making something like 10 or 20 at a time.

So far, the expansion does not seem to have caused any deterioration in the quality of the instruments, which makes a refreshing change from the way such events usually progress. This could be connected with the fact that the proprietor, designer and chief guitar checker, spends most of his time actually in the workshop, making guitars.

There are several models of Lowden guitar available. All the standard models are steel string acoustics with relatively large and resonant bodies. This S 22 review sample is one of the cheaper models. More expensive instruments are available with rosewood or jacaranda bodies and alternative decoration.

## Construction

The S 22 has a mahogany body and neck, with sycamore edgings and splittings, an ebony fingerboard, a cedar front and a bridge of rather unusual shape made from some sort of exotic tropical wood. I

find its striped texture very attractive. This bridge is rather like a more curvy version of the Ovation bridge. There are no bridge-pins and the strings are threaded through slanting holes drilled in the back part of the bridge. This sort of bridge arrangement can sometimes result in insufficient pressure between the strings and the bridge saddle, particularly if it later becomes necessary to lower the saddle so as to adjust the guitar's action. On this sample the geometry of the slanted holes has been carefully considered and each string makes an adequate break-angle over the saddle. (This does not mean that the strings are likely to break easily; the angle made by the strings as they go over the nut or the saddle is called the 'break-angle').

Although the present arrangement is entirely satisfactory, the angles made by the first and third strings are near the lower limit, and there is not much leeway for lowering the saddle if required to adjust the action. It is unlikely that anyone would want the action lower on *this* sample, but I should like to see the string angles at the bridge increased a little, so that the occasional guitar with a slightly higher action can be more easily adjusted. The bridge saddle is split into two parts which permits rather more accurate adjustment of the octaves at the 12th fret.

The mahogany body is large, very resonant and surprisingly light. It may not be apparent in the photograph, but all the decorative edgings and inlays are of various colours of wood. Also the white outer edge-bindings are made from *flamed* sycamore. ('Flame' is a freak decorative effect which is found in some samples of some timbers. It produces the appearance of stripes in the wood which flicker and change position as you look at the wood from different directions. Hence the description of such wood as 'flamed'). It is regrettable that crude black and white plastic inlays often look better in a reproduced photograph than more subtle wooden ones. I don't think anyone would prefer the plastic variety after seeing this guitar.

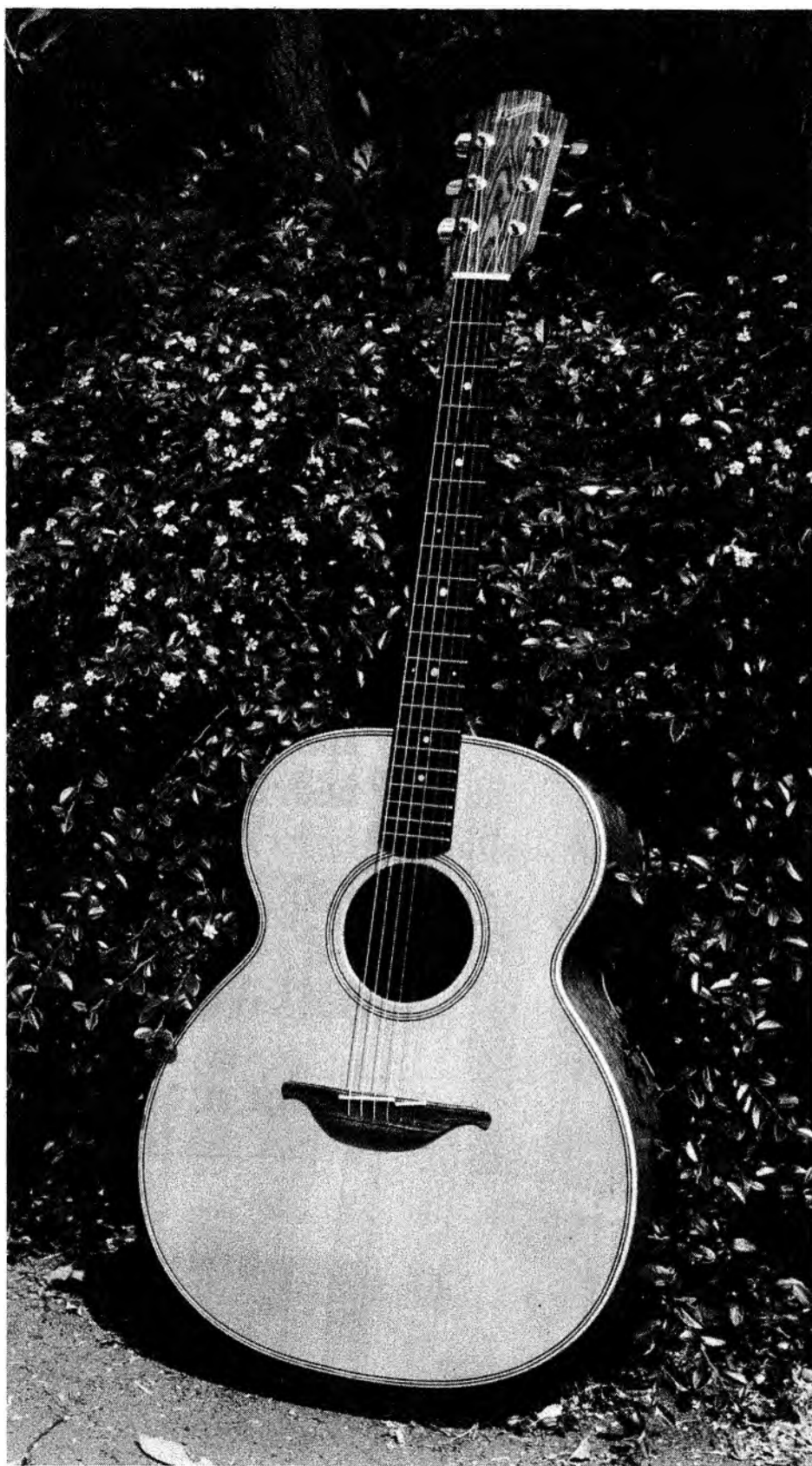
The inside of the body is just as neat as the outside. The strutting on back and front is roughly in the pattern made famous by Martin guitars, but with one or two small modifications which the maker has developed over several years. Also inside the body, under the fingerboard, is the adjustment point for the neck truss rod, should it be needed. This has the advantage that there is no access pocket cut at the other end of the neck where it is already thin and relatively fragile. It is a particularly good idea in the case of mahogany necks. The neck on this guitar

is made from three pieces of mahogany, and two narrower strips of sycamore or maple, laminated together. It seems to be a strong and well-made neck, and the back has a comfortable, rounded shape but, however well made, it is still likely to be more robust for having the truss rod adjustment at the body end.

If a guitar neck can be stronger without changing its weight or other important physical properties I am all in favour of the change. There is the possible added advantage that the future owner is less likely to fiddle with the neck adjustment. Once a guitar has settled down, it is usually preferable to make slight changes to the action by adjusting the bridge saddle(s), not the truss rod in the neck. From an aesthetic point of view, I feel that the back of the head, where it joins the neck, is not as attractive as the rest of the instrument. It is pleasant and neatly finished, but it is rather dull, and even though a quite insignificant point, it stands out because the rest of the guitar definitely has class. The other end of the neck, at the body joint, is almost a classic example of how to make a graceful piece of woodwork.

Most Lowden models are available in a high gloss finish on request but this sample has a smooth satin finish, which fits with the traditional image of 'old brown mahogany guitars'. The entire finishing job is superb, and would put most factory-made, and many hand-made guitars, to shame. Although selected primarily for its acoustic properties, the finishing material used is so tough and resistant to accidental scratches, that it takes a great deal of work to rub it down to a satin finish. It should be resistant to the common fault of turning glossy in patches where it is rubbed by the player's clothes. Equally, the high-gloss finish is likely to remain glossy. The company could probably increase their production (and their profits) significantly if they changed to finishing their guitars with cellulose. However, they choose to do it the hard way, because the finish wears better and the guitars sound better.

They do indeed sound better. If you want a lively guitar with lots of bass and lots of treble, you would probably have to pay nearly twice as much to get anything as good from one of the better-known companies. I think that for a heavy solid rhythm sound one of the slightly more expensive rosewood guitars from the same maker would be a better choice. Equally, for that application, a cheaper guitar which happens to have a good neck, and a suitable pick-up will often serve as well, at rather lower cost. The players who have the worst difficulties finding suitable instruments are



those whose work includes some subtlety. Unless they have a reasonably sensitive instrument, very little of that subtlety is going to reach the audience. This guitar is capable of being subtle. It is also capable of being very loud. It has an ebony fingerboard and decent frets, it plays in tune, it looks good it is fitted with good Schaller machines as standard, and, in spite of its sensitivity, it seems to be solidly built. What more can you ask, for about £326 including tax. Supplies are obviously very limited, but a range of Lowden guitars should soon be available from selected specialist dealers in the U.K., and I for one shall be most happy

to stock Lowden guitars in my own shop.

#### Measurements on Lowden S 22

Serial number 0079

Scale length 650mm

String spacing at bridge 55m

Fingerboard width at nut 44mm

Depth of neck at 1st fret 20.5mm

Depth of neck at 10th fret 25mm

Action as supplied 1.9mm treble 1.8mm bass

There is a slight tendency to buzzing on the lower strings, but the action is unusually low. At normal action settings for this type of guitar, there should be no problem.

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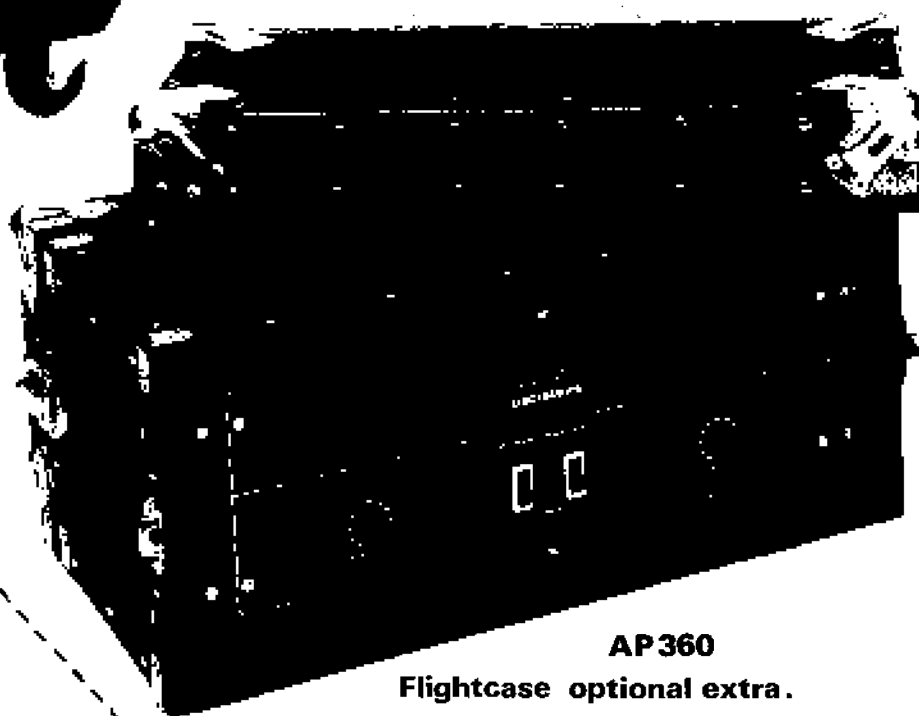
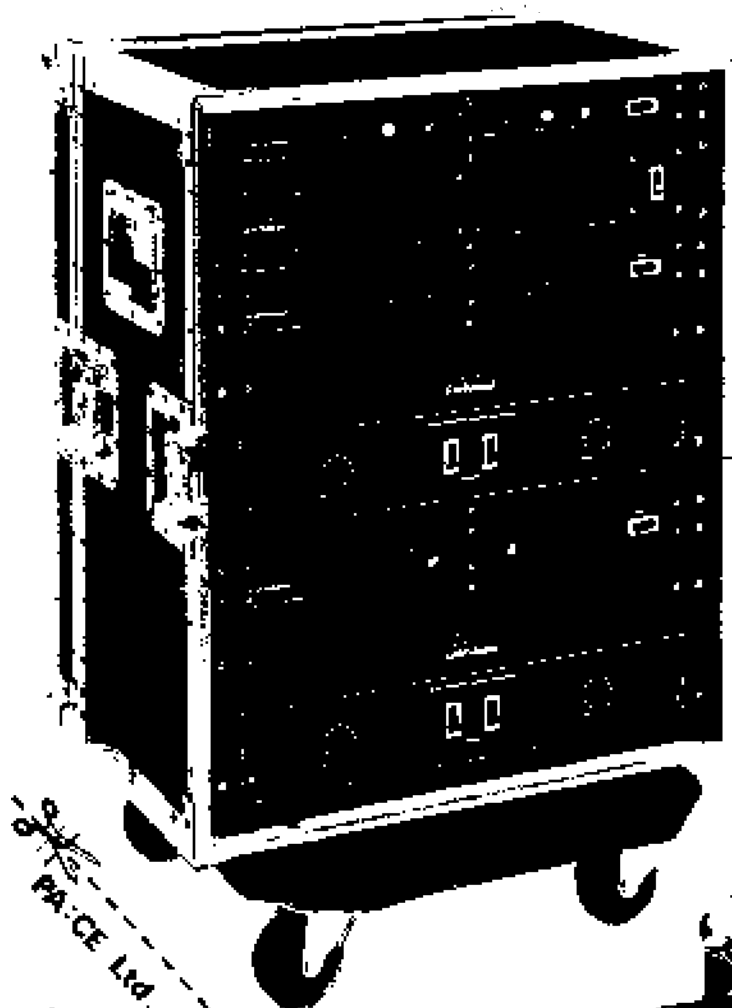
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David Essex pictured at the time of collecting the Eurotec Black Box modular effects system from Macari's Ltd.

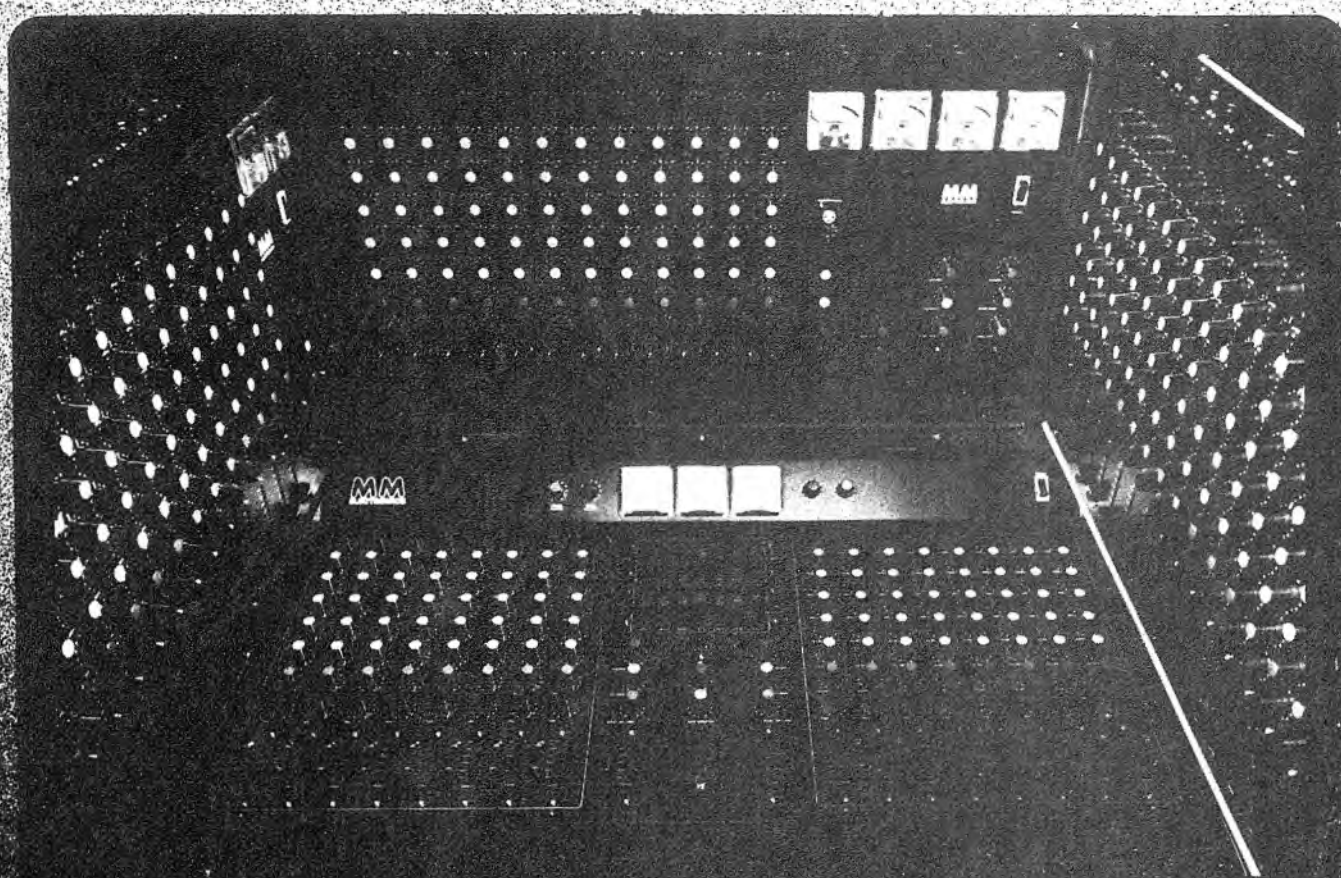
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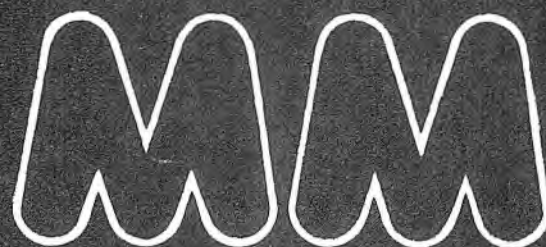
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# MAKING A SOLID GUITAR

Stephen Delft

## Head Facings

If you have been following these articles, you may already have the decorative head facing made, glued in place and trimmed to fit the shape of the head.

You may alternatively have chosen to use a thicker head and either leave the front face in its natural colour, or paint it black at some point during the finishing process. As a 'faced' head must be thinner than a painted one, to give you the same *total* thickness when assembled and finished, you should keep to the original decision made when you were cutting out the head and neck.

I did not go into much detail about making and fitting a wooden head facing, so here are some pictures which should help to explain the process. If you have completed this part successfully, don't worry. If you have not, read the next few paragraphs.

Although it is preferable to fit the head facing before the fingerboard, I usually find myself left with this job still to do at about this stage. I usually make the head facing from a scrap of the same wood which I used for the fingerboard. If you are lucky, there will also be enough for a heel cap at the body end of the neck. The scrap of wood needs to be just more than half the width of the head at its widest point.

You need enough extra to allow for planing the centre joint between the two halves of the facing. You do not need machines to cut a small piece of very hard wood into thin slices. I find the job quicker by hand. **Photo 1** shows a piece of Madagascar rosewood held in the bench vise, a marking gauge, a finely-set plane and a frame saw. This is not a 'bow saw' as found in the better tool shops, although it works on exactly the same principle.

You can use a sharp carpenters' rip-saw, but the frame saw only requires about one third of the effort for the same cutting speed. You cannot buy one of these tools in England as far as I know. Something similar, but much prettier, is made by the Ulmia company in Germany. It should be available to order from the Art Veneers Co., Mildenhall Industrial Estate, Suffolk, but it is likely to be expensive. My saw was made from pieces of an old desk, a bit of cabbage box, assorted screws and washers and a piece of string. It has had five years' use and it is just about beginning to show signs of wear.

The blade is a piece of half-used Startrite metal cutting bandsaw blade. It is a 'skip tooth' blade with 3 or 4 points to the inch. This blade is thicker and stiffer than most bandsaw blades, and is necessary if you intend to cut in a straight line. One blade should last you for ever, as my saw still has the *original* part-used blade and it is still very sharp. This sort of saw requires some practice before it will work for you, and on softwoods has a habit of jumping out of the cut and slicing your hand. Carpenters' saws are more suitable here. However, if you ever have to deal with a block of hard Rosewood or Lignum, or if you have to cut any hard or resinous wood along the grain, you need this sort of frame saw. It has been in use at least since the Middle Ages, and is so efficient that no one has really been able to improve on the design in that time.

In theory, it cuts on the 'pull' stroke; however, I find mine slower but more accurate if I turn it round to cut on the push stroke like most saws. The saw in the photograph is arranged in this way, and the user would be on the left of the picture. These saws require very little downwards pressure while cutting. If you apply too much, they bite into the wood



inaccurately, and eventually become stuck. Large pieces of very hard wood need about as much down pressure as an ordinary saw when cutting hardboard (Masonite).

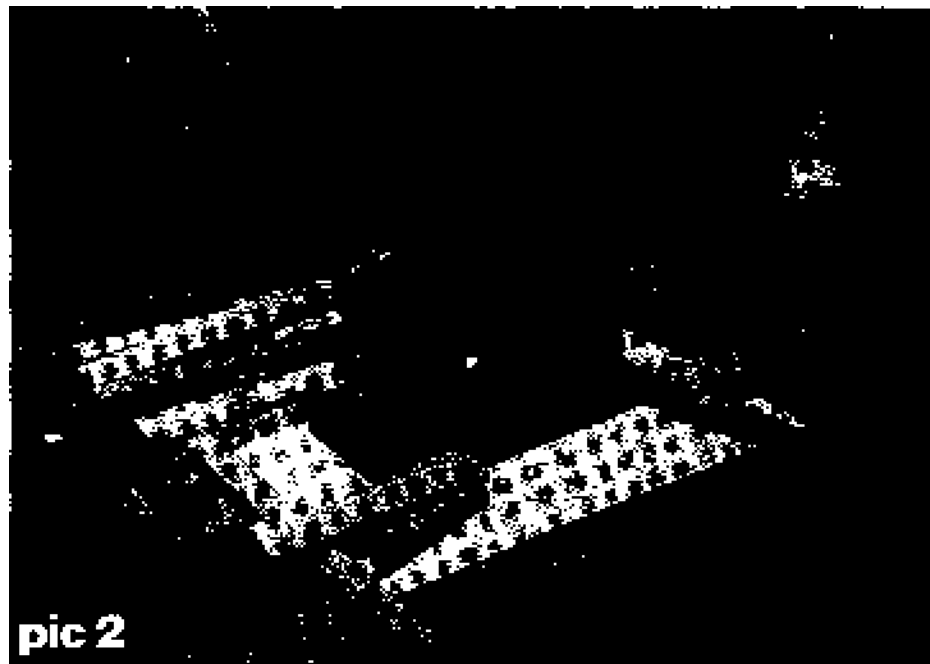
Plane one face and all edges of the scrap of wood for the facing, mark a pair of lines around the edges, indicating a slice about 4mm thick plus a space between the lines just more than the width of a saw cut. Start the saw carefully across one corner between the pair of lines. Saw down until the saw hits the other corner as shown in **photo 1**. Turn the wood round and continue the cut at the same angle from the other side.

When the *far* side of the saw reaches the level of your original cut, turn the wood round again. Repeat until the bench gets in the way of the saw and then turn the wood top to bottom. Cut in the same way from the other end of the piece, to meet in the middle. This cutting at an angle, from alternate sides, reduces the risk of the far end of the saw going off course. Even so, I would suggest you look frequently at the back of the cut. If it is going wrong, turn the wood round immediately and gently pull the cut back into line. You will only need 2mm of the 4mm thick slice even-

tually, so it is no disaster if you just go over the line.

When the slice is cut off, plane its newly sawn face, and also the new face of the remaining piece of wood. Re-mark, and cut off another slice. If the slices are not long enough to make a head facing *and* a heel cap, take a third, thinner slice, just enough for the heel. Plane the back of the second (and third) slice(s). You will need to plane both slices so that they are the same thickness, between 3 and 4mm. Arrange the two pieces edge to edge so the grain produces a pleasing symmetrical pattern. Plane the joining edges so that they fit, and so that no light comes through the joint when held up against a window.

Glue the two halves of the facing on a piece of paper on a flat bit of bench and table. **Photo 2** shows a suitable clamping arrangement, though you may get away with a 'rubbed' joint and a brick on top. Leave about 12 hours. Scrape off the paper and surplus glue, and plane the facing down to between 2 and 2.5mm. Line it up centrally on the head and against the end of the fingerboard and draw round the outside of the head and the inside of the machine-head holes.



# Part 19 Applying the Finish



Carefully saw round the outline with a fine fretsaw blade or a medium piercing saw blade as described for cutting out the template for the head. Leave about 1mm margin. Drill or saw the machine head holes in the facing about 2mm undersize. I usually cut out the hole for the truss rod adjuster as well, but it requires careful support and a fine saw blade to avoid cracking the facing. A perfectly good alternative is to draw the position of the opening needed for the adjuster in pencil and then drill the largest round hole possible within this area. Use a 'Lip and Spur' machine bit or a Forstner bit. A large size of Engineers' drill or Carpenters' spiral-nose bit would probably split the facing into pieces. The adjustment hole *can* be marked, but left uncut, until the facing is glued on. This is the safest way: you may take some chips out of your cutting tools on the concealed end of the truss rod when cutting it out later, but this only means that you would have to re-sharpen a knife and a chisel once or twice, which is no great disadvantage.

You can glue the facing on with almost any woodworking adhesive. I prefer hide glue but unless you are doing the job in the summer, you will need one of the prepared varieties which remains liquid when only moderately warm. Do not underestimate the force with which the facing and the head will curl away from each other when wet. Wetting the other side of the facing causes cracks later.

The solution is a thick rigid clamping block against the facing, with a sheet of paper for easy release later, and lots of clamps around the edges. I have referred to this before, but it appears that a photograph would help some people. See **photo 3**. With fewer clamps than this, I usually find that some corner or edge of the facing has pulled away from the head, leaving a gap or a thick glue-line. Leave for 12 hours. Remove clamps and block and paper and leave for another 12 hours in a dry, com-

fortably warm room. After this, the facing can be trimmed to fit the head, and the various holes enlarged to their proper size. Use chisel/knife/gouge for the truss rod hole.

For the machine head holes, use a small coarse round file, from the front, until the facing holes are nearly to size, and then finish off with a 13/32 inch Taper Pin Reamer from the back, if you have one. Otherwise use sandpaper round a dowel, again working from the front. If you find soft or wet glue around the holes or edges, leave the head a little longer to dry before continuing.

At some stage, you can if you wish make a little cap for the heel where the neck joins the body. You can see this in **photo 3**. About 1.5 to 2mm is about right and you may need to cut a corresponding amount off the heel with a sharp chisel. It looks nice if the heel cap slopes down slightly from the body to the back of the neck. This heel cap will try to warp when glued, like the head facing. The best cure is an accurate joint and a clamping block with a slightly hollow surface so it only presses on the outside 3 or 4mm around the edge of the cap.

To prevent the cap sliding off, the clamp will need to be at a slight angle to it so as to pull the cap against the end of the guitar body. You will need a packing block underneath to protect the frets anyway, so put some grooves in it to fit over the frets, and cut the other side at slightly more of an angle than the heel cap. Then the clamp can sit securely at just the right angle to hold the heel cap in place. Don't use more glue than you have to under the heel cap. In particular, try to keep glue away from the end grain where the body curves down to meet the back of the neck. End grain wood stains easily, and it will not be easy to sand this bit clean later.

## Heads with a 'facing' of black paint

Many commercial guitars are done this way. If you have chosen to make the head thicker, and to paint the front black, *don't*

*paint it yet*. The black paint will soak into the edges of the head making a ragged edge, and may be impossible to remove. Get at least two sealing coats of clear on the whole guitar first, as described later on. Then mask everything but the front of the head with masking tape and a big plastic bag, and give the head three thin coats of Holts Black Cellulose from the *large* spray can. (When I last looked, the smaller cans of re-touching spray paints also called Holts did not contain the same sort of paint. It was thinner and made runs and drips more easily). Leave 2 hours between coats of black. Leave 2 weeks after the third coat before applying more clear International polyurethane, then spray several very thin coats at first. Polyurethane on top of cellulose requires that the cellulose coat is thin, and fully dried hard. (If you are spraying clear *cellulose* onto the black then 2 days will be enough drying time for the black paint). If you have to apply the clear polyurethane by *brush*, leave the black for at least 2 weeks, then quickly apply one *unthinned* coat of clear to the front of the head with as little over-brushing as possible, and leave it alone until next day. Repeat twice. After this you can "flat" it lightly to remove lumps and continue finishing the whole guitar. Whichever way you do it, don't flat or sandpaper the black paint. Don't put fingerprints on it, put the clear lacquer directly on top.

## Natural finish head

If you find all this troublesome, and you have chosen the thicker head, without a wooden facing, you don't *have* to paint it black — or any other colour. It will look nice left natural like the rest of the head and neck, and you will save yourself a lot of trouble. The guitar shown on page 52 of the May issue is finished this way.

## Head with fancy wooden facings.

Once again, no problems. Wipe any free colour out of the wood with solvent on a clean

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rag, as described for the edges of the finger-board, and then treat the head exactly as the rest of the guitar. You can only face the head this way if you originally made this decision while cutting out the thickness of the head. If you put a thick facing on a head intended for paint or for no facing at all, the total thickness will be too great for most machine heads. If you use a very thin wood veneer facing, it is likely to pull the face of the head hollow as the glue dries. You really have to abide by your original decision about the head, but you can see what a rosewood facing on the head looks like in **photo 4**. This does match the finger-board, which is covered with masking tape at the moment.

#### Finishing the guitar

You will need somewhere with good even lighting where the guitar can be lacquered, and where it can hang undisturbed to dry between coats. As you will see from **photo 4**, I have found a small whitewashed room adjacent to my workshop in which I hang up guitars to dry. For reasons which should be quite apparent, it is about the least suitable place to leave a sticky guitar that one could imagine. However, it is the only part of my workshop which can be kept free from sawdust. It also has good ventilation, separate from the rest of the shop. A clean spare room or garage would be a better choice. Try not to leave sweaty fingerprints on the guitar at any stage during finishing. If necessary, wear thin white cotton gloves. These are sometimes used in factories for handling goods which are later to be painted.

#### Brush finishing

Get a very good brush. A Hamiltons 'Namelvar' or 'Alblon' if they still make these. If you like a slightly softer brush, *Rekab* make a flat brush used as a filling-in brush by sign-writers. It is made from a sort of ox-hair. Useful sizes are 1½ and 1 inch. Squirrel hair brushes are usually too soft for polyurethanes,

even when well thinned. Flat with 400 wet and dry paper and White Spirit between coats. Flat very thoroughly with paper and a cork block every 3 or 4 coats. You will probably need 8 to 10 thin coats. Leave 2 weeks to dry. Flat with 600 paper, and White Spirit, wipe clean and leave 2 days. Burnish with T-Cut sold for car paintwork and an exhausting amount of very hard rubbing. A useful hint is to use a cloth moistened with White Spirit for applying the T-Cut. It is easier to rub, and it doesn't dry out on the cloth so quickly. Use a dry cloth to polish off.

After each flattening down, and before re-coating, wipe the guitar all over with a 'tack rag'. The subsequent coat will be less lumpy.

#### Spray finishing

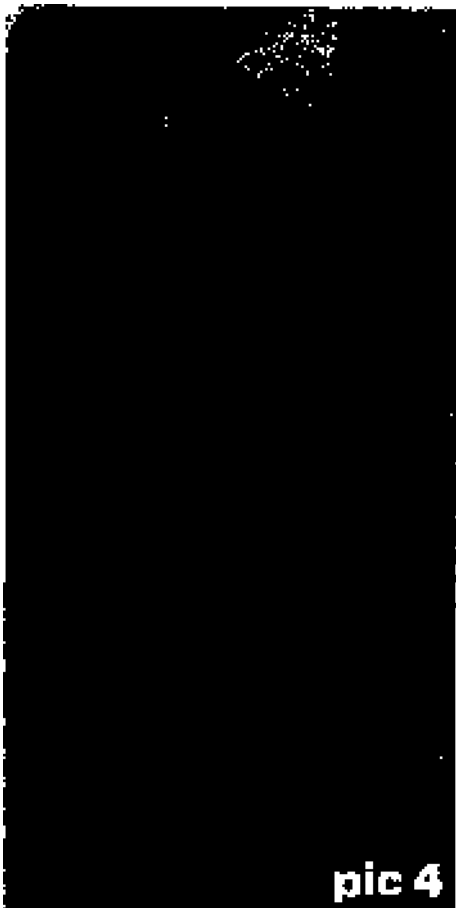
Correct thinning for the particular gun and air pressure in use is the secret. The rest you can learn from one of several books on the subject in the Public Library system. Remember if you spray International Polyurethane that there are max. and min. re-coat times, and that each coat will take longer to be touch-dry than in the case of Cellulose lacquers. It will also eventually 'sink' less than Cellulose.

#### Base Coats and/or Grainfillers

Use what the lacquer maker recommends, and follow the directions exactly. They are all different. Even within one company's products, some base coats/fillers may not be compatible with some lacquers. The only exception I would make concerns 'paste' grain fillers. Some makers recommend wiping off with a coarse cloth and then spraying over when dry. I find this gives a very muddy appearance to the wood. I prefer to sand the filler off the surface when it is dry, leaving it only in the pores of the wood.

You don't have to use a grain filler, particularly with sycamore and maple, but on porous woods such as mahogany it will save you many times its cost in time and lacquer

saved. Filler should match maple and sycamore, but may be a shade darker and colder than mahogany and walnut. Some fillers won't set on some rosewood. Hill Son and Wallace's 'Thixo' filler will set on practically any wood.





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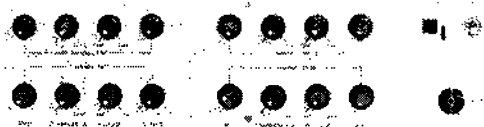
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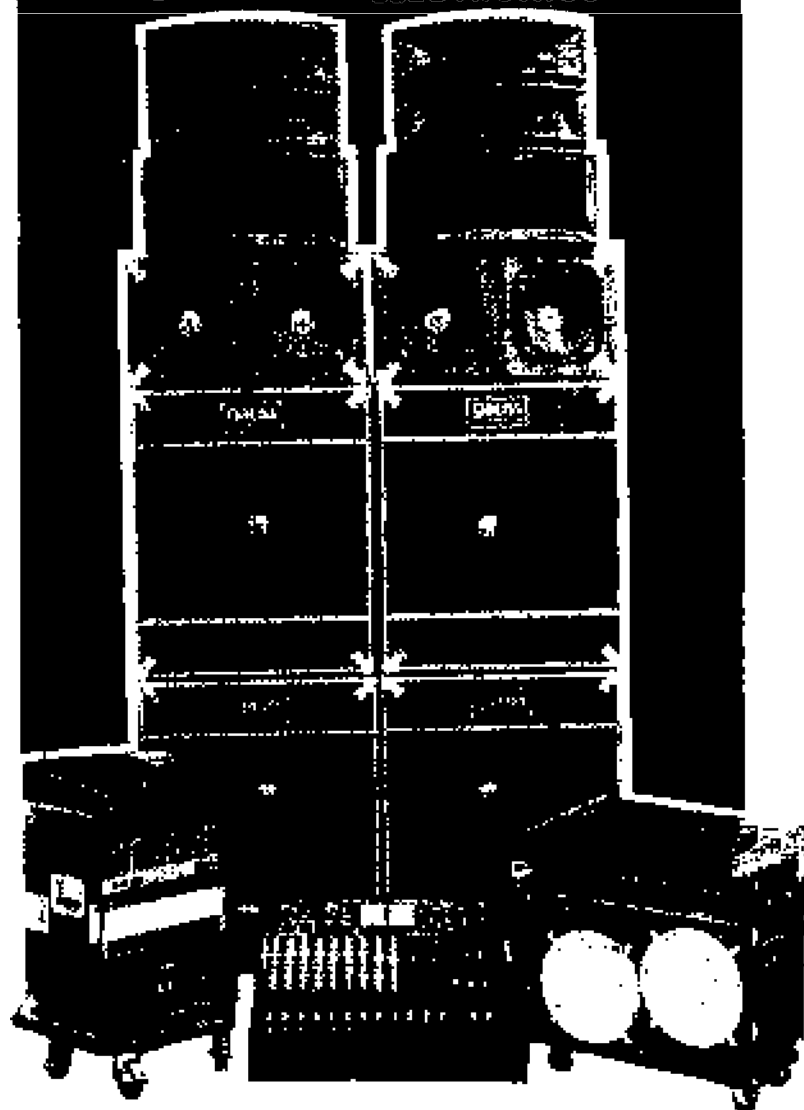
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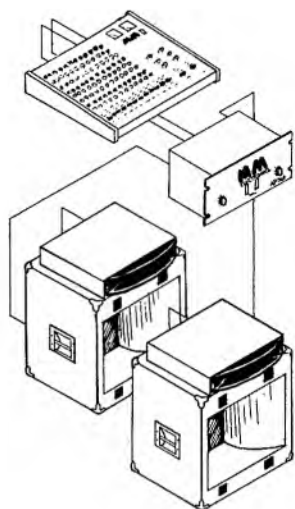
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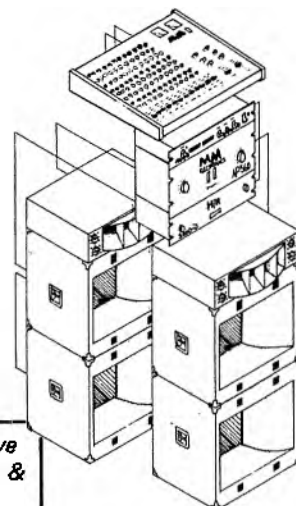
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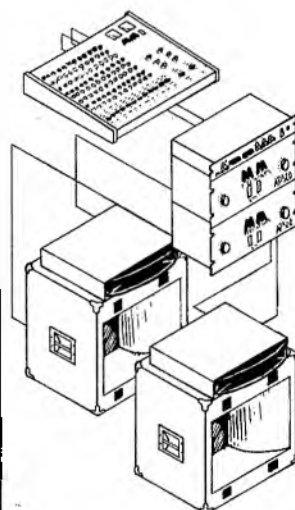


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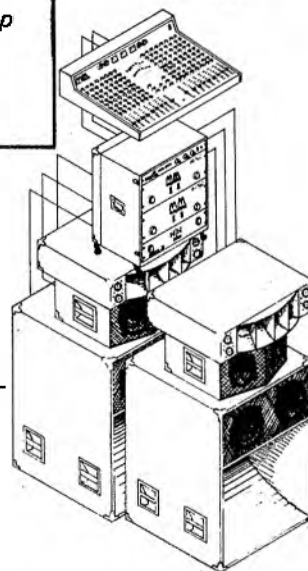
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# The Ohio PLAYER

by Steve Rosen

*Richie Furay was a member of perhaps the most influential American band of the 60's — Buffalo Springfield. From that band came the likes of Jim Messina, Neil Young, Stephen Stills and Dewey Martin who in turn influenced a whole generation of instrumentalists and writers.*

*Furay's main contribution to the Springfield as well as to subsequent bands (Poco; SHF Band; Richie Furay Band) was more as a vocalist/songwriter than as a guitarist but his command of rhythm guitar makes him a valuable person to listen to.*

*He was the foundation of the Springfield behind Stills and Young and his playing has developed into a true art form. He admits being a frustrated lead guitarist but in fact he has played lead on several tracks during his career. The following interview tells all about it.*

**When did you get your first guitar?**

I got a guitar when I was 8 years old. It was a Christmas present from my parents. I'd been bugging them like nobody's business to get me a guitar. I guess it was because we used to watch this show on TV called the Midwestern Hayride. I grew up in Ohio, and that was the instrument you saw. You always saw the guitar player because they were playing country music. I bugged my parents to death for one and Christmas morning I woke up and went downstairs and had a cardboard guitar. It was painted green with cowboys on it. It was a semi-sized model, it wasn't a full sized guitar but it had little cowboys sitting around a campfire.

I did the thing you'r not supposed to do — I went back to them and told them I didn't want it because it wasn't a real guitar. They felt real bad and talked about it for a little bit and I talked them into getting me the real thing on one condition; I did have to take lessons.

This was in Springfield, Ohio, and I went down and met the music teacher and she took one look at me and talked to me for a few minutes and it was like going to a doctor and finding out you had a bad illness. She said, 'Well, let me talk to your parents here for a minute.' I couldn't even get my hand around the neck and she said, 'Boy, I don't know, I don't think I can teach him because he's so small.'

We talked her into it and I took lessons for maybe two years and as it turns out it was probably more or less where I learned all my chording structure. I did learn barre chords and things like that. But as far as learning any further degree of playing guitar, I didn't.



**"What more could you ask for than to have the Buffalo Springfield as your first rock and roll band?"**



**What type of guitar was that?**

I think it was a J-150 Gibson, I can't really remember the exact model.

**What did you do after the lessons?**

I started listening to records and I picked on the best guy I could have picked on at that time. I was probably about 12 or 13 and I started listening to James Burton because he played with Ricky Nelson and Ricky Nelson was my idol, I kept watching him on TV. So I would try and pick up all his licks which I couldn't do because he is one fine guitar player. But I had a great time trying to do it.

About high school time I dropped the guitar because I decided it wasn't the thing to do. I actually didn't play from about 16 to 17 or 18 when it was basketball and baseball and all those things. I think it was actually during that period had I been more aggressive on the guitar I would probably have learned more of the lead type guitar. I'm not a lead player, I use the guitar to write songs with basically. I'm pretty much a basic rhythm guitar player. I do think I have a pretty good feel for the rhythm.

**What was the first band where you really had a chance to play?**

I had a folk band when I went back to college and that's when I decided to pick the guitar back up. That's when I got into folk music but the commercial aspect of it like Peter, Paul & Mary, the Kingston Trio, and that type of music. I was the only player in the band because we really focused in on vocals. It was really just the rhythm instrument to keep it going. That's probably where I took over becoming more or less a rhythm guitar player because it was right after that that I met Stephen (Stills) and then the Springfield started.

If you want to say, the first real substantial band was the Buffalo Springfield. What more could you ask for than to have the Buffalo Springfield as your first rock and roll band?

There's a funny story. Stephen and I did play folk music back in New York in the same group; we called ourselves the Au Go Go Singers at the Cafe Au Go Go across the street from the Bitter End. There were seven of us and we were like the New Christy Minstrels, Serendipity Singers, Bitter End Singers.

Stephen was always more or less a lead player because he was more aggressive and in all the groups I've been in it's always seemed to be like that. You haven't needed a thousand lead players;

in the Springfield there was Stephen and Neil (Young); in Poco there was Paul (Cotton), and Rusty (Young) and Jimmy (Messina); and in all the bands I've formed since then I've always looked for a lead player.

I am a frustrated lead guitar player. On my *I've Got A Reason* album I was the only guitar player so I had to call in a few guitar players but I could play as much guitar as I felt I could and I did write down parts and if I do sit down and write parts I can come up with them. I'm not very much of your free-form guitar player.

**Did you really learn from playing with Young and Stills?**

When Stephen said 'come on out to California, I've got a band together and all I need is another singer', that's really what I felt my instrument to be; my instrument is really my voice. And consequently being in a band I was sensitive enough to know that having two lead guitar players, three are going to get in the way. Anybody can take a look and see that three guitar players are going to be a whole lot, so I mainly kept my parts in the background, to just the rhythm parts. That's where I developed into the rhythm guitar player that I was in that group.

**What type of guitar were you using with the Springfield?**

I used a Gibson 335 twelve, it was a twelve string. The Byrds had the twelve string going so we were going to have it; and the Beatles had it and there was an era when that was happening so it was a twelve string. I didn't want a Rickenbacker so I got a Gibson. I had a great time playing it, that's about the only guitar I really did play in the Springfield. I didn't start playing six string until Poco. Did you play much acoustic guitar in the band?

On the first album, no, I played all twelve string stuff. On the second album I did start to branch off and play some acoustic on basic tracks. And then on the third album basically the same thing, some acoustic and some electric.

The first album was the real true group, where you had the bass and drums, my rhythm guitar, and Stephen and Neil. You can really tell the distinctive styles. I really feel that was Neil at his best. It's maybe because I'm a "parts" man and I can feel the guitars Stephen and Neil worked on became parts. It wasn't your shotgun/machine gun guitar which I'm not very sensitive

to because I'm more melodic. I like to hear melody in the instrument.

I believe when the Springfield was at its best was when Stephen and Neil were actually playing great parts and my rhythm would fit right in up behind that. After that, on the second album he began to more or less drift. There were probably even some things where we started bringing in other people to do things.

It wasn't necessarily guitars at that time but that's when bass players and drummers started going in and out. The third album was just: 'you go and make up some songs, we'll come back later maybe and put it together on a record.' That's why I think I started building a track with the bass, drums, rhythm, acoustic guitar and maybe some keyboard stuff and then overdubbing the electric.

**When you recorded with the band was it all pretty live?**

The early tracks were cut that way. Actually a lot of the first album was cut on four-track. I mean it was 'let's go in and lay it down. Some of the tunes were four-track, not all, but then we went into eight-track. But basically it was the same. It's amazing to me now that there are so many tracks, I'd almost rather do it not more than 16. But we had to go in and I can see us standing there at Gold Star (studio). I mean it was like a live recording and just going at it.

**After you left the Springfield it was Poco?**

Yeah, Jimmy (Messina) and I decided when I knew the Springfield was going to split up that we were going to put a band together. And we really felt the direction we wanted to go in was more or less kicked off by 'Kind Woman' from *The Last Time Around*. We called Rusty (Young) in to play some steel on that one and we knew that we wanted to go off more or less into country rock. That's where that label came from which I hate. I hate labels because as we did it we were pioneering some new music in that era. And the radio was not ready for it at all.

The classic quote was that we were too rock for the country stations and too country for the rock stations and what we had was a piece of product that we couldn't get too many people behind. Had it not been for progressive free-form FM we would have actually had trouble having our records heard on the radio.

But that was the form we took and we asked Rusty to be in the band, and Jimmy — I will say this for him — was



also a great James Burton fan because you can really hear it in his style. I think Stephen (Stills) influenced him too.

That was a good unique sound that we had going for us. There again, I was the rhythm guitar player in the band. I probably could just have played acoustic guitar. I think miking at that time the sound wasn't quite as good as it could have been and that's probably why I went on to play electric guitar.

**What guitar did you use with Poco?**

I started off with the twelve string again and I got it stolen in Austin, Texas, when we were doing a tour and that was really a blow. That was the only guitar I've really lost; I lost two twelve strings. I lost one and got one from Bernie Leadon and it got stolen at Fillmore West and that was just carelessness.

After that you start to see who's watching your stuff when you're not. At that point I bought the six string which was a 355. That's the white guitar that I'm still playing today. And I got it converted from the vari-tone on it to a master volume because I don't need all the different sound when I'm playing rhythm. I really liked the neck and the feel of that guitar. It belonged to Virgil Beckham who played lead guitar on my new album and I bought it from him in 1969. It's an old guitar, it's a '59 but I loved the neck on it. It was like a prototype guitar, I don't know where exactly he got it, but I knew the minute I held that guitar I wanted it. Obviously it's the one I've played for the last ten years.

I don't know what it is about that neck but it's a real smooth neck. I love the guitar.

**Have you done any other work to it?**

Not really. I still toy around with frets. I think as I try to work out more little lead parts and duets and stuff I'll go to wider frets so it is better when I bend strings. My finesse on that isn't real great.

My guitar player is Charles Kurz and I'm learning a lot about guitar from him. He prefers a little wider and a little heavier fret for the lead work that he does.

I am going to get a Les Paul but when you hear what Charles can do you'll see why I consider myself even more of a rhythm guitar player. I know a Les Paul is not a rhythm guitar but I've wanted to play one for a while and when I do get into the studio I can take my time. I love to sit at home and play with my tape recorder and just work out parts.

I do so much singing that the accompaniment is needed from another person. That's why I have ended up surrounding myself with a lead guitar player, a lead keyboard player, or whatever.

**What amplifier are you using?**

Right now I still use a Fender Twin. I've used one forever. There was a period when I tried some other amps and I always go back to Twin, I don't know why.

One amp that I would like to get in with and experiment with is the Boogie amp, the Mesa Boogie. That's what my lead guitar player plays with now and Jimmy Messina is playing with one. I really like what they do and I like the sound they get and I would like to experiment with it. I think for my basic rhythm sound the Twin is the one that fits into the sound and feels the best. I've never tried a Music Man which is probably a similar amp to the Twin.

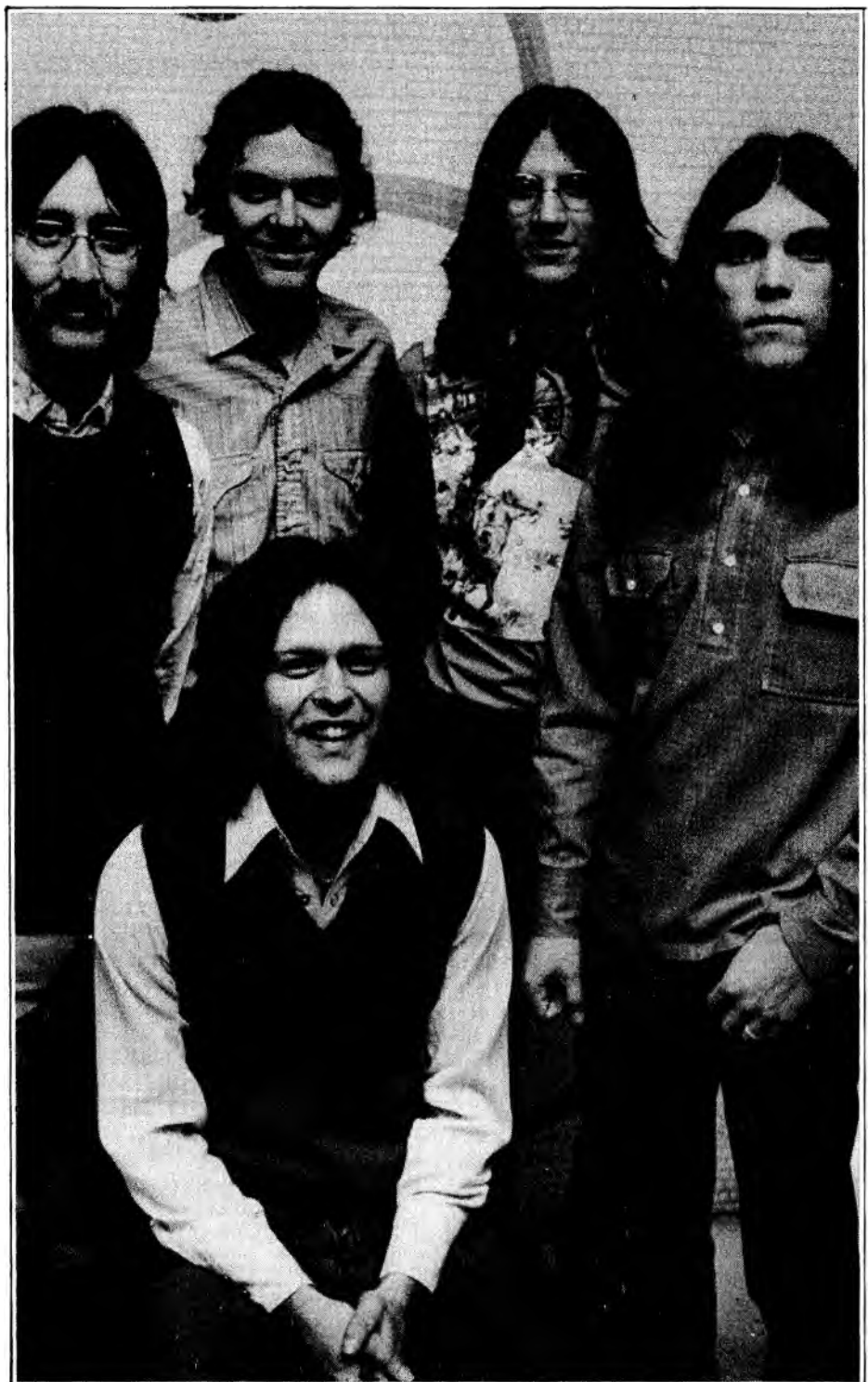
I actually started with a Showman

with the Buffalo Springfield and I guess it was with Poco that I got into using a Twin.

**Is it a stock Twin?**

It's not really a regular stock Twin; I have it beefed up a little bit with speakers and power and stuff but it's not converted that much. And I'm not very much of a technician.

I really feel kind of strange because I'm not an instrument man. I guess I do have a tendency to put myself down thinking I'm not a lead guitar player but



Furay (second from right) when he was with Poco. Rest of group L-R: George Grantham, Rusty Young, Paul Cotton and Tim Schmit.



there definitely is a place for the rhythm guitar and it can destroy a sound if you don't know where to put it in a band.

So I guess I should pride myself in knowing after all these years where to put it and place it in the band. And there are times when I don't play that I feel my part is missing and the other guys do too. I know it's real good for me to sit my amp right by my drummer because the drummer and the bass player and myself are the push of the band. We're the rhythm section. And it is important. Who do you think are good rhythm guitarists?

I think two of the finest are John Lennon and David Crosby. I think they are really good rhythm guitar players. Maybe it's because I came out of that era back there but Townshend is fantastic. But he's a lead guitar player too.

You like using hollow bodies for rhythm?

I think it's a good rhythm instrument. Chuck (his lead guitarist) has been trying to talk me into a Stratocaster for rhythm because he thinks it's a great band sound for Strat. I'm going to do some experimenting now; I might play a Strat for a little bit and see how I like it and try a Les Paul. I'm going to see if using other guitars it'll give a different sound to here and there.

I have what is known as an iron grip. If I'm grabbing that guitar there's no one who's going to get that neck out of my hand. I think that came from years ago when Neil, who had a problem of passing out on stage a lot, would hane me his guitar before he hit the deck and our grounds would never be the same so I'd get shocked.

What tone settings do you use?

I turn both volume knobs wide open and I adjust the sound with the tone switches on the guitar. I either run the amp about 5 or 6; the treble about 8; midrange 6; and my bass setting about 7 or 8 also. And I find when I'm singing I'll run both pick-ups about 7 on my master volume. And when we start pushing a more solo thing and we start driving — adjusting for whatever room you're in — I might adjust my tone volume to a little more bass and hit the treble pick-up just so it will cut through and drive just a little bit more if it's like a hard solo.

Do you use any effects?

I use an MXR phaser and just the regular stock tremolo that's on the amp. I don't really feel that I need any more than that. I like the phasing sound for some things.

What kind of strings do you use?

I use D'Angelico strings; ever since I started playing acoustic guitar I've used them. When I went to New York in 1964 to be a folk singer I started using D'Angelico strings before they were D'Merle. I found that they retained the best tone for me for the longest length of time and also some people's body

chemistry just cause strings to corrode. And I found that those held up for me the best so when I started playing electric I just started using D'Angelico too.

What gauge do you use?

I use an extra light set on my 355 and it's a stock set called XL 200 and it has the wound G string. Not being a lead guitar player I don't like having the unwound G; I don't have to really bend it and I find I can keep my guitar in tune better with the wound G. I use a light gauge set on my D-28 acoustic guitar and I use a medium set on a J-200 I have because that's more of a jumbo guitar but still I don't like to use their heavier strings because they're too heavy. The J-200 has a great rhythm sound with the medium set.

I can use an extra light set on my D-28. If I want to do any picking at all, like on the intro of 'Just For Me And You' on the Poco album, it has a good lead sound for that. But I find the light sound all around is one that works the best on that acoustic guitar.

It seems you would want a little heavier set for the electric to give more sound and prevent the guitar from going out of tune.

Actually my guitar has been pretty good to me because I really have not had any tuning problems with it. I have a little bit of a problem in California because of the heat. But back east, where the humidity should be as high as ever I didn't notice too much of a problem with it. I really stretch the strings before I go out and play; I don't give them a little tug, I give them a pull so I know that they're stretched out pretty much as far as they're gonna stretch out. I think that helps to keep the guitar in tune.

How often do you change strings?

I put on new strings about every three shows.

Do you play acoustic guitar live?

Not yet. This band has only been together a little over a month. They have had to retain instrumental and vocal parts and coordinate the two so right now what we have is a foundation set. Eventually I would like to put some acoustic stuff into our set. I would like to work out an acoustic thing maybe where I play a couple of tunes by myself and then build it up.

Do you use any special miking techniques in the studio?

I let the engineer adjust to where he feels comfortable. I liked some sounds Stephen used to get on our Springfield things. He was doing a lot of picking and you could really hear the limiting, you could hear that sucking and pulling the notes out.

On the rhythm it's like a nice clean sound. The way I mike the guitar is I put one back by the hole and one up by the strings. The two mikes together bring in a nice sound then you can tinker around

with the toys you've got inside the studio if you're doing lead picking or whatever and you want to get that limited compressed type sound. I really haven't found that too necessary with the rhythm I play.

What kind of picks?

I use a very light autographed model. In the studio I really like it because I can play with a very light touch and it doesn't strike the strings too hard; I like the picky sound that it gets when I play rhythm.

And also if I used a heavier gauge pick I have found myself attacking the guitar a little too strong live; getting wrapped up in the excitement and everything that's going on. And I found that I would break some of my higher strings. I like the lighter pick because it doesn't grab it and hold. I did use a Herco gold for a long time.

Your attack then is light?

In the studio it's very light; it's much cleaner. I've heard the difference of when I pick hard and the nervous tension builds and right away I know you can't get the delicate clean sound beating a guitar too hard.

Have you every played lead on record?

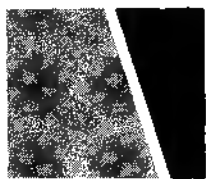
On my new album I played lead on 'Someone Who Cares' and you can tell it's different from any other lead on the album because it's a worked-out solo, it's not your free-form solo. I played lead on 'We'll See' on my band album. I played lead on 'Bad Weather' on Poco's *From The Inside* album on the acoustic guitar. 'Just For Me And You' a little lead solo. I guess there really aren't any leads on *Gettin' Through*. All the guitar, except a few things Al Perkins and Steve Cropper did on my *I've Got A Reason* album, I played. And I played the lead and it was live on 'Brass Buttons' on the *Crazy Eyes* album. I throw a few leads in every once in a while.

I would like to be able to do that a little bit more because it even gives the songs a little more variety. I like duets and that's why there's duet solos on 'Someone Who Cares' and 'We'll See'.

Do you think your playing has become stronger over the years?

Yeah, definitely. I'm a lazy guitar player I'm ashamed to admit but I spend most of my time writing. And when I do that I accompany myself with chords. From *I've Got A Reason* on I've been able to sit at home and overdub and as I'm overdubbing I'll take time to experiment with soloing and that.

The most important thing for me is to write the song because I know I've always got a lead some place from somebody. Once you've got the song then you start arranging it and adjusting to where you want what. But when I'm at home I over dub and that's how I worked out the solos that I did work out. Sometimes I'll hum a part, I'll sing it vocally, and then I'll go and find the notes on the guitar.



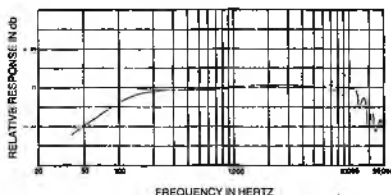
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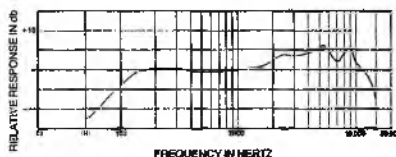
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## SM58

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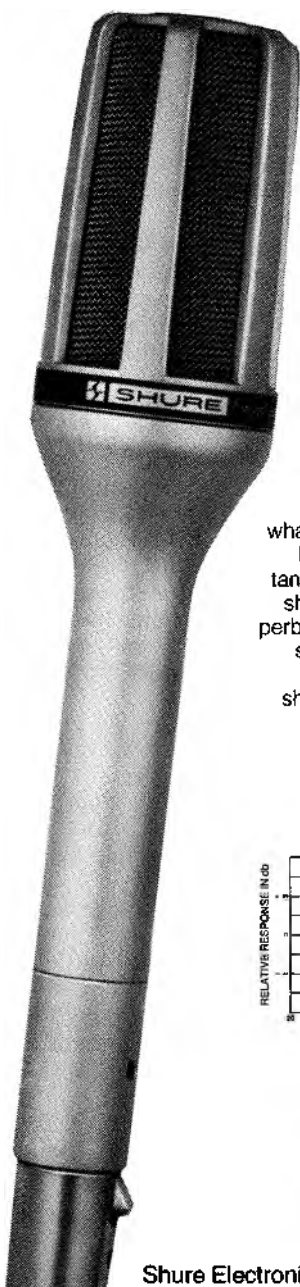
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By Pete Quin B.Sc. A.F.B.I.S.

*Pete Quin is a songwriter and ragtime guitarist based in Portsmouth, England.*

# Build a Bug Pre-Amp

## Introduction

Perhaps the most popular method, and certainly the most convenient, for amplifying an acoustic instrument (e.g. an acoustic guitar) is to use a piezo-electric transducer. These devices, often referred to as 'bugs', are produced by several manufacturers in various different sizes and shapes but, basically, they all perform in more or less the same way.

The working part of a bug is a piezo-electric crystal. These crystals possess the interesting property of producing a small voltage across opposite faces when they are slightly 'squeezed'. The voltage produced is proportional to the force used to squeeze them. With a mechanical produced is proportional to the force they are used as gas-lighters, the voltage produced being high enough to make a spark to ignite the gas, for example.

However, very careful manufacturing techniques now enable us to produce crystals which respond evenly to very small vibrations, the vibrations making the crystal produce voltages that are electrical 'analogues' of the vibrations themselves. In other words, if a piezo-electric crystal is fastened, say, to the face of a guitar, the signal it will produce will be exactly equivalent to the vibrations it 'feels' in that place — just as a microphone 'feels' vibrations in the air and produces an electrical signal.

With a mounted transducer, ('transducer' just means it changes energy from one form to another, i.e. in this case, mechanical energy to electrical energy), there are certain advantages over microphones.

There is no worry about distance from the 'mike', and the transducer can be specially tailored to suit the type of instrument, to ensure a reasonably flat response; therefore, once you have found, by experiment, the position on the instrument which suits you best, you can depend on getting the same quality of sound out of your bug at all times.

There is, however, one problem which is common to all bugs. By their very nature, they are Very High Impedance devices and need, therefore, to be connected to an even higher impedance amplifier input. (Impedance is to a.c. (e.g. a musical signal) what resistance is to d.c.).

A basic rule in connecting sound

equipment is to be sure that the impedance you're connecting to is higher than the impedance you're coming from, or it just won't sound right!). The trouble is that most modern amplifiers and mixers have input impedances to suit modern microphones and normal electric guitar pick-ups, and these impedances are nowhere near high enough to allow a bug to perform properly, with the result that the sound is nowhere near as clear and accurate as it should be.

While some manufacturers produce special pre-amplifiers to help match the bugs into amps, these are usually almost as expensive as the bugs themselves. The object of the rest of this article is to describe the construction of a very simple but highly effective pre-amplifier that, for the minimum possible expense, will satisfactorily match all common bugs into all common amps and mixers. It has been exhaustively tested by a large number of musicians, and has proved entirely satisfactory for both professional and amateur use.

## The Circuit

The circuit shown in fig.1 is a very high input impedance pre-amplifier reduced to its simplest form. Since, in the vast majority of matching problems, signal level is no problem, no gain stages have been included, since these inevitably add some noise, and possible signal deterioration. The circuit as shown should prove satisfactory for all bug-amplifier and bug-mixer combinations, introducing no audible noise or distortion. The circuit uses an f.e.t. (field effect transistor) as its only active component.

The gate-source impedance of this is exceedingly high, therefore the input impedance of the pre-amp may be taken as equalling R1, 1.5 megohms being chosen as high enough to satisfy all bugs. The output impedance depends partly on R3, but the value of 68 kilohms was chosen for a very special reason.

While allowing the unit to match even a low impedance mixer input, this value of R3 means that the current drawn from the battery is extremely low. (Typical current drawn by pre-amps in use has proved to be less than 100uA — one ten thousandth of an amp). Thus, there is no need to incorporate a switch in the circuit. This means that some

unusual installation methods can be used, resulting in added convenience for the musician.

## Construction

A typical complete set of components for the pre-amp is shown in fig.2. The specified f.e.t. is a 2N5459, but, if you find this not easy to obtain, try any other n-channel f.e.t. — with luck, the results should be quite satisfactory. Be warned, though, that pin configurations may differ with other f.e.t.s, so be sure which way round they are. There is nothing difficult about the construction, but take care not to overheat the leads of the f.e.t. when soldering. The photographs show three different layouts in use.

Figure 3 is a typical small metal box in which the circuit has been constructed on the tags of two adjacent jack-sockets. A large number of pre-amps may be fitted in the same box in this way, and may be powered by the same battery with negligible cross-talk.

Figure 4 shows the circuit constructed on a jack-socket for mounting in a guitar. The heavy lead goes to the bug. A clip nearby is needed to hold the battery.

Figure 5 shows perhaps the most useful layout of all. It is made possible by two features of the circuit — its lack of need for a switch, and its lack of need for screening. In practice, this unscreened circuit picks up no more audible hum than the bug and connecting leads themselves do.

The entire circuit may be constructed on a battery connector, one lead connecting it to the bug and another to an output socket. In this way, the whole circuit, with battery, can be positioned in a conveniently accessible place inside an instrument. Figure 6 shows a typical installation inside an acoustic guitar. If leads are kept short, as in the illustrations, the entire pre-amp can be no more obtrusive than the battery itself.

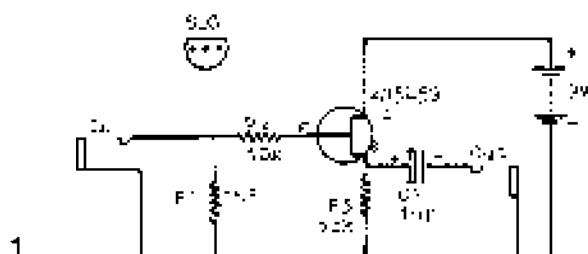
## Conclusion

All the layouts shown sound exactly the same. One, however, should prove most convenient for your particular application.

It is probably best to use an alkaline battery, since these show little tendency to leak when ignored for long periods of time. Discounting leaks, any battery would last almost indefinitely in this circuit, regardless of how often you play, but it's a sensible idea to change it every year or so, anyway.

Finally, the circuit has been kept deliberately simple since this has proved most satisfactory in practice. If you're into electronics and want to try your own modifications, go ahead, but remember: tone controls and high gain stages can be fun, but it's what it sounds like that really matters, and this little one sounds great!

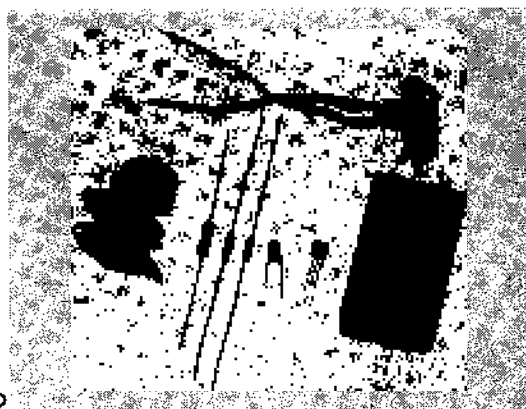




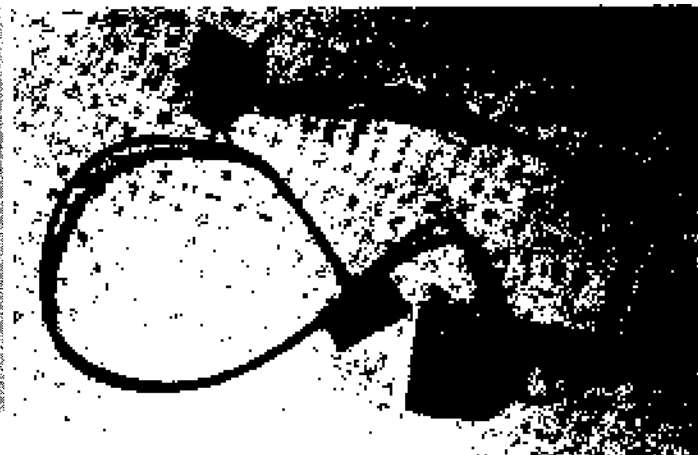
1



4



2



5



3



6

**Fig 1:** The circuit of the pre-amplifier.

**Fig 2:** A complete set of typical components for the pre-amplifier.

**Fig 3:** Layout 1. Components are mounted on the tags of two adjacent sockets. A box may contain several pre-amps like this, all powered by the same battery.

**Fig 4:** Layout 2. Components are mounted on a single socket, one lead going to the bug, for installation inside an instrument.

**Fig 5:** Layout 3. Components are mounted on the battery connector itself. The most convenient method for installation inside an instrument.

**Fig 6:** This shows layout 3 installed inside an acoustic guitar.

#### PARTS LIST

TR1	2N5459 (see text)	
R1	1.5 megohm	1/8 watt
R2	10 kilohm	1/8 watt
R3	68 kilohm	1/8 watt
C1	1uf tantalum	35 volt

(or near equivalent)

One mains jack-socket

One 9v battery, PP3 size or alkaline equivalent

One battery connector

Battery clip, etc., as required.

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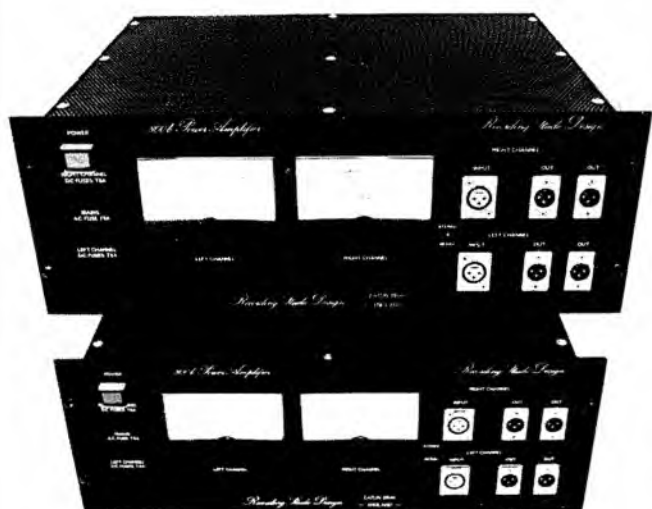
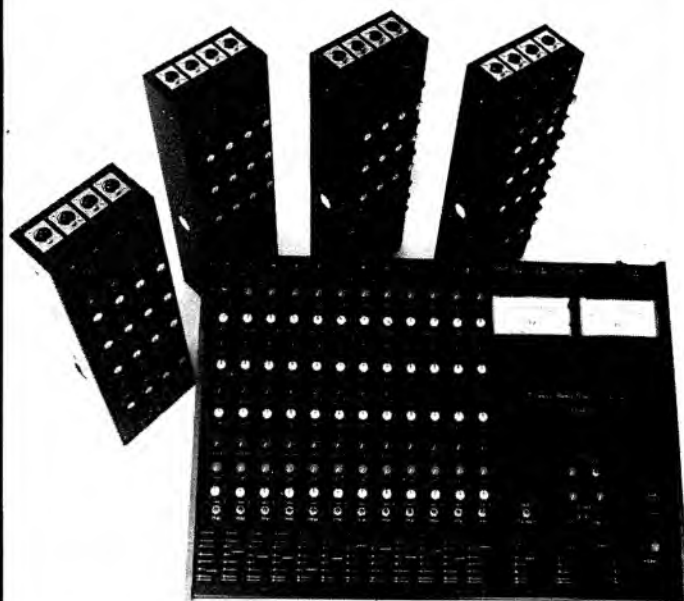
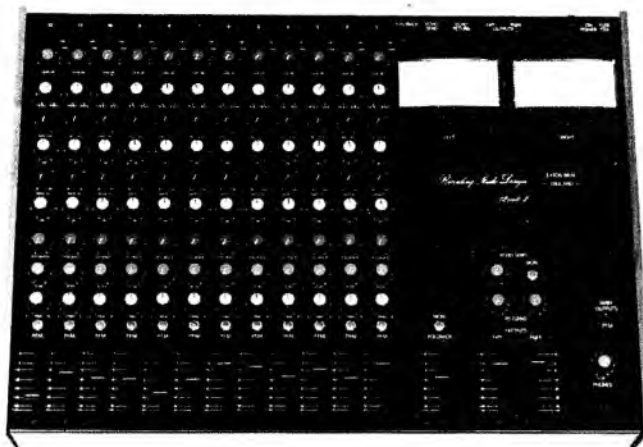
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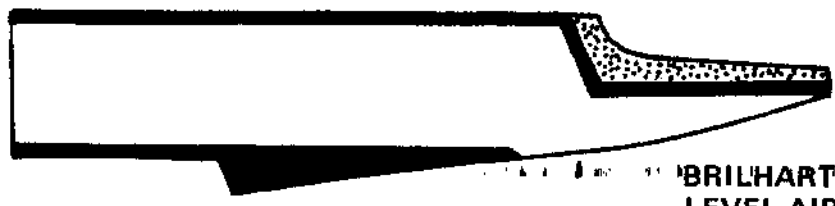


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	100/0/M	100	7
	100/1/M	100	7
	100/1/SMS	100	7
	100/2/M	100	7
	7*B	104	7*
	7	100	7
			
	7	100	7
	6	97	6*
	G	91	6
	E	74	4*

BERG LARSEN

LAWTON

OTTO LINK

BRILHART  
LEVEL AIR

SELMER CLASSIC

SELMER JAZZ

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# .....BLOWING IN THE WIND

## BERG LARSEN

Berg was a professional saxophone player who was also an engineer and, after much experimentation, finally evolved the very popular stainless steel mouthpiece which most sax players have in their collection.

The early Larsens were made from aluminium which was anodised black but these were prone to a aluminium rust, (a form of corrosion in which the metal becomes pitted and eventually eaten away). He tried stainless steel, which is very difficult to machine as it blunts cutting tools and generates a lot of heat. This same metal is used for surgical instruments as it can be polished to a mirror finish and withstand the continual steam treatment of sterilisation without going rusty.

Unlike the bronze mouthpiece, stainless steel can be left polished without the gold or silver plating required to keep them from tarnishing. Apart from the machining problems, stainless steel is the perfect mouth-

piece metal.

Its tone is different to bronze, being colder and more penetrating, the early bronze Larsens were noticeably different in tone to the steel.

The 100/0/M makers marking refers to the tip opening in thousandths of an inch, the height of the baffle (0 and 1 both have the same slope inside) and the type of curve on the facing as both M and SMS are the same very long leg of 1.050" inches. This makes the tuning difficult to control Soft reeds less than 2½ should not be used.

The SMS is a different tone to the M which gives the sound achieved by Junior Walker on his early records, King Curtis up to 1969 and Wilton Felder with the Crusaders. Plas Johnson, Ben Webster, Gato Barberi, have all used metal Larsens to get their own sound across.

The two-tone chamber is actually a totally different design to the 0 and 1 as it is still made from the original size,

fatter casting, and has a straightstep inside. The sound is more mellow than the 0 and 1 and the tuning is better. It was this model that King Curtis used although it was modified by having a much shorter lay.

The design is basically capable of many different tones by reason of the four different interior. The bore is tapered and could benefit by having the last inch or so when it fits on the crook. This is parallel to stop the mouthpiece working loose. Some additional length would help too. The rail thickness seems to vary quite considerably but the advantage of stainless steel is that it can be adjusted using a fine jewellers file. It is characterised by easy blowing and a bright modern sound, but inclined to sharpness in the upper register so the intonation needs great care. The Larsen sound is unique, and if this is what you want, then you won't get it with any other mouthpiece.

## LAWTON

This is a bronze mouthpiece with a very smooth, highly polished interior. Made by Geoff Lawton, each one is finished in gold plate. The reed clamp is fitted with great precision into a milled slot and is a perfect fit. The rails are narrow and of even width as is the

reed tip so the harmonics speak very easily.

There are two models: the standard and the star model. The brighter model (the 7\*B) has a higher baffle than the 7, and great resonance and ease of blowing. The 7 is still very bright by

comparison to the Link, and the design has a sensible length of lay, so the tuning is excellent. The circular tone chamber and smooth interior give a big sound to the bottom end, in the case of the star 'B' models, very good volume. Very easy blowing; recommended.

## OTTO LINK

One of the first metal mouthpieces this design goes back around 25 years, and in some ways is still the standard by which others are judged. It is cast from bronze and is unique in its construction, by being made in two halves soldered together down the centre line and gold plated. It became very popular in the early sixties and is used by all the older session musicians.

It has excellent tuning and its design was a breakthrough in taking a tone chamber larger than the bore and, by narrow tip and rails and shrewd compromise in the height of the baffle; was able to combine the excellent intonation of the traditional classical mouth-

piece with brightness and edge. Because of its almost universal use by professional musicians in the big band context, and by jazz players like John Coltrane, Lockjaw Davis, Wayne Shorter, Stanley Turrentine, the possibility of playing one and sounding individual is now remote. This is because all the combinations of hard reed close lay, soft reed wide lay, and permutations have all been tried. It is fair to say that some of the very bland musak type recorded sounds are made by this mouthpiece. Every tenor sax player should have had one at some stage and it is an excellent mouthpiece for the beginner as well as the man

who sight reads music for a living and must be in tune with a number of other wind players.

By comparison with the Lawton it lacks volume and projection and it has a very characteristic hollow ring to its sound. Maybe a similar model to the Lawton star B could be added to the standard Link range which would have a higher baffle and flat surfaced sloped into the tone chamber for players who prefer more resonance, volume, and projection.

Pop music is, by definition, 90 per cent of a sax players session work so an updated Link would be very useful to a large number of players.

## BRILHART 'LEVEL AIR'

The makers of this rather unconventional design have chosen stainless steel but in the form of a thin-wall precision casting. The reed table is

tilted in a downward direction so that what is normally a slope into the tone chamber is now horizontal.

The plastic Brillhart was standard

issue in the heyday of the big bands and Arnold Brillhart was on the right track when he designed this to carry on when styles and tastes changed.

Unfortunately he overlooked a basic fact regarding the slope angle between the reed and the top or 'bite' of the mouthpiece.

Between 22 and 27 degrees is standard and a clarinet mouthpiece has an even steeper angle. By making the top of the mouthpiece nearly parallel to the reed he deprives the player of

the feel that he is accustomed to of pushing against a slope.

This mouthpiece would have found greater acceptance had this basic slope been built in. It would be a relatively simple modification to re-design the plastic bite insert to accommodate the proper angle.

The mouthpiece has an excellent

harmonic range from its narrow rails and fullness at the bottom. It has been popular in baritone form for the good bottom sound. Very bright tone with good edge prone to sharpness in the upper register but nevertheless worth trying.

## SELMER CLASSIC METAL

This is in fact, as the name suggests, a classical design which has a circular dual-concentric tone chamber. It has quite a short lay and the tuning is near perfect when used with the Selmer saxophone.

It has a beautiful round, almost flute-like tone and of course is not very edgy or loud. The soprano model was used by John Coltrane and is excellent for a non oboe like tone on this rather abused instrument. A very musical

mouthpiece which has unfortunately recently been deleted in England but there will still be some old stock in the shops.

## SELMER JAZZ

This is like the Classic, made from a copper-free white metal alloy and beautifully finished in silver plate. The word 'Jazz' is engraved into the reed table and it has a flat slope into the bore and a tiny step.

As its name would suggest, it is much brighter sounding than the

Classic, in some ways like a Link but without the characteristic hollow ring. The short lay means good tuning.

Both these Selmer mouthpieces are beautifully — made and generously proportioned, being some  $\frac{1}{4}$ " to  $\frac{3}{8}$ " longer than the products of other manufacturers. This extra length could

be used with advantage by the Berg Larsen as its tapered bore makes it prone to working loose.

The tone of the Selmer Jazz is full and bright and represents an excellent compromise between very good tuning and a slightly stepped design.

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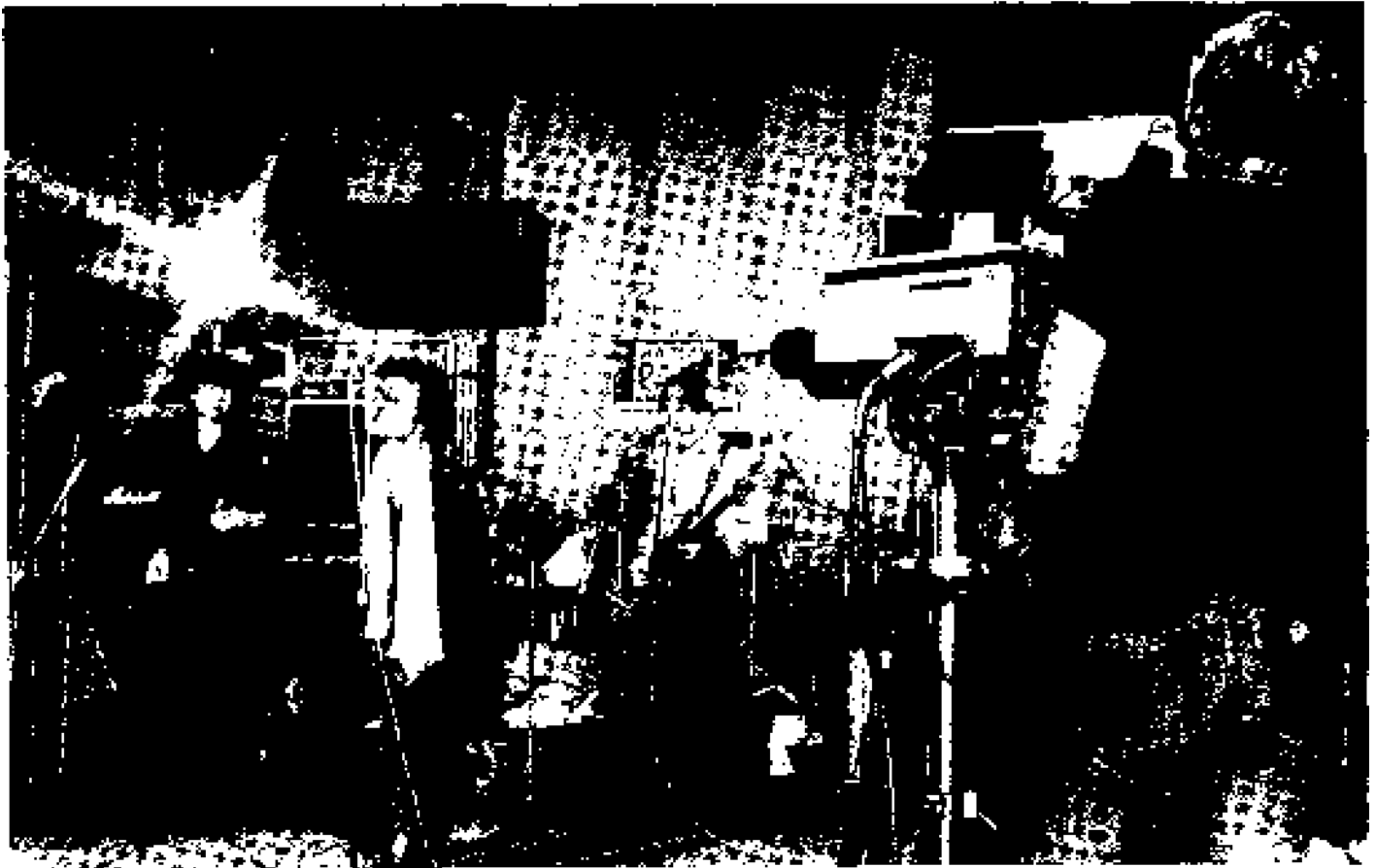
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# THE VIDEO BOOM

## I.M. Investigates Rock's New Medium.



You know how you sound, but what do you look like? For the past 20 years groups have been rushing off to demo studios to place their sound on tape and most bands have a pretty accurate idea about how they sound. But what do you look like on stage. It's a question you'll only be able to answer when you've recorded that first TV show. Then you all gather round a TV set and laugh very loudly to cover your embarrassment.

Now you haven't got to wait until a TV talent show allows you to make a fool of yourself before 20 million people. The miracle of low-cost video taking has finally arrived. There are many *cheap* ways a band can make a high quality video demo and the object of this feature is to discuss them and encourage you to iron out the most obvious faults before it really matters.

There's another very important use for video tapes. They're the ultimate promotion tool for your act. Take along a video cassette to WEA records (every large company has a playback machine) and let them see why they should give you a contract (with a decent advance). This use really cannot be understated and if you're any good your manager will certainly succeed in illustrating this with

a video cassette when he might fail with just an ordinary demo.

John Ham of Swansea (if you've gigged in that area you'll know his shop) says that he knows of one very successful agent in South Wales who takes along a "Video Showcase" to clubs and lets the entertainment committee actually see the acts he's trying to get them to book. The advantages are obvious.

Trident (the company behind the Studios, originally behind Queen and many other bands) are pioneers of video promotion. When they tried to launch Phoenix (albeit unsuccessfully) the first thing they did was make a really high quality videotape. This impressed everybody from overseas record companies to journalists that the band undoubtedly had visual appeal and the purpose was achieved without endless processions to the Birdcage in Harlow (for example) allowing visitors to see the band.

You can buy or hire the video you need. The suggestion of buying it is far less horrific than you might think and once you realise what else the equipment will do it will seem far less of an extravagant idea.

A video cassette recorder costs between £500 and £900 pounds (\$1,000-\$1,800). This machine is very similar to normal cassette recorders, it's just a little bigger. It will do several things. It will sit beside your TV at home and record programmes from the aerial. The TV doesn't need to be on and the recorder functions entirely separately. This means it can record any programme at any time irrespective of your movement or what's being shown on the TV. You can programme the machines to record automatically whilst you are out (one machine will even accept programming for a time up to three days ahead).

For a few hundred pounds you can then buy a black and white camera and you've got your own TV studio. All of the video cassette recorders accept input from a video camera and this accessory allows real use of the medium. Take a cassette recorder along to a rehearsal or a gig, set up a camera and record the whole show. If you've got a roadie or another spare pair of hands get him to take the camera to different positions. The result on your stage act will be incredible. You've only got to watch yourself performing once and you'll immediately realise that some of your mannerisms are

irritating, some pleasing and some just unnecessary. Because you're taping yourselves it doesn't matter how bad you are, you'll get used to the medium and then start to use it creatively.

The second method of getting yourselves taped is to hire the equipment. This is an exercise that is well worth the £70 or £100 (\$140-\$200) it is likely to cost. You get a recorder and camera for a week and by the end of that period you will have completely reshaped the visual element of the act.

The gear is very simple to use and there are centres for hiring in most major cities. Be prepared to leave some form of deposit and off you go.

The third method is the most professional way. Many video services offer a "video unit" for hire. This involves two or three operators from a company turning up at a gig or a rehearsal with video tape machines, cameras, lights, vision mixers etc. and making a professional tape of your act. After the recording the tape will be edited and you'll end up with a very high quality tape that shows your band off to full advantage. This service is likely to cost between £300 and £1,000 (\$600 and \$2,000) and is certainly worth it if an overseas record deal needs clinching. This type of operation is done fairly regularly for known "second division" bands and only you know if you're ready for it.

Within a few years video discs and tapes will be on sale in every high street "record shop". Every artist currently making record will have to make a video version and obviously music will no longer be purely an aural entertainment in the rock field. This means that you must ensure your act has real visual appeal. This doesn't mean that every member of the band has to be as pretty as Peter Dinklage, that would be very boring. But it does mean that movement must be co-ordinated and the drummer must learn to react (or not) when a camera zooms in for a close-up during his solo.

Rock music is no longer an aural art. Video has changed the business and doubled your challenge.

Bands have already used video to beam a recording of themselves on to a backdrop screen while they are playing live. More recently, videos have been used as part of promotional campaigns. Alan Porter, Video Sales Manager for REW, one of the biggest audio visual specialists who are based in Charing Cross Road, London, has experience of one such campaign.

He explained the use of video in an exercise to promote a new Emerson Lake and Palmer album. A film was made of the group playing material from the new

album which was turned into cassette form. A video playback machine was then installed in about half a dozen record stores. Screens were set up and the film was run continuously in the store during the day. After a week or so the machines would be moved to different shops and the process repeated. The success of this campaign was reflected in increased album sales.

Alan said: "Video can be a great promotional aid, particularly in the entertainment business. Obviously, it is not a thing for bands who are just starting out, but for those who have reached a certain level and want to progress. It is also possible for a band who have never seen their own performances to learn and improve from a video.

"Probably the most important use of video for bands would be helping them to get work or land a record contract. On an ordinary cassette groups tend to sound so much alike and you really have got to be something special to get noticed.

"With a video, the impact is visual; obviously agents can tell more about a group from a video than just listening to a cassette. I would think it would be very useful when trying to get work abroad. If you have a video to offer, then an agent or record company would certainly remember you and also shows that the group is organised and has a professional outlook.

"There are going to be a lot more people with video cassette recorders and I think the time will come when record companies will say, 'can we see your video cassette?'"

The cost of hiring equipment and making a video varies greatly and depends on the type of job and the requirements of the artists. Being the most experienced company in the video business, REW can offer the very best in equipment and facilities, as Alan Porter says: "Coming here, we will make sure that the video will play back and convert to standard."

The video boom is not just restricted to London, audio visual companies all over the country are becoming aware of new markets which are springing up. Hammonds of Watford say: "More and more agents in the entertainment world are becoming aware of video and its tremendous possibilities. If you want to present a group or artist, there is no better way of putting it over with a punch than with five minutes or so of video.

"We have both colour and black and white facilities with equipment for location work, we also have our own studio which can take about four or five people. Recently we had a video of an artist which led to a booking in Las Vegas. For the promotion of up and coming

artists, video is marvellous."

Colin McCloud, managing director of Studio 45 based in the West Midlands, said: "We are involved in all aspects of video and find it is a growing thing. We tend to specialise in groups. Not the stars, but those making their first appearance on television or doing a stint at a night club and want to get themselves on tape."

The requirements of rock bands differ considerably from most other video users. There are many companies who do not undertake the work. Many, like Audio and Video of London, have worked with rock bands but do not specialise.

The company say: "We try to avoid it because we haven't really got the facilities to cater for them. Rock bands tend to be very mobile and this means our people being out for a number of days with them, but it all depends on what they want.

"If they want just playback facilities, then obviously they don't really need operators. Operators go out if we have a big camera job, but there is potential in the rock music field for this kind of thing and there are companies who are now specialising in it."

Hire is standard with black and white facilities costing £45 a day, colour camera recording at £150 a day, and replay facilities from £25.

The Electronic Picture House company in Wardour Street, London, specialise in the hiring and selling of video equipment to the rock business. "We cover both ends of the music spectrum. We make videos of established artists such as Manfred Mann's Earthband and Weather Report who have their own playback machines and want to build up a kind of video photograph album of themselves.



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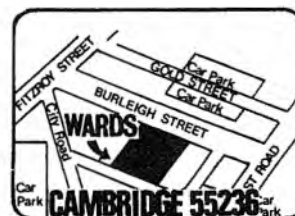
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"We also do the lesser known bands who may be trying to get a recording contract. Obviously record companies are going to take more notice of a band's music if it is accompanied by a video, it saves them going to see them, and also saves the band hundreds of phone calls. At both ends of the business the use of videos is definitely on the increase."

A top quality colour unit with everything included will cost £500 to hire for half a day, although Chris does have a special deal for up and coming bands.

Wards of Cambridge are typical of the many highly-skilled, professional video companies all over the country who carry the full range of equipment and a comprehensive hire service. As yet they have not been called upon by groups wanting to make videos, but all the facilities are there together with vast experience of all media work.

Thanks to the advances in technology over the last few years, the company say that their units are completely mobile and can be on the road in 10 minutes. Wards use top-quality Sony equipment and reckon a Sony colour unit would cost £120 a day plus tape to hire; full editing facilities are also available.

The Videotron company from Ilford in Essex have all the usual video equipment for sale or hire, plus an amazing new machine which rock bands looking for something special would do well to check out. Called a Spectron, it is essentially a video synthesizer.

Sales director Paul Hobbs explained that the machine is similar to an audio synthesizer, except images are created and changed via TV cameras. "It is the ultimate light show," he said, "the

capabilities are truly amazing. It is a very artistic machine with limitless possibilities, whatever ideas a person puts into it, he will get out so much more."

The effects of the video revolution are already being felt where it matters i.e. the record companies. On the subject of new bands submitting videos, Dave Dee, director of A&R at WEA records said: "It has already started happening."

"I would say that in the last six or seven months I have been sent more videos than in the last five years. What these bands are doing is finding a video company who, for an experiment, will go to the Rainbow or somewhere where the band is doing a couple of shows, and do a one camera job. The results are not unprofessional, particularly when you are listening to a demo tape at the same time."

"Obviously it must help, by virtue of just knowing what they look like rather than just what they sound like. A band may sound good on tape, but when you travel up to Glasgow, Leeds or somewhere like that to actually see them, many have turned out bloody awful."

"The price of these videos, which I believe is around £150, is only like going into an 8-track studio and making tapes anyway. I do not know the logistics of it all, but ideally the length should be about 15-20 minutes, although the cost of editing down from, say, 45 minutes might be high."

"A video has got to help; I can get so much more out of seeing a band, you can see how they look, how they move, all sorts of things." WEA have both Philips and Sony video cassette recorders.

Jeremy Ensor, A&R man with CBS records, said: "We very occasionally get tapes, but have not had very many."

Obviously it is a lot better to be able to see a band, and while we still have to see them in a live situation before an audience, a video helps to speed the whole process up. We can tell from seeing the band whether we are interested or not.

"I do not think we are going to get a lot of videos until the whole business has been explored properly. One of the problems of video is if we get sent a tape which is not the right one for our machine. We have a Sony, so it is no use sending us a Philips."

The basic principle allows images to be changed and built upon to give a truly original and astounding light show. The possibilities within the rock business are endless, although no bands have yet come forward to try it.

Audiotron also offer the usual video hire facilities which would cost about £50 a day for the basic black and white unit and £150 for the basic colour set up, in both cases operators, cost of tape etc. are extra — the synthesizer goes out for £100 a day.

Video can be an invaluable aid to an up and coming band who want to secure a recording contract but bands should also remember that a badly-presented video would probably seal their fate in double quick time.

Information on video companies can be obtained from the Video Yearbook which is printed by Dolphin Press and lists all the various services available, or from any Yellow Pages directory.

**If you are contemplating sending a video to a record company, find out first just what type of playback equipment they have so you don't waste your money on using the wrong type of tape.**





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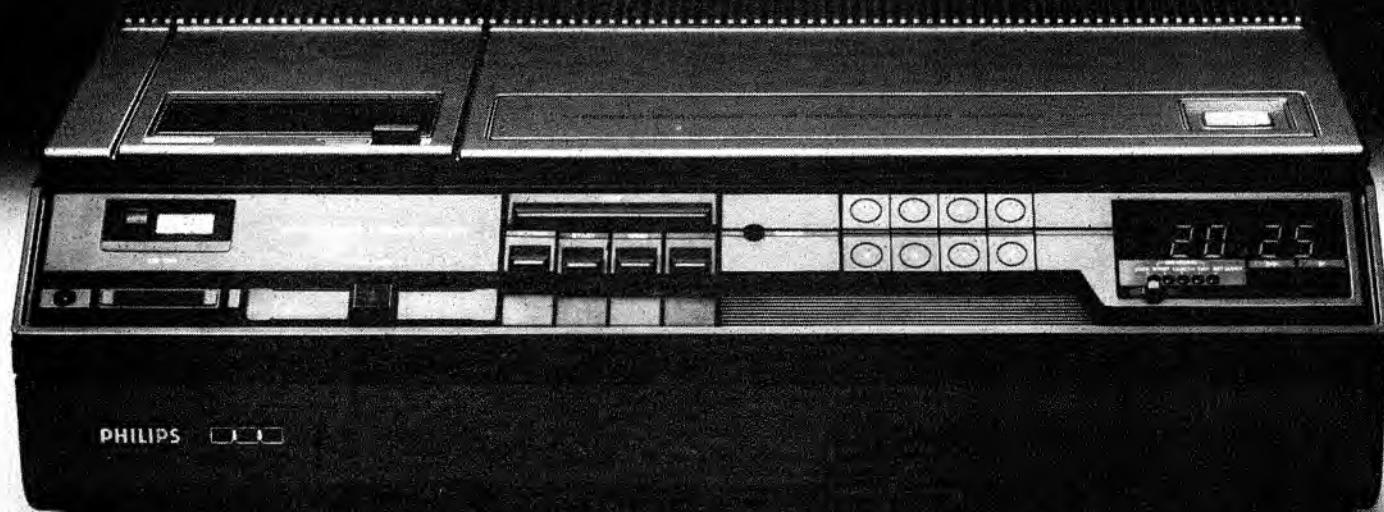
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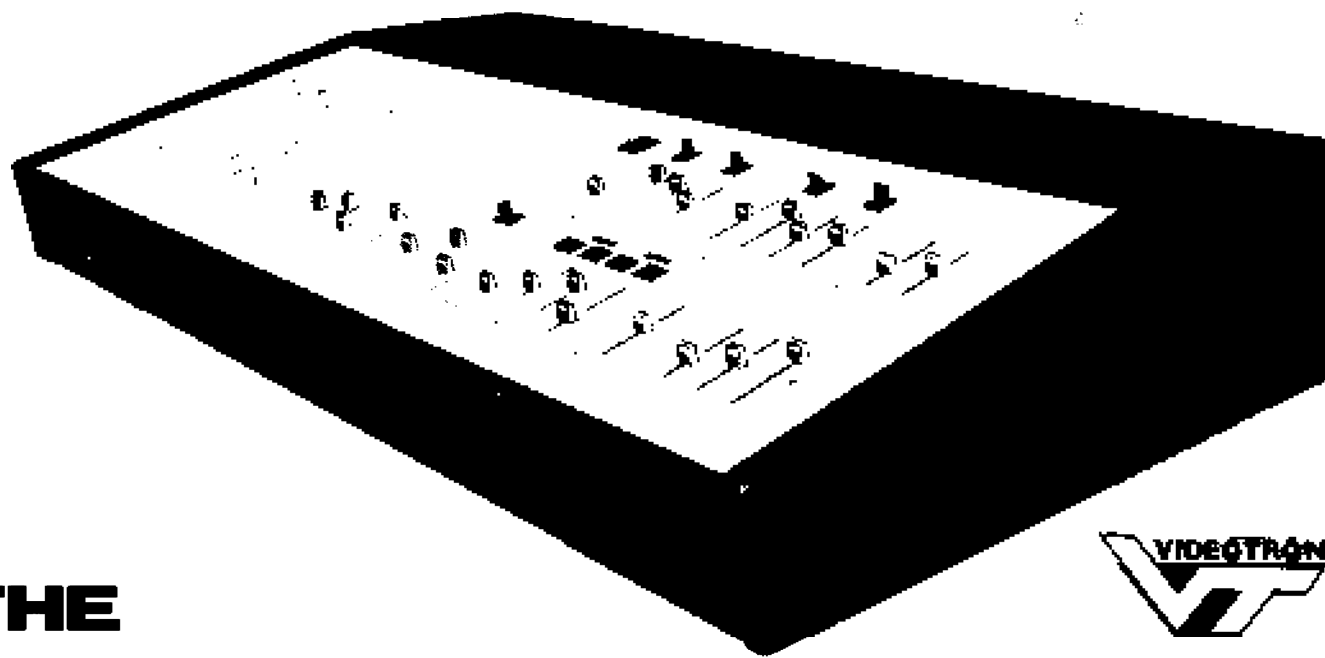
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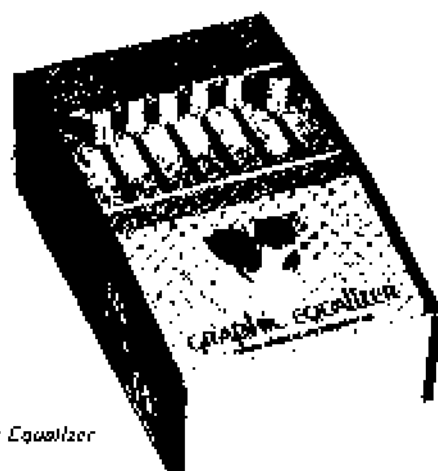
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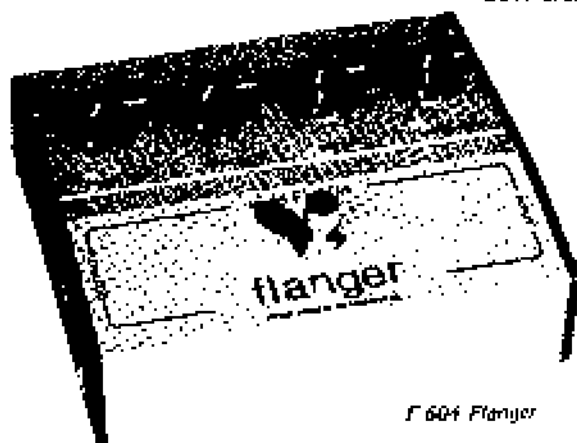
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# BLINDFOLD TEST



## BRIAN JAMES

In the second of our "blindfold tests" we invited guitarist Brian James to pit his wits against a concealed Custom Sound combo amp. Brian is one of the new breed of guitar players who made his name with one of the original punk bands, The Damned.

Along with the Sex Pistols and The Clash, their early work set the standards for hundreds of other groups to follow, and Brian James became one of the best known New Wave musicians. He is a powerful aggressive guitarist who takes his music and his equipment very seriously, and is a member of the Musicians' Union. Brian came along to do the blindfold test just before the launching of his new band, Tanz Der Youth.

He played his Gibson SG through the amp and was not particularly impressed with the sound. "On the overload it really does sound overloaded. I have no idea what it is, it's not a Fender, it just sounds pretty crummy," he said.

"It only sounds bright with the brightness turned all the way up. Instead of getting sustain you just get distortion, it sounds something like a Selmer, an amp that hasn't got a lot of character. It needs some kind of balls ingredient, also the reverb isn't very subtle at all."

Brian guessed the power to be about 80 watts (and was spot on with the price) but remained none too happy with the amp even after it was eventually uncovered and he had the chance to use the controls himself.

The only sound which he found vaguely presentable was on the brightness channel, and his biggest criticism was the "characterless" aspect of the amplifier.

## DAVE FLETT

Dave Flett was the second guitarist to "Blindfold" test the Custom Sound. Dave was a member of Manfred Mann's Earthband until they split six weeks ago. He wields a Gibson Les Paul armoured with Super Distortion DiMarzios and used this instrument, bought from Rick Derringer, to test the Custom Sound combo.

The thing Dave liked most about the combo was the fact that he could change its tone from clean to meaty from his guitar volume control. He is a player who likes his amp to sustain with vibrato-induced harmonic feedback.

"I can't get a 'whistle' at low volume and I can't get a good sustain. There should be more balls at the higher volume. I like it when I can get a note out which goes into a whistle. This sustain dies away and then the whistle comes back in. It would be alright if you're just doing a riff because the sound has got a nice edge to it.

"I don't think it's a Fender. It's more like one of those names where there are certain good aspects but they haven't got the whole thing right. It's nowhere near a Fender or a Mesa Boogie but it's below HH. I think it's solid-state."

After we revealed the amp to Dave his comments were: "I'm not really surprised. I don't think I'd have one. The weight is ridiculous. It's heavier than a Marshall top and cab together. It's got a lot of good things, like the tone changing from the guitar volume. One strange thing is that the reverb feeds back when it's turned up past five but the guitar is switched off. Knowing the market, I'd say it sells for between £250-£300."



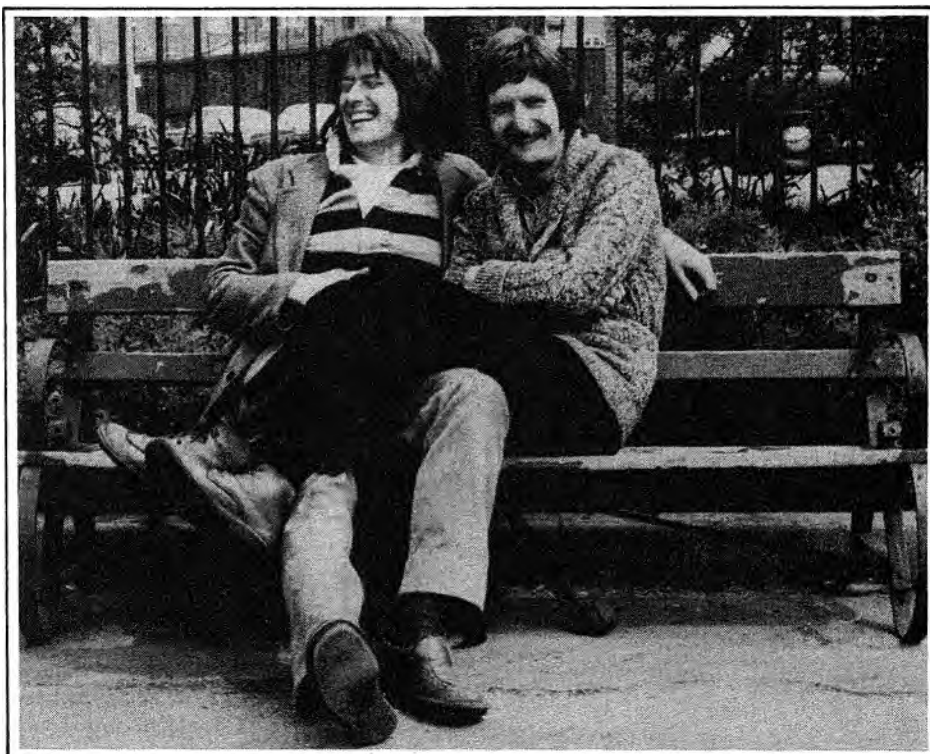
## RECORDING ACOUSTIC GUITAR

Tom Newman, of "Tubular Bells" fame talks to Paul Brett

*Producer Tom Newman is probably best known for his work with Mike Oldfield on 'Tubular Bells' and 'Hergest Ridge', two top selling albums that won international acclaim for Oldfield but left Newman somewhere between the devil and the deep blue sea as far as the business side of his affairs went. He went on to work on his 'Faerie Symphony' and finally sold it to Decca, who let it "slip out of the back door" to an obviously unaware public.*

*Tom Newman is basically a rebel who has only recently taken to wearing shoes! His ideas are often bizarre, like the building of a recording studio in an airship, but his intentions and talent are genuine.*

*He does not go out of his way to sell himself and is always willing and ready to help people. It was these qualities that attracted me to work with Tom on my new album, 'Interlife' and subsequently ask him to give away some of his trade secrets to help you in the recording of your acoustic guitar.*



L-R: Tom Newman and Paul Brett. Out of the studio.

To record a nylon-string guitar I'd use an AKG C12A valve condenser which gives a very smooth sound. You don't get the 'peakiness' that you get with a lot of dynamic microphones. The frequency response of this particular microphone is a perfect match for nylon strung acoustic guitars.

Lower-quality guitars need two microphones, one to pick up the high harmonies of the fretboard and another, about a foot away from the soundboard, to pick up the high transience from the fretboard, which compensates for the lack of quality in the guitar (see Pic.1). Normally, if the guitar is a good quality one, little 'eq' is needed. However, if you have to 'close mike' a nylon string guitar, it will generally produce more bass than treble so I roll off bass at about 50 cycles and add 3 or 4 decibels at 3.5k of presence. This brings out the crispness and generally gives a good nylon guitar sound.

Steel strung guitars are usually not as much trouble as nylon strings and I'd use a Beyer M160. Again, it's down to the quality of the guitar. With Paul Brett's guitars in particular, I've never had to use a Beyer N160 because of their amazing sound quality. I normally only use an M160 for problem guitars. When I recorded Paul's guitars at Capital Radio Studios, I used a 247 Neumann and that

worked very well. However, for the Japanese guitars I'd try an M160 because it's a ribbon mike which is very smooth without the sharpness of the C12A. The steel strung guitar has naturally got more sharpness and presence anyway.

Sometimes, you can get a good steel string sound even from a stage mike, like a Shure Unidyne. The worst thing you can do is to be bigotted about experimenting because the most important thing in recording is to keep an open mind (Pic.2).

With regard to equalisation, again if you are miking within six inches of the soundhole, the bass will increase dramatically, so I'd cut the bass and middle at 1k and add high treble on the 'eq' with 4 or 5 db at 15k. If you then add a little compression, you can get that Crosby, Stills and Nash-type sound which is really punchy.

Some purists may call it an unnatural sound but they forget that you have to compensate on record for the lack of visual liveness so you have to make the sound larger than life.

Twelve-string guitars are renowned for being difficult to record but Paul's twelve-string is a dream to record and for £50 it's the best I've ever heard. I've recorded all kinds of twelve-strings and I've never come across one like that.

Having said that, Cat Stevens had one

that was a bastard to record; I recall having problems with it sounding really cheap. It was on 'Catch Bull at Four' which I engineered and that guitar was a bitch to record. I hope Cat doesn't take offence, but it was a problem. The Kay



Pic. 1. Mike position for nylon strung guitar.

## RECORDING WORLD

is even easier to record than Mike Oldfield's Martin. The only way to record that was to get at least six feet away from it with the microphone to achieve the best recorded sound.

For the Kay twelve-string I used an AKG CK451 which is a small capsule condenser that gives a very bright sound. I used very little equalisation except maybe around 15k on the top end just to get that larger than life thing happening. Also, I'd probably roll off about 4 or 6db from the low middle.

As soon as you start strumming a twelve-string you start bringing out the lower end, so I would roll off the bass end and probably add on the high frequency (Pic.3).

For the purist, stereo recording is an unnatural thing to do because a guitar is a mono instrument in that the sound source emanates from one place. But for stereo recording I'd use, say, two AKG CK451's and pretty well in a coincident pair, i.e. crossing each other quite closely; one pointing towards the point where the fretboard joins the neck and the other towards the lower end of the guitar. This gives an enormous spread to the guitar in a stereo recording situation.

I'd separate the microphones by bringing one down to the bottom end of the guitar and the other virtually on the fretboard. That can give you a broad but unnatural sound and maybe it's better used in an effects situation (Pic.4).

For the recording of guitar duets, say for example, a six-string metal strung guitar playing lead and a twelve-string playing the accompaniment. I'd use the Beyer M160 on the six-string and the CK451 on the twelve-string and it's amazing how directional microphones with a tight cardioid are, you can actually get the players quite close together, which is good from a psychological point of view, so that they can feed off each other musically.

Engineers tend to get hung up with separation, technically that is, and often destroy the feel of the playing by being too finicky. They tend to forget that they are recording *music* and that the music will be better if you can get the players closer to one another. Let the players face each other and let *them* decide where they want to be and *them* up accordingly rather than force them to be where you want them to be.

With the 160 and 457 microphones in a 'close mike' situation you can get up to 30db separation between them which is as much as your record player's going to give you anyway (Pic.5).

I've only just discovered another mike for nylon strings and I'm not sure whether it's available in the UK yet.

Somebody brought me one back from the States. It's made by Electrovoice; it's an electret condenser PL76 and apparently, very cheap. Although the Japanese have been sending them over for years, this is an American one (though I suspect that the capsule is Japanese) and they're carefully selected for frequency response

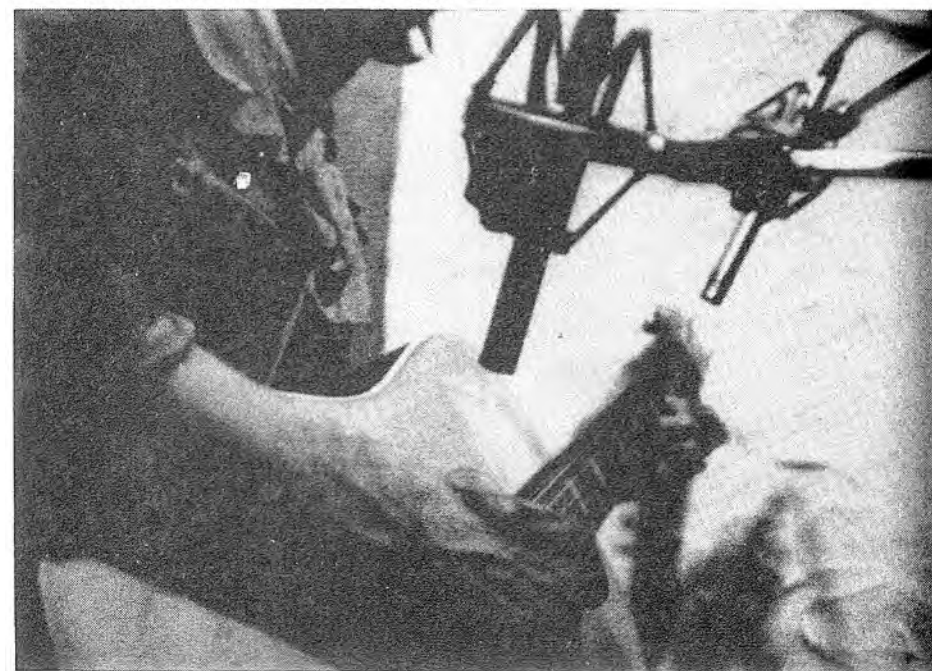
and noise. The Electrovoice is completely quiet, it gives a really smooth sound although the actual capsule is only about half an inch in diameter, which puts it in the same class as the CK451 which is three times the price. I'd really recommend this microphone for nylon-strung guitar recording (Pic.6).



Pic. 2: Microphone position for steel string guitar.



Pic. 3: Microphone position for twelve string guitar.



Pic. 4: Microphone position for stereo recording



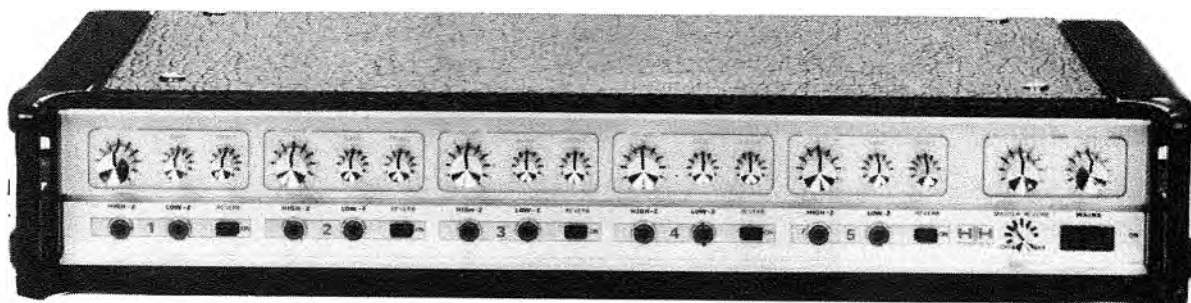
Pic. 5: Microphone position for guitar duets.



Pic. 6: Electrovoice microphone set up for nylon strung guitar.

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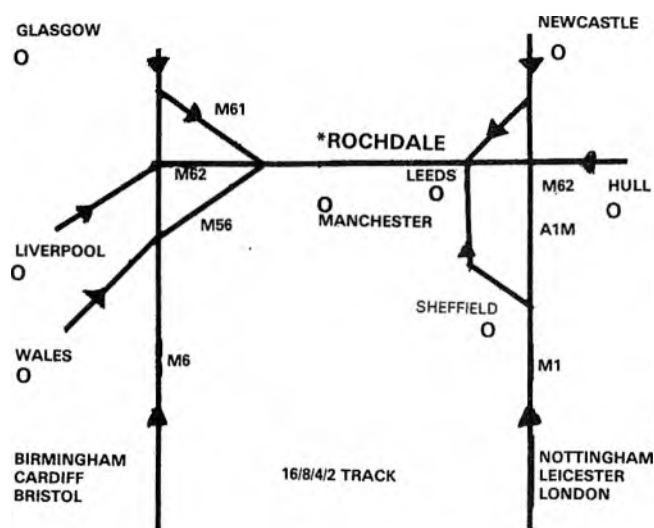
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### Phil Ault Amazon

**Phil Ault** started his engineering career at Basing Street Studios seven years ago before moving to Amazon last November. At the moment the studio is undergoing extensive modification, but in a few months it will reopen at its base 10 miles out of Liverpool. Then it will be equipped with a 24-track Amek M3000 console, two MCI stereo machines, Klark Teknik graphic and Urei limiters and compressors among other things. When musicians go into Amazon they will have a major aid to recording with the five mini-mixers enabling them to mix their own sound in the headphones regardless of the control room balance.

### Stephen Hall, John Emmas and Martin Mitchell August Sound Studio

**August Sound Studios** in Benson Street, Liverpool, have only been open since January, but already the word is spreading about their work. The studio is run jointly by two engineers, local born **John Emmas** and **Martin Mitchell** who comes from Harrogate.

John was an electronic engineer who used to run a mobile recording studio. "I was working with the mobile and then decided to open up a permanent studio in a building. I advertised for a partner and that is where Martin came in; he had spent some time working in studios in London, one of which was Trident."

They mainly deal in making demos for up and coming rock bands, and thanks to advertising have attracted artists from all over the country. The studio takes up just one floor of the large city centre building, but there are plans for a 16-track. They also specialise in making studio equipment and PA gear.

The studio has a Soundcraft desk, eight-track SWM tape recorder, limiters, compressors, etc. by Audio and Design Recording, plate echo, Tannoy speakers, plus AKG, Neumann and Beyer mikes.

### John Brierley Cargo

Ten years is a long time in the music business but that is how long **John Brierley** of Cargo Studios in Rochdale has been involved in recording. He first started working stereo tape recorders in his bedroom while doing work for John Peel's Dandelion label. Now he is a co-owner of the three-month-old Cargo set-up having built and designed the studio himself. The equipment John works with centres around a 24/16 Soundcraft desk and a £3,000 custom Cady 16-track machine. This equipment, plus a pair of stereo Ferrographs enables Cargo to do either two-, four-, eight- or 16-track recording.

"We try to give bands who otherwise could not afford the chance, an opportunity to record. We do everything, from rock bands and Dub, to cabaret and folk singers. The studio is good for a rock band. They can turn up; the sound of the room is not completely live but it isn't 'dead'," said John.

### Paul Cobbold Chapel-Lane

**Paul Cobbold** is a bass player turned engineer who has been involved with engineering

for three years. At the new Chapel-Lane studios near Hereford, he works with an Amek 20 into 16 track desk and an MCI 16-track tape machine and a Studer A67. Chapel-Lane's selection of mikes include AKG and Beyer equipment and the sound is monitored through Tannoy units.

### Nigel Sharp Elephant Studios

**Nigel Sharp** is co-owner and chief engineer at Elephant Studios which takes its name from its close proximity to London's Elephant and Castle. Nigel has been in the recording business for two years. At Elephant he slaves over an Alice 10/4 and Brunel Mini-8 desk. Tape machines are Revox A77's monitored through the ubiquitous Tannoys driven by HH power amps. Elephant deal in all types of music and recently took in its largest booking, a nine-piece band.

### Roy Neave Fairview

**Roy Neave** has been at Fairview for 18 months as an engineer. The studio is an 8-track set-up near Hull but is planning to go 16-track once Fairview's owner Keith Herd finishes building a new desk for the upgrading.

Currently, Roy works an Ampex 8-track machine through a Custom desk. Extra equipment includes limiters, compressors and DBX noise reduction units. Musicians can also use the Yamaha CS60 synthesizer, Logan string machine or Hammond organ that is on hand at the studio. Fairview records "anything and everything". They do a lot of custom pressing of LPs for cabaret artists and do many folk albums as well as group demos. Any group up to a six-piece outfit can record comfortably at Fairview.

### Al Foulcer Forest Studio

Al is chief engineer at Forest Studios in Leytonstone, London, a studio that prides itself as being set up by musicians for musicians. Al is himself a musician with 10 years road experience and says "We like to feel we have a place where musicians can drop in and feel like musicians. We have a very homely musical atmosphere and the most important thing we try to do is keep people relaxed; we let them run the show and we explain what we're doing at every step. We prefer to have engineers here who are musicians and take the time to explain to bands what is happening."

Bands going into Forest can record on 24-track in a few months although the studio currently is 16-track. The new console will be an Amek working with a 24-track Cady. The studio also has Revoxes and Tannoy monitors and a new Scamp rack has been ordered. There are two studios at Forest, one for large ensembles (a 25-piece Scots band has been in there) and a smaller studio for up to about six people.

### Stephen Hall Hallmark

**Stephen Hall** started his Hallmark studio in Hampstead about five years ago as a workshop for his own writing, but went public a couple of years ago.

"We started out with a lot of rock bands, we also do educational tapes for various TV and radio programmes as well as the occasional ads. Because of my being a solo songwriter, we tend to work a lot more in the writer field with session musicians."

"I do a lot of guitars and occasionally percussion and we have got a little clique of musicians; people know this and so they just usually bring along one musician with them. We have spent a large part of our overall investment in musical instruments rather than expansion because this is the type of thing we are into."

Equipment includes a Brunel eight-inch track, Chilton 12 into four mixer, two high speed Revoxes with varispeed, a pair of parametric e.q.s, Orban para sound mono reverb, AKG BX15 stereo reverb, Tannoy speakers, Quad 50E power amps and AKG and Neumann mikes. Instruments available include a Fender Rhodes, Wuritzer, ARP, clavinet and grand piano.

Although based in Hampstead, Hallmark are hoping to move into London's West End in the near future.

### Dave Wood Impulse

**Dave Wood** is the boss at Impulse and shares engineering duties with Mickey Sweeney at the Newcastle studio. Dave points out that Impulse is a studio where musicians new to recording will always get a helping hand rather than short-shrift. Dave says he himself has been in too many studios where he would rather have been at home and he is determined that bands feel at ease in his place.

Equipment at the studio is based around a 16-track Ampex and 8-track Studer with various two-track machines including Revoxes. The desk is a Sound System 12 and monitoring is done through Tannoy Golds powered by Amcons. Recent clients include Ray Jackson, Prelude and half of the Splinter duo.

Impulse has been going for 11 years and Dave Wood says there are now more and better bands than ever. Any artist going into Impulse will receive good backing from the house band made up to Allan Clarke (keyboards), Charlie Harcourt (guitar), Tommy Guffey (bass) and Ian Wright (drums).

### Dan Priest Magritte Sound

Dan started up Magritte Sound because he was not happy at any of the other studios he worked at during the past four years. Together with **Eric Hines** and **David Hughes** he set about building a 24-track studio at Harmondsworth, near Heathrow among four acres of land.

The studio is as far removed from the city environment as possible and people like Mungo Jerry, Allan Clarke and Gary Benson have all recently been in there. Dan works a 24-track Lyrex desk and 16-track Ampex 80/100 machine. Magritte Sound also has equipment by Helios and monitoring by Lockwood Tannoy. As well as recording contemporary music the studio has been doing work for the BBC and takes on quite a bit of work from ad agencies.

## Mick Glossop The Manor

**Mick Glossop** must be the envy of many an engineer with the environment in which he lives and works. For Mick is chief engineer at The Manor recording studios deep in the Oxfordshire countryside, and lives in a cottage just a 100 yards from the main building.

He has been at The Manor for four years, having started out as a tape operator with Wessex studios and then to Nova and his first engineer's job. Mick spent nine months in Canada working in the Quebec Sound studios, and has done considerable freelance work in Europe.

As one would expect of The Manor, Mick has worked with some pretty big names who recently have included Van Morrison, Camel and Wet Willie. He still does a fair amount of freelance work, but says working at The Manor is "very relaxing" thanks to all the facilities which are made available to the staff as well as the artists. Working alongside Mick at The Manor is their other resident engineer, Alan Perkins.

The Manor hardware is, as you would expect, all top quality, and includes a control room designed by Westlake Audio, and 24-track facilities with a magnificent 32-channel console costing £40,000. All the tape machines are Ampex, with a new £25,000 MM1200, and the 24-track is backed up by two AG440C four-track machines, a two-track AG440C and a four-track AG300.

## Geoff Calver Marquee

**Geoff Calver** has had more than a decade of experience in engineering. He began at Pye late in 1967 where he was a disc cutter for three years. Now he is chief engineer at Marquee Studios which is associated with, although independent of, the famous Wardour Street Club. Marquee is 24-track utilising MCI equipment which includes 24-track machines, as well as JBL monitors, Amcron amps and the usual array of pro mikes. In its main control room the Marquee people have designed a custom baffle linked to equalised JBL 4320 monitors. In all, a total of four engineers and their assistants work at Marquee along with two technicians and two maintenance engineers.

## Nick Bradford Matrix

Nick Bradford is chief engineer at Matrix Recording Studios in London's West End. When the studio opened six months ago, Nick brought with him a wealth of experience in recording having previously worked his way up from tea boy, through to tape op and finally to engineer at Trident.

"Trident was a great training school," he recalls, "because then it was the days of the 'star' engineers and producers like Roy Baker, Ken Scott, Robin Cable and people like that."

Nigel Frieda is Studio Manager and Simon Hayworth and Richard Whaley are also resident engineers working alongside Nick. The studio has come a long way in a very short time. In the past six months, they have done work for Gong, Deaf School, The Boyfriends and Radio Stars and many others.

"We have a very relaxed atmosphere here, and we've got a very good team, and that's really important. At the moment, we are working on a second room, which will be a kind of overdub studio but will also be capable of full sessions. The beauty of that is that the band can come in and spend more time doing

the overdubs and other bits and pieces after the main track has been laid. It won't cost them as much and they'll be able to take more care because there'll be no panic."

Matrix's console is a Trident A range 28 into 24 desk and the rest of the equipment includes an Ampex 24-track machine, EMT plate, Neumann, AKG and Beyer mikes plus Tannoy monitors and Crown amps. There is also a resident Bechstein grand and a Hayman studio drum kit. The Matrix premises also house a well-equipped kitchen and a games room.

## Dave Cook Quest

**Dave Cook** has been at Luton's Quest 8-track studio for a year although he has been an engineer for three years. He works at Quest together with John Gittins and Clive Bunker (of Jethro Tull fame) operating the Soundcraft 16/8 Series II desk with a Brunel-Richardson 8-track machine. The studio is also equipped with a brace of TEAC 2-track machines and boasts a considerable array of effects which include compressors, limiters, Eventide Harmoniser and Flanger.

The studio comfortably holds up to seven players and Dave says the room has good separation characteristics. The studio is involved mainly in demo work but has mastered a couple of singles. Recent clients include Robin Lumley and Jack Lancaster as well as Split Enz and members of the old Glitter Band. Clive Bunker's band "England's Mighty Engine" regularly records at Quest with its line-up of Mick Rogers, John G. Perry, Jack Lancaster and Clive himself.

## Pat Flynn Rainbow Sound

**Pat Flynn** and **Andy Terry** started Rainbow Sound some 18 months ago to specialise in contemporary music. Pat, a guitarist as well as an engineer, started developing his engineering skills through a small studio at home before opening up Rainbow Sound in the centre of Nottingham. The studio is eight-track and the equipment includes: a Tascam 880, two Revoxes, Neal cassette machine, Tannoy monitors and a Quad amp.

A specialty of the studio is that it has its own reverb room which Pat says is especially good for drums and vocals. In fact he claims Alvin Lee heard a demo cut at Rainbow and made a point of contacting the studio to ask how they achieved their vocal sound.

## Andre Jaquemin Redwood

If you're familiar with the Monty Python record you're familiar with Redwood Studios in London's Covent Garden which belongs to Michael Palin of Python fame. **Andre Jaquemin** is chief engineer at the studio which has won awards for its work on radio commercials. Andre started at Studio G in Wardour Street as the proverbial Tea Boy before moving on to work at Redwood.

The studio is 8-track using Revoxes, Studers and a Primrose Electronics desk. Andre, who has been engineering for ten years, has produced people like Barry Humphries as well as Python material and is currently working with New Wave band Leyton Buzzards. Harry Stoneham and Eric Idle regularly use Redwood.

## Dave Ollard Rolling Thunder

Set in the heart of Bedfordshire, Rolling Thunder is another studio which tries to make

musicians feel at home by inducing a "workshop" atmosphere whereby players are invited into the control room to work with engineer **Dave Ollard** to get the sound they want.

"We try and work on an 'American sound'. We get name bands in but we welcome anybody, songwriters, semi-pro groups etc. We try and give people a good sound and a good atmosphere," said Dave.

Rolling Thunder is equipped with a 16-track Sculley and 2-track Studer with monitoring by JBL. A custom-built Gelf desk is on its way to the studio and for £12 an hour you can record 16-track or pay £10 an hour for 8-track recording.

## John Sinclair SARM Studios

**SARM** studios in London's East End are just recovering from a fire which badly damaged the building. As a result, the Osborn Street premises have been completely redesigned and are more impressive than ever.

In the five years they have been operating, SARM have built up a considerable reputation with a whole host of top acts such as Queen, Elton John and Gerry Rafferty recording there. Studio boss John Sinclair said: "We are mainly a rock studio although we do MOR work and also a lot of jingles. A lot of artists like working down here, because you do not get the hassles of working in the West End. Someone like Elton John can go into a restaurant around here without having a lot of fuss made over him."

However, John is quick to point out that whether they be international stars or just local pub bands, all get the same treatment, i.e. the best. SARM also boasts 46-track facilities thanks to two Studer 24 machines, and the largest Trident TSM desk which has 40 in and 40 out. The studio also has Cadac monitors and a Bosenorfer 9'6" Imperial Grand in addition to what John calls his two "banks of toys", which are the most comprehensive range of outboard equipment in Europe.

## David and Bob Whiteley September Sound

It would be hard to find a studio working with such a wide range of artists as **September Sound** of Huddersfield. Brothers **David** and **Bob Whiteley** are just as at home recording local rock bands as the Brighthouse and Rastrick Brass Band.

"We moved into the premises about two years ago, and built it up from scratch. It used to be a Methodist Sunday School so, by dividing up the hall, we have a large studio and control room. The studio can hold up to 45, which is ideal for a brass band or something like that."

One interesting feature of their control room is a Lyrec 16-track machine which is Danish. There aren't too many of them in this country, but David reckons they are one of the best value-for-money products around, and it can be up rated to 24-track if necessary.

The desk is by Sound Techniques, although September are negotiating with the nearby Calrec company about the possibility of installing one of their new products. Equipment includes two Ampex AG440 stereo machines, Dolby A, EMT240 echo plate and AKG, Calrec and Neumann mikes, plus AKG CMS mikes for TV work.

The studio do mobile recording which according to David is a real "removal job" and necessitates shipping out much of the studio gear.

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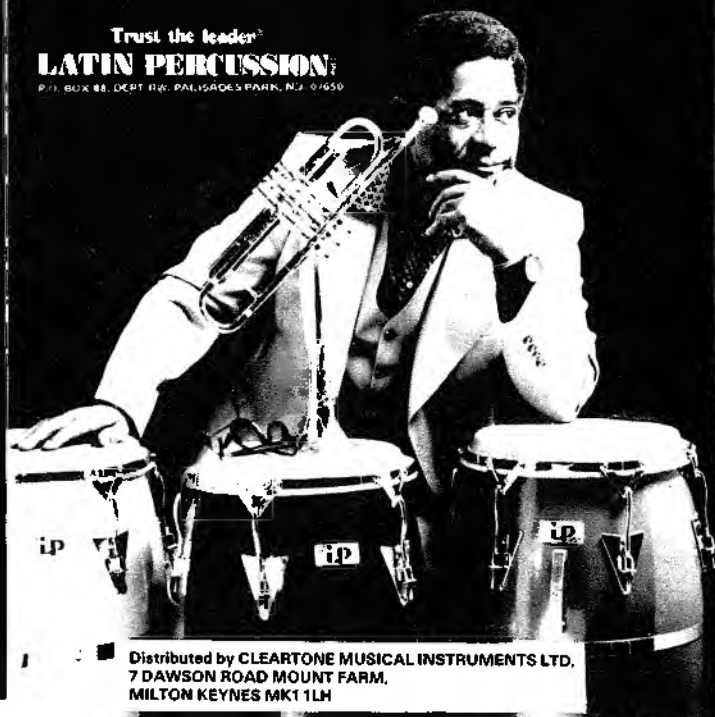
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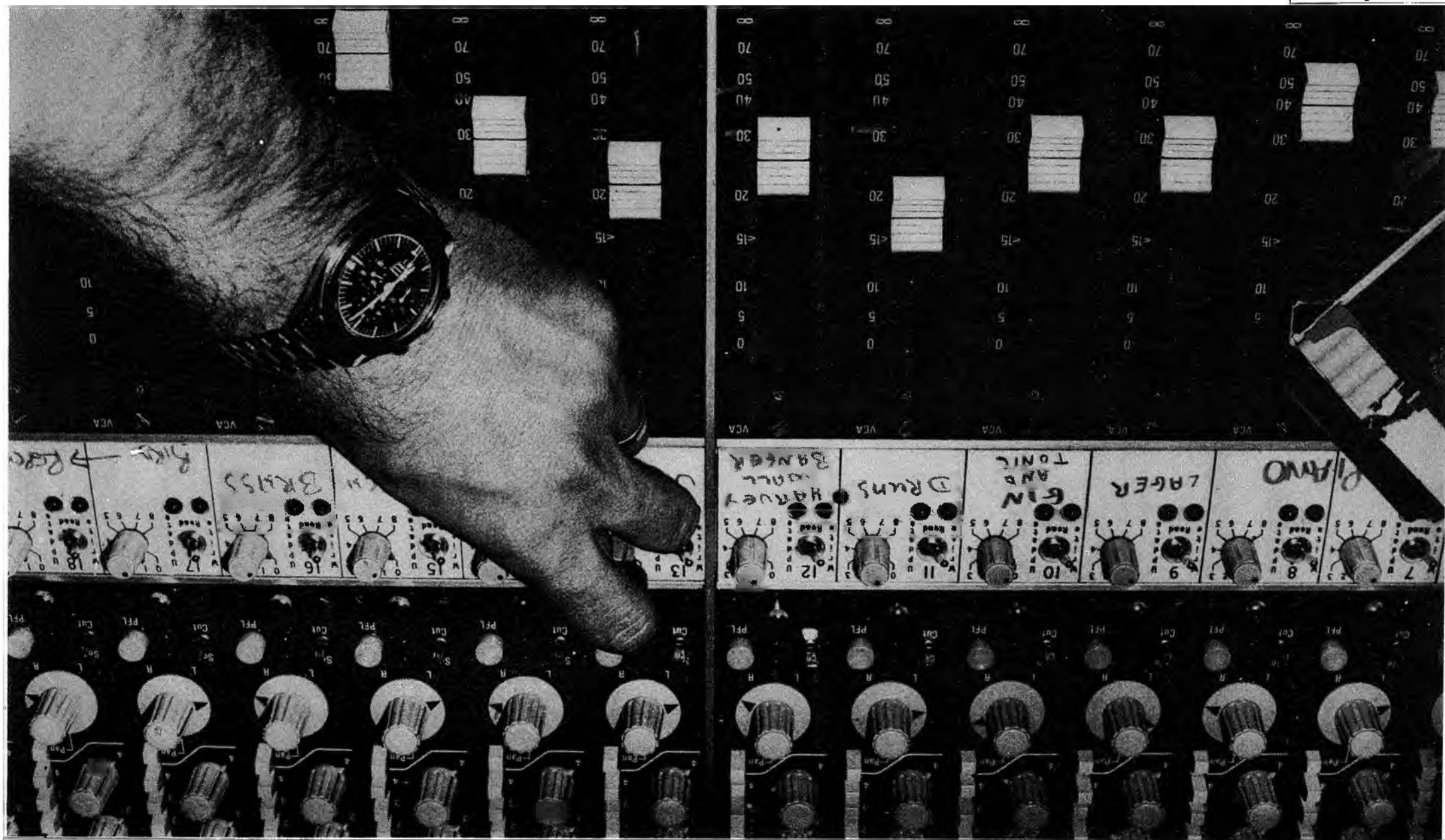
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# ARE YOU BEING SERVED?



# Maison Rouge



The purpose-built Maison Rouge studio.

Inside the control room at Maison Rouge.

The red house in Wandsworth Place next to Chelsea football club is one year old this month. To musicians, the premises are probably better known as the Maison Rouge recording studio.

Over the past 12 months the studio has become an important part of the national and international recording scene, building on the reputation established by the famous Maison Rouge mobile. Setting up a permanent base was an obvious step, but a visit to the Fulham premises soon reveals Maison Rouge as much more than just a building in which to record music.

The studio was completely purpose-built, incorporating all the facilities which studio manager Robin Black had learned were necessary for an ideal recording situation during his years as an engineer. Of their first year he says: 'It has gone really well, the main thing is that we have had no problems. You often find studios are put out of action through technical hitches but we haven't had any problems like that, and have been fully booked over the whole year.'

Comfort and a relaxed friendly atmosphere are the name of the game at Maison Rouge as seen by the air conditioned studio, TV lounge and patio, well stocked bar and the various games to help pass the time in between sessions. They

have even engaged their own cook, Peggy, to serve up culinary delights for the guests and generally look after them.

The word on Maison Rouge has spread far and wide with bands coming from Europe and even America to record there. The studios can even arrange for special rates on accommodation for visiting artists at a nearby hotel.

The hardware of the studio is as impressive as the comfort it affords. The desk was custom built by Helios and the design has helped to simplify a lot of the recording processes.

The full equipment line up contained in both the studio and the mobile consists of Studer 24, 16, four and two track machines, the 24 track Helios console with new Lockwood speakers which have been only recently installed and threaten to shake the place to its foundations.

Ancillary equipment includes echo by EMT and Master Room, Eventide and Lexicon digital delay, Eventide flangers, Audio Design, Urei and Kepex limiters, compressors and expanders, Urei graphic equalisers and a huge range of all the top mikes. The latest addition to the range is the Aphex Aural Exciter, designed to enhance the sound even more.

From the outset, the studio have been keen to expand their interests in the

music scene, hence their production company, Salamanda Music Productions. This enables them to become involved in helping and recording up and coming talent.

The smooth running of the studio has also led to the offshoot of another enterprise. With comparatively little to do on their own studio, the Maison Rouge maintenance department has been involved in producing and developing its own studio equipment. Even though they are a comparatively new company, who are completely independent, they are ever alert to what is happening in the music industry and the need to change and expand. The addition of another studio is an obvious possibility for the future.

Among the artists who have used Maison Rouge recently are the Small Faces, Mud, Maddy Prior, Noosha Fox and Marseilles, while the mobile is still in huge demand with the likes of Steeleye Span, Roger Glover, The Rubinoos, Buzzcocks and Barclay Records of France.

In the case of Maison Rouge, the recipe for success is undoubtedly the mixture of highly professional set up with a friendly relaxed atmosphere which makes their name particularly apt — even if some people think it sounds like a house of ill repute.

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Illuminated V.U. Meters show output programme levels.

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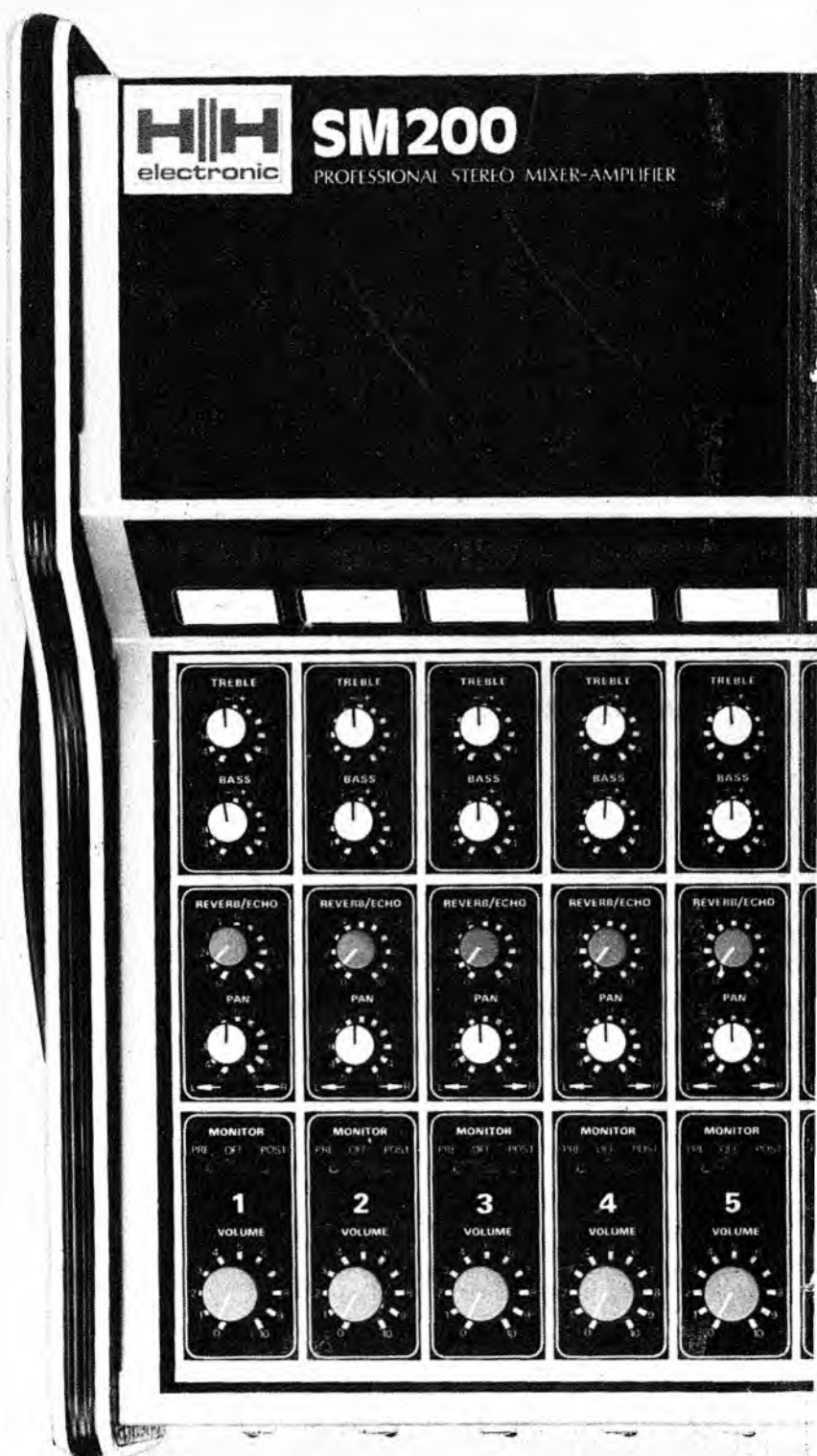
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NEMS is the company formed originally by Brian Epstein back in the early Sixties. It started with the basis of the Brian Epstein stable, and has had a chequered agency past until it merged with John Sherry's Sherry-Copeland Artists.

John Sherry started in the business as a drummer in the mid-Sixties and has held an agent's licence since he was 15 when he started his career in agencies by booking his own band. He worked for several agencies before starting his own in 1968 and in 1974 formed a company with American manager Miles Copeland: SCA. After a few years, Miles Copeland left and John was bought out by NEMS where he is now head of the agency with over 75 acts on the books. He is a director of the company which also controls NEMS Records and a new management division.

#### WHAT DOES AN AGENT DO?

I must say I think that has changed a great deal in the last ten years. Originally, an agent's occupation was very simple. Basically, it was to get the most money, the best fee the agent could get for the act he represented. To a lesser extent, he would take into account whether or not the engagement is actually going to further the artist's career. But in general he would negotiate the best deal possible for the artist. When I was in a group, we had no road managers and we all travelled in the same vehicle. Now we represent about 75 working acts and they all have at least two or three road managers; they all have 3 ton trucks. The whole business is very complicated but the same principles apply.

To start with, we have to negotiate the best deal for the artist. But the best deal might mean that the best show, in terms of whether it's going to further the artist's career or not. There are so many things to take into consideration, like the access to the venue; whether or not the doors are physically big enough to get the sound system in and out; whether or not the stage is physically big enough for the particular act to set up the type of equipment that particular act uses.

Every group is different, every show is different and a hall which may be suitable for one particular act may be actually physically impossible for another act to perform there. As far as fees are concerned, the whole thing has gone full circle to such an extent that record companies will even pay to get their artists on to a particular tour. If there is a sold-out concert tour by a name act, the record company is

## Taking Care of Business PART 6

Alan Holmes talks to NEMS' John Sherry.



## THE AGENCY GAME

perfectly aware that they can get a great deal of exposure for a particular record that they're promoting by having their act play in front of X-thousand people. Therefore they sometimes bid and there is considerable bidding going on between record companies for the opening spot on a particular tour.

I don't actually look upon it as "buying on", because the cost of performing in England at the moment, for a major act is astronomical. There aren't very many acts that actually make money on the road. If one assumes that a tour will sell out, then it is very easy to know in advance what the return will be. I can tell you now the net door take at Southampton Gaumont on a £3.50 ticket price. So, let's say that a particular act is touring, and the net proceeds from that tour will be £20,000. What the act actually has to do is sit down and think "do I spend £20,000 and no more? In other words, do I present the best show that economics will allow me to present for £20,000?

That's all I've got to spend. Then I'll divide it up between sound, trucks, lights, hotels, wages for people, and that's it. If I've only got £3,000, then that's all I spend. Or do I, regardless of my return, put on the best show that I can and do I use a lighting system that costs me far more than my budget will allow? If I believe the audience deserves

that lighting system and that it will enhance my career in a more general sense, then I really have to make that decision." Some people will say "OK, the receipts are £20,000 and, we have to make a profit; we'll spend £15,000 and we will make £5,000. Then we'll stick rigidly to it". I would think most people take the other attitude, especially when they're promoting an artist's career and that the receipts aren't the guiding factor. So they sit down and decide what show they're going to put on.

The primary function of an agent should be to build the artist's career in respect of live performances, regardless of record sales. Whereas a manager will take into account, quite rightfully, record sales, publishing, etc., etc., an agent's got to think "If I do this show, will I be able to rebook this artist into this venue, or into this town six months later, whatever his return pattern ought to be, and play to twice as many people? Am I enhancing the artist's career? In other words, should he play at a college for £1,000 to 1,000 people, or should we play on somebody else's show for £350 and play to 3,000 people and therefore enhance our career?"

Obviously, a Mr. Ten Percent attitude is that ten percent of £1,000 is £100 and ten percent of £350 is £35, so let's take the thousand, but this is a very short-sighted way of looking at it. We would almost certainly take the £350 and hope that then we could book the artist back for £2,000. An agent's primary concern should be to build the career of the artist. That involves packaging, and involves finding out what else is on. In fact, the old concept of 'Manager' and 'Agent', those terms have been eroded and outdated and I don't even like the word "agent". I personally feel that I am a representative in the field of live entertainment rather than in the field of recording. That is not to say that we don't negotiate record deals, because we do, but in the strict agency side of it I like to feel that I am a representative for live entertainment. An agent has a slightly Chicago-type image, with striped suits and a "ten percent tan" and it's really not like that. In fact, to get onto another question, we don't work for 10%.

#### HOW MUCH COMMISSION IS USUALLY CHARGED?

Our commission is usually now 15%. The reason for that is that when I was first on the road myself, 15 years ago, the average price for a new act or a relatively unknown act, would be £50 a night and, 15 years later, it's still £50 a night. The one thing that hasn't gone up at all is the price of an unknown act. There basically is no fee, it's what you

can negotiate.

I used to drive from Bournemouth 13 years ago to play at the Whiskey a Go-Go and I was paid £20! The Whiskey a Go-Go is still booking acts for £20! You don't have to be very good at arithmetic to show that 10% of £50 which was £5 in 1956 is still only five pounds in 1978. The difference is that when I first started an agency, my telephone bills were, per line, around £40 or £50 per quarter and they're now £700 or £800 per quarter for the same function, so our costs have gone up by around one thousand percent.

The telephone cost is the one cost that has risen out of all proportion. If anybody was ever to do an in-depth study, the government should be taken to court for it. It's just unbelievable the way they blackmail the public. I'm lucky enough to spend a lot of time in America and some other countries in the world where not only do they have a telephone system which is four times as efficient, it's a quarter of the cost. Here, one call in every four is misrouted anyway. To get a misrouting when you're on the telephone in America is an unusual occurrence; you think there's something wrong with the phone.

The whole thing is so different now. If we got £75 for a booking then, even if there was seven of us in the band, we could actually make money. We were all in the same truck, you carried your own equipment, you set it up; hopefully, you wouldn't blow too many loudspeakers because they were expensive. You'd end up with maybe a fiver each at the end of it. And now, I would say it would cost you £75 just to hire the truck. The whole thing has changed around completely. The agent's costs have gone up so much. We generally charge 15 per cent commission and we feel we deserve it.

#### **HOW MUCH WILL BANDS HAVE TO PAY IF THE AGENT ALSO ACTS AS MANAGEMENT AND WHAT WOULD BE THE DIFFERENCE IF THEY ARE SEPARATE?**

Obviously, that is down to the manager. A normal kind of management contract now — and they vary tremendously — will be a 30% contract. It can be one of two things. It can be a contract which says that the manager is responsible for hiring an agent and paying the agent. This means that on live performances, there will be a total commission payable by the act of 30%; 15% of which will be retained by the manager and 15% of which would go to the agent. That would mean that, on publishing and recording etc, the manager would get a 30% cut. Now, there are schools of thought which say that's too much for an area that perhaps has a more con-



sistent return. A lot of management contracts now will be a change of shifted emphasis slightly and may be 20 percent on publishing, 20 percent on management, 20 percent on live work. But it's the act's responsibility to pay the agent.

The act will pay 35 percent live and then only the 20 percent on the others. That is very much now something that is agreed between the artist and the manager and there are a lot of things to take into consideration. For example, if a manager takes on an act that is already established in the world of recording and the record deal has already been done and they have already reached a certain level, then it would be unreasonable to ask for 30 percent commission. However, if he's had to struggle for a year to get them a recording agreement, and they're totally unknown, etc., etc., then obviously he deserves a better payment. I don't think there's a standard contract like there used to be. A standard management contract — was at one time probably 25 percent across the board and that's it, or 20 percent or 30 percent. They are very, variable now and of course, there are far more lawyers in the business than there ever were. All these agreements tended to be between a manager and

artist. Now they're likely to be between the manager's lawyer and the artist's lawyer, which changes things somewhat.

#### **IS THERE A STANDARD AGENCY CONTRACT?**

There is a standard contract for the gig. This was laid down many years ago by the Allied Variety Agents Association, which most people use. It's a fairly very simple booking form, between the promoter and the artist. Don't forget that the agent is the negotiator and you're not actually part of the contract. He operates in the same way that an estate agent would, in that he gets a contract back from both parties and then exchanges them. But he's not actually party to the contract.

As far as the actual contract between the artist and the agency, we don't take an act on unless they sign an agency contract. We won't become involved in building an act unless we know that we're going to represent that act for a period of probably five years, because we would reckon on not getting a return on that act for the first couple of years.

There is a minimum cost to booking an act for us because of our staff, and our overheads, which would mean that up until the artist is earning a fee of about £350 to £400 a night, we don't actually get any return. In other words, it costs us money on a commission element of much less than £50. It actually costs us money to make the booking, with the telephone costs and the proportion of the rent, etc., etc. We very rarely represent an act unless they're on an exclusive agreement. That agreement itself is not standard, it varies tremendously. If an act comes to me which is already established and is for some reason, unhappy with their particular agent, and say, "We want to change, we want to come with you", then it would be a very simple agreement, which would be just for live appearances.

If it is a brand new act, and they come and sit down, and say "we've been recommended, and we have no recording agreement, publishing agreement, or manager", they might actually commission us and we might enter into an agreement with them, to do all those things.

That doesn't mean to say we become their record company or their manager or whatever. What we will actually do is recommend them to a manager and try and put them together with a manager. Or we will actually negotiate for them a record deal, which is something we do quite frequently. It's something agencies in America do all the time. In fact, they probably negotiate more recording agreements than managers.



# THE AGENCY GAME

## IN THE CASE OF A RECORD DEAL ADVANCE, WHAT COMMISSIONS WOULD BE PAID?

The commission on negotiating a recording deal would be 10 or 15 percent of the lump sum, depending on the circumstances. Basically what you're doing is you're charging a commission on the record deal. The fact that the artist receives £20,000 up front, is an advance payment against the royalties and obviously a percentage of that is due to the agency. The point is that, if an act is unknown and it walks into CBS, they will be offered a minimum royalty and a minimum advance. If I take exactly the same act, go into CBS and I say "we are behind this act", they're going to do a nationwide concert tour with the X-Y-Z band, in November, I've already introduced them to the manager of the so-and-so band that we also represent; obviously the record company is going to quite rightly think to themselves, well, this is a different situation.

Therefore, we are prepared to spend more money, because we think that this act stands more of a chance of being successful and we are also prepared to pay a higher royalty because we think that the act may be successful quicker and therefore our return, although it would be in terms of percentages, smaller in terms of gross, will be better.

In other words, we believe that we don't cost the act a penny because if the act can get a royalty from CBS of eight percent, I'll get them 14 percent. That's the difference. Although, when they've got gold albums around the walls, they might think, "well, we're having to pay 10 percent of this", they have to remember that they may not have had the deal in the first place, or at that level.

## IDEALLY IS IT BETTER TO HAVE SEPARATE MANAGEMENT?

We don't actually manage acts. We *do* have a management operation which is a service operation, more to take care of things where, if an act asks us to take care of the running of their operation, we would do it.

We would not advise an act in the same area that we represented them or in an area that one could be in conflict; in other words, we would not be the

managers, the record company and the publishers of an act.

To start with, if there was ever any dispute in court, it would be thrown out because of the conflict of interests. Generally, when we take on an act, we find them a manager. It is better to have a separate management. It's a different occupation and it's something which requires a great deal of thought.

The problem with something like "Complete artist's services, where they handle everything" is that it can work and it can be perfectly OK while there is a totally harmonious relationship. But if there is ever a situation where there is a possible conflict of interests or there is any negotiating to go on to increase the artist's return from a particular area, it's an impossible situation. You can't keep running around the other side of the desk.

I think where people have total integrity and a total harmonious relationship, then it can work. It very often doesn't. There are actual specific issues which are in conflict. Groups themselves have found this when they've tried to launch their own record label and the first thing that happens is that they think, "well, we'll sign up all our friends". Six months later the friends that they signed up are no longer friends because they're arguing with them about royalties and advances.

There are many examples of that. Some "star" signs his mate to his own label and before you know what's happened, they've fallen out. There are business differences depending on what side of the fence you're on. However, it can work. I'm not ruling it out at all. I would say in general it doesn't.

## WHAT SORT OF BANDS WOULD YOU BE INTERESTED IN SIGNING?

I don't think there's any answer to that, personally. I have never been involved in "trend" deliberately. I have been involved in a trend without knowing it in the sense that when the underground thing started in the late sixties — early seventies, flower power, and all that kind of thing, I started to take on underground groups because they were popular, but not BECAUSE they were popular. In other

words, they were popular and they were underground. I would never actually have gone after a specific type of act, and said we must have a punk act. In fact, when the punk thing came out, we were probably the last company to start signing any of the acts. Not because I didn't like punk acts, but because I hadn't found one I liked. I don't really believe in these categories. There can be a sort of an overall category, I guess; groups which are similar because of what they do. But to me we have to assess each one and that's it.

The main quality we look for in an act is success. We have to look at an act. We don't take on an act just because they've got a good record deal. We don't take on an act because they haven't got a record deal and we think we can do one. All these elements are appraised. But in the final analysis, you just have to think, 'do they have something to offer?' There has to be a business-like approach, is it going to sell, are people interested? Hopefully, we're not too cynical about that. If something isn't going to be huge, but it's going to be successful then that's very valid too. Providing we think an act can be successful at a certain level, they have something to offer which the public respond to, we'll go along with it.

## WHAT SAFEGUARDS ARE THERE WHEN NEGOTIATING DEALS WITH CONTINENTAL PROMOTERS?

We are licensed by the Department of Employment and Productivity, which all agencies now are and they call for a lot of safeguards. We would almost certainly receive a deposit from the continental promoter which is held in "escrow". Let's say the fee is a thousand pounds. We will receive a 50 per cent deposit six weeks before. This is banked in the artist's escrow account, rather like a lawyer has a client's account. That is held by us until after the fulfillment of contract.

If the engagement runs smoothly, if neither the promoter or the artist commit a breach of the agreement, then we have security for the artist, we have 50 per cent of his fee, and we will then pay that over to the artist after the engagement.

# THE AGENCY GAME



If there is a dispute, then we have to sit on the money, and we have to hold it. If the promoter says the artist didn't turn up or the artist says he didn't get the other part of the money or whatever, then the money has to be held until the dispute is settled. We can't return it to the promoter nor can we pay it to the artist. It's a security. Sometimes if we think the circumstances warrant it, we will ask for a 100 per cent of the money as security. Basically they're checked and vetted very carefully. In general, we only use promoters we've been using for years anyway.

## CAN A GOOD AGENT MAKE ALL THE DIFFERENCE IN A BAND'S CAREER AND WHAT KIND OF THINGS MAKE THE DIFFERENCE?

There's one thing that we can't influence too much — although we like to think we can contribute a great deal — and that's in the recorded career. If the artist is being represented properly on the road, playing the right concerts, you naturally hope and think it will help sell records. However, we can have an act for five years and they will get a hit single, and we've been struggling away and all of a sudden, it's easy. Or we can have an act which never has a hit record but they build up a huge following on the road. One particular band we have, Wishbone Ash, haven't failed to sell out an appearance in the U.K. since 1972 and every concert they ever play sells out. Their last hit album, in the light of gold albums, platinum albums, was four years ago, their last gold album. They've never had a hit single, but their live following doesn't wane. We can effect record sales to an extent but that side of it is largely in the lap of the Gods.

It's very easy for me to say this from my side of the fence. But I think it's very dangerous to underestimate the importance of the agency. Some people, when they're starting in the music business, think that the be-all and end-all of it is a record contract. Perhaps a few years ago record contracts were hard to get; now there is nothing difficult about getting a record deal. What is difficult is getting the *right* record deal.

If we are approached by an act that we feel has the wrong record deal, we won't even sign the act. The reason is

that we know that whatever we do, we're going to be frustrated by the inability of the record company and there are certain situations we would avoid like the plague. Some people still think the first thing they must do is get a record deal and then any old agent will do to get them the gigs.

It doesn't work like that any more. Whoever negotiates a record deal, whether it's an agent or whether it's a lawyer or a manager, must be aware of all the facets of the music business.

To underestimate the importance of the agency, is suicide. It really is. We have record companies phone us every day, asking us to book tours for them — requests are actually coming from the record company because they need the live tours in order to promote their records.

## WHAT HAPPENS IN A 'SPLIT COMMISSION' DEAL INVOLVING TWO AGENTS?

That, of course, doesn't involve the act at all. It is something which doesn't go on very much any more compared to the way it used to. It happens, but generally the way it works now is each agency will represent a number of acts, and most people know that that act is represented by that agency. I would say that probably as high as 80 per cent of all our bookings are done direct with the promoter. However, if we get a phone call from another agent who exclusively represents the promoter, then we'll be quite happy to deal with him and we will pay the commission to the sub-agent. It's nothing to do with the artist. It's not like in the old days when there were booking agents all over the place and split commission was very much a common thing, it doesn't really happen. It's often not worthwhile for the sub-agent to do.

Having said earlier that it's all changed; basically it hasn't, in the sense that there's still people sitting behind the telephone. You must have somebody who makes the telephone calls. If the artist's agent doesn't make telephone calls, the artist isn't going to get work. It's as simple as that. The whole basic crunch of it hasn't changed; I don't suppose it will ever change, in that somebody has to get on with it. They have to get in in the morning, get on the phone to people and say, "would you like to

book our artist". Alternatively, if the artist is in the happy position of having lots of incoming telephone calls, someone has to be there to answer them and to negotiate the best deal.

The basic fundamental side hasn't changed, the emphasis shifts all the time. Styles change. Perhaps the biggest single thing is the amount of equipment that's involved. A major concert tour involves a retinue of 30 people, including the act. A lot of managers, and a few agencies, bit the dust in the mid-seventies because they failed to draw the line between representing the act and financing the act. A lot of artists have suffered as well. An agent is employed by the artist, not vice versa and a manager is employed by the artist. It's rather like employing a chauffeur, employing somebody to look after your car and then asking them to lend you money. It just doesn't make sense and a lot of managers really bit the dust by failing to work out the economics of it.

Basically, if we are employed as an agency, by the artist, we expect to be paid by the artist. Then, of course, you get to the next point, can the artist afford to pay us. If they can't, because their record deal isn't sufficient to finance them or because their profit element on the road isn't high enough, then the question arises, do they need financial investment? If they need financial investment, we may negotiate for them, but it wouldn't come from us.

It may come from a record company, a publishing company or it may come from a bank. But it is a very, very different area. Our commission of 15 per cent covers our costs and our profits. Now if we're going to start lending the money — which we wouldn't — then there would be another percentage on top again, for the risk on the money. That has nothing to do with being tight or anything, it's a purely financial situation. Bankers are to lend money. It's the age old thing you see over bars; "We have an arrangement with the bank; they don't sell spirits and we don't cash cheques". I would say the same thing. If you're going to ask your bank manager to start booking your concerts, then it's all screwed up. That's basically it.

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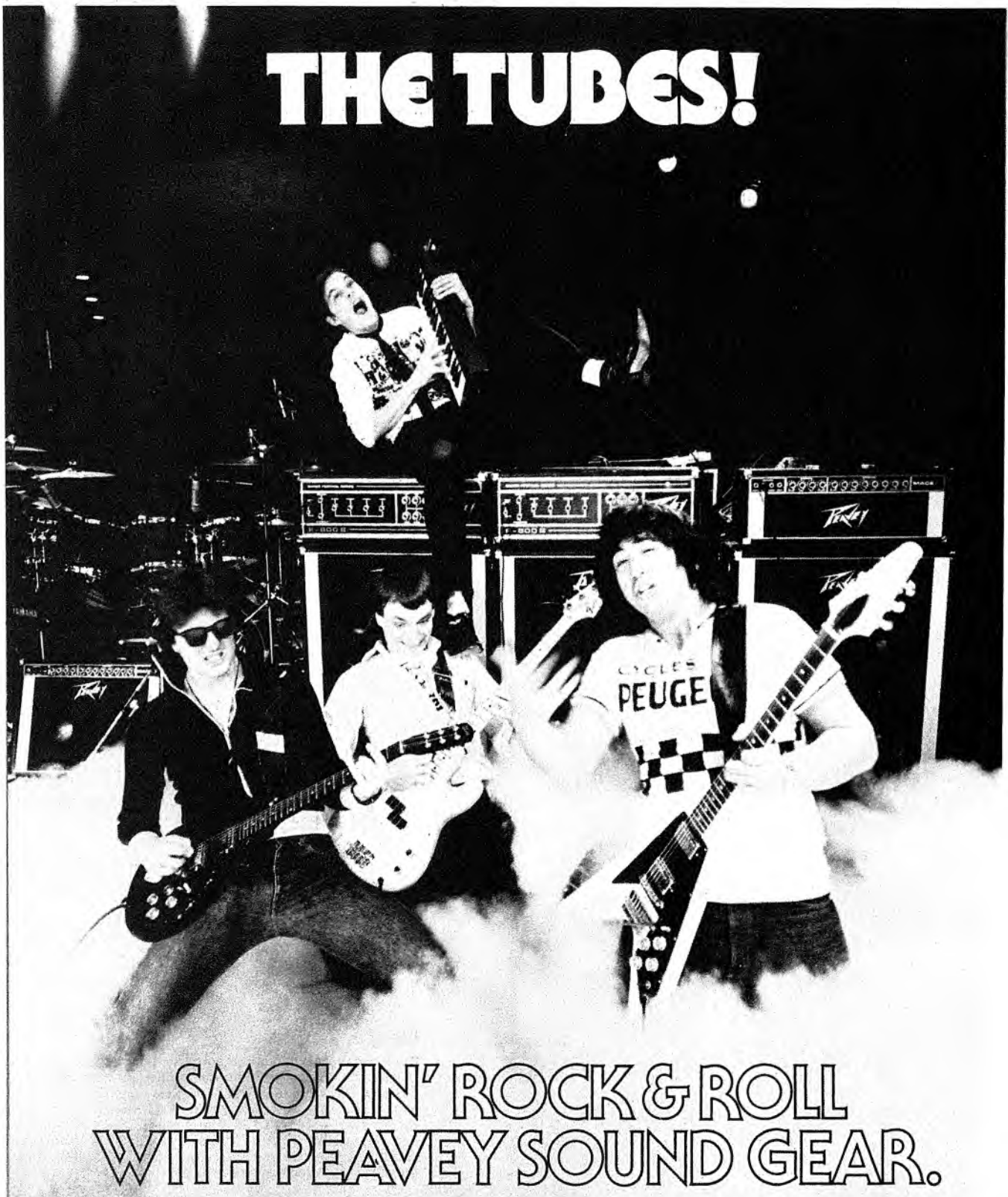
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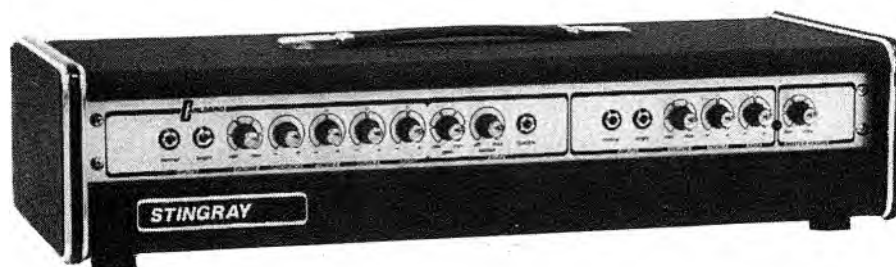


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# build a cab

Ken Dibble explains how the big names make their cabs and gives you a guide to materials for D-I-Y projects.

Probably the most noticeable difference between the commercial amplifier and loud-speaker cabinets gleaming in music shop windows and their counterparts made on a do-it-yourself basis by the musician in an effort to bring his equipment needs within his budget, is in the finish. It is true that the do-it-yourselfer does not have the machinery to permit R.F. gluing techniques, or to cut up his chipboard to within one hundredth of an inch of the required size, but most will be able to make a fairly presentable job of constructing the basic cabinet shell, mounting the components and screwing the whole thing together.

Despite this, only very rarely does such a cabinet look a professional job. All too often, one's efforts are thwarted by having to make do with a covering material that was really intended for upholstering chairs, or corner fittings meant for use on a toolbox or medicine chest. The carrying handle usually has to be one intended for use on a much smaller and lighter piece of equipment — possibly from an old record-player cabinet, etc. Even the glues available are not really suitable for the type of covering material used, and this is usually shown by peeling back corners and edges within a very short space of time.

The professional cabinet maker has at his disposal a vast range of purposely-designed fittings, which serve to adorn the finished product, give an identity to a particular maker's product range and also to protect the cabinet from excessive scuffing and scraping in use. In fact, a whole new industry has developed around the manufacture and distribution of such fittings and materials and, in recent years, these have become widely available to the do-it-yourself and small batch cabinet maker. There has always been a certain mystique surrounding the source of supply of certain types of fitting and these have in many instances remained apparently exclusive to particular manufacturers for years — even though they were, in all probability, readily available if you knew where to obtain supplies. The moulded, black plastic corner fittings used since the late Fifties by Vox is a case in point but, as time went on, more manufacturers located the supply source. Now, these are readily available in packs of four over the counter at most music retailers. Adam Hall Supplies, Rean Products and Hamiltons of Teesside are among the many distributors supplying these and other fittings to the retail trade. Of course, as a given type of fitting becomes more popular, and therefore less distinctive, the leading manufacturers go on to something new and more individual in an effort to retain the "exclusive" image — and so the circle goes on.

An interesting case in point is that of H.H. Electronics who, after many years using a chrome-plated version of the old Vox type corner, have now had special heavy duty ABS corner mouldings made specially for them for their new range of loudspeaker cabinets. This of course will remain exclusive to their own

products for as long as they choose to use it.

This of course is typical of H.H.'s way of doing things — they did just the same when their amplifier range was introduced some years ago, so it had to be only a matter of time before they followed suit with equally individual loud-speaker cabinet fittings. This approach, ideal though it may be, is an expensive solution and involves the commitment of heavy capital investment in moulding equipment and only the very biggest equipment manufacturers would be in a position to entertain this method. For most, the standard, mass-produced fittings have to be the answer, individuality being retained by the use of the very latest or the more obscure types before these too become readily available. In recent years, there has been a noticeable trend towards a 'flight case' type of presentation, especially for amplifier racks, P.A. mixers and for certain types of loudspeaker cabinets. Several companies seem to have specialised in this type of fitting, like

C.P. Cases of Chiswick, London, who manoeuvred themselves into an enviable market position when they negotiated an exclusive European distributorship for the American brand leader, J.H. Sessions & Sons, of Bristol, Connecticut, USA.

Rean Products carry only a selection of the more popular types of cabinet fittings, and have geared their operation to supplying retail outlets in particular. As a useful sales aid, they supply their 300 or so dealers with a floor-standing display rack and all products are pre-packed for easy handling — a sort of self-service approach.

Adam Hall Supplies, however, are probably about the biggest distributor, with a wide range of fittings of every description and, although these people are probably the main suppliers to the cabinet building industry, they are also geared to supply retail outlets and even the individual do-it-yourself builder. They operate this service on a mail-order basis and a detailed



# build a cab

catalogue and price list is available.

Close of their heels come **Hamiltons of Teeside**, with an equally impressive catalogue of fittings from all over the world. They will supply any customer with any quantity of any fitting either as a cash customer calling in person, or on a mail-order basis, the pricing being based solely on the quantities purchased and not on whether you are a retailer, a manufacturer or a private individual. Both Adam Hall and Hamiltons include a selection of flight-case type fittings in their catalogues in addition to their wide ranges of more conventional products.

Of course, only a very few manufacturers of amplifiers and loudspeaker systems actually make their own cabinets. Most rely instead on the cabinet building industry that has grown up around the success of the major amplifier manufacturers. This in turn has made such cabinets readily available, and has opened the door for smaller manufacturers to put products onto the market that are of equal quality and finish to those of the long established names. In many cases, dealers are able to buy empty loudspeaker cabinets from these makers, fit drive units of their own choosing and market the complete loudspeaker under their own brand name. Some of these are very good indeed and pounds can often be saved by buying these. However, the prospective purchaser should enquire as to the type of drive units fitted and the actual maker of the cabinet, as not all "own brand" cabinets are of an equivalent quality to the known names, who have in many instances built up their reputation over a number of years, and who in turn are dependent upon the quality and workmanship of the specialist cabinet builders.

Carlsbro are among the very few large scale manufacturers who, to my knowledge, manufacture their own cabinets from raw materials. More recently several of these cabinet specialists have started producing the larger types of P.A. cabinet for the hire companies and for the specialist P.A. builders and, as an offshoot of this, JBL "copy" bins are becoming more readily available, and the prices are coming down to sensible levels. While most such makers prefer to deal through a retail outlet when supplying these, certain companies will supply, in small quantities, direct to the customer — especially when the customer is located miles away from the nearest dealer handling that maker's product range.

Until the last twelve months or so, **Heathpoint Timber** were primarily concerned with the manufacture of cabinets for the H.H. product range. More recently, the company have diversified their interests and besides supplying several leading manufacturers — Maine, Soundout and Souwave among them — they are becoming more and more involved with the building of custom cabinets and bins for hire companies and specialised building of P.A. stacks for Martin Audio and the Vitavox Thunderbolt system. The bulk of the H.H. work seems to have passed to **KAM**, who also

have a good reputation in the manufacture of customised "own brand" cabinets for dealers and in the building of horn-loaded bins. Both these companies seem to be very concerned in maintaining the quality of their products and, while they prefer to sell their "customised" range through retail outlets, they are also prepared to deal direct with the customer.

**JEB Electrical** were, for many years, specialist builders of cabinets for the domestic Hi-Fi trade and progressed onto professional products for the music industry about two years ago. Their main manufacturing customers include Flame, Custom Sound and Maine Electronics and retailers are supplied, both for 'own brand' loudspeakers and for over-the-counter sales of empty cabinets for do-it-yourself assembly. JEB do not deal direct and their retailers include Soundpad at Leicester, Coventry Music Centre, Music Stop at Cannock and Salop Music Centre. With an output of over 1,700 cabinets per month, JEB are obviously among the larger of the cabinet building specialists.

**Pepper Music** seem to be primarily concerned with the manufacture of dealers "own brand" cabinets and also deal direct with certain end-user customers. Recently, for example, they supplied an eight-cabinet PA system to the Ray McVay Band as a direct sale. Pepper also make a range of padded and lined instrument cases for electric solids.

Until recent months, **J & C Sound Systems** of Ilkley were also primarily concerned with the supply of dealer "own brand" cabinets, but have recently become committed to the manufacture and selling of complete specialised systems under their own brand name. The product range seems to start from a simple 1 x 12" reflex cabinet and wedge monitor through the range to some fairly sophisticated horn-loaded stacks. A novel design approach is claimed, but I seem to recognise some fairly well-known themes running through the catalogue.

**Hillspin Sound Service** of Sacriston are another firm, primarily concerned with cabinets for their own product range, which are sold usually through dealers under the H.S.S. brand name. Except for their lower-price ranges, H.S.A. cabinets are likely to be found rather heavier than many of the competition due to the particularly sound construction methods employed and the use of adequate cabinet bracing — thus reflecting the company's philosophy that the cabinet contributes as much to the final sound quality as does the drive unit. "Solid concrete would be our ideal material from a performance aspect, but due to practical considerations, a solid, well-braced timber cabinet is the next best thing" remarked Mr. Maurice Hill — a philosophy by the way which I heartily endorse.

**Hutchinson Manufacturing** are another company rapidly establishing themselves in the North East. They started three years ago as cabinet builders and were mainly concerned with building and selling the Hutchinson/ATC

range. About 18 months ago "Music Maker" was started to provide a separate retail outlet and trade distributor for the Hutchinson Cabinet and Speaker System. Also, a new range of more general purpose cabinets were introduced under the Music Maker name. Recently, Hutchinson House invested heavily in new, specialised machinery and large factory premises to enable them to increase production levels. Having geared up, they are now actively seeking a slice of the "Name Proud" cabinet business. With tongue and groove jointing on all cabinets and hand final assembly, they are able to maintain quality and, at the same time, keep the prices down — a rare combination these days. Hutchinson/ATC and Music Maker Cabinets are available mainly through a network of dealers in the North East, or via ATC in London.

A whole variety of assembly methods are in use — often dependent upon the materials being used. Most of the lower priced cabinets are built from chipboard of various grades and assembly is usually by simple butt joints, glued and pinned. More elaborate cabinets are built from either high density chipboard or from plywood and the joints are often lapped and glued with either pins or screws to reinforce the glued joint and, sometimes, additional blocks are used to further strengthen the joint. Usually, either the baffle panel or the cabinet back is pinned and glued into position for rigidity, the other panel usually being removable for access into the cabinet — although in some variations, both front and back are glued. This of course results in a particularly solid cabinet, but this approach can only be used where front-mounting loudspeaker units are to be used. Several of the cabinet fittings distributors include adhesive gasket strip and speaker chassis clamps in their catalogues to facilitate front loading and there are only a very few loudspeakers that cannot be mounted in this fashion even though they were not originally intended for this.

Each type of timber, and each type of covering material requires special glues to ensure an adequate bond and it must be an important part of the cabinet maker's art to ensure that the best glues and gluing techniques are employed in each part of the manufacturing process.

There can be no doubt that the building of a cabinet that will both look attractive and withstand the abuse it will receive on the road is a specialised business. It is also a job that can be undertaken at home with care and attention in the constructional process. The names and addresses of some of the leading cabinet builders and suppliers of fittings will be found in the various advertisements included in this special feature and between them, via dealers in some instances, the reader should be able to obtain either a ready made cabinet in which to fit his own speaker units or other equipment, a complete ready made system, or just those special fittings which will add that professional touch to an otherwise totally home made cabinet.

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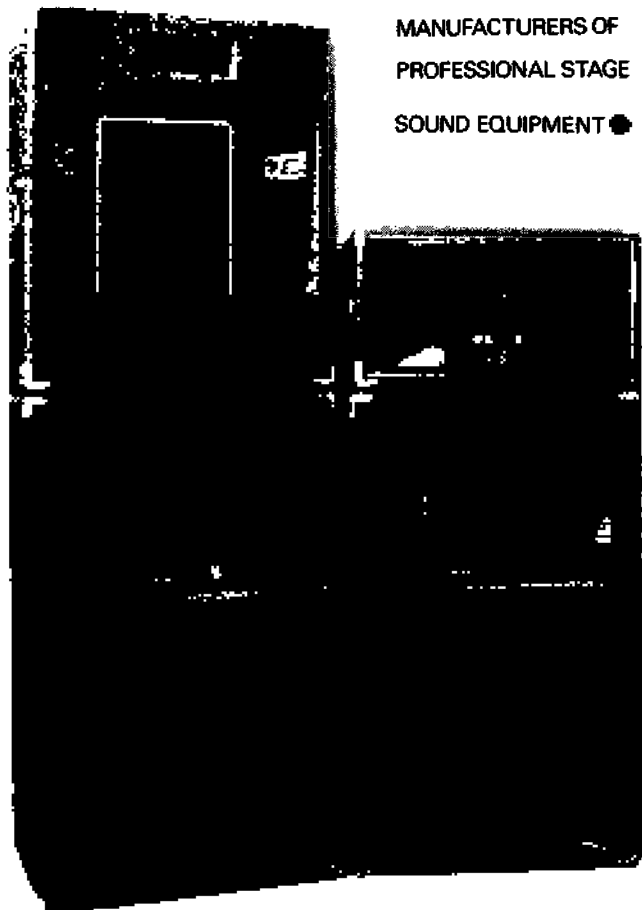
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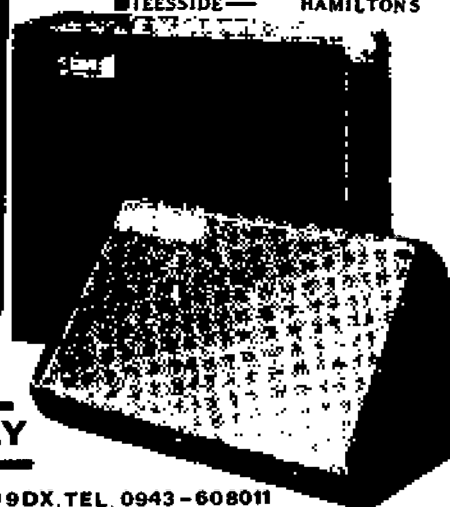


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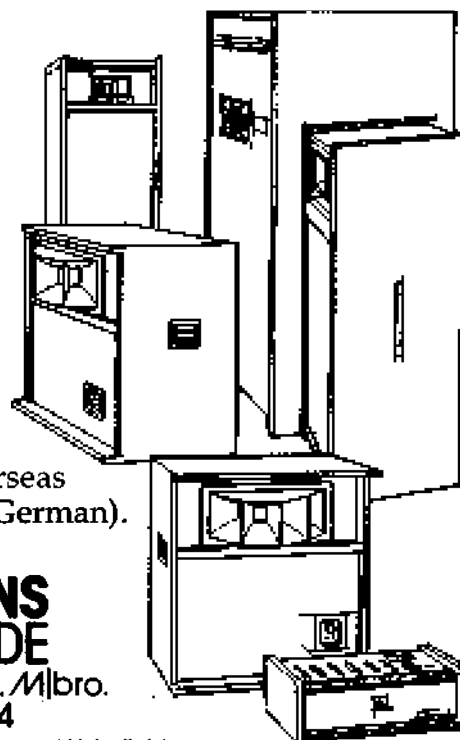
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# The Donahue Dossier



*There may be many people who think that Jerry Donahue is an Englishman because of his long association with Fairport Convention. But the 31-year old guitarist hails from New York and grew up (he moved to Hollywood when he was 6) in the glitter city. He combines an American country feel with an English folk sensibility which makes his style solely unique. He is comfortable playing heavy rock phrases or gentle folk runs and his technique has been praised by everyone who hears him. Here he writes to about his technique and career which led him to be one of the most respected names in the field.*

I've been using a steel slide lately; it's just whatever I can get hold of in some store somewhere around the country. I don't do enough of it to really spent a lot of time looking for the right one. It's a steel one, not really heavy but not really light; I use it on the middle finger so I can play around it and play the guitar when I'm not actually using it, then when it comes to the solo I can use it; if it's on the little finger I find that it gets in the way because I use my little finger a lot.

I listen to slide players and I admire their style a lot but I just haven't spent enough time really listening to them and getting a style myself. I think that will be one of my projects in the future.

I play slide on one track on Joan's new album called 'Opportunity' and that was on the Strat. I have a pretty light touch so my action isn't that low so I just use it the way it is; I just play lightly on it and it's fine.

I did listen to Roy Buchanan for a little while, I liked his sound a lot. I didn't hear him when I first started with Fairport and some of those long instrumentals required a lot of sustain and stuff and I never used a Gibson so I just tried to get the sustain from the amplifier and from the approach. He does that particular style

better than anyone; so when I heard him it was like an extension of what I was doing. He's great.

I use a lot of harmonics and then bending behind the nut which is another reason why I have to use a Fender because you can't do that on a Gibson; there just isn't enough room between the head and the strings. I've experimented a lot with bends, bending one note a tone and another one a minor 3rd and stuff like that: or two harmonics behind the nut for instance depending on which fingers you use and where on the string you are and how much tension you give each string. You know, you can get different scales. There's one where I did harmonic bends on the *Nine* album on 'Bring Down' during the fiddle solo. 'Em Down' during the fiddle solo.

guitar; that fast picking and letting the strings ring wherever they're open and stuff like that, but you have to sit down and work those out.

I don't have any particular kind of picking style; it's just wherever the notes appear on the guitar that's where my fingers have to be. Jerry Reed does a lot of instrumentals like that. That's where I first heard it on guitar. His are more country-based though, mine tend to sound a little more far out. I don't know how you describe because it's just one major sounding. And there are a lot more chords involved in the one I do — F, G, C, Am, instead of just three chords.

I use the jazz pick hold when I'm playing single strings and stuff, just up and down. And I add the fingers when I need that. I've never tried using a thumb pick or anything... well, I tried it but it was just too awkward. It's always the flatpick plus the addition of fingers.

Sometimes when I'm accompanying I'll play lines but other times I might do little finger arpeggio type thing in the background. I'll do various different things depending on what will sound best on that particular number.

If I want the solo to be pretty; I think in terms of the note that's needed rather than the one that's easiest to play. So I'll find a way to get it and sometimes bending to it is easier than reaching for it another way especially if I need to hold on to another note at the same time. So that might be why the style sounds very distinctive and sounds like a steel guitar sometimes. I don't think in terms of scales when I play, I just feel the notes for what's needed. Hopefully what comes out is what's right. That's what I strive for.

I'm not a heavy metal guitar player but I have done some things with a lot of sustain. If you listen to 'One More Chance' off

the *Rising For the Moon* album, that had an extended solo at the end that starts off pretty soft and builds and keeps building. That's one like that which requires a lot of sustain. I was doing a lot of two-tone bends and things like that. That was done in England through the Twin Reverb amp and it was whacked up pretty loud in the studio to get that. Actually I was using the Twin Reverb amp driving a Leslie cabinet as well; the belt was off the Leslie and it just sort of adds a richness to the tone. It wasn't a thin sound; it was a Fender sound but more like a Hendrix type, a Gibson sustain type sound.

'Tall In the Saddle' was the same thing off Joan's album; that's got quite a loud solo in the middle of it. It sounds like a soft, dreamy, semi-jazz number that you'd expect to hear in a bar lounge somewhere. The first thing I wanted to play was something very delicate but she wanted a really rip-roaring solo going through it. And I said OK and they were very pleased with the way it turned out. But it comes as sort of a shock because this guitar comes soaring through.

I did that on a couple of Sandy Denny tunes, too. The orchestra was live in the studio and I played acoustic guitar on two of the tracks and then overdubbed the electric solo. It starts off in the same manner as 'One More Chance.' That album hasn't been released in America yet, it's called *Rendezvous*.

On a long pull I use my ring finger backed by my little finger; adding the support that the ring finger would need. And those can really only be done on the G or B string. When I was using the lighter gauge on 'Tall In the Saddle' I was able to get two tones off the top (high E) string. But it was half way up the board. Now I can only get a tone-and-a-half at the very best and that's quite a stretch. The strings tend to break if you're not careful.

Glyn Johns helped with the guitar sound, we'd experiment together. I came up with the idea of the Leslie because I'd used it before. He was not too excited about the idea of using a Leslie right off the bat but when I told him it was for the actual tone and sound and not for the swirling effect, he went along with it.

There was one particular sound he got himself and that was coming out in the studio while I was actually playing an open sounding arpeggio type thing with a lot of flip-offs and slurring notes sort of like a banjo style and on the number 'Save Me' from the Joan Armatrading album and what he did was turn on the vibrato on my amp. That gave me a medium speed vibrato and then he turned on my MXR phase 90

and added very slow phase and that gave it quite a distinctive sound.

I think the level of guitar playing is rising; the competition is getting pretty great these days. But most of the players that I think are great are relatively obscure. They're not the ones that the fans think are great. It's usually either the studio guys or sometimes guys I heard in bars who can just wail. But eventually most of them will get some sort of work if they want to; some really don't care about it.

But there are some great ones. You've heard of Jerry McGee; He's a great player. When I was first playing guitar I used to see him in a place next to Dino's Lodge called the Sea Witch and he was playing with Larry Taylor (John Mayall; Canned Heat). He was playing great, I had never heard anyone play like that. He was using a thumbpick and bending all those strings and this was 1960 or something like that. It was country based but it was pretty mean sounding. He was playing a Telecaster and he was hitting those bottom strings with a thumbpick and pulling and snapping strings and the best I'd heard in those days was the Ventures.

Now I'm working with Mike Chapman (Chinn/Chapman) who's putting a group together. It's coming together sort of like *The Magnificent Seven*; each member is being added as he is listened to and approved. As a matter of fact there probably will be seven in the band. Jerry Conway the drummer with Cat Stevens who was also in Fotheringay is going to be involved in that too. He hasn't approved him yet because he hasn't seen him live but Rusty Buchanan from Sugarloaf is probably going to be the bass player. He can really sing.

I think my playing is growing, I like it a lot. There's things I did with Fotheringay that I still like but I'd do them very differently now.

There are a couple of things on the *Rendezvous* album I'm very pleased with. I'm very pleased with the stuff I did with Joan and Fairport. With Gary Wright, Hugh McCracken was doing most of the lead work and I didn't get a chance to do that much. I was playing mostly rhythm or things to back him up; he was mostly a single string player so I was doing most of the stuff in the background. But a lot of that was pretty hard rock too so it was a lot of chord strumming to add weight. It was fun working with him, he's a good guitar player.

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**Professional  
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Following last month's interview with Glyn Johns we turn the spotlight on another giant of the production world — Tony Visconti. Tony is noted for the wide variety of his work from Marc Bolan, David Bowie, Ralph McTell, and Osibisa through to The Steve Gibbons Band and Thin Lizzy. His most recent work has included the last two highly acclaimed Bowie albums "Low" and "Heroes" and he is currently working with Irish New Wave band The Radiators on their second album.

Tony was born in Brooklyn, New York, "of Italian extraction" and first became interested in music when his father bought him a ukelele for his fifth birthday. He later took up classical guitar and string bass and from the age of 13 was playing in local New York bands.

It was only when he started making demos that it was suggested he might have a future in the production side of things. Tony was brought over to England in 1967 by Denny Cordell who at that time was producing Procol Harum, Joe Cocker, Georgie Fame, Denny Laine and The Move.

His initial six month stay became indefinitely extended, and the Anglicizing process was complete when Tony married singer Mary Hopkin. He now has his own studio in Dean Street, London, and has just put the finishing touches to Bowie's new live album.

Tony came to Britain during one of the most exciting and innovative periods in rock music. The Beatles had just released "Sergeant Pepper" and the whole scene was set to explode into psychedelia and acid rock.

He had studied arranging back in New York, and this led him to making his first mark on the British recording scene.

"My first year here was spent sitting by Denny's (Cordell) side learning how to produce from him. The very first arrangement I ever wrote was "Flowers In The Rain" and that helped to secure my job.

"Denny said it was too sluggish, and the backing too plodding but I loved it and I asked him to let me have a go. It cost just £40 for four session musicians in those days, so I had four woodwind players and wrote out the parts for them. That seemed to work, it was an instant

success and I also met Marc Bolan and David Bowie on that deal.

"Because of my background I never stuck to one thing. I had training in all kinds of music and was willing to try anything out. In that year I met Marc Bolan and David Bowie, and no one would touch them; they just couldn't get contracts, no one would give them a listen because they were so radical. I did all their early recordings and Marc proved to be the more immediate success.

"The first single we did, 'Deborah', reached 28 and the album sold an unprecedented 20,000 and they were so disliked even by David Platz (of Essex Music). We did that album in four days and it hardly cost them a penny. Even Tyrannosaurus Rex was difficult to say all the time and I used to put T. Rex in my diary from the start.

"David wasn't so easy to get off the ground, he was even more radical than Marc and we tried so many different types of records. Finally we got to do the first album for Mercury which had 'Space Oddity' on which Gus Dudgeon produced. I didn't like the song — I still don't. Gus was always keen to work with David, so I told David and they had a hit together. To my surprise David came back and said, 'OK, now let's get on with the album.'

"On that they used a young session player, a guy called Rick Wakeman. No one would use him, but I used him on a few of my first productions and David liked Rick's playing and asked to have Rick on the session, also a guitarist who was working with one of the group's I was producing, so they were all my people.

"Anyway, David and I made another album, "The Man Who Sold The World", which again was pretty revolutionary. It just went down, even Mick Ronson was getting discouraged, we were all getting discouraged and I had to think about my bank account which was down to almost nothing, and the T. Rex money wasn't bringing in anything. Half of my income in those days was playing on other people's records and writing arrangements, playing bass and guitar, I also play recorders and all the strings. I said I would concentrate on Marc, and David was more or less ready to pack it in

# Tony Visconti

by David Lawrenson

anyway which he did and lived on the royalties of 'Space Oddity' for about a year and a half. Then he came up with 'Hunky Dory', by which time David and I were no longer friends.

During the early Seventies Tony worked with many artists, but probably the most famous was Marc Bolan. Bolan was one of the most important figures on the rock scene, because almost single-handedly he re-introduced the idea of a glamorous "pop star". He went from an acoustic cult band to an electric pop superstar who burst out of the sombre Progressive/Heavy Metal scene, and paved the way for good quality hit singles and "glam rock".

Tony worked with Marc from the beginning, and produced every record for him up until "Truck On Tyke". To many people, Bolan had virtually changed overnight to his pop star image, and he was accused of selling out to commercialism. Tony offers an interesting insight into this fascinating period.

"Marc always wanted to be a star," he said, "and he figured in '67 when all the stars were doing the Flower Power bit and psychedelic recordings he said, 'that's the way I am going to do it'; he was very adaptable. So his cult thing and wobbly voice were well calculated; actually the wobbly voice thing was natural, he couldn't sing a steady note.

"He used to monopolise on his good looks and his voice and he obviously had a flair for poetry. His musical abilities were limited but he had all those other things going for him, and he very cunningly saw that Flower Power was dying, that wasn't the way to do it, and he just saw the right moment. Everyone was walking around with long hair, jeans and all that and he said, "I'm going to put on a glitter suit and get an electric guitar," which he had been playing for years, incidentally.

"He wouldn't pull it out until he was convinced that the acoustic thing wasn't going to make it. When he was convinced he just took the guitar out and introduced it on a record. After 'Ride A White Swan' — a hit he was aiming for believe me, he didn't want to be that cultish — he realised that maybe if we had a drum kit on 'Ride A White Swan' it would have gone to number one instead

of number two.

"I was working with Mick Jupp and he had a band called Legend. In those days and even now I don't go for the names like the studio guys, you get more response from a guy who is in a group, as long as he is a good musician. He is usually willing to stay in the studio all day, a session musician does want to get out in three or four hours. A guy in a group doesn't mind going over and over and getting the number right and the fills exactly in the right places. So I had Bill Fifeield from Legend, he was the best rock and roll drummer I knew at that time. I brought him in for the 'Hot Love' sessions; Marc loved his playing and he changed his name to Bill Legend and he became drummer in the group.

"I was the bass player until Steve Currie came along, because it was obvious I couldn't do gigs. It's funny, I was Bolan and Bowie's bass player at one time."

Still the jump from producing records for a cult "underground" audience to top twenty hits would seem a big one. The early T. Rex hits certainly had a distinctive sound, which Tony must take a great share of the credit for.

Tony explained that he and T. Rex were always trying to make hit records, but in their own way. "There are many ways to make hit records, for instance like Biddu — incidentally I produced Biddu's first record in 1967 when he was trying to make it as a singer. There is that way of doing it, by getting a guy to write out the arrangement, make it as obvious as possible and slam away the disco beat. In the time I was producing Marc there were formulae like that flying around, we could have done it that way.

"But it is my policy to work with unusual people, I think eventually the unique people will go right the way to being cult figures. I stuck to my guns and the few people I have invested my time in have made it that way.

"So we were trying in our way with all those weird singles like 'King Of The Rumbling Spires' they were attempts at number one records. The only difference on 'Ride A White Swan' which made it, was that for years I was asking Marc to use some strings. He heard some of the strings I was writing for The Move and he said 'OK, do your stuff on this one — but keep it simple.

"I asked my boss, David Platz, how many strings we could afford and he said four, so we had these four violinists playing, and that's the only difference on 'Ride A White Swan', those four violinists putting that little glistening thing on the top and that seemed to do it. On the radio it sounds good to have a very high sound, a very middle sound and a very low sound, whereas at the time T. Rex sound was all middle, there wasn't even bass on. I think 'Ride A White Swan' was the first record that we had bass on.



Marc always had it in him to make hit records, he just needed the right elements and finally we invented the T. Rex formula. 'Hot Love' had more strings on it and backing vocals with Flo and Eddie, in fact I have got a hilarious tape of them doing it, they were really funny."

The formula proved incredibly successful with a whole string of top ten hits, but just before "Truck On Tyke", Tony realised that things weren't going to change and Marc's popularity began to wane. Despite this, he remains convinced that this trend could have been reversed if Bolan had gone back to an early demo he had made called 'The Children Of Rahn', which Tony says could have been a rock epic in the "Tommy" mould.

Instead, Bolan continued making rock albums and eventually forgot about the tapes, although a couple of years later he remembered and asked Tony for them, but he only came across them after Marc had died.

Tony is probably best known today for his current work with David Bowie. Bowie has been through many changes in his career, almost always managing to set new trends not only visually but musically. The last two albums "Low" and "Her es" saw Bowie at his creative and imaginative best, experimenting with new sounds and ideas, the latter being widely acclaimed as the album of the year.

Tony resumed working with David on the "Diamond Dogs" album. "One day he phoned me up and said, 'I never had more fun than making 'The Man

Who Sold The World', that was the best album I ever made, please come back and work with me."

"I was very flattered and honoured, and we have been together ever since.

The only album we didn't do was 'Station to Station' and that was because it was a rush job. He had to do it while he was in California making the film "The Man Who Fell To Earth", so the album took about a week and a half to make.

"I've just finished his live album.

That was an incredible job. I recorded four nights, two in Philadelphia, one in Boston and one in Providence, Rhode Island. David trusts me so much that he said, 'take the tapes back to London and mix it'. I said, 'don't you want to be there?' and he said, 'Tony, I trust you'.

"So I set the mixes up. He would often be late to the studio and he would come in and would hear how the mix had progressed and say, 'that's marvellous; just a little bit of this and a little bit of that' and he'd sit down and finish off the mixes with me.

"This album is totally live. Not one single thing is overdubbed, unlike all your so-called 'live' albums where people replace entire solos, and record an entire section in the studio and just add ripples of applause. This is a real, genuine live album, he didn't have time to do anything, when I left after Madison Square Garden he shot off to Germany to do the rest of his tour, and I shot off here to mix the thing and it sounds fantastic."

On the albums, Tony is credited as a

# 2 THE PRODUCERS

co-producer with David which would suggest a particular working relationship between the two. "It's hard to define what a producer does alone, but a co-producer in this sense is that David feels very strongly about, say, the musicians he wants to use — and he is paying the bills. He therefore has every right in the world to call himself a producer because technically that's what a producer is. He gets me in more on the creative side whereas I don't have to worry about the studio costs, booking the guys and all that. It is his side that flies all the musicians in. In that sense he is producing.

"Of course an artist of his stature who has produced hits like Lou Reed and all that, I don't mind sharing producing credits with. It's very valid. In the case of young bands who don't know anything about studio technique, I am the total

producer. I'm technically a co-producer with Thin Lizzy as well because before I joined them they had already made four or five albums and they're pretty keen on their studio technique. What they need is me in the control room while they are out there, and again they are paying all the bills, flying me all over the world to produce their records so I'm not put off by co-producing."

Recording with an artist of Bowie's stature and vision would obviously tax any producer to the limits, the "Low" and "Heroes" albums, for example, have a pervading stark, almost funeral-like, feeling. This poses the question of just how that was achieved, was it carefully planned, was it Bowie's idea and if so how did he manage to translate it to his producer?

Tony offered a fascinating insight into the recording of the albums and the way the man works. "This is where David excels as a producer, he actually stages an album, the whole thing was calculated. We started "Low" at The Chateau studios in France, and he purposely stuck us out there. Let me describe the little village to you.

"You are in the middle of a hostile little village, they hate British people there, they refuse to speak English even though they all can, the staff were pretty unkind to us, and it was 13 or 14 miles from Paris. There is no motorway either, it's a good two hours to do those 13 or

14 miles so we were stuck out there. No one ever made breakfast or lunch for us.

"David knew all this. He knew the place had fallen into a shambles and there was a sort of decadence about that studio. The studio was very poorly maintained, sometimes I'd be recording at a level and then start noticing things on the playback and I'd say, 'when was the last time this machine was lined up?'. Then I'd say, to the only person who would speak English to me, 'get a maintenance engineer quickly, I want that machine lined up. He'd say, 'this is impossible, he left on his holidays two days ago.' It was a good job I knew how to line up the machine, so I ended up lining up their equipment.

"The decadence was there, the walls were literally crumbling and the studio was crumbling. Our one meal of the day would be something like rabbit or eels. We were getting drunk quite a bit just to compensate. Finally it came to a peak when David and I got food poisoning and were bedridden for three days.

"We got out of there after three weeks, and went to Berlin to finish it, and a lot of Side Two, the instrumental side, was done there. I'm surprised Eno doesn't get a producer's credit, because a lot of that time we'd just leave him alone. He said, 'look, I work best with my synthesizers all around me, just show me how to work the remote control unit and I'll work when I'm inspired.' He writes his music out on graph paper, he's got all



sorts of diagrams, he is a real genuine modern composer. Quite often we would just leave him for a whole day and he would come up with a backing track, like Warszawa for instance.

"It's funny because my son, who was three at the time and is quite a musician, played the first three notes of Warszawa, Eno said, 'that's good', shoved him off the piano, and went on to finish the number.

"Brian should get a credit as co-producer, because he played a very important part. For instance on Warszawa David would come in at the end, overlay just a few things on top plus the vocal bits, and of course Brian did get a credit as co-writer."

Tony said the "Low" album was terrific to work on, but it very nearly didn't get made because it was far too radical for many people's tastes.

"At the beginning of it all, David said, 'I'm going to do something so radical that it's probably not going to be released, are you willing to waste a month's time? It might prove to be the best album I ever made or the worst, because I have never done this before but I am sick and tired of being a rock star and I have this desire to compose music a bit deeper.' The guy was writing terrific songs anyway, and here he wants to really go off it. I said, 'Of course I don't mind,' he really said, 'you might waste a month of your life'.

"Anyway, we did it, and RCA hated the album, but David and I loved it, we knew we had done something good, and he didn't care how many fans he would lose — he knew he'd lose some. Even his former manager, Tony De Fries, just out of spite told RCA not to release the album because there weren't enough vocals on it. There was so much opposition even before the album was released, all this criticism was going down, all this backstabbing and backbiting. There was one official at RCA who said David's most successful album to date was 'Young Americans' and he said, 'You know what I am going to do for David Bowie, I'm going to buy him a house in Philadelphia to make another 'Fame' or 'Young Americans'.

"He really ran into opposition, but I'm glad David stuck to it. Then after "Heroes" made it, they called him Musician Of The Year and that stuff goes down so well now on stage, the kids really love it, they are really quiet, those numbers sound even better on stage.

"Brian (Eno) came backstage at Madison Square Garden. He was asked to do the tour, but turned it down because he said he couldn't tour anymore after Roxy Music, but that night he was standing backstage with me watching and he said, 'why didn't I take it on?' He was almost in tears when they played Warszawa because it really sounds beautiful played at high volume in a big arena which is usually bad for rock music, but for this

synthesized music which echoes all the way around it was marvellous.

"Bob Fripp was in the audience and he was also asked to do the tour and he was sickened by Adrian Belew, who was doing all the stuff that Fripp does through a synthesizer. Adrian, who worked with Zappa, was getting all these sounds out of this little beat up old Fender amp and this real beaten up Stratocaster just by feedback and putting this and that on. He was getting real synthesized sounds, the kinds of stuff that Fripp has thousands of pounds worth of equipment for. Fripp was so sick he didn't even come backstage and say hello to David, and Brian said that he had heard reports about the tour and wished he'd taken it on now."

The success of the "Low" and "Heroes" albums has put the Hansa studios in Berlin on the international recording map. Bowie was living in Berlin at the time and had looked around several of the local studios before deciding on Hansa. Tony had never worked in Germany before, and had rather a stereotyped image of the people, but he had nothing but praise for the staff at Hansa.

He said, "The people there were fantastic, engineer Eduard Meyer showed me the desk the first couple of days we were there, because David had insisted that I engineer. In Germany all the engineers have to go to university for four years and I felt a bit embarrassed about pushing him out of his chair, but he was great.

"The room at Hansa, where we recorded "Heroes" is like EMI's number one studio, you can shove 150 musicians in there and that accounts for the big sound. I had two boom mikes about 100 feet from the stage soaking up the ambience, and we used those mikes on every track on "Heroes", the band tracks not the synthesizer tracks.

"It's a funny studio too because you face a gun turret on the Berlin Wall about 500 yards from the control room window. We were facing these Red guards through the whole mixing, and they were peering at us through telescopes and binoculars. Once Eduard shone a light in their eyes and stuck his tongue out at them and me and David just dived under the desk."

Inevitably, Tony has come up against musicians who have been difficult to work with. "I've had one or two guitarists, and it's usually guitarists and bass players who are really not aware of their sound. It's because they are partially deaf from playing at high levels on stage.

"I've got one guitarist who uses two Echoplexes, and on Echoplexes he uses WEM Copicats. He uses one as a pre-amp to drive the next Copicat, and there is more hiss coming out of his Marshall than there is music. The guy, quite honestly, cannot hear the hiss. He looks for a certain sound and he hears it. It took me a long time to discover that I had to hear the

sound through his ears to know what he was going on about, because he cannot hear the hiss or the fuzz when he is hitting the low notes because his amplifier is clapped out.

"It is usually guitarists and bass players who hear something completely different. I've had my ears tested recently and my frequency response is still up around 17kHz, which is remarkable after being in this business for 11 years, my hearing is still very good. That is how I overcome these problems, by filtering these things and asking the musicians 'is that it?'"

His work has taken Tony all over the world, and into many different studios but he does insist on certain basic requirements. "I usually phone up beforehand and ask them what they have got. I also usually work in Westlake/Eastlake designed studios because I know they are the most reliable. I am not a hundred per cent in love with them but they are built to a world standard.

"I prefer to work in my own studio (in Dean Street) because I made it myself to my own tastes. We are getting a new desk in soon, but this desk has been marvellous, it has been modified to hell and it is not your typical Trident B range, it's a real souped up hot rod, it does a lot of tricks.

"I usually end up mixing my stuff here, so it doesn't matter too much where I record, I can get my sound or what sound I'm looking for. Microphones are microphones, every studio has the same ones, I'll work anywhere except The Chateau in France. My reputation is such that when I go into a studio now, it's all set up, I've got two or three attendants and that's the way it should be."

Although one of the most versatile and popular producers in the business, Tony denies that there is a distinctive "Visconti sound"; nevertheless he remains largely responsible for the specific sounds of individual artists e.g. Marc Bolan.

Tony explained that this lack of a "Visconti sound" has helped him survive in the business because those producers with a distinctive sound, like Phil Spector or Gus Dudgeon, don't make many records these days. "My philosophy is to get the best out of the group and I want to make their sound. I have played a major role in creating everyone's sound, like the T. Rex sound is of my manufacture, explaining to Marc where the drums and bass should be in the mix, and those numbers were successfully very danceable.

"The T. Rex sound was partially my sound, but I also made sure that it was Marc's sound as well. It's like I'm a tailor, everyone I work with, I want to make a sound for them. I've already discovered with The Radiators what they do best and where their strength lies and I'm just emphasising that. I will now help them create their own sound."

He realised quite early in his career

the advantages of being an engineer in addition to his role as producer. "Before I became an engineer I'd get these ideas and sounds, and then you'd get an indifferent engineer working with you. He is on a wage and you are on a percentage, and I'm afraid that makes all the difference in the world. This guy is not going to work his ass off to please you.

"So about seven years ago I decided. I was going to have to do my own engineering. I was already doing the T. Rex mixes, but I never engineered the microphone part. It's hard enough to sit there and produce, listen and make sure everything is all right, but to balance the mikes and do it is pretty difficult. In time that came together and now it's great because the right side of my brain and the left side of my brain are all working together, they are two people who are working hand in hand now and I don't have to work with engineers anymore."

In many ways Tony has the best of both worlds because he gets the chance to play on records as well as produce them but has no desire to go out on the road with a band and suffer the rigours of touring. Tony is also a songwriter and actually produced his own solo album last year which sold the initial 5,000 copies despite difficulties with the record company.

He is essentially a freelance producer, able to pick and choose who he works with, but this has not always been the case: "For the last five years, up until December last year, I had my own production and record company. I was in partnership with a guy who convinced me that to make a lot of money you had to have your own company, and I must say it was the saddest five years of my life.

"It limited my freelance work because it was written into my contract that I was only allowed to do one freelance artist a year whereas, prior to that, I was often working with three very big acts in one given year. So, during that five-year period, a lot of sad little groups used to come to my company just because of my name and my partner would give them the lowest rates possible. The people we were attracting were so



underdeveloped, there was no way they were going to turn into stars even within a year or two.

"Eventually, my partner and I split up and, since December, I've worked with Thin Lizzy, Steve Gibbons and David Bowie in a five-month period and the year isn't over yet. It's fantastic being freelance again."

Tony admits that he doesn't really have the time to go out searching for new talent, but he still gets approached by new bands. He has done his stint of going to gigs and being pipped at the post for signing a band, now his reputation means artists will seek him out.

However, he does operate a policy of sticking mainly to big names. He explained: "The main reason for this is that the big names are usually the best musicians to work with and the sessions usually go smoothly. Lizzy and Bowie and people like Steve Gibbons are terrific and are so disciplined in the studio. To me it is very, very frustrating to work with a band that is just starting out, they come in and they love the sounds but if it doesn't sound like the finished mix, it's very hard to explain to them that it will be O.K. I happen to know it's true but they don't, whereas you can tell it to Bowie or Lizzy and they say 'oh sure, we know that'.

"I don't want to ignore new bands obviously, and my new band is The Radiators, who have had no hits, and I'm running into the same problems with them. They come in and they hear a good drum sound and a good bass sound, but it's not a finished mix and they worry a bit, so I have to say 'don't worry boys'.

"You also have to play differently in a studio than on stage because the tape cannot take the dynamics, and you do have to limit your dynamic range a bit — you can play as loud as you like, but don't get too quiet, you can play quiet but don't get too loud, it is something that experienced artists know. They know how a studio works, the limitations and they know the benefits, so I'm going to stick with this policy of the big names, but if there is a hot little group I'm interested in, like The Radiators, then I want to know."

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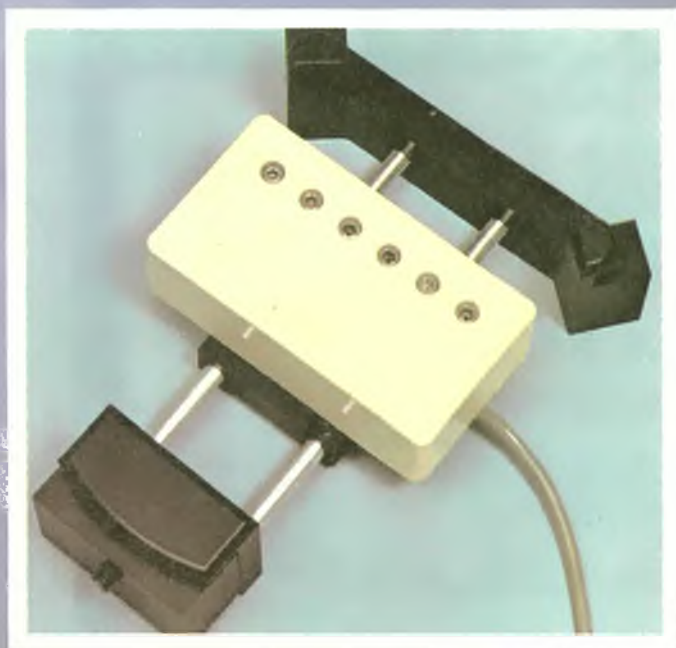
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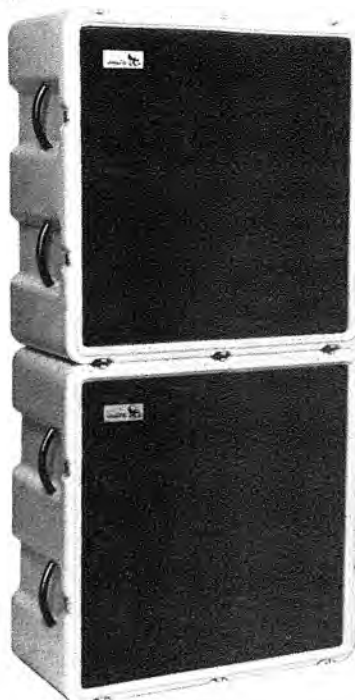
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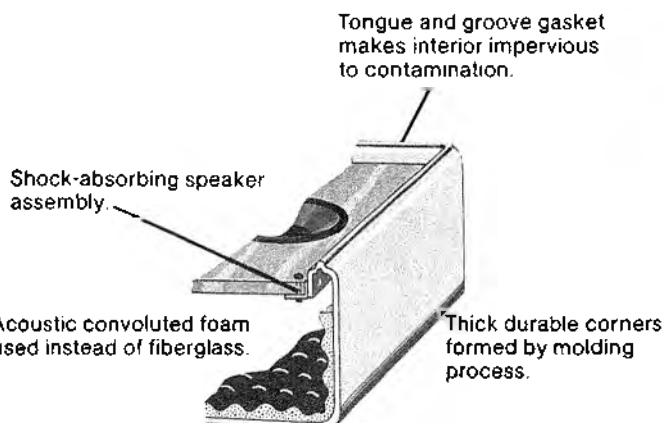
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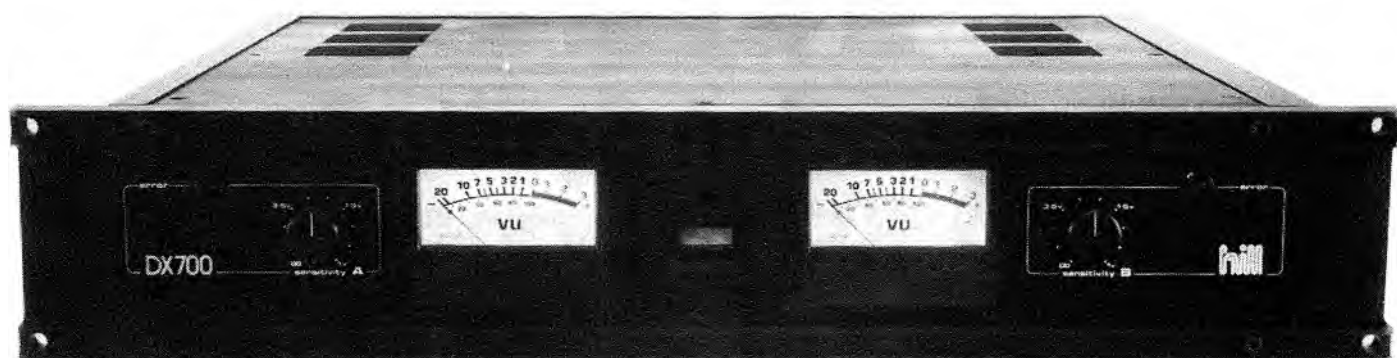


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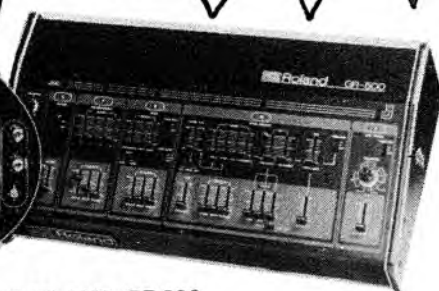


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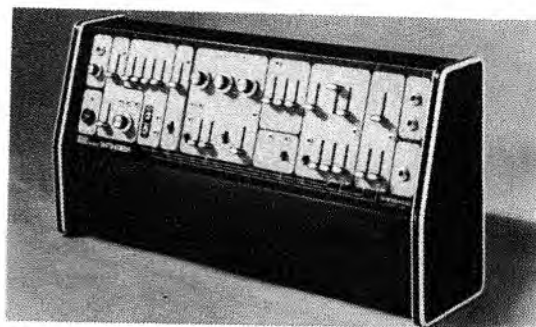
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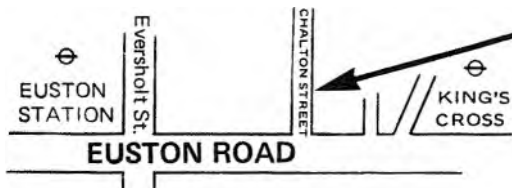
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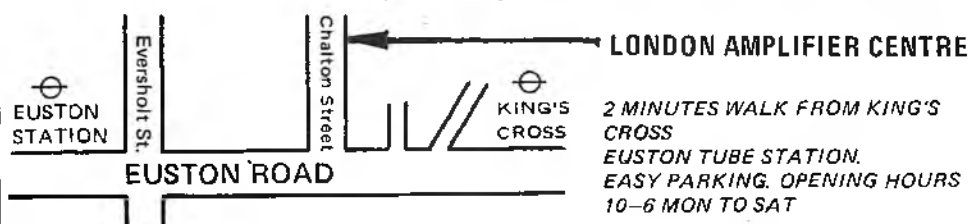
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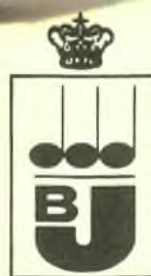
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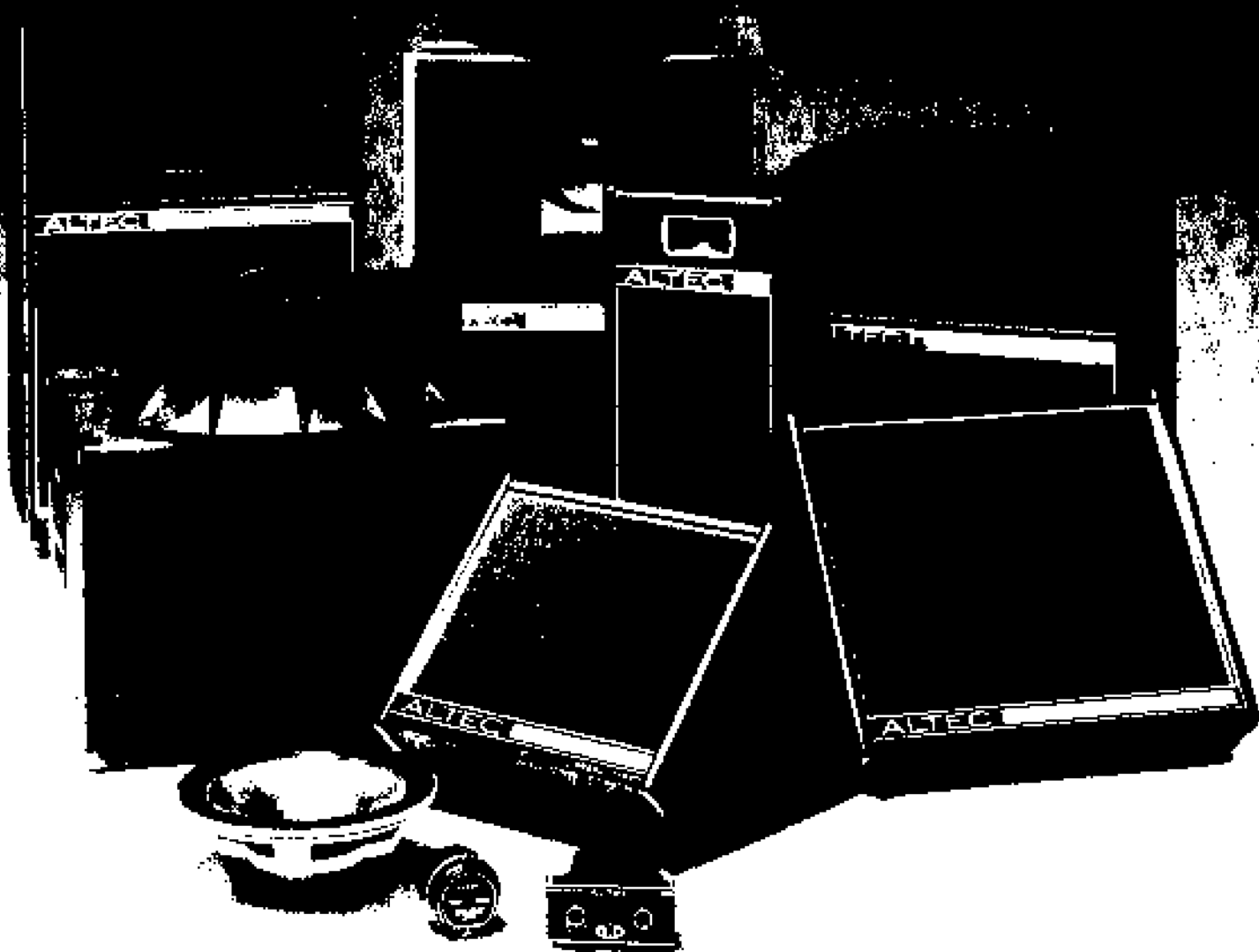
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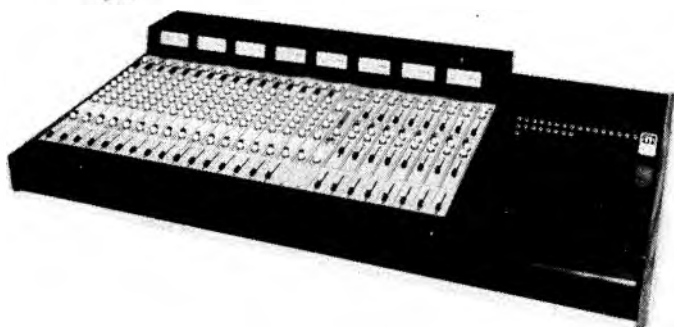
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# UNDERSTANDING SYNTHESIZERS

by Tony Horsman

## PART 2

### Introduction

Last month I explained a number of terms related to sound synthesis, some of them very familiar and others perhaps less so; we covered "sound waves", "oscillations", "frequency", "amplitude" and "decibels". This month I am going to start by linking together the ideas about frequency and amplitude; let's have a look at the sensitivity of the ear in relation to pitch.

### Aural sensitivity

It is a fact of life that the ear is not equally sensitive to all frequencies. Broadly speaking we can hear sounds in the range from 20Hz to 20kHz and all synthesizers can produce sounds throughout the whole of this frequency range and beyond. Below 20Hz (in the sub-sonic range), we tend to feel rather than hear the sounds; above 20kHz we hear and feel nothing at all, although many animals are able to detect these "super-sonic" frequencies (cats can hear up to 60kHz!).

Within the "audio band" (20Hz to 20kHz) our ear is most sensitive in the region 3 to 4kHz. This is illustrated in Fig.1 in which the lower curve shows how the "threshold of hearing" varies with pitch.

What it means is that at frequencies above and below 4kHz sounds have to be *relatively* loud (notice the "decibel" scale) before we can hear them. If we could just hear a sound with a certain amplitude at 4kHz, then if the frequency of the sound was lowered or raised we would have to keep increasing the amplitude so that we could still just hear it.

For example, by the time we descended to 50Hz, the amplitude would be at least 40dB (=100x) greater than when we started. Actually, it is a good thing that our ears are completely insensitive to very low frequencies, otherwise we would constantly be hearing our own heartbeats and the blood rushing through our veins!

Fig.1 also shows the "threshold of pain". You will see that this does not vary very much with frequency. Most of us, perhaps with the exception of the Grateful Dead, have had enough long before we reach these levels — more than 1,000,000 x (i.e. 120dB above) the threshold of hearing at 4kHz.

### Vibrato

It is *variations* in sounds that are interesting, not so much the constant parts that are the foundation of the sound itself. Just think of the variety of

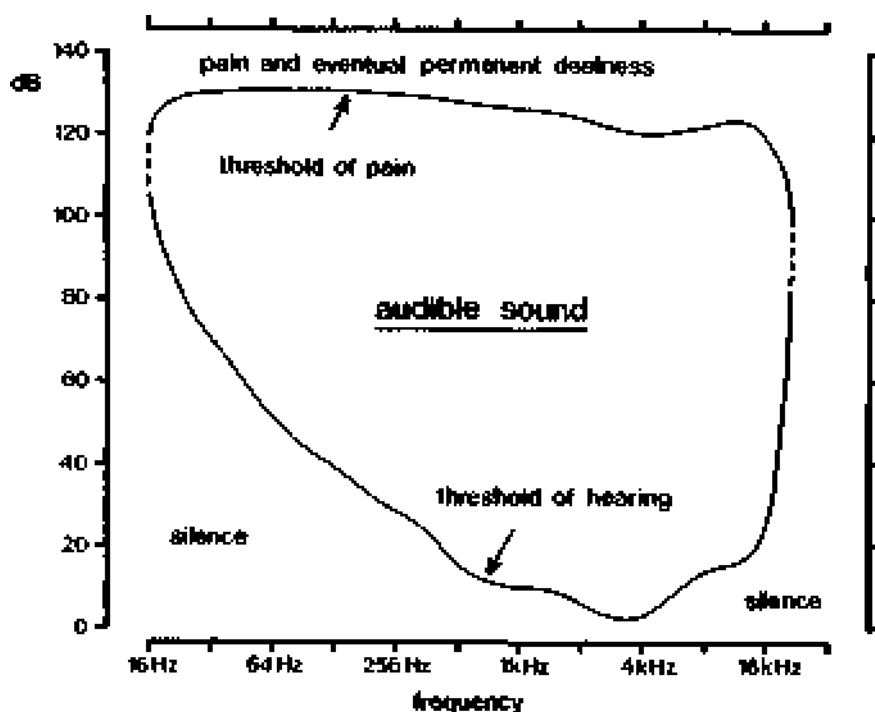


Fig.1 Aural sensitivity in relation to frequency. Note the serious consequences of very high sound levels.

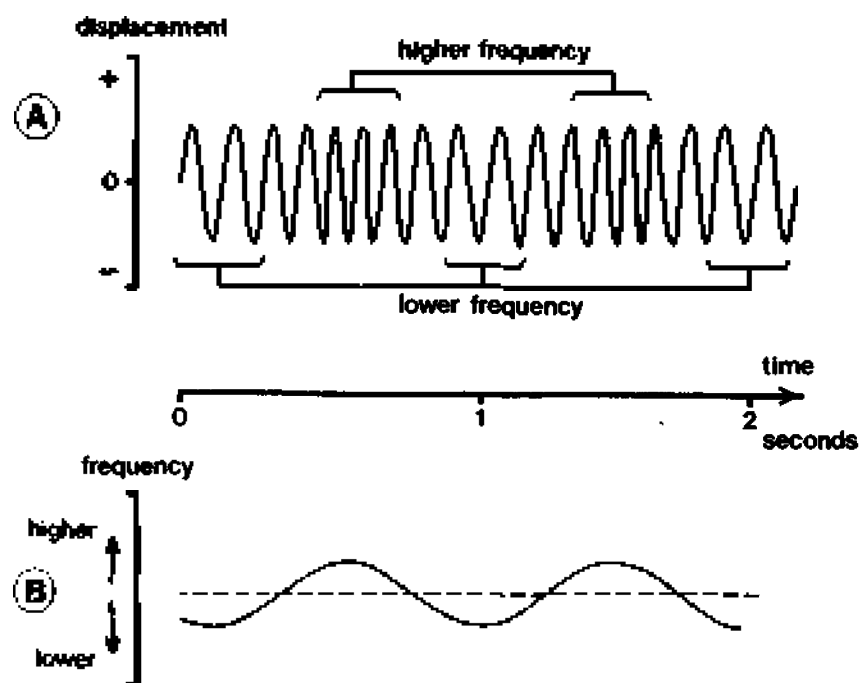
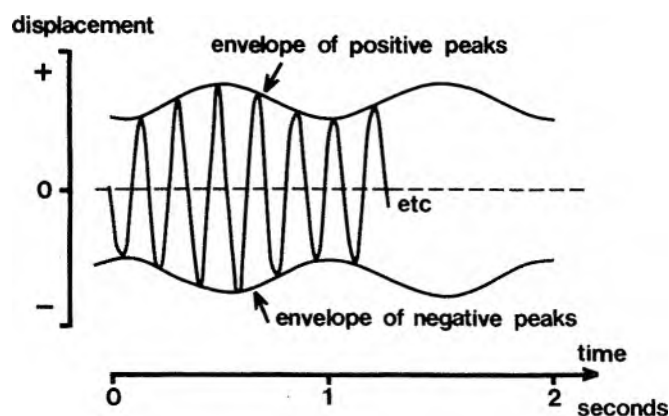
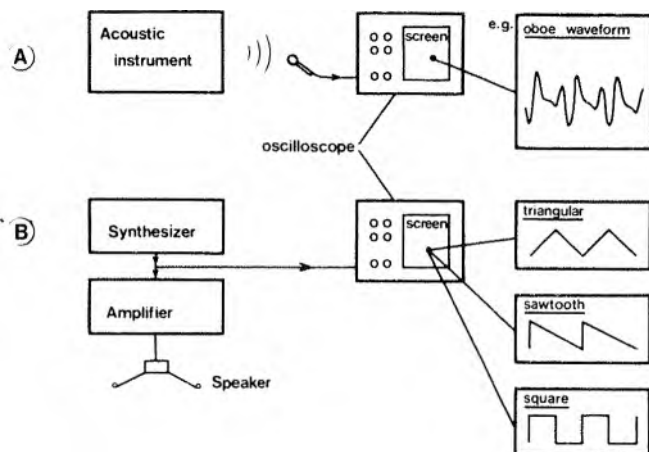


Fig.2 Two different ways of showing vibrato (frequency modulation). Fig.2A shows the individual oscillations which vary in frequency along the waveform. Fig.2B shows how the frequency itself is changing as time goes by. This waveform has a frequency of about 1Hz, which is called the "vibrato frequency."



**Fig.3** Illustration of the tremolo effect. Notice that the frequency of the waveform is constant but its amplitude is always changing.



**Fig.4** Use of an oscilloscope to demonstrate waveforms of an acoustic instrument using a microphone (A) or synthesizer by direct connection (B).

effects that are used to alter the sounds produced by electric guitars — wah-wah and fuzz, phasing and flanging for example.

If you are still in doubt, watch the finger movements of guitarists: they "bend" the strings and produce an increase in pitch by temporarily increasing the string tension. They can make the pitch go up and down in a regular pattern by making their hand oscillate, which in turn causes the position of the fingers on the strings to change very slightly.

Often a tremolo arm is fitted to the guitar which alters the string tension and this can produce either "bend" or rapid fluctuation in pitch depending on how it is used. Although it is called a "tremolo arm" it is completely misnamed!

Regular fluctuations in pitch produce an effect called *vibrato* which is used to add variety to the sound of almost every musical instrument. All the string family, wind instruments, electronic organs and not the least synthesizers benefit from the proper use of vibrato. Pianos (the wood variety!) cannot produce these fluctuations in pitch, but one of the early forerunners of the piano, the "clavichord", could actually do so because the player's finger pressure on the keys slightly altered the tension in its strings.

In Fig.2, vibrato is shown in two ways. In Fig.2A, the displacement of the guitar string from its rest position is shown for a number of cycles. First of all, notice that the amplitude (peak height) is fixed. However, the number of cycles squeezed into the same time interval is changing; in some regions the cycles are closer than others, and the more closely they follow one-another, the higher the frequency and the higher the pitch. You can see as you look along the "waveform" in Fig.2A (a "waveform" is a pictorial representation of what's happening) that the frequency is increasing then decreasing, increasing then decreasing. This frequency variation (vibrato) has

been drawn out in Fig.2B; you can see that the frequency of the vibrato oscillations is about 1Hz in this illustration. Vibrato frequencies usually lie in the range 1 to 10Hz. If you want to impress your friends, the technical term for vibrato is "frequency modulation"!

### Tremolo

Another way in which variety can be added to sounds is to produce periodic (regular) fluctuations in volume. Not many instruments can produce tremolo effects alone, and tremolo tends to occur in conjunction with vibrato. The flute is perhaps one exception but there is another instrument — believe it or not it's called the "*vibraphone*" (!) — which produces pure tremolo by rotating paddles in the top of the cylindrical tubes (resonators) which hang down at the front of the instrument.

The tremolo effect is an example of *amplitude modulation* and is illustrated in Fig.3. Notice first that the frequency of the oscillations is not changing, only the amplitude (peak height). These periodic changes in amplitude are heard as fluctuations in the volume of the sound. Although synthesizers can easily produce vibrato effects, producing *good* tremolo is slightly tricky, and I will be explaining how this is done later in the series.

### Waveforms

Wherever I have illustrated oscillations in the figures, they have been represented by smooth curves, without sharp edges or kinks. Not all oscillations have smooth waveforms, but the important thing is that however complex the waveform of one cycle might be, the pattern is repeated cycle after cycle.

Waveforms can be displayed on an electronic test instrument called an "oscilloscope". To observe the waveform of acoustic instruments we would obviously require a microphone to turn the air pressure oscillations into electrical

signals which the oscilloscope can display.

Fig.4A indicates how this is done, and shows the kind of waveform produced by an oboe. To display the waveforms produced by a synthesizer we do not need the microphone. The electrical signals produced by synthesizers are always measured in "volts" (a *voltage* is actually an electrical *pressure* or "force", whereas a *current* is a *flow* as the name suggests).

So the synthesizer waveforms are known as "voltage waveforms", and in Fig.4B you can see three typical voltage waveforms produced by a synthesizer oscillator (an oscillator is a device which produces oscillations, that's all). It is obvious when you see the waveforms where the names "triangular", "sawtooth" and "square" waves come from.

Do synthesizers ever produce smooth waveforms (such as the one shown in Fig.3 of last month's article)? The answer is sometimes yes and sometimes no. There is a particular smooth waveform called a "sine wave" which is *theoretically speaking* very important in sound synthesis and I will be saying more about this later.

However, a sine wave *sounds* very much like a triangular wave and because it is easier to produce a triangular wave than a sine wave, the audio oscillators (the oscillators which produce audible sounds) in a synthesizer sometimes do not provide a "sine wave output". However, there are oscillators in all synthesizers which produce sub-sonic oscillations (say 1Hz to 10Hz) which are used amongst other things to produce vibrato and tremolo.

These oscillators are often called "*low frequency oscillators*" and usually do have a sine wave output.

Next month I will be explaining about harmonics and frequency spectra and relating these to two opposite approaches to sound generation — additive and subtractive synthesis.

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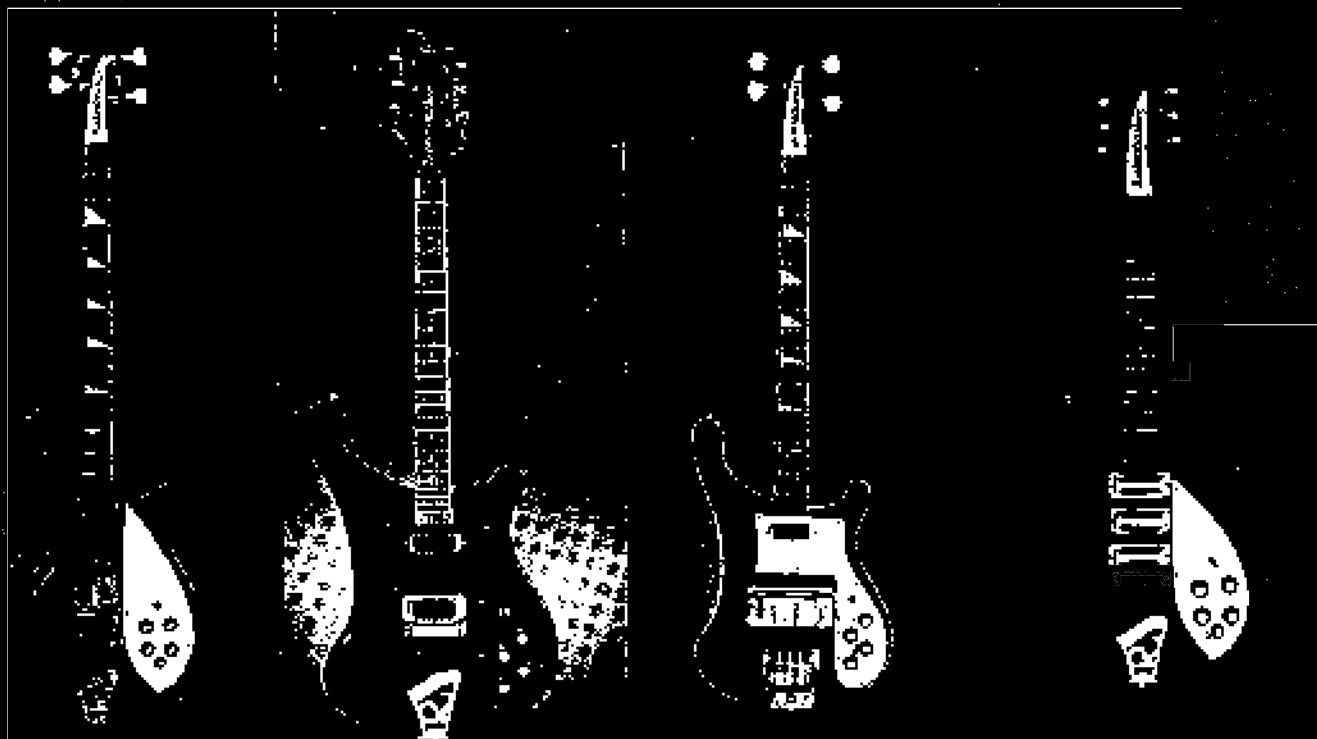
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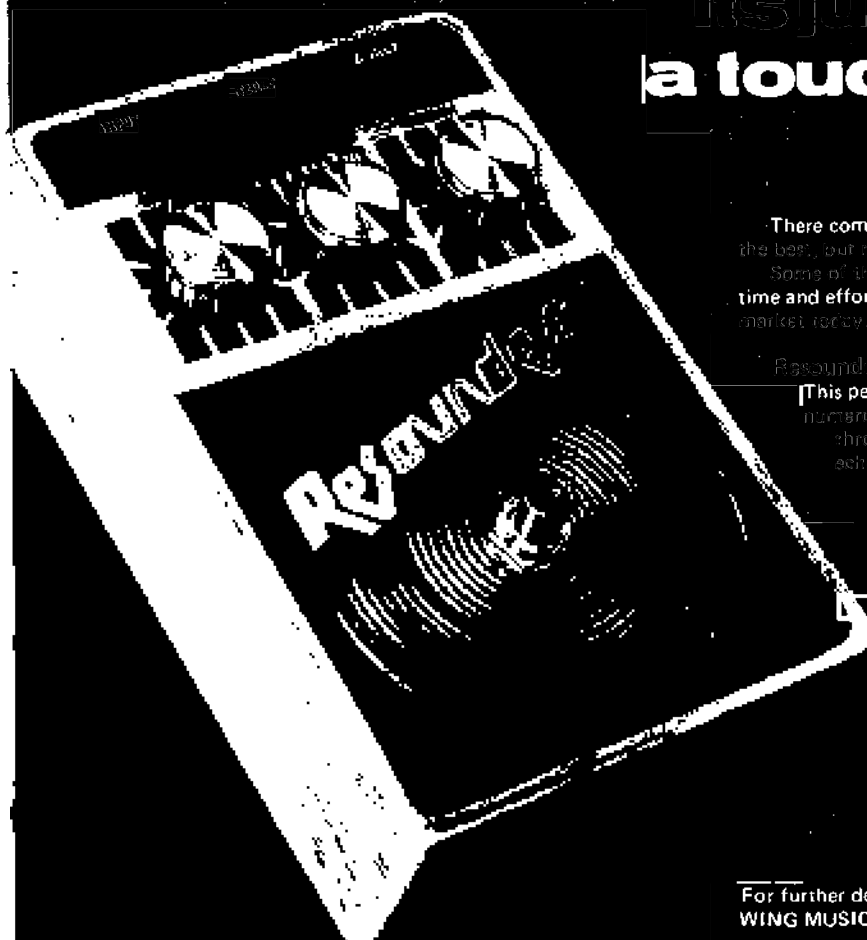


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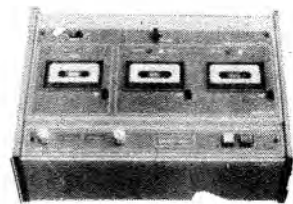


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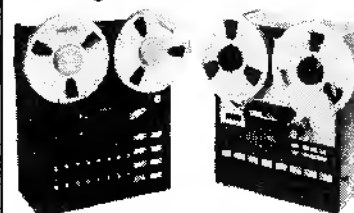


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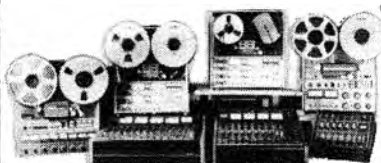
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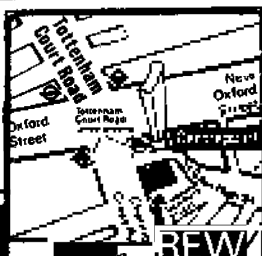
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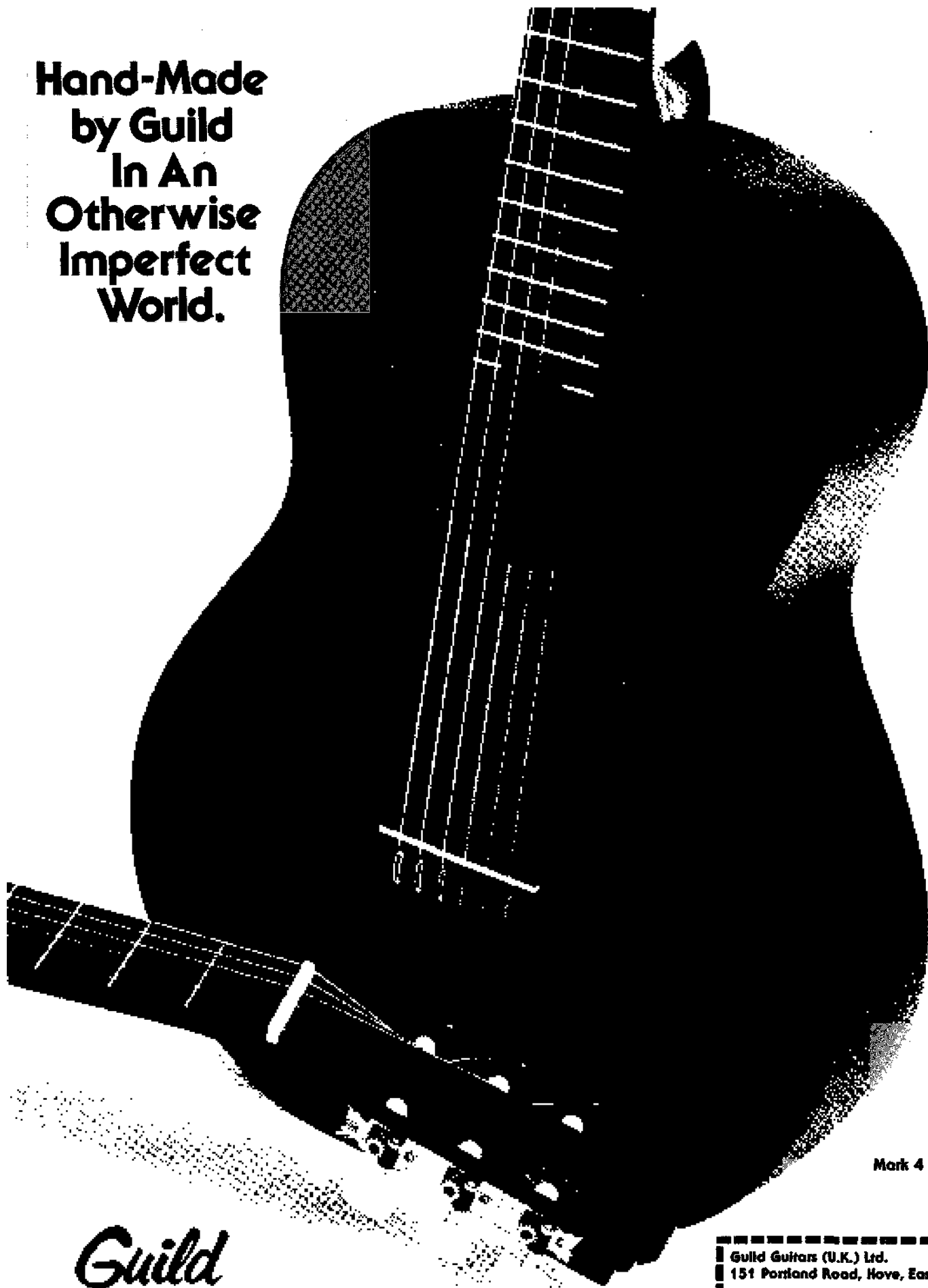


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# Chappell

# 167 years of music

Chappell of Bond Street sounds like one of London's top houses of fashion rather than a major music store. But a music store is what it is, and over the last couple of years it has become a firm favourite with both name and semi-pro musicians.

Chappell, of course, has been a famous name in music since 1811 when the publishing business began, and the company are now the biggest music publishers in the world. In fact up until a few years ago, much of the present Bond Street store was used as storage centre for sheet music. Eventually the storage was moved elsewhere and the premises turned over solely to the music retail business.

This is where Ed Jones, the man in charge of the music department, stepped in. Ed had joined Chappell from school as an outlet for his interest in music. He said: "Although I play several instruments, I realised that I got more out of selling instruments to people than playing mediocre music.

"The store were expanding and I felt that it would be a good idea to go into the group gear market. Fortunately, Chappell is a well known name in the music business which helped, and things have worked out."

Ed set about building up a comprehensive range of top quality gear and one of his first coups was to stock Ibanez guitars. "They were a new product, and we were launching a new department so it seemed a good idea. It has all worked out really well, we now have the largest stock of Ibanez in Europe, and I believe they are fantastic instruments."

The beautiful range of Ibanez instruments is one of the showpieces in a department which is one of the best laid out you are ever likely to see. They do not go in for the huge amplification and PA gear, but specialise in the small but top quality products, a prime example being the incomparable Mesa Boogie amplifier.

The range of equipment within the department is staggering, with classical violins, oboes etc. side by side with the most sophisticated electronic equipment. This variety is only matched by the customers who visit the store.

Being in one of London's busiest shopping thoroughfares, it is quite common to see tourists popping in for all types of instruments, ranging from Arabs and their accordions to South Americans buying Fender guitars to take home.

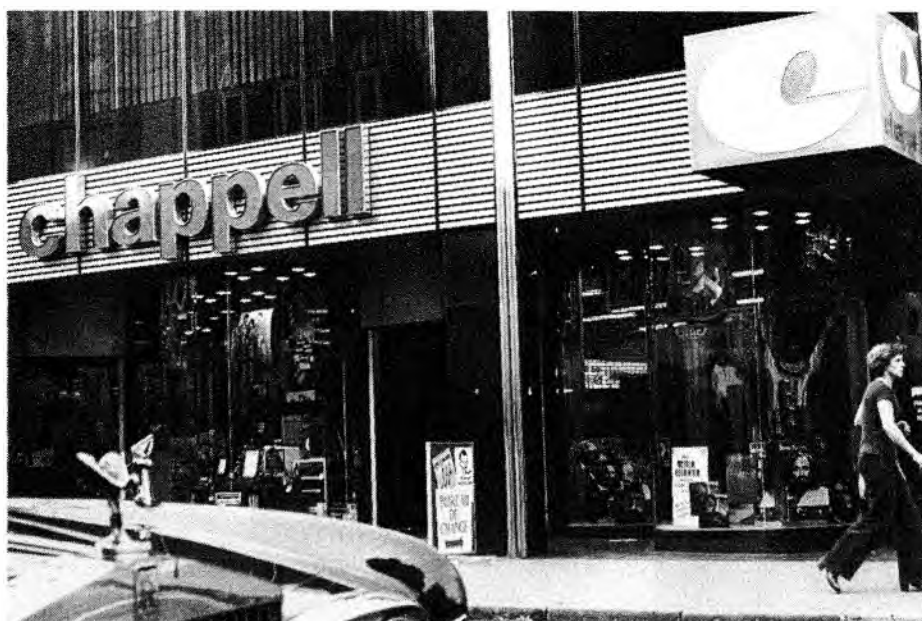
But it is as a group gear centre, that the store has really expanded catering for top stars as well as New Wave acts. Chappell must be one of the only stores where they can cater so comprehensively for every musician. For example, Ed recalls members of Emmylou Harris' backing band dashing in to equip themselves before a gig. The store was able to deal with all their requests ranging from the fiddle player to the guitarist.

In keeping with the growing success of Chappell, a new shop, catering exclusively for group gear is due to be opened in nearby Maddox Street. Although the Bond Street store will continue to stock gear, the new premises will enable them to expand into new areas such as the synthesizer market.

The success of Chappell as a music store has largely been built on Ed's insistence on the "personal touch". There may be other shops who offer bigger discounts, but for back up service and unbeatable HP terms (a flat rate nine per cent) Chappell is hard to beat.

A tour of the store would not be complete without some reference to what has made Chappell world famous — sheet music. The store is a must for anyone searching for sheet music and books about music be it jazz standards or the Bee Gees' "Saturday Night Fever".

There is certainly nothing like Chappell in the music business and to be honest where else would you find a bust of Beethoven next to the life story of Jimi Hendrix?



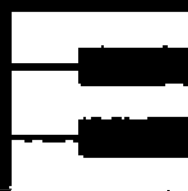
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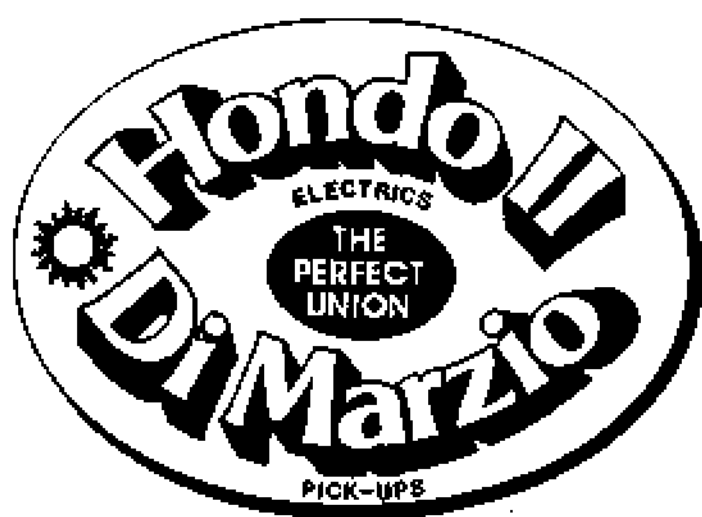
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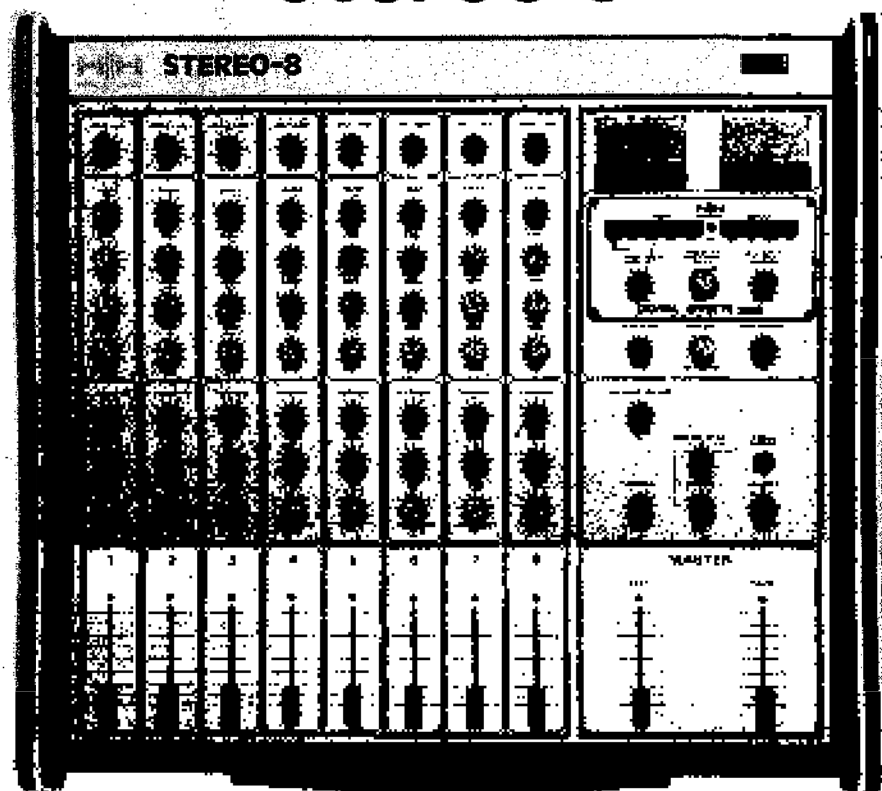
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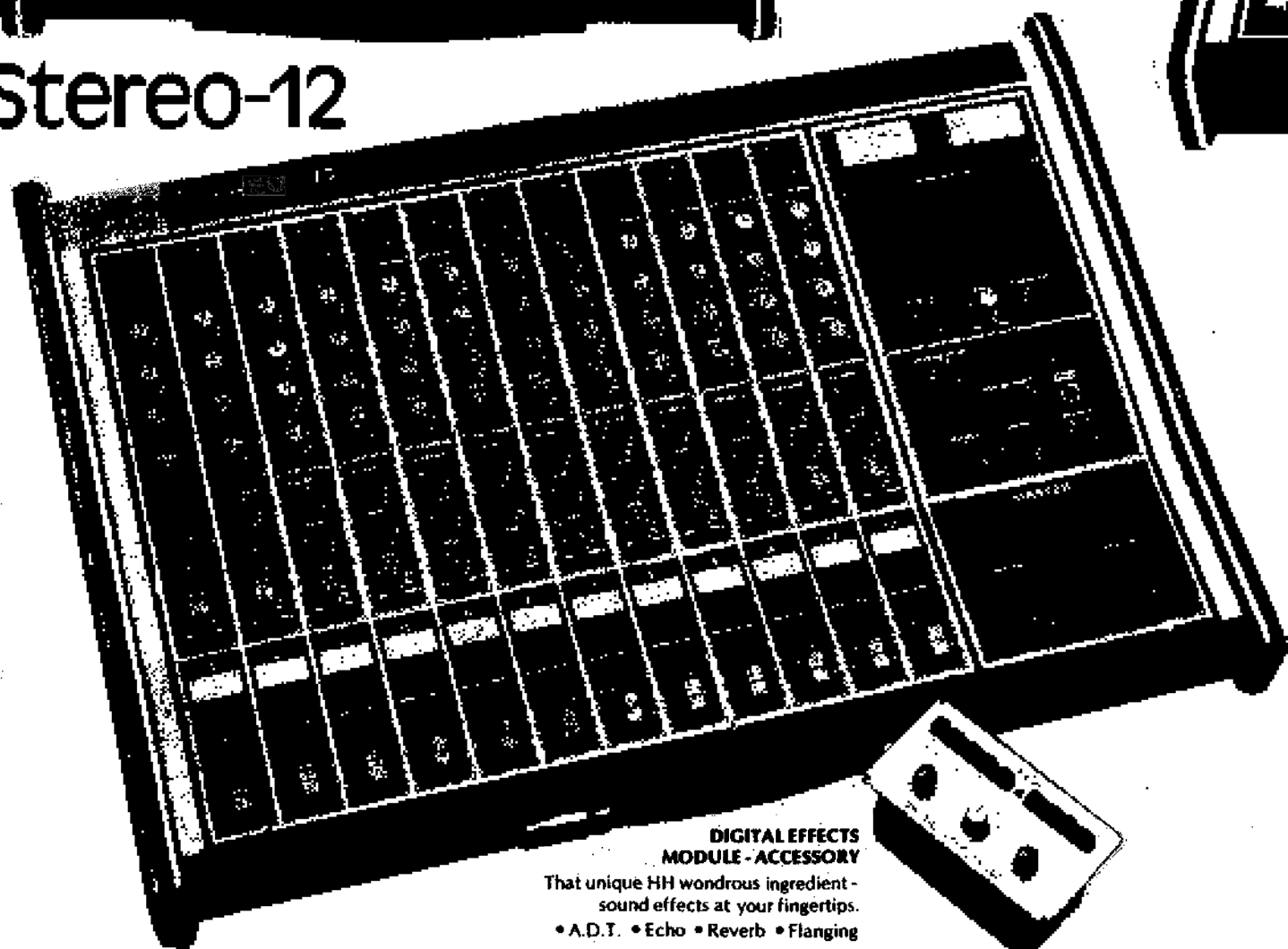
## Stereo-8



### MULTICORE STAGEBOX ACCESSORY

High quality remote  
connection system for your  
HH Mixer at an affordable  
price!

## Stereo-12



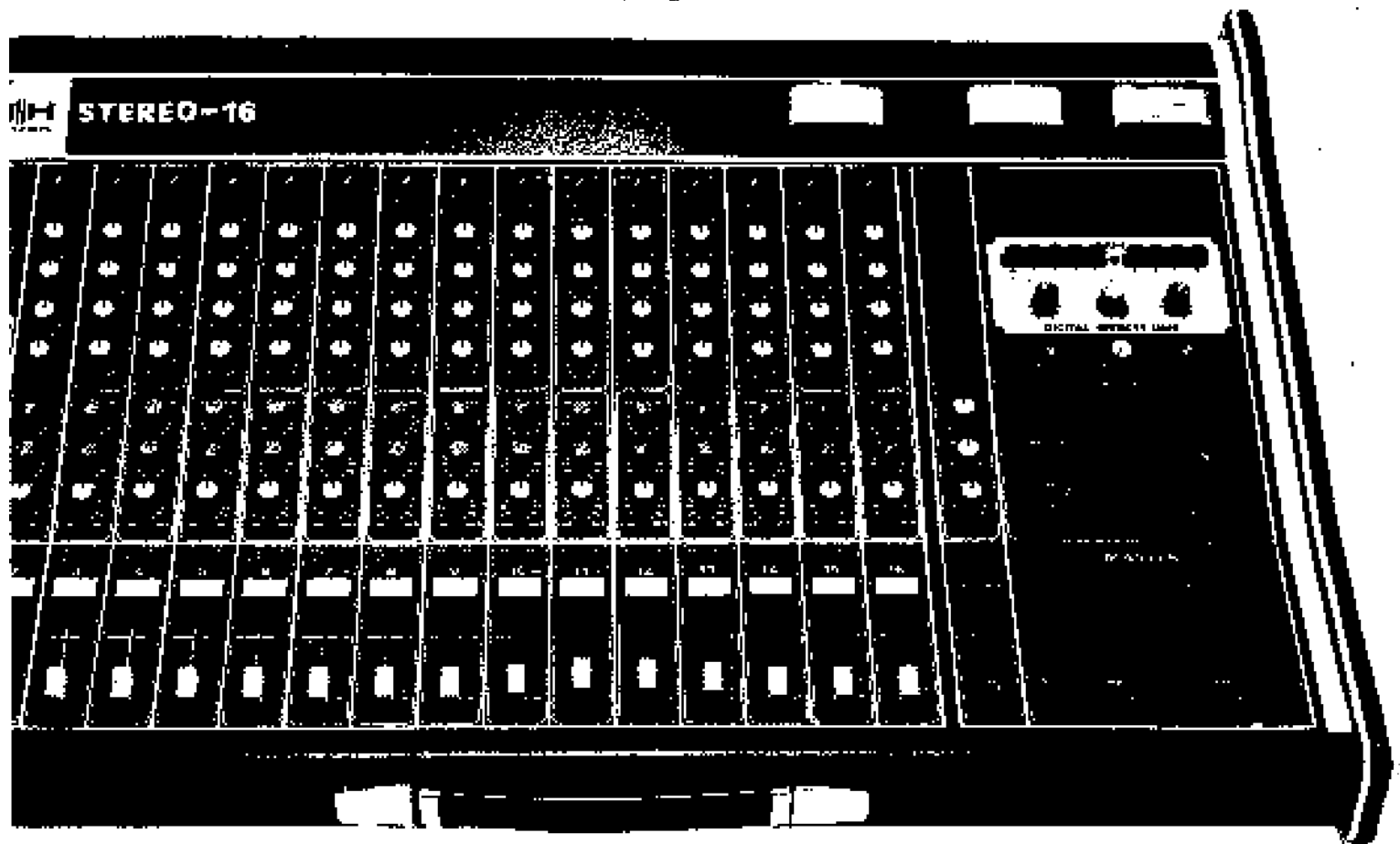
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# Sound Mixers....

## Stereo-16



## Designed for exact Sound Control

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HH Electronic's engineers, working closely with professional sound engineers and performers have created this versatile range of mixers sufficiently accurate for recording applications but precise and rugged enough to meet the needs of on-the-road performers.

### SUPERB PERFORMANCE

Electronic performance is flawless - wide frequency response, low noise, low distortion with excellent precision controls: top quality electronic design is our standard.

### FEATURES:

- Balanced inputs and output
- Four Band active equalization
- Stereo Pan, Echo Send, Foldback and Input Gain controls on each channel.
- Monitor Select switch and stereo headphone monitor facility. Additional Monitor V.U. meter on the Stereo - 16.
- Illuminated V.U. Meters on each output.
- Foldback output group.
- Echo Send and Return with controls.
- Self-contained, fully regulated, fused power supply.
- Channel overload indicator P.P.I. and Pre-Fade-Listen P.F.L. facility on Stereo - 16.
- Multipin connector as standard on Stereo - 16 only.
- Graphic Equalizer - seven band. Stereo - 16 only.

### ACCESSORIES:

- HH Digital Effects Module (D.E.M.)
- Full complement of Cannon-type connectors
- Flight Case
- Vinyl transport case
- Mixer Tripod stand
- Multipin connector for Multicore Stagebox
- Multicore/Stagebox

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# MARKET REPORT

Ten years ago, HH Electronics of Bar Hill, Cambridge arrived with a big impact on an unsuspecting market. With an excellent range of top quality combos and PA systems, combined with sophisticated solid-state technology, they instantly became popular among musicians of all kinds.

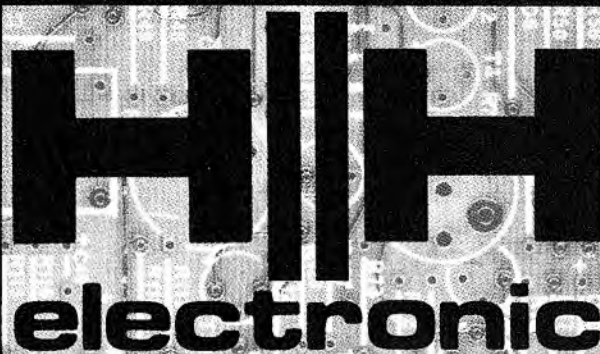
The HH story began shortly before that, when the company was involved in manufacturing and selling electronic equipment for industrial use. HH wanted to produce something different for musicians.

The "something different" was the first HH IC-100 transistor instrument amplifier, a winner from the word "Go".

Since then, the company has gone from strength to strength, and the range of equipment just keeps

on growing. They now produce instrument amps, PA amps, speaker cabinets of all descriptions, slave amps, combos, echo and reverb units and a new range of mixers.

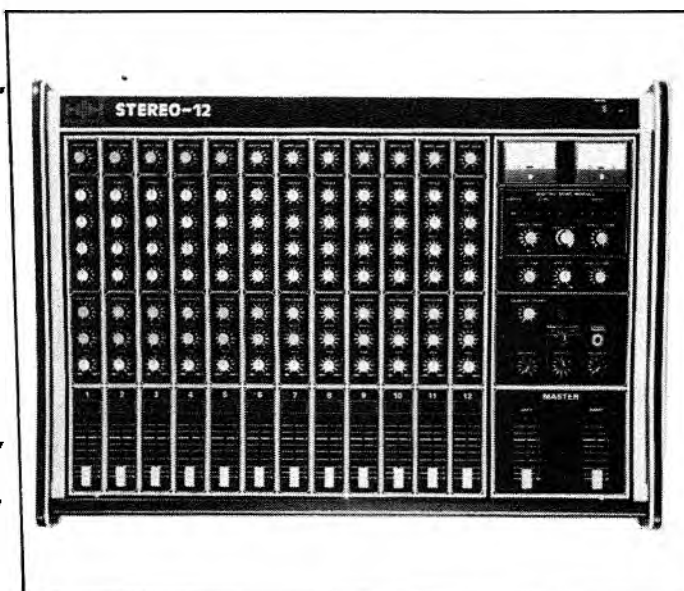
HH's latest development is the launch of a complete new range of PA equipment which allow modular building of systems from 100 watts to full concert hall requirements. This means that a club band with relatively small power requirements can gradually upgrade by adding on the custom HH units built to match each other both electronically and acoustically. Another new HH advance is the development of the company's own range of professional speakers, lenses and horns which are claimed to offer professional quality sound and reliability at reasonable prices.

The logo for HH electronic, featuring the letters 'HH' in a large, bold, stylized font, with the word 'electronic' in a smaller, bold, sans-serif font directly below it. The entire logo is enclosed within a rectangular border.

**HH**  
**electronic**

# Dealers

1. Hedley, Rumbelows, Coronation Bldgs., Wallasey Road, Wallasey, Liverpool.
2. Brian Hyam, Swanns of Manchester, 69 Mardol, Shrewsbury, Shropshire.
3. Pete Coggins, Hammonds of Watford, 161 High Street, Watford, Herts.
4. Bob Lynn, Rock City Music, 48 Cloth Market, Newcastle.
5. Mr. Dias, J.P. Dias (Carlisle) Ltd., 149-153 Botchergate, Carlisle.
6. Steve Wright, Andertons Music Superstore, Stoke Fields, Guildford, Surrey.
7. Tony, Frank Hesty Ltd., 62 Stanley Street, Liverpool L1.
8. Michael Crowley, T. Crowley and Son Ltd., 29 MacCurtain Street, Cork.
9. Graham James, Hudsons Music Centre, 40 Burlington Street, Chesterfield, Derbyshire.
10. Ray Broome, Albert Balaam Music Centre, Risbygate Street, Bury St. Edmunds, Suffolk.
11. Roger Jenkins, Sound Centre, 9 St. John's Square, Cardiff.
12. Rod Watts, Bennett's of Portsmouth, 58 Fratton Road, Portsmouth, Hants.
13. Mr. McSeveney, Session Music, 169 Spencer Road, Derry, Co. Londonderry.
14. Andy Durgate, Hodges & Johnson, 291 High Street, Chatham, Kent.
15. Don Clayton, Chatfields Music Stores, 2 Hope Street, Hanley, Stoke-on-Trent.
16. Martin Rea, Rea Sound, The Square, Stewartstown, Co. Tyrone.
17. Pete Watson, White Sound Equipment, 3 Albion Place, Sunderland.
18. Phil Johnson, Johnson Soundaround Ltd., 227 London Road, Sheffield.
19. Keith, Carlsbro Sound Centre, 182-184 Chesterfield Road North, Mansfield.
20. Bolly, Nathaniel Berry & Sons, 48 Grand Parade, Green Lanes, N.4
21. Mr. G. Mellor, A1 Music Centre, 88 Oxford Street, Manchester 1.
22. Ian, Coventry Music Centre, Whitefriars Street, Coventry.
23. Steve, Keyboard Harmony, 82 High Street, Redhill, Surrey.
24. Bernie, John Ham Sound Studio, 75-76 Mansel Street, Swansea.
25. B. Grooby, Reidy's Home of Music, 9-13 Penny Street, Blackburn, Lancs.
26. Barrie Dean, Bernard Dean Ltd., 10-12 St. Thomas Street, Scarborough.
27. Mr. Favell, Cookes Band Instruments, 74 St. Benedicts Street, Norwich.
28. Fran Quigley, Band Centre, 9 Harcourt Road, Dublin 2.
29. Terry, John Holmes, 21-23 Farringdon Road, Swindon.
30. Ray Luckhurst, Sounds, 124 Shaftesbury Avenue, London W1.
31. Jack MacKechnie, Modern Music Centre, 30 Castle Hill, Dudley, W. Midlands.
32. Ian Doig, Marcus Musical Instruments, 113 North Street, Belfast.
33. Ian, John King Music, 8 Richmond Road, Kingston-on-Thames.
34. Norman English, Hamlyns Music Shop, 20 Oxford Street, Weston-Super-Mare.
35. John Parker, J.W. Parker, 187 Old Kent Road, London SE1.



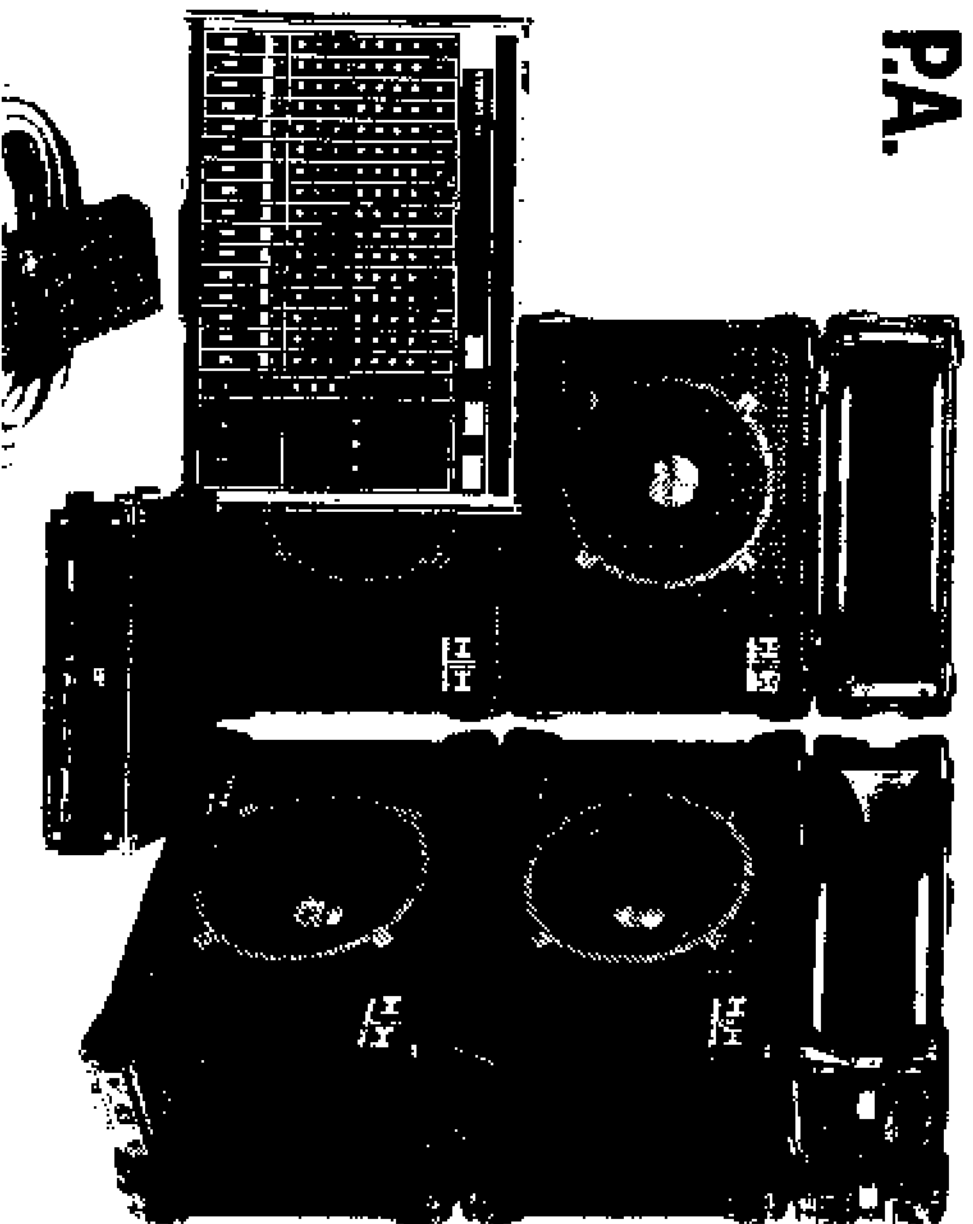
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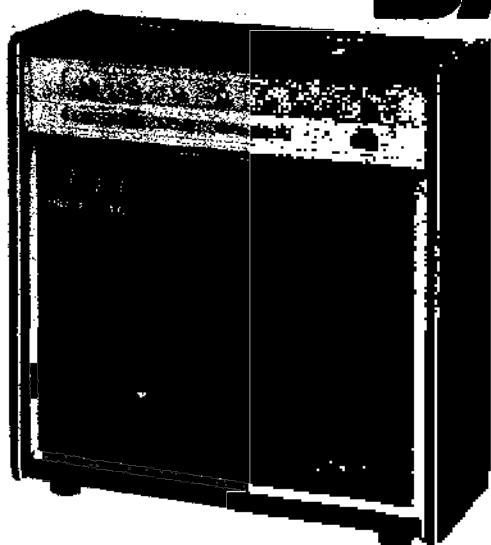
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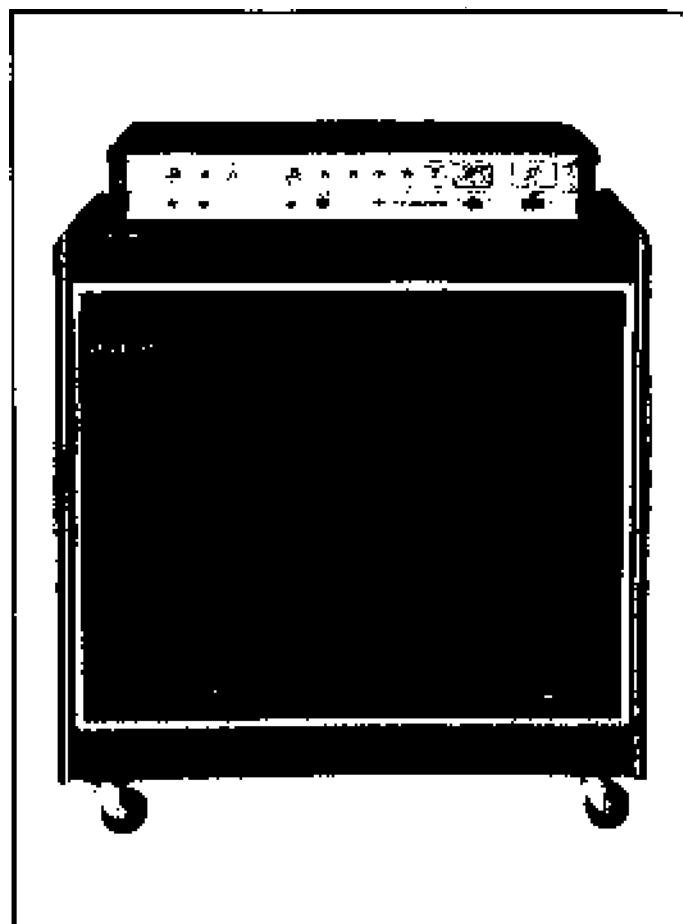
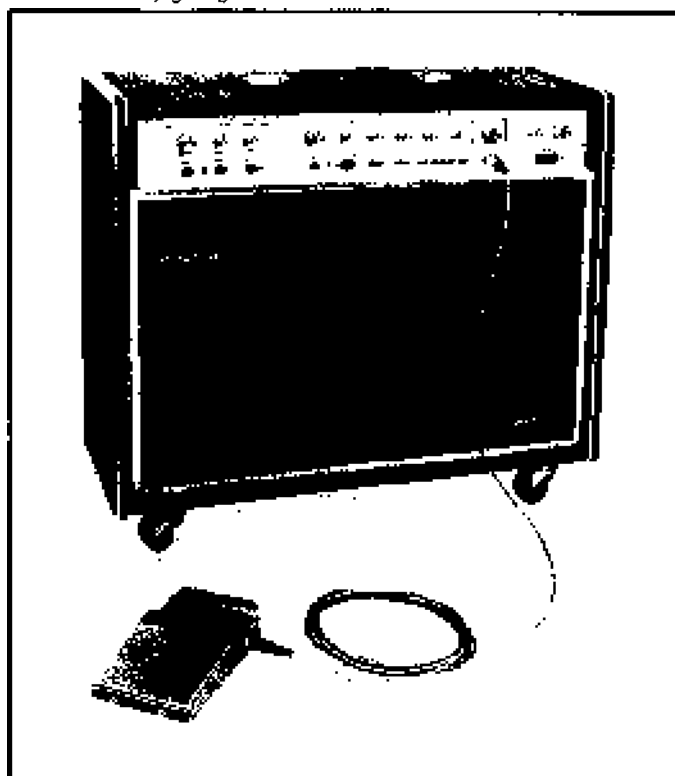
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H.P. FACILITIES

# Describe HH's position in the market place compared with other equipment you sell?

1. Leaders.
2. Getting stronger every day.
3. One of the best sellers.
4. Very healthy.
5. Number one.
6. The leader.
7. The best seller.
8. Nothing to touch it.
9. Market leader.
10. Leaders.
11. Streets ahead.
12. Not such leaders as they were.
13. Top of the list.
14. At the top.
15. The brand leader in that price range.
16. One of the most popular.
17. Very favourable.
18. My best seller.
19. A leader.
20. Pretty good.
21. At the top of the field.
22. Still first.
23. Very competitive.
24. Top selling line.
25. Sells very well.
26. Market leader on most of its products.
27. Still the top.
28. It's a religion.
29. Very good value for money in that price range.
30. One of the best. Sell more than anything else.
31. Very popular.
32. Leading on most other makers.
33. Very good seller.
34. Very favourable.
35. Definitely going to be a winner.

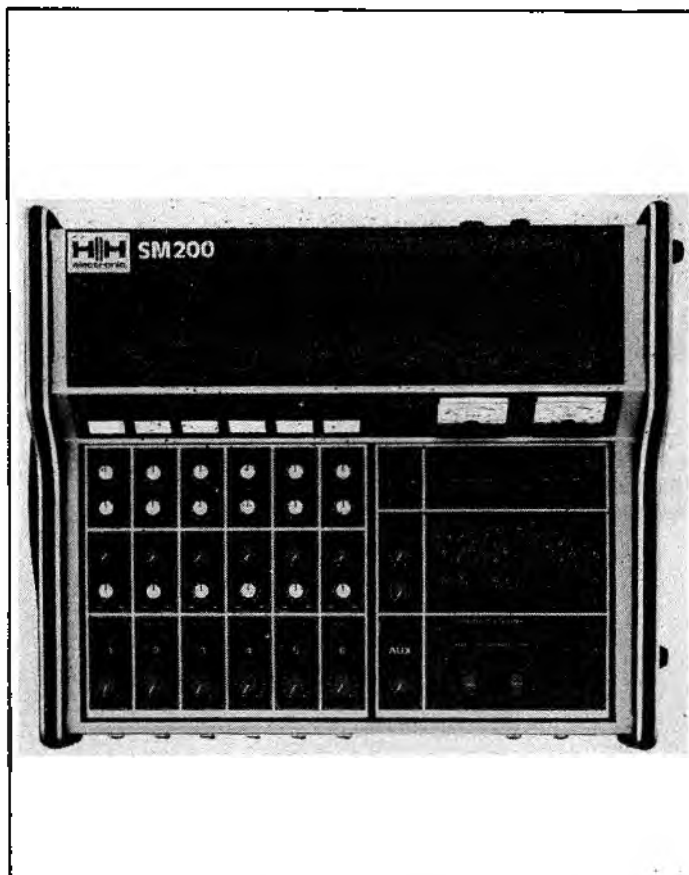


# Describe the consumer reaction to the new HH mixer?

1. Pretty favourable.
2. Fantastic.
3. Fairly interesting.
4. Very good.
5. First class.
6. Excellent.
7. Very good.
8. Very good.
9. Very favourable.
10. Good response.
11. Very good interest.
12. Quite good.
13. Haven't got any yet.
14. I would imagine they'll do well.
15. Disappointing.
16. Favourable.
17. Very impressed.
18. Very favourable — good value for money.
19. Excellent.
20. Very slow.
21. Very favourable compared to others.
22. Everybody likes the looks of them.
23. Very good indeed.
24. Top seller.
25. O.K.
26. Mixed!!!
27. Excellent.
28. Very good.
29. Slow.
30. No complaints.
31. We've sold all we had in!
32. Will be a while before they take off.
33. Good.
34. Don't stock them.
35. Popular amongst most musicians.

# What is the single best thing about HH equipment?

1. Value for money.
2. It's professional.
3. Such a large selection.
4. Excellent value for money.
5. Compactness.
6. Value for money.
7. Reliability.
8. Value for money.
9. Quality.
10. Quality.
11. Customer-minded.
12. Portability.
13. Reliability.
14. Quality of the sound.
15. Sensibly priced.
16. Value for money.
17. Very, very good value for money.
18. Value for money.
19. Design and appearance.
20. Price.
21. Reliability.
22. Fact that you can see them in the dark.
23. After-sales service.
24. Their popularity.
25. Design.
26. Reliability coupled with appropriate design related to function.
27. Reliability.
28. Reliability.
29. Price.
30. Price.
31. Lightweight.
32. Reliability.
33. Sells well.
34. Reliability.
35. Outstanding performance.



# What is the single worst thing about HH equipment

1. They don't do a valve amp.
2. Occasional small faults.
3. Deliveries.
4. None.
5. Don't know of any.
6. None.
7. None.
8. None.
9. Slow deliveries.
10. Delivery.
11. Bastard covers.
12. None.
13. None.
14. Reliability.
15. Deliveries.
16. Delivery.
17. None.
18. Delivery.
19. Cost of footswitches.
20. Delivery.
21. Minor service problems.
22. You can only use *their* footswitches.
23. Reliability at the moment.
24. Some items slow on delivery.
25. No bad points.
26. No bad points which HH have not overcome or are acutely aware of.
27. Delivery.
28. We can't get enough of it.
29. Not durable enough.
30. Too clean.
31. None.
32. Haven't found any.
33. No guarantee service area in London.
34. None.
35. None.



# H||H

electronic

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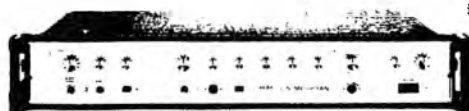
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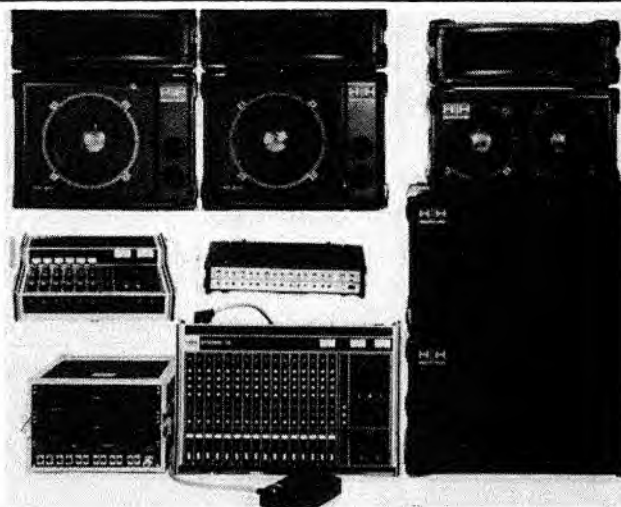
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# PLAYING

## MICK ABRAHAMIS

*This month, Mick Abrahamis joins the ranks of I.M.'s star names in the "Playing" articles. Mick 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.*



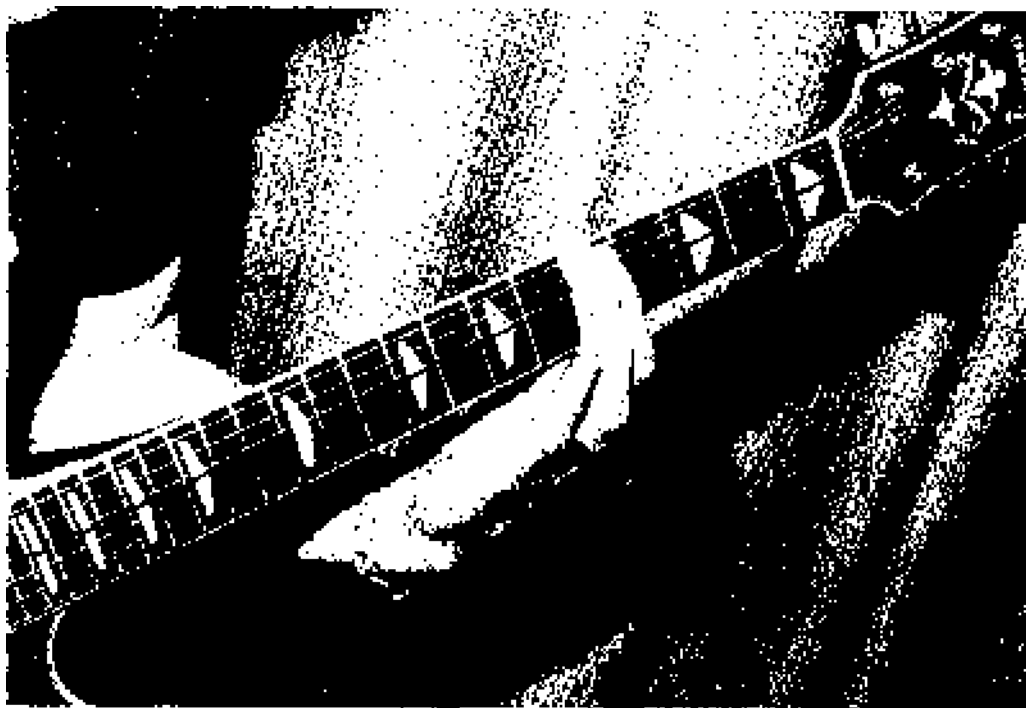
# Open tuning and bottleneck

Hello to everyone out there. First, let me say it's a great pleasure being asked to write this column for I.M. and I most certainly hope that, in the coming months, you will find some of the tips and hints on guitar playing, tuning, amplification and general group "business" helpful and interesting. I'm going to concentrate these first few articles on bottleneck and chord or slack-hand tuning. I feel, as do many other guitarists, that the best way to learn something initially is by hearing it, rather than just reading the dots. So, for this reason, I'll try to convey my points to you by a method of photos and simplified diagrams. Also, by recommending various artists and records to listen to.

The first tuning I'm going to deal with is a fairly straightforward one — the chord of E. Working from top to bottom, tune E (1st) as normal, B (2nd) as normal G (3rd) to G sharp, D (4th) to E, A (5th) to B and bottom E (6th) as normal. This will give you an open chord of E. Pay very clear attention to fine tuning on all the strings, as a guitar tuned to any chord can sound terrible even if it is just fractionally out on one string.

To check fine tuning, you can use the simple method of playing the corresponding note on each previous string. In the case of an E chord tuning, play the B (2nd) at the fifth position (to correspond with E), the G (3rd) at the third position (to correspond with B), the D (4th) at the fourth position (to correspond with G sharp), the A (5th) at the fifth position (to correspond with E) and the E (6th) at the seventh position (to correspond with B). Okay, it sounds a bit freaky to start with but after a while you'll get to develop a sense of accuracy on your own.

Now to the different chord



*Making an A chord by simply barring at the 5th position.*

structures themselves. This again is a fairly simple exercise inasmuch as you can obtain semitones and tones by just barring at each fret. Then by adding the various notes required on top of the barre, you can obtain sevenths, majors and even minors (although these are slightly more difficult if you are using a bottleneck). The open is my own preference for bottlenecking, largely because it gives more scope for picking notes while using the bottleneck.

The bottleneck itself can vary in length, width and also the material from which it is made. I prefer to use a short glass one as it allows me more freedom to pick out notes with the protruding part of my little finger. It's down to yourself to choose the particular bottleneck which suits you — a trip to your friendly

music shop and a bit of practising with the various types available should determine this. Obviously only time and practice help you to evolve the kind of style that suits you best but here are a couple of simple tips.

- Make sure that the action on your guitar is slightly raised. This will not only make for a much cleaner and more accurate sound but you'll also be able to bottleneck in the lower register much more easily.
- Try a few different types of strings to ensure you get compatibility for bottleneck playing. You know, different strings for different things!
- Finally, when you apply the bottleneck to the strings, avoid pressing too

hard on them as this will just result in string buzz and duff notes. Just gently, but firmly, stroke the strings with the flat of the bottleneck for a more accurate and melodic sound.

Experiment with the E tuning as it is a particularly good one to start with. It's a popular tuning and you might want to listen to a few tracks which will demonstrate the open E tuning like "Vigilante Man" by Ry Cooder from his 'Into the Purple Valley' album (Reprise K44142), "Rock Me" by Alexis Korner from 'I Wonder Who' (Fontana TL 5381) and a number from one of my own albums, "Winds of Change" from 'A Musical Evening With the Mick Abrahamis Band' (Chrysalis ILPS 9147).

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## **Bruce Springsteen: Darkness On The Edge Of Town (CBS 86061)**

Without doubt, this has been one of the most eagerly awaited albums of the Seventies — Bruce is finally back after an absence of over two years.

The story of his rise to prominence, subsequent avalanche of hype and protracted legal wrangles with his former manager which prevented him recording, is probably more well known than anything Springsteen has done himself. Since the release of his last album "Born To Run" many artists such as Graham Parker, Phil Lynott and Elvis Costello have drawn heavily on Springsteen's influence on their way to success. This makes his latest release even more intriguing; the question of comparison may be odious, but it is nevertheless obvious.

From the opening track "Badlands" the echoes of the "Born To Run" album are obvious, a distinctive piano riff, sonorous drum sound and a Clarence Clemons sax break topped off with the unmistakable Springsteen vocals. This track is not unlike Barry Maguire's "Eve Of Destruction" hit and as an opener for the album is adequate.

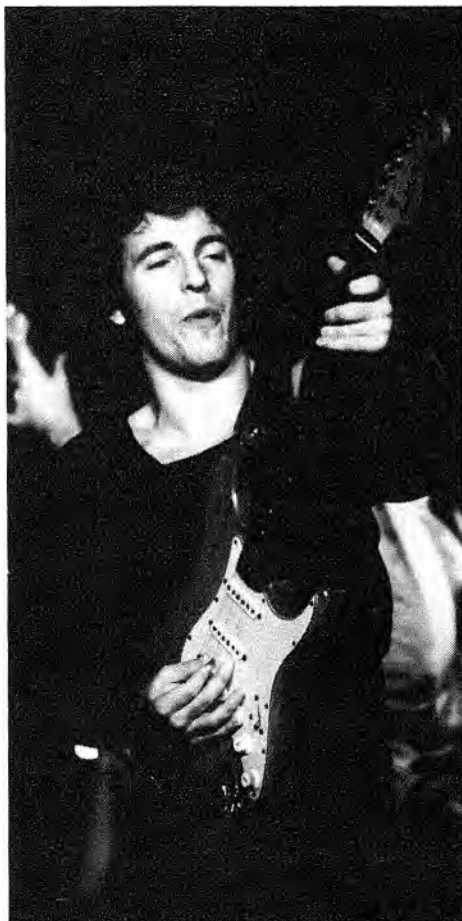
"Adam Raised A Cain" is Springsteen near his soul-wrenching best, a slow smouldering build-up which threatens to burst into flames with a Neil Young-type stuttering guitar solo. A false ending proves an effective ploy, although the performance overall sounds a little stylised. "Something In The Night" is similar but better, while "Candy's Room" is probably the standout track, a pulsating up-tempo number featuring some machine gun drumming.

The rest of the album follows much the same pattern as the early cuts, although it is difficult to single out any particular one after only a few plays.

Many fans are going to be disappointed with this album, after all two years is a long wait; however, it must be seen in its true context. It is without doubt a good album, but probably not a great one, after such a long lay off it seems that Springsteen has had difficulty in gaining the right momentum, particularly after his brilliant last album.

The sound is probably a little starker and more basic than we are used to; Springsteen has not tried to be adventurous but just seeks to consolidate. This is reflected in his topics and lyrics which have always been so good.

As usual, on this album he is back on the New Jersey streets cruising round with his friends in a car and reflecting that lifestyle. Cars and street life as ever figure largely, but his recent lyrics do not have the same freshness as previous work. Nevertheless his biggest strong point is his voice; I'm convinced he could sing nursery rhymes and still bring the house down.



On the playing side, Clarence Clemons' sax parts are all too brief, and Roy Bittan contributes some nice piano throughout while the leader takes the guitar solos which tend to be predictable and fairly uninspiring.

In the final analysis the album is perhaps a little disappointing by Bruce Springsteen standards, but is still a must if only to hear the great man back in action again.

Now that all the legal hassles are over and he is touring again I expect him to slip into top gear for the next album — which mercifully we won't have to wait another two years for.

### **David Lawrenson**

*Produced by Jon Landau and Bruce Springsteen. Recorded by Jimmy Iovine, mixed by Charles Plotkin and Jimmy Iovine. Recorded at the Record Plant, New York.*

## **Earl Klugh: Music In Your Eyes (UAG 30171)**

Instrumental albums are something of a rarity these days, good ones are even rarer. This album by Earl Klugh offers a welcome and refreshing change to the mainstream rock music which is to be found on most turntables.

Earl Klugh may sound like the name of some old Nashville picker, but in fact he is a young American who plays beautiful Spanish guitar. It says something of

his talent and background that he has played with George Benson who rates him very highly.

The George Benson feel is in evidence on this album, a tasteful easy-on-the-ear collection of songs. The title track "Magic In Your Eyes" opens the album and sets the mood with a simple tune picked out by Klugh who duets with a Fender Rhodes and is backed by a tasteful string arrangement.

As with many instrumental sets, the numbers can often become repetitive and boring, but Klugh tries to vary his material to avoid falling into this trap. On "Alicia" and "Mayaguez" for example he plays over a Latin American bossa nova rhythm, while on "Lode Star" he uses a synthesizer and goes funky. Two of the numbers, "Julie" and "Good Time Charlie's Guitar Blues" were recorded in Nashville and feature Lloyd Green on superb pedal steel.

My favourite track is Klugh's interpretation of the instrumental "Cast Your Fate To The Wind" which is done with the utmost feel and restraint — simple but effective.

Klugh's playing is not the type of virtuoso guitar which will stop you dead in your tracks, but he is tasteful and never self indulgent. His improvisations are kept to a minimum, preferring to coax the sounds out of the instrument rather than hammer it to death and he is certainly no speed freak. The legendary figure of Booker T Jones looms large over this album, he did the string arrangements as well as producing the album.

It must be said that, at times, the music verges on bland easy-listening, but ultimately it stands as a tasteful collection of ideal mood music.

### **David Lawrenson**

*Produced by Booker T Jones. Recorded at Sound Factory, Hollywood, California. Engineer: Jim Nipar, assistant engineer, Serge Reyes.*

## **Bob Seger: Stranger In Town (Capitol EA-ST 11698).**

It's always a danger with good rock performers that success dilutes the guts and grit that the struggling years bring out. Thankfully that hasn't happened with Bob Seger, as one play of "Stranger In Town" will reveal.

Seger is the Detroit singer who has finally broken through after 10 years of being on the road. He cut a brace of fine albums some years back including the very fine "Back In 72" and "Seven".

Since then there has been "Night Moves" and "Beautiful Loser". But with this latest offering, Seger brings out his ace in the hole — The Silver Bullet Band. Their bedrock of tightness and power is the perfect backdrop to Seger's wrenching vocals.

Straight from the opening cut



"Hollywood Nights" we're well into Seger country with a churning cauldron of jangling guitars, Grand Prix drumming, and Seger bringing concert hall atmosphere into the studio. The pace doesn't let up and carves through "Old Time Rock and Roll" which takes over where Berry's "Rock and Roll Music" lets off.

Side Two opens with a Frankie Miller song "Ain't Got No Money" and Seger does a remarkable impression of the Scots belter. Indeed there is very little difference in both Seger and Miller's style.

Six of the nine tracks are Seger's own numbers and prove his prowess as a writer as well as a singer. Even now, Thin Lizzy are doing nice things to his "Rosalie" and Dave Edmunds has tackled "Get Out of Denver". Expect a cover of "Hollywood Nights" any day.

Without taking credit from Seger, the Silver Bullet Band is all a rocker could wish for as a backing group. They are: Drew Abbott (guitars), Robyn Robbins (keyboards), Alto Reed (!) horns, Chris Campbell (bass), and David Teegarden (drums).

It's bad enough missing a Seger gig. You'd be even more foolish to ignore "Stranger in Town".

**Ian White**

*Produced by Bob Seger and Punch Andrews. Recorded at Criteria Sound Miami, Capitol Records Studios and Muscle Shoals.*

## **The Isley Brothers: Showdown (Epic 86039)**

The Isley Brothers are one of America's consistent hit making outfits, and since their early Motown days have gone from strength to strength thanks to the addition of the three instrumentalists.

Showdown is their latest album and it is very much the same recipe as before – good soulful, funky sounds topped off with the unmistakable wailing guitar of Ernie Isley. Stand out track is "Take Me To The Next Phase" which has the band firing on all cylinders. The Isley Brothers are true professionals and it is difficult to see them ever making a bad album.

**David Lawrenson**

## **Digby Richards: Whiskey Sundown (RCA PL25154)**

At first reading, it seems that to have an Australian living in London and singing contemporary country is a recipe for disaster. This is Digby Richards' second album for RCA and as a label who have a strong catalogue in this genre with Waylon Jennings and Guy Clarke it seems logical they must know what they are doing.

The handouts say Digby Richards is a country songwriter with strains of Jim Croce, Gordon Lightfoot and Waylon Jennings. That's fairly accurate and the album is certainly better than a lot of the conveyor-belt country pouring out of Nashville.

In fact it was recorded in Britain with, as I understand it, British musicians. After a few listenings, "Whiskey Sundown" turns out to be a very good album of its type. Richards' voice is one-up on Kristofferson's but still retains that "lived-in" feel.

There are some pretty good numbers on it too, especially "Play Mama Play" which should be picked up by a few of the country biggies on the other side of the Atlantic (plug for its writer John J. Francis) and the musicianship is always efficient without becoming maudlin or threatening overkill.

In "Too Long Gone" Richards shows he knows how to turn out a good country rocker with evocative lyrics about bad women and smokey bars. You could really call the album laid back with feeling.

Digby Richards has already recorded in America with top country session men so he is really no novice. Don't think that just because he wasn't born and raised in Texas or Tennessee that he is no less a talent than some other established names who could be said to be resting on their laurels. The music is original and well worth a listen by anyone into good "Outlaw" music.

**Ian White**

*Produced by David Mackay and Barrie Guard for the Round Record Company, recorded and mixed at The Factory.*

## **The Motors: Approved By The Motors (Virgin 2101)**

I always thought of The Motors as being a typical English rock band, the type who are all competent players, put in maximum energy and give great value for money. This view has been slightly changed by a couple of tracks on this their latest album.

When I first heard the opening track "Airport", I was convinced it was the theme tune for some television series. It was simply a great song containing some good ideas with an instantly catchy chorus. The next song to confound my theories was "Forget About You", another superbly produced pop song which reminded me of the early Foundations hits.

True, there are rockers on the album e.g. "Breathless" but "Soul Redeemer" and "You Beat The Hell Outta Me" show a range of talent which has not been present in an English band since 10cc.

**David Lawrenson**



*The Motors (left to right): Nick Garvey, Andy McMaster and Bram Tchaikovsky.*



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## Morley pushes a pedal seminar

Marvin Lubow, marketing director of Morley the American effects manufacturers, proved a hit when he conducted a seminar at the Guitar Institute of Technology in Hollywood.

Marvin demonstrated both the needs and results of using various pedals with the electronic guitar,

and their function in creative expression as both leads and rhythmic background was both discussed and demonstrated.

The use of the pedals in studio sessions and gigs was also explored together with the capabilities, versatility of the whole range. The venture was so successful that Marvin has been invited to make the seminar a regular part of the GIT's curriculum.



Marvin Lubow, Marketing Director of Morley, during his seminar at the Guitar Institute of Technology in Hollywood.

## Ampex in Italy

Ampex have appointed Westrex Italiana S.p.A. to market the Ampex line of professional audio equipment in Italy. The arrangement, which is effective immediately, covers Ampex ATR-100 master recorders, MM-1200 multi-track recorders, MOS-100 synchronising systems, ATR-700 semi-professional audio recorders and associated accessories.

## Brodr Jorgensen Musicians' Workshop

May Day saw a musicians' workshop held at Southend's Zero Six discotheque, promoted jointly by Honky Tonk Music of Hadleigh in Essex and Brodr Jorgensen, sole UK distributors of Roland equipment and Kramer instruments.

It featured the Roland band in concert using Roland amplification and synthesizers, Kramer guitars and basses with staccato drums, and several other bands. The event proved a tremendous success with an attendance near the 1,000 mark.

## Pro PA from H.H.

H.H. Electronics recently invited key British dealers to a sales conference at the Cambridgeshire Hotel, Bar Hill, Cambridge. The object was to unveil the new P.A. systems H.H. are launching this summer and to reveal that the company is moving into the "big league" by offering high power concert P.A. systems.

An audio visual display told the story of H.H.'s growth and Sales Director Clive Bradbury discussed sales techniques and plans for the new P.A. range.

H.H. boss Mike Harrison introduced dealers to Ed Forme, Managing Director of H.H. Acoustics who revealed that a large number of H.H. Driver units have been operating very happily in items of equipment sold to the mass market for the past 18 months. He explained that H.H. made a massive investment in speaker technology and it was this element, as much as any other, that contributed to the high efficiency and relatively low cost of the H.H. P.A. range.

## New Factory for Project Electronics

Project Electronics Ltd. have moved their production to a larger factory close to the office and showrooms in Ealing.

The new premises will pro-

vide over 5,000 square feet of extra production space.

The company has thanked customers for their understanding of the extended delivery times caused by the move. "Dealers have been really great," says director Dave Simms, "and we appreciate it very much indeed".

## Neve change name

Rupert Neve and Co. Limited, the marketing, sales, service and systems company for the Neve Group have changed their name to Neve Electronics International Limited but wish to continue to be known to the trade and customers as Neve.

Managing director of the new company is Derek Tilsley who was previously marketing director of Rupert Neve and Co. Limited, having been with the company for seven years. His industry experience includes being engineer in charge of planning and installation with Granada TV in Manchester where

he was responsible for their extensive colourisation programme.

Jonathan Pedre joins the board as marketing director responsible for Neve's growing UK and worldwide activities apart from N. America where a Neve subsidiary already operates. Jonathan Pedre joined the Neve group last year as marketing manager.

Another Neve board appointment is that of Les Lewis who becomes sales director. Les is well known in the industry, having been with Neve for 9 years, and he is active in the APRS (Association of Professional Recording Studios) and a member of their Executive Committee.

## Stop Press.....

### APRS Extra

Highlight of the Leavers-Rich stand will be the Proline 2000TC range of 6.25mm professional recorders.

Complimentary to the Proline 2000TC range is the Proline 1000 offering high performance and extreme ruggedness at modest cost. Leavers-Rich are also sole UK agents for HAN-D-MAG, a powerful hand held de-magnetiser for de-magnetising heads, tape guides and other components in the tape transport assembly.

### Dolby Laboratories

Last year was the best to date for sales of Dolby A products for recording studio use, excluding cinema equipment. The amazing success of this 10 year old system is largely due to the fact that Dolby noise reduction is comparable to the playback equalisation in the magnetic recorder. They are both "standards" which the studio does not want to change unless there is good reason.

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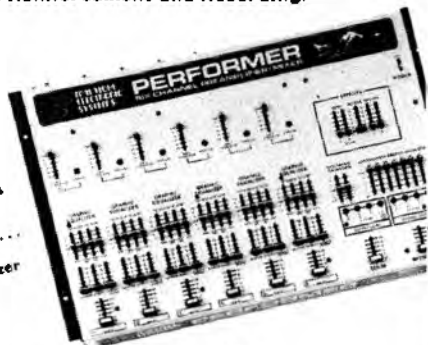
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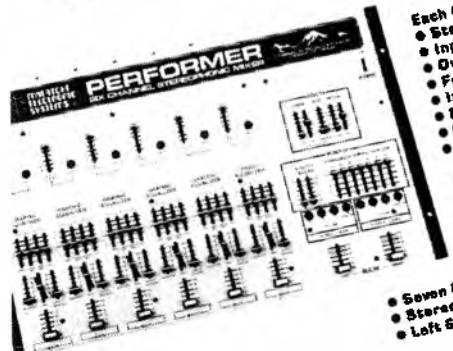


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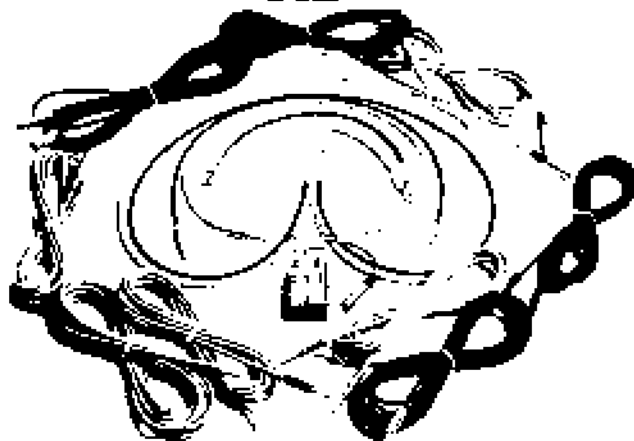
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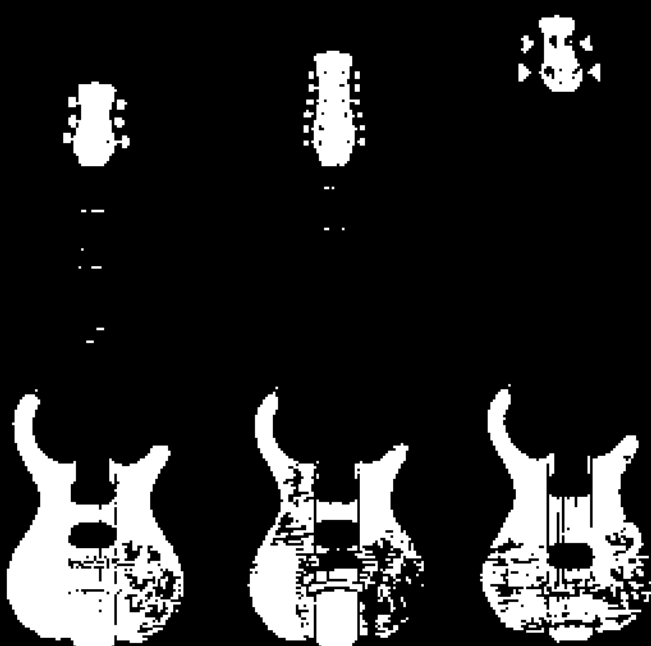


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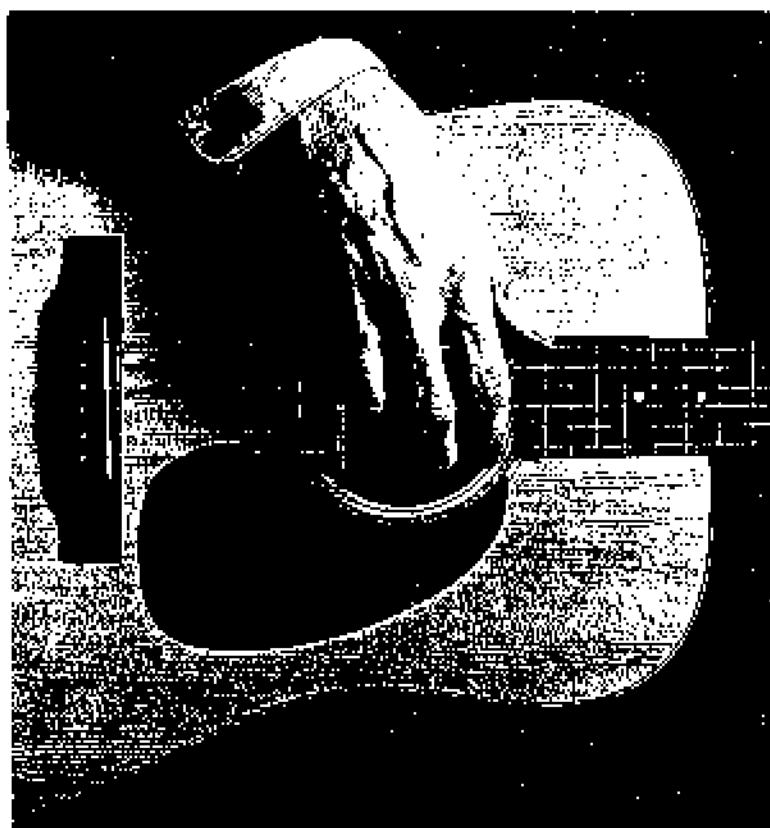
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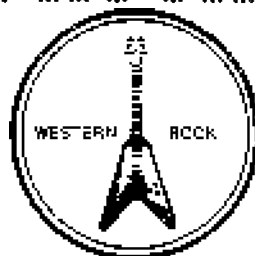
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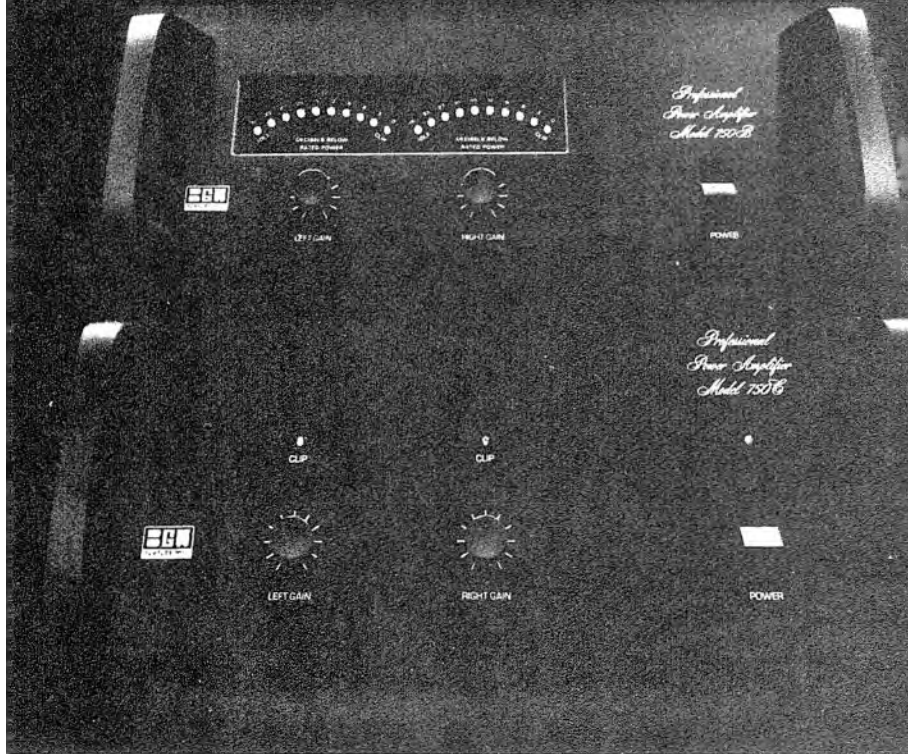
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Or ring 01-940 6254 or 020 488 8880.

# GET BEHIND BGW's NEW 750 SERIES

## The Competition Already Is.



BGW's characteristic rack handles, front panel LED's and fans have long been exploited as symbols of design excellence by competitors who know good amplifiers when they see them. But professional power amps live or die by their guts, not their facades. And that's where BGW's new top-of-the-line 750 Series leaves the competition behind.

Identical but for their front panel power indicators, the Model 750B, with light-ladder VU meter, and the Model 750C, with clipping indicators, each generate more than 360 watts of continuous power per channel into 4 ohms. Sophisticated arc-interrupting and time-delay circuits protect monitors and guarantee transient-free switching. Twenty (20) large-geometry, full complementary output transistors provide unequaled 10A in an ultra-conservative design. These professional power amps employ high quality magnetic circuit-breakers, XLR-type connectors, and input transformer sockets. Separate circuit and chassis grounding eliminates annoying ground loops. TIM figures are held to an incredibly low 0.02%!

Your franchised BGW dealer can give you still more reasons why your professional peers are getting behind BGW...and why the competition stays behind!



BGW SYSTEMS  
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method, AESJ, Vol. 25, No. 4.

## Rex Bogue

CUSTOM ONBOARD  
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GUITAR AND BASS

**THE  
"BALZ"**

Is ideally suited for use with normal magnetic pick-ups and Piezo electric. This basic pre-amp does not change the sound of the instrument, only amplifies and drastically improves signal to noise ratio, attacks transients, frequency response, by isolating the pick-up from the capacitance of the cord, and overall sound quality. Output is low impedance and will drive a set of headphones. With your normal amp it will give you "The Balz" and much wanted sustain at much lower levels, and, with a power amp, very clean studio sound. You can also go direct to any board.

"The Balz" is recommended for any 2 control guitar or bass such as Telecaster P., Bass-Les Paul Junior, etc. and will also fit all others.

**"BALZ"  
GALORE**

Can be used to achieve an extremely clean sound, yet, when turned up, delivers the most sought after overdrive and sustain characteristics yet obtainable with any device. Mounted directly in the guitar, Balz Galore offers limitless control over sound characteristics, with active treble and bass circuitry. Unlike conventional tone controls, Balz Galore gives enormous boost and cut of the treble and bass frequencies, so you can really dial in Your Sound.

If you own a Stratocaster, Les Paul, Explorer, L6S, or any 3 or 4 control guitar, this is the model for you, and it is the same one you've seen and heard on the Rex Bogue Guitars we've become famous for. If you don't have \$3,000 for a Rex Bogue Guitar, the "Balz" Galore at under \$100 is a steal.

**"BALZ"  
DELUXE**

Offers the ultimate in onboard electronics with selectable frequency ranges for the treble and bass tone circuitry. You can boost or cut at four selectable frequency ranges, two for treble and two for bass giving intense upper and harmonic snap and driving bass simultaneously, or for that matter, any sound you like. For the bassist, the clearest, most powerful sound to be imagined.

The "Balz" deluxe is installed in every bass we build without exception. Because its sound is what bass players have been looking for, for years. Once you hear it, you'll never be without "Balz" deluxe. The "Balz" deluxe is ideal for guitarists seeking the ultimate clarity & clean sound.

The three electronic packages offered—"THE BALZ", "BALZ GALORE" and the "BALZ DELUXE" are designed to fit any guitar you own, with any type of sound you wish, from a sweet and clean sound to the most awesome power and sustain you could possibly imagine. We offer all models in kit form, which includes assembled "BALZ" of your choice, and instructions, intended for repair shops, dealers, or electronically inclined guitarists; or fully assembled, complete with all parts fully wired and ready to install.

In addition to our line of electronics, we will also be offering a complete line of pickups to directly replace and update all humbucking and Fender types. We maintain a full repair and custom facility, which includes our line of guitars that we build on custom order only.

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Piezoelectric transducer with sound transmitting diaphragm. No pre-amp needed, thus no pre-amp noise! Simple to attach, small enough to be installed inside. DeArmond designed it for you!

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Each string has its own magnet, preset for balanced output. High output possible without feedback. It's in our catalog!

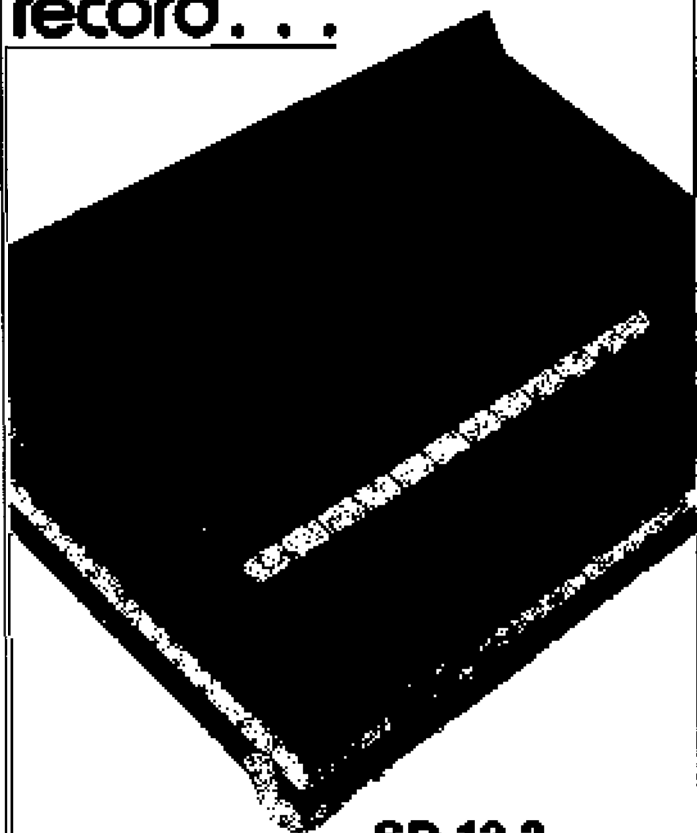
**Model 800—Nylon String Flat Top Pickup.**  
Magnetic type contact pickup. Easy to attach and remove. Fingertip volume control. Available now!

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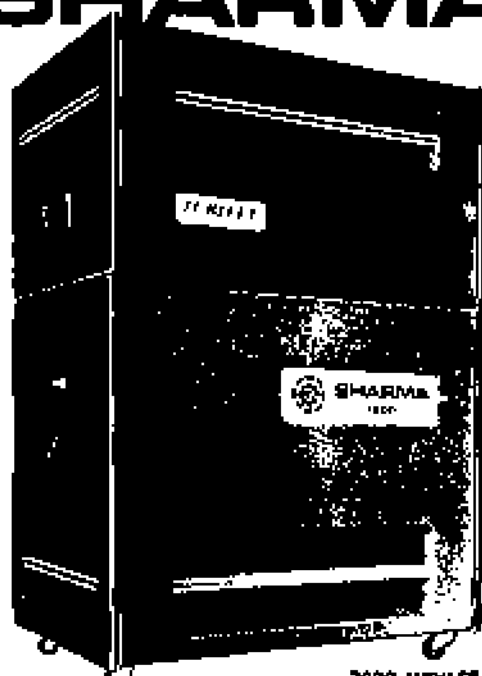
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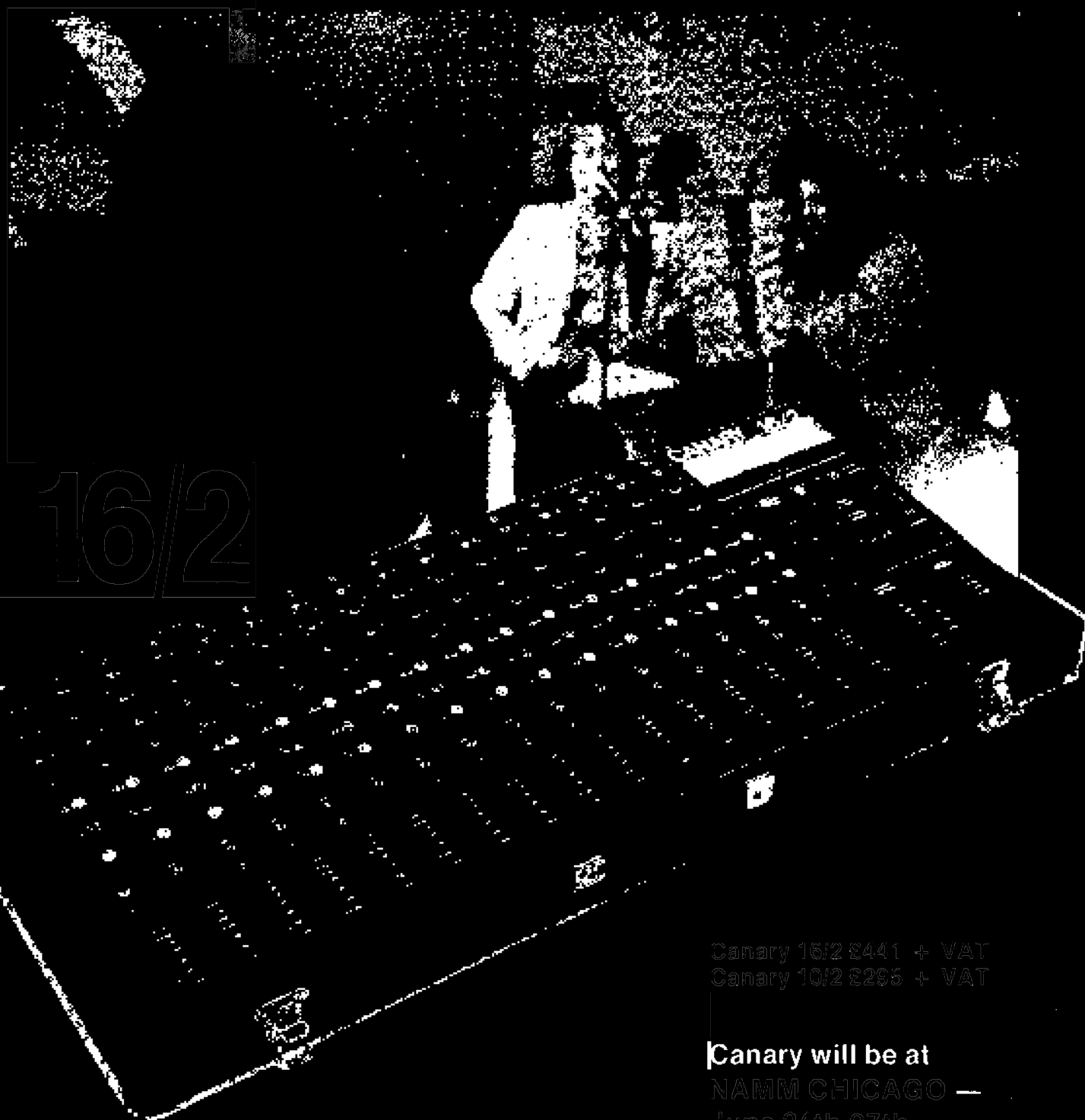
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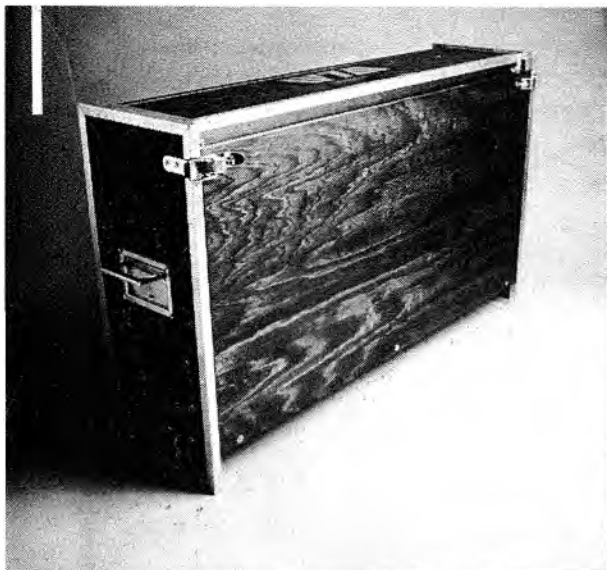
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2) Our sound also contains consonants, not just vowels, which means an exciting and pleasing sound impression.

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

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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.

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E.D. Brown (Organs) — Kendal, Nelson,  
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Clinkscale Organs — Melrose  
Duck Son & Pinner — Bristol  
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Freedmans — Leytonstone London E11  
Free 'n' Easy — Hemel Hempstead & Oxford  
Funkshun Supersounds — Northampton

Hamiltens Music — Middlesbrough  
Hodges & Johnston — West Cliff  
McCormacks Music — Glasgow  
Midland Organs — Birmingham  
Eddie Moors Music — Bournemouth  
Music Ground — Dunsroft, Doncaster  
Music House — Peterborough  
Regent Music — St. Helier, Jersey  
Sharon Organs — Downham, Maidstone  
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Britains Best

Vol. No. 2 JULY 1978.

& inside your Grope.....

Albert the Tabby Tom Tells All!!! Yes, the full story, untouched by human hands or feline feet. All in his own unexpurgated words!!!!

My Life Without 'Em. The tragic story of Albert's operation.

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Super Sensational Musicaid Journal

# SHOCK NEWS!

## ALBERT SWITCHES TO AMPEG!

IT WAS TODAY revealed to a shocked and stunned music industry that Albert the Tabby Tom has switched to AMPEG amplification.

### EQUIPMENT

When asked of his equipment, he joked 'What equipment?'. Remembering his much-publicised operation, that fractured a million feline ventricles, I corrected 'No, not your equipment, I mean the AMPEG equipment'. In answer to which, Albert simply broke into an hysterical purr!!

### SUPERSTAR

Albert attained superstar status when after a recent world tour he announced he was to join the list of tax-exiles living abroad, Commenting on his world tour he said, 'I knew my show couldn't fail with Ampeg, man!'

### BIG PUSSY

I tactfully enquired if Albert was really as big a Tom as his stage clothes suggested, to which replied, I know I'm a laid back cat, but after the operation, - me, how?'



Albert with his trusty AMPEG

## MUSICAID — OPENING THE FLOOD GATES

At press time our reporters had uncovered a fast-growing list of dealers suspected to be handling Ampeg amplifiers. Below, we name names and print the addresses of those involved. During the investigations, our reporters had to decline several offers of a 'refreshment-service' from certain dealers.

### Masterminds

We discovered that the masterminds behind the growing Ampeg network were a company called 'Musicaid', of 66 Radlett Road, St. Albans, Herts. (0727 72829).

### Sexual Offences Act

Musicaid, it seems, are also responsible for such devices as Asba Drums and Camber-Cymbals, not to mention certain appliances called 'Original Pickpocket Guitar Straps' which should amuse the old Bill! !

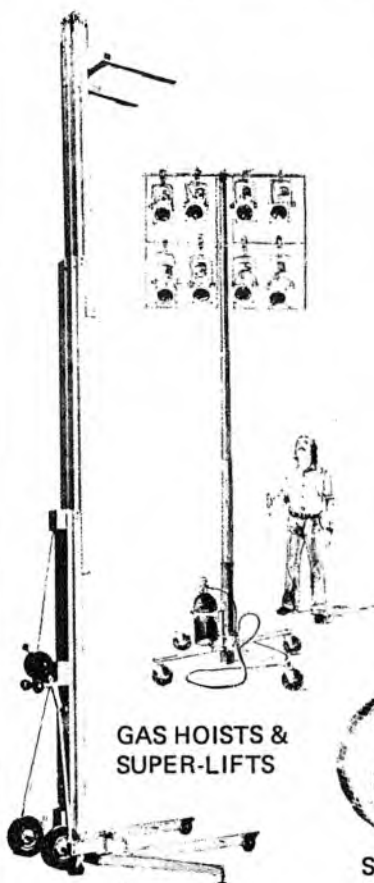
Lastly, there is a piece of apparatus called a 'Lyricon' wind synthesiser, which if it fits its description, will doubtless contravene the Sexual Offences Act.

All the facts are now in the hands of the police. All decent, clean living people will be shocked by this report. IT MUST BE STOPPED!!!!!!

### The Offenders

St. Giles Music Centre, London WC2;  
Unisound, Kilburn, London NW6;  
Unisound, Peckham, London SE15;  
ESS, Barnet, Hertfordshire;  
Magnum Sound, Wishaw Strathclyde,  
John King Sound, Kingston upon Thames;  
Maurice Placquet, Shepherds Bush;  
Honky Tonk Music, Hadleigh, Essex;  
Rumbalows, Reading;  
John Holmes/Gearbox, Bristol.

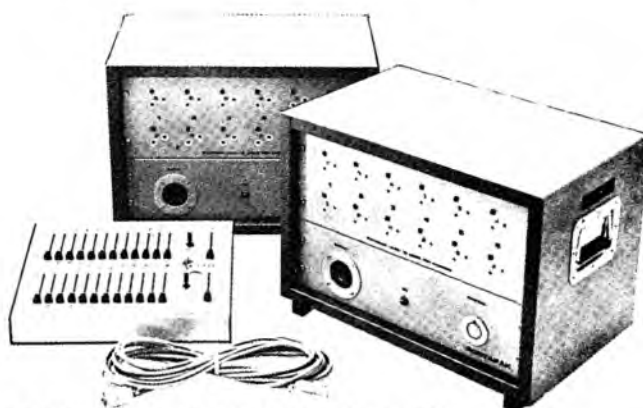
# ANY BRIGHT IDEAS?



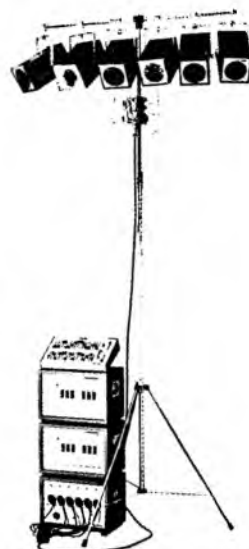
GAS HOISTS & SUPER-LIFTS



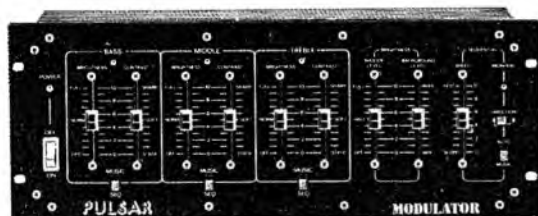
SPECIAL EFFECTS



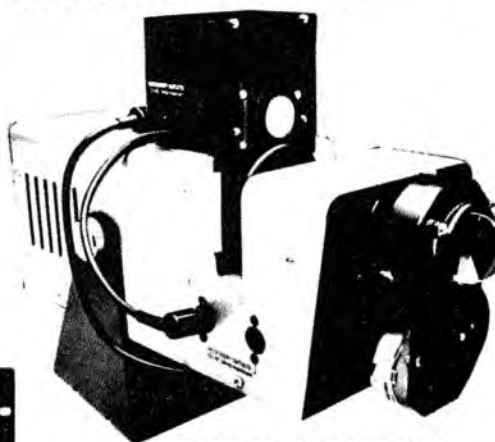
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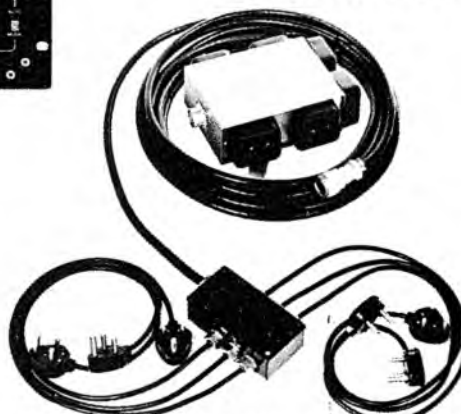
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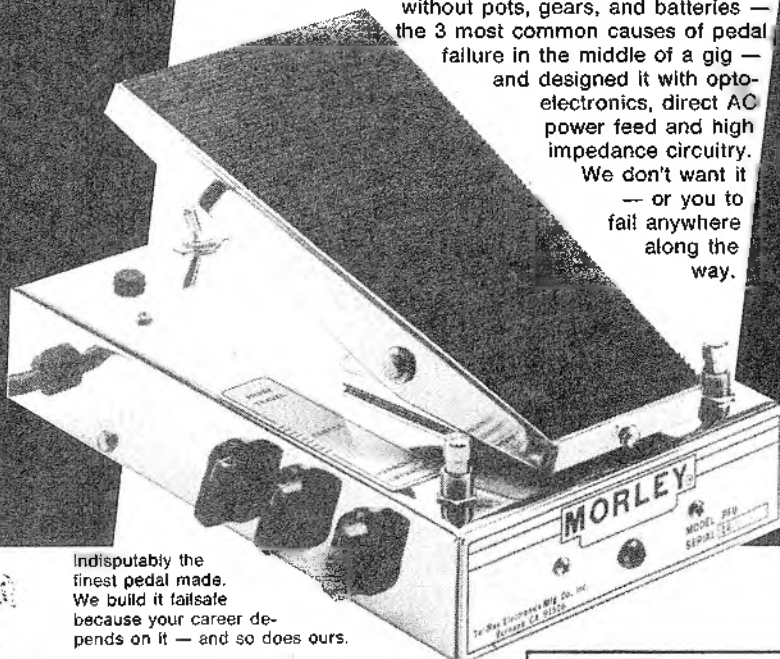
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Inaudible sounds — tumbling, weaving, spiraling through the creative chambers of your mind — become precisely audible expressed within the broad range and versatility of the only flanger capable of continually meeting your creative challenges on your way to the top of the chart.

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- \* in the non-automatic position the sweep varies with the movement of your foot.
- \* an indicator lamp reveals when you are in the flanging position and also oscillates at the flanging rate when on "Automatic".
- \* odd/even harmonic emphasis switch.

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*globetrotter*



**WELSON MODEL GLOBETROTTER  
ELECTRONIC PORTABLE ORGAN**

**UPPER MANUAL** — 49 keys C to C

6 drawbars: Flute 16', Flute 8', Flute 5 1/3', Flute 4', Flute 2 2/3', Flute 2'

Percussion: 3 push-buttons: 5 1/3', 2 2/3', LONG/SHORT

STRING SYNTHESIZER: 3 tabs: Cellos 16', Violins 8', 'Animazione'

BRASS SYNTHESIZER: 3 tabs: Horn 16', Trombone 16', Trumpet 8'

PRE SETS: 5 push-buttons: OFF, Full/Flute, Choral Organ, Jazz Organ 1, Jazz Organ 2

SPECIAL EFFECTS: 2 tabs: Piano Harpischord

**LOWER MANUAL** — 41 keys C to E

3 drawbars: Flute 8', Flute 4', Flute 2'

STRING SYNTHESIZER: 2 tabs: Violas 8', String 4'

ORBISOUND: 5 push-buttons: Lower Manual Flutes, Upper Manual Flutes, Upper Manual Brass, Upper Manual Special Effects, Slow/Fast

SUSTAIN: 2 push-buttons: Upper Manual Sustain, Lower Manual Sustain

GRAPHIC VOLUME CONTROLS: Bass Pedal Volume, Lower Manual Flutes Volume, String Synthesizer Volume, Upper Manual Flutes Volume, Upper Manual Percussion Volume, Brass Volume, Special Effects Volume

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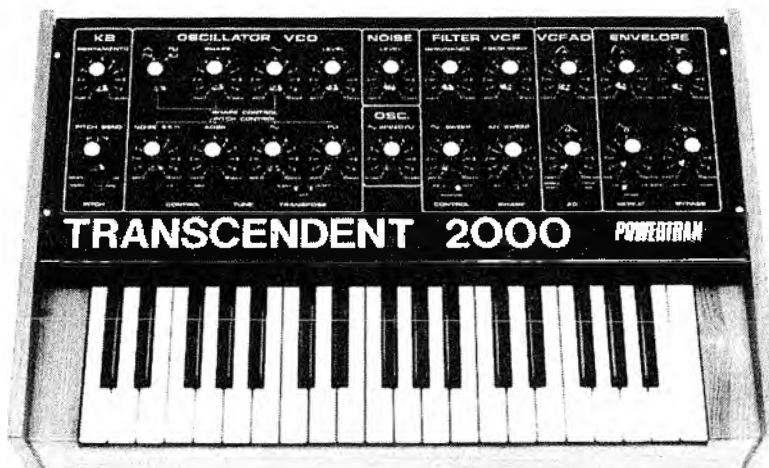
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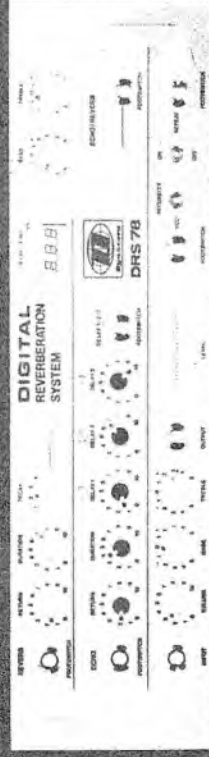
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original-effects stereo left/right

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775 mV  
775 mV  
775 mV

## TAM 19

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- Stereophonic spacesound simulation (simulation of rotating speakers)

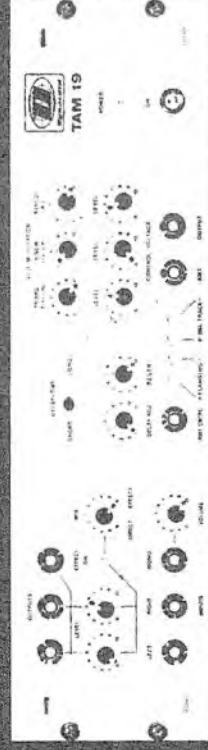
Basis for all these producible effects is the so-called time axis manipulation. Expressed in more simple words the music in its course of time is being expanded and compressed alternatively and effects signals are being mixed with the original in different ways and manners. By mixing the manipulated 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

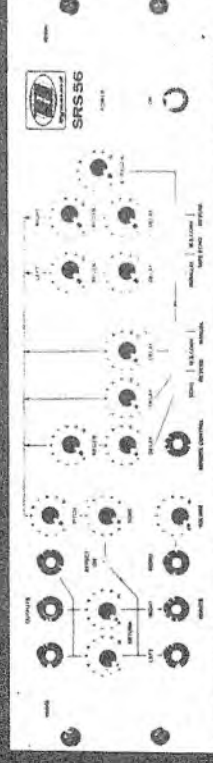
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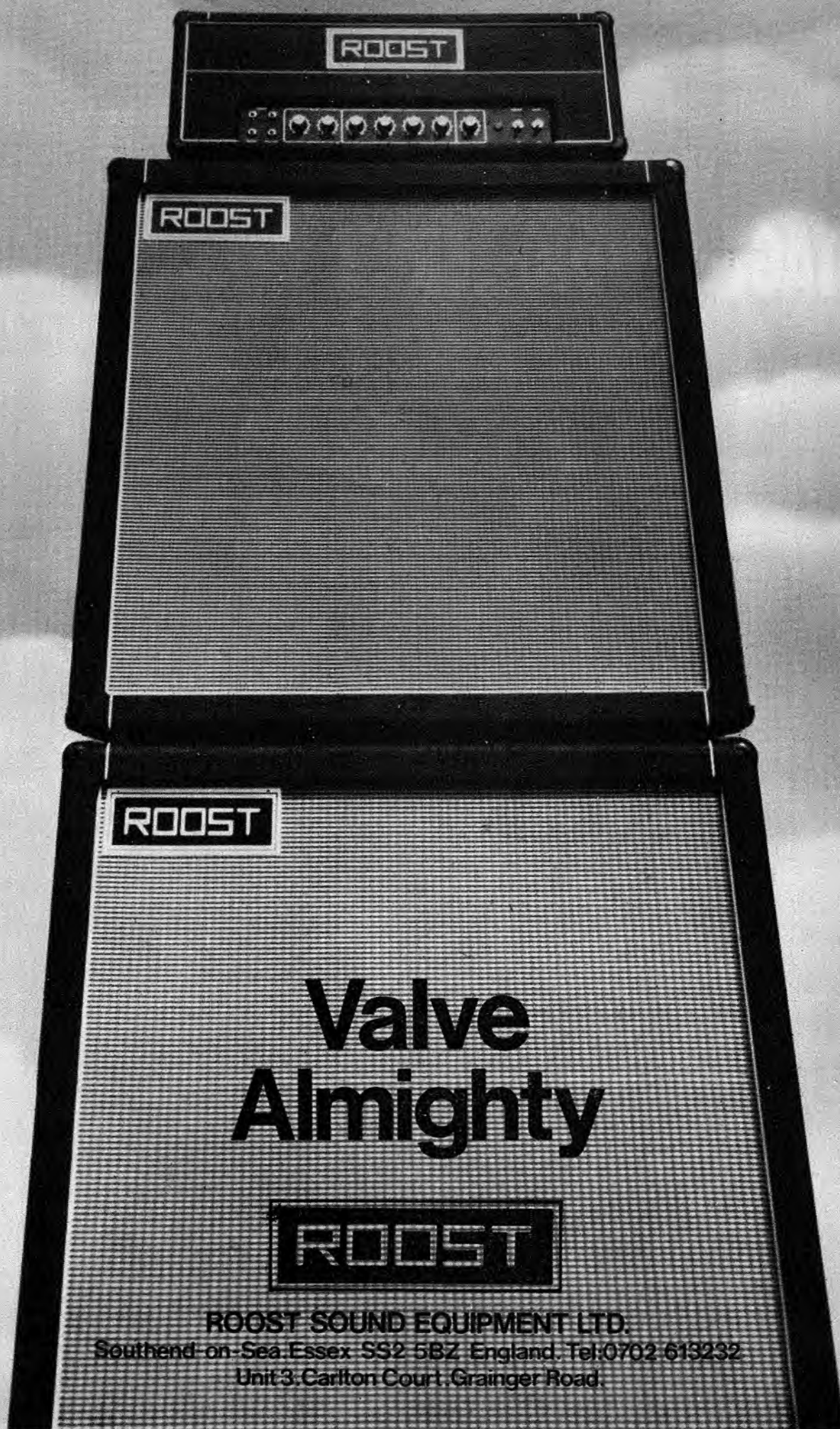
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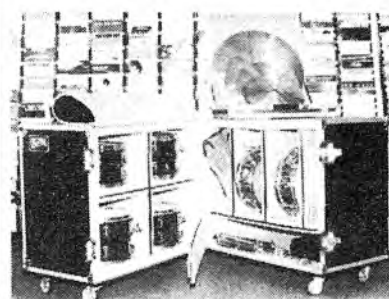
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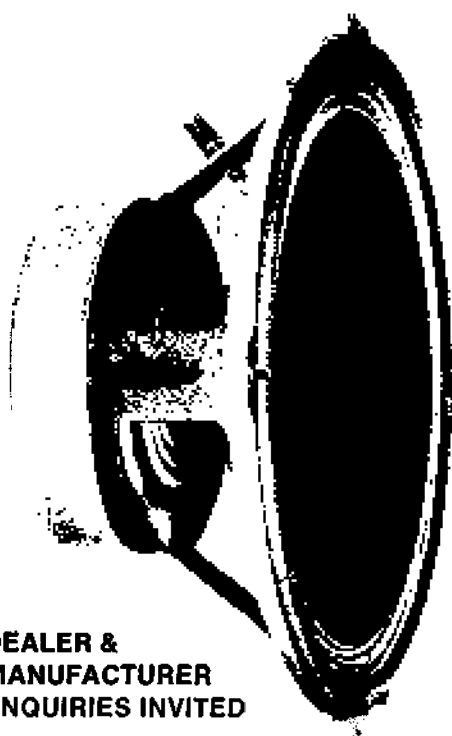


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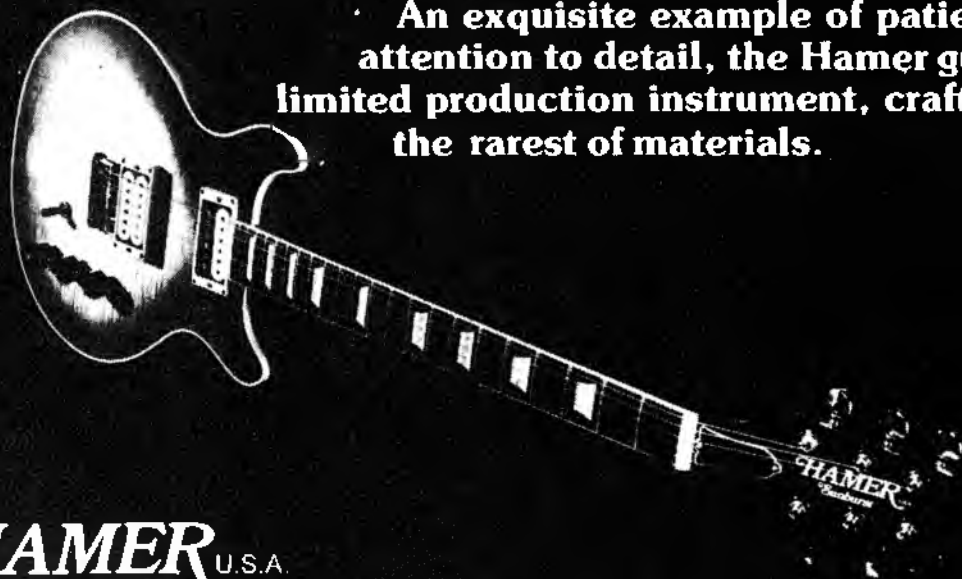
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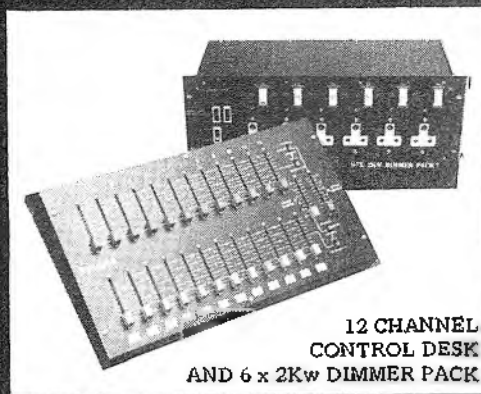


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R-R. C. Cr. £10 p/h D. OTC.  
**BERWICK STREET RECORDINGS**  
8 Berwick Street, London W1  
01-734 1888/5750  
24T Cap 16 £40 p/h D. tf. R. R. CP. Ka. Ac. d.  
I. M. S.  
8.T.W. RECORDING STUDIO  
125 Middleton Road, Wood Green,  
London N22.  
01-888 6655  
4T Cap 10 £6.50 p/h tf. R. R. Ka. dt. M. S.  
SM.  
**CBS RECORDING STUDIO**  
31-37 Whitfield St., London W1  
01 636 3434  
Studio 1 £48 p/h 24T Cap 75  
Studio 2 £48 p/h 24T Cap 25 & automated  
desk  
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DC. R-R-C Cr. D All studios multi-track  
**CENTRAL RECORDERS LTD**  
9 Denmark Street, London WC2H 8LP.  
01-836 6061  
24T Cap 20 £32 p/h D tf. R. R. CP. Ka. R.  
dt. OTC £5 p/h. M. S. AC/BA. SM  
**CHALK FARM STUDIOS**  
1A Belmont Street, London NW1  
01 485 5798  
16T. Cap. 15. £20 p/h D. TF. R. R. CP. Ka.  
R-C, DC. D-T. OTC. £3 p/h. M. S. SM  
**DECIBEL STUDIOS**  
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01 802-7868  
01 227 p/h. p/d neg. Cap 20 D. tf. (1  
Amplex 1 Studer) R. R. CP. Ka (Yamaha  
Grand and Synth) R. C. d-i. Q. OTC £2.  
M. S. fcl. Ac. ba. SM.

# STUDIO GUIDE

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**PIPER SOUND STUDIOS**  
50 Cheapside, Luton Beds.  
0592 605875/27195/26693  
8T £8 p/h 16T 10 p/h incl. tape Cap 10 R-R  
C-D. DBX. Comps/Lims Sm, tf. CP. Ac/ba.  
A. Ampex Mastering Echo Plates, TV.

**QUEST STUDIO**  
71 Windmill Road, Luton, Bedfordshire.  
0582 414297/36950  
8T Cap 8, from £6.00 p/h. p/d ba D. tf. R. R.  
CP. R. C. DC. Ba. d-i. Piano, M. S. Ac. ba. SM  
Eventide effects

**ELEPHANT RECORDING STUDIOS**  
181A Long Lane, London SE1  
01 403-3505  
8T £6 + £5 1" Tape hire. £30 per 8 hours.  
Cap 8. tf. (Brenell 8 track - Revox 2T. R-R.  
CP. Ka. (Piano, Organ). R-C. OTC (after  
11pm £2.00 p/h) M.S. SM. ba.

**FOREST STUDIO**  
189 Hainault Road, Leytonstone, E11.  
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24T £18p/h. 16T £16p/h. 8T £10p/h.  
(Block Bookings-more than 10hrs. neg). tf.  
R-R. R-C. Cap 25. CP. Ka. (2 Organs,  
Synthesizers, Pipe Organ, Piano etc., DC.  
ba. NO OTC. M. S. AC. SM.

**FREE RANGE STUDIO**  
22 Tavistock Street, London WC2  
01-836 7608  
16T £15 p/h neg p/d Cap 30 tf. R-R. CP. Ka  
(Grand Piano) No OTC. MS. fcf. VS. SM.

**GOOSEBERRY STUDIOS**  
19 Gerrard Street, London W1  
01-437 6255, 01-734 2257  
16T £16 p/h (discounts available on sliding  
scale). 8T £13 p/h Cap 8 D. tf. R-R. CP. Ka  
Hammond L100, Roland SH2000, Fender  
Rhodes) R-C. d-t. OTC. M.S. SM. ba

**RG JONES RECORDING STUDIOS**  
Beulah Road, Wimbledon SW19  
01 540 4441  
24T £34 p/h 16T £24 p/h Cap 40 R-R-C-D  
OTC, Studio 2 - Stereo only £7 p/h.

**KINGSWAY RECORDERS LTD.**  
129 Kingsway, London WC2  
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24T £38 p/h Cap 35  
16T £34 p/h Dc/ba D

**KPM STUDIOS**  
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£12p/h.

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p/h

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R. R-C. d-t. CP. Ka (Steinway). £8p/h. OTC.  
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d-t. M. S.

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R-Cr. d-t. CP. Ka. (Steinway grand, ARP  
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SM. ba.  
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Rhodes, Hammond B3 Q.M.S. tf. R-R, R-C,  
R-C, R-Cr, d-t, SM, ba

**REDWOOD RECORDING STUDIOS**  
15 Neals Yard, WC2.  
01 240 0568  
8T £18p/h. Cap 8. tf. R-R. R-C. R-Cr. d-t. CP.  
Ka. (Rhodes, ARP Odyssey, Roland String  
Synth, Daneman Piano). Q. OTC. (+25% of  
hourly rate) M. S. SM.

**REGENT SOUND STUDIOS**  
4 Denmark St., London WC2  
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Techniques Desk 18 x 16

**RIVERSIDE RECORDINGS**  
78 Church Path, Fletcher Road, Chiswick,  
London W4  
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16T £16 p/h Reductions on block bookings  
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Musicians.

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d-t. M. S. OTC. SM.

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R-C. d-t.

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16 tf. R-R. R-C d-t CP. M. S. Ka  
Dc/Ac/Sm/ba.

## KEY FOR STUDIO GUIDE

T	Track
Cap	Capacity
p/h	per hour
p/d	per day
D	Dolby
tf	Transfer facilities
R-R	Reel to Reel
CP	Copying
tba	to be advised
Ka	Keyboards available
R-C	Reel to Cassette

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OTC SM

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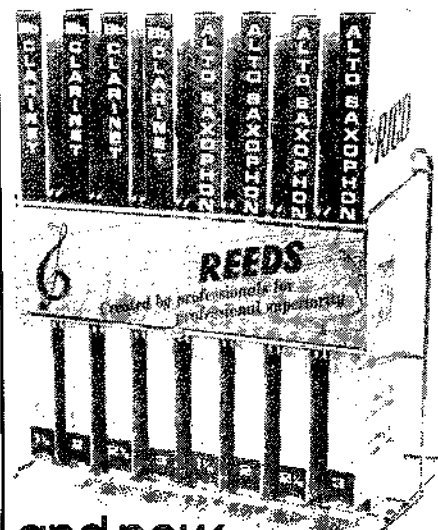
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## KEY FOR HIRE COMPANIES

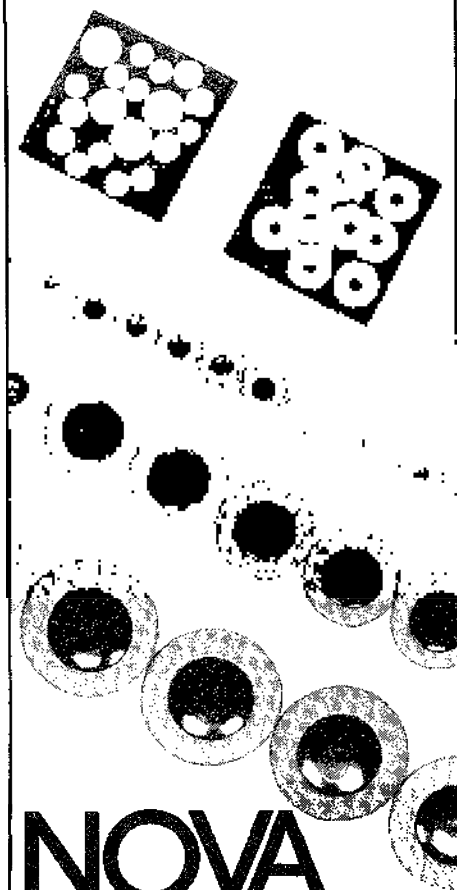
ME	Musical Equipment
T & C	Transport & Crew
RHR	Rehearsal Rooms
SL	Stage Lighting
Sc	Security
Di	Disco
CM	Channel Mixer
CTM	Concert Tour Management
PA	Public Address
ST	Storage
R	Repairs

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# The MACARI CHRONICLE

No. 3

## "We Get 'Em All"

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The boys in the Macari stores don't bandy "star names" around when a reporter asks who's been in. But recent visitors' names would read like a Who's Who of the rock music business.

The David Essex Band are particularly frequent visitors. They've equipped themselves with everything from DiMarzio pick-ups to Eurotec Overdrive units and when ever they're in town they make a point of visiting Macari's.

Billy Ocean called in to the shop not long ago and decided there and then to buy a Wurliitzer piano. He also bought some other bits and pieces of gear.

Just a few weeks ago Macari's were able to supply Wishbone Ash with an item they had

been looking for for some time. This was a good condition 1960 Telecaster and it is understandable that the band were highly pleased.

Steve Hackett of Genesis has bought quite a bit of Roland equipment from Macari's and other names you would have seen in the store recently include The Stranglers, Hawkwind, Thin Lizzy, Meal Ticket, Sacha Distell and the Sex Pistols.



Essex — DiMarzios

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"My father believed that we should learn everything," Joe recalls. "At five or six I started to learn acrobatics and I tried to play the accordion. I got on all right buy my brother Larry was so good I really didn't have a chance. He's really gifted on the accordion and I switched to the saxophone. I developed a real love for that instrument that has lasted all my life. I've never been a technician, I prefer to try to get feeling and tone. I remember that the first sax I had was built out of tune and I played this thing for two years. When I eventually got a

good sax everybody told me I was playing out of tune. What had happened was that I had learned to adjust my embouchure to the out-of-tune sax and that meant that the moment I played a sax that was built properly, it sounded out of tune. It took me weeks to make the adjustment."

Larry Macari quit professional show business when he entered the music industry in the late Fifties. Shortly after Joe joined him and together they built up the reputation of service and knowledgeable advice that is the trade mark of the Macari shops on Charing Cross Road. If you want to discuss a double necked Gibson you'll be in good company because players like Jimmy Page, Jeff Beck and Eric Clapton have been regular Macari customers over the years. If you want to talk about a soprano sax there's few men who understand the instrument better. If you want to talk about accordions, Larry is still one of the finest players in the country. So finally, if you're into music, you should be into Macari's — as often as possible!

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