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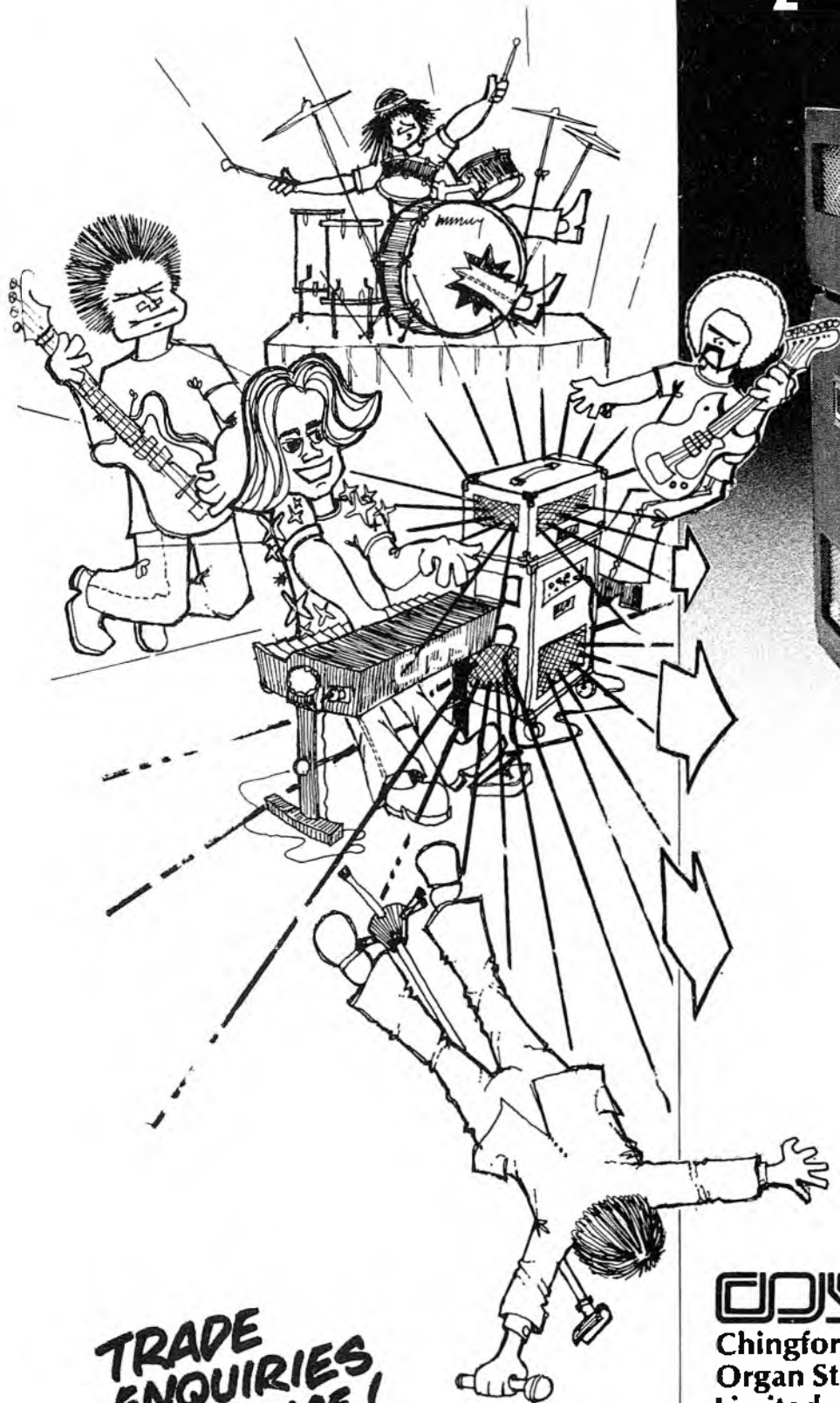
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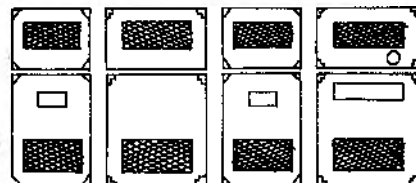
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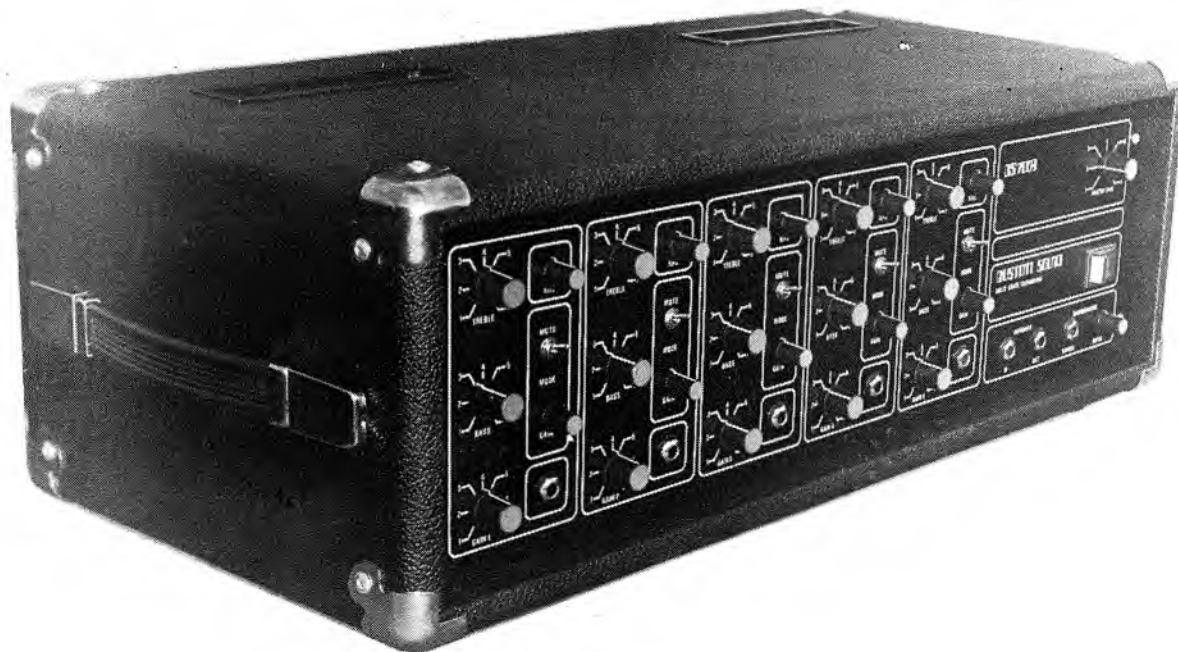
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PA 12 - Stereo Mixing Console

The Sunn PA 12 - Stereo mixing console is our most ambitious attempt yet to furnish you with efficient, trouble-free, sound reinforcement components. What we've done here is combine existing technology and taken it one step beyond. Our term for it is "automated sound systems". Features such as our SUNN-SENSOR, which is composed of a system of LED indicators on the 9-band graphic equalizers to display the frequency which is producing feedback, and COMP-LIMIT, which allows you to preset maximum levels on each channel, are just the beginning. Complete stereo capability, monitor system control, high and low impedance operation, clean electronics, and exceptional portability and roadability combine to make the PA 12 - Stereo the most effective sound reinforcement tool currently available. Once you put this unit through its paces, we're sure you'll agree with us that Sunn has once again demonstrated its leadership in sound reinforcement components for the contemporary musician.

A. FRONT PANEL

1. 12 MICROPHONE CHANNELS
 - a. Dual Impedance (hi & lo)
 - b. XLR & Phone Jack Inputs can be used simultaneously
 - c. Board will accept 24 mic inputs
2. SLIDE VOLUME CONTROL (Each Channel)
3. STEREO PAN POT (Each Channel)
 - a. Use for stereo mixdown or as a separate monitor control with internal power.
4. CUT & BOOST BASS AND TREBLE CONTROLS (Each Channel)
5. REVERB/MONITOR MIX CONTROL (Each Channel)
 - a. Use as reverb intensity control or a separate monitor mix in conjunction with master monitor control and external power.
 - b. In "normal" mode, control is reverb. Simple adjustment changes its function to a monitor level control.



6. COMP-LIMIT (Each Channel)
 - a. Presets maximum level of channel. Allows input to accept up to 10 volts RMS without overdriving the preamp. In this way you can "lock-in" your levels. So whether you scream or whisper, the mix will remain well-balanced.
7. MASTER VOLUME CONTROLS (Left & Right)
 - a. Slide Potentiometers
8. MASTER REVERB CONTROLS (Left & Right)
 - a. Slide Potentiometers
9. MASTER MONITOR LEVEL CONTROL
 - a. For use with Reverb/Monitor Mix Control
 - b. Slide Potentiometer
10. 2 9-BAND GRAPHIC EQUALIZERS
 - a. Divided by octaves
 - b. Equipped with SUNN-SENSOR This feature is composed of LED indicators over each slide potentiometer on the graphics to indicate which frequency is feeding back. Use when "tuning" the room upon initial set-up.

B. POWER AMPLIFIERS

1. 2 BUILT-IN POWER AMPS
 - a. 200 Watts RMS into 4 ohm load (each)
 - b. 400 Watts RMS total
 - c. Less than 1% THD
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C. BACK PANEL

1. 4 SPEAKER JACKS (2 Each Channel)
2. REVERB FOOTSWITCH JACK
3. MONITOR PREAMP OUTPUT
4. SLAVE AMP OUTPUT (Each Channel)
5. 2 TAPE OUTPUTS (RCA type)
 - a. For stereo recording
6. ACCESSORY LINE OUTPUT (Each Channel)
7. ACCESSORY LINE INPUT (Each Channel)
8. UMBILICAL ACCESSORY PLATE

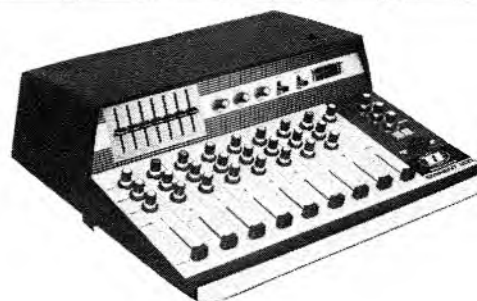
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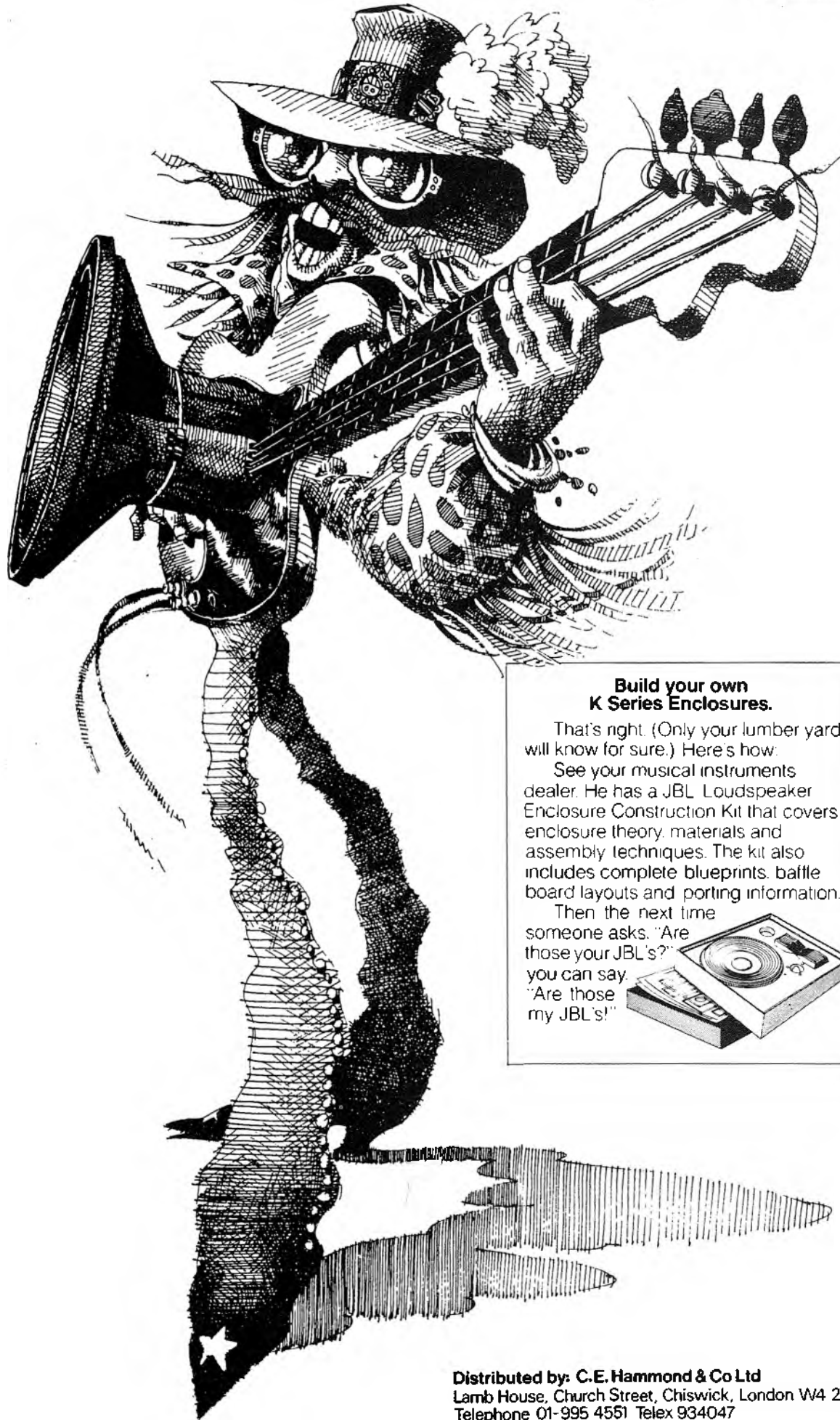
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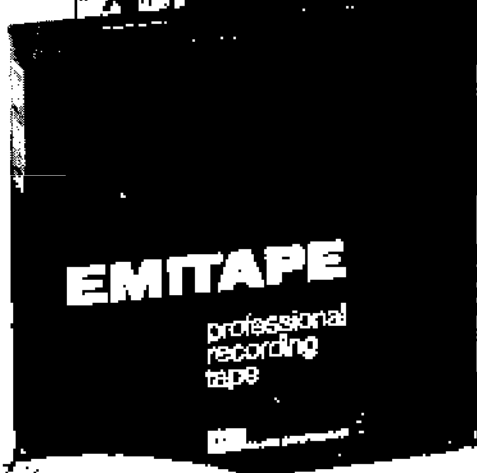


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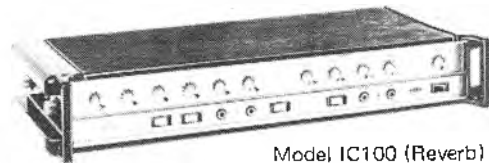
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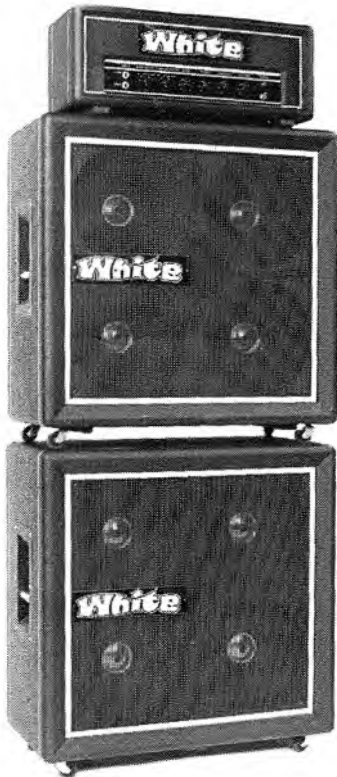


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This is our twelfth issue. It's been a ridiculous year for us really, a year of astonishingly rapid expansion, a year of great success and above all, a year of really hard work.

You are responsible for our success. Our readers and our advertisers have responded to this magazine with instant and genuine enthusiasm and we're really grateful to everybody who's bought the mag and everybody whose name has appeared in its pages.

This is a good time to outline our future policy. In our second year we will put into practice all we have learned in our first. As we're the first magazine to be solely for musicians, a policy of trial and error has been necessary to establish our most popular features. One thing is certain, equipment tests are particularly popular. You'll find a multitude of tests in this issue and we're continually working on improving our test techniques and method of evaluation. We value our independence of opinion and you can rest assured that when our Soundcheck reveals that an amp delivers 200 watts, it really does deliver 200 watts.

It was at the Frankfurt Fair last year that the musical instrument trade first saw International Musician. A major part of this issue is dedicated to covering musical products that will be displayed at the Fair and it is important that the Fair's influence should not be underestimated, as this show finally affects every musical dealer in the world.

It is not often that musical talent and technical ability are found in the same person. However, we will persist in publishing articles on modifications and Do It Yourself, projects that will either save the musician money or provide a unique facility.

International Musician will continue to be a musician's second requirement.

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Eamonn Percival talks to Ireland's Rock wizard



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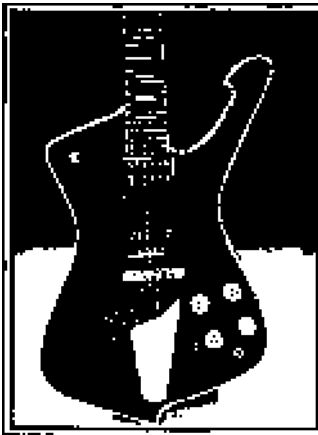
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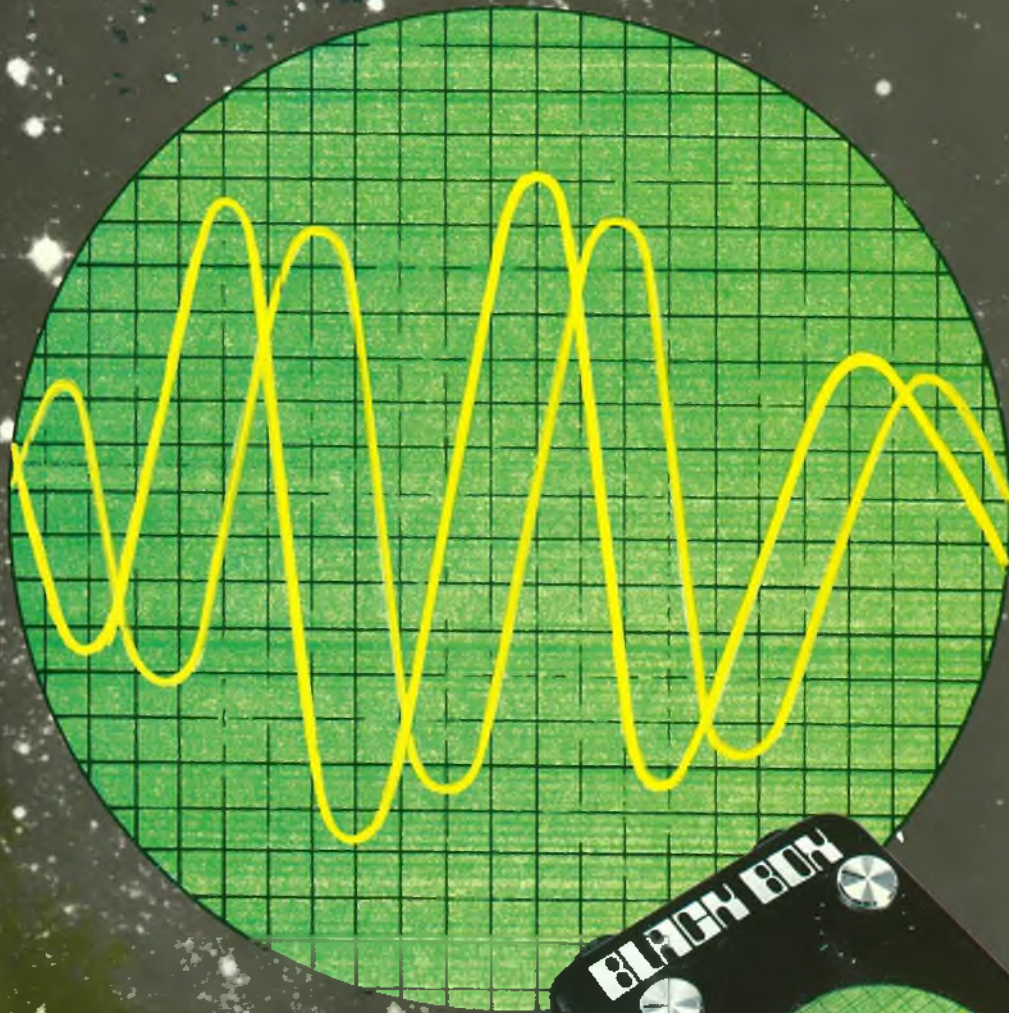
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LETTERS

edited by
Eamonn Percival

Sir: I have an Avon guitar, for which I was thinking of purchasing a Gibson humbucking pick-up. After suggesting this to my brother, and giving him the price, he suggested leaving buying a pick-up until next year. He explained many coiled electronic components will soon be replaced by "Hall Effect" I.C.'s. Similarly, the normal coiled pick-up may soon be replaced by a single "Hall Effect" IC pick-up (containing no coils). A high quality pick-up of this type could cost as little as a pound. Could you please tell me if any manufacturers have been experimenting in this field and if so, how long would one have to wait before they are on the market (i.e. would it be worth waiting for a year to save thirty quid?

Nick Rompton,
Bath

Various people have been experimenting in this field, but not enough is known about making them yet. Another point is that they are linear and therefore tend to distort.

Sir: Thank you very much for such a good magazine. Most people's interest are taken into account and the sound-checks are particularly useful. I have a problem, with which I would appreciate some help. I have a Guild S90 and can't get the action as low as I would like because I get fret buzz, especially towards the high frets with even quite a high action. Could the neck be warping? It doesn't look like it as far as I can see. Mark Durman,
Slough

First, check the neck for bow near where it joins the body. Alternatively, some frets may just be higher than others. If you're lucky, a good fret filing and polishing job should fix it. Better still, you should ask a Guild dealer to check it for you as a low action should be possible.

Sir: I have recently bought a Yamaha FG200 acoustic guitar. I am very pleased with it apart from the loss of volume on the first and second strings, even though I have a very good set of strings on. Could you please tell me if there is anything I can do to the instrument to eliminate this fault and any other advice on how I might improve the guitar in general?

Michael T. Killeen,
Lancs

You don't specify which strings you are using, but you could try Guild, Handcraft or D'Addario. They are all good, but different. You could also try an ivory bridge saddle with a properly rounded top.

Sir: I am renovating a Hokada flattop guitar. It only cost £25 about four years ago but it's got a very pleasant sound. A friend of mine is an artist and we would like to know.

(1) If he does a design on the wood, how do you get over the fact that you have to rub down every layer of varnish (or is that where the skill comes in) to get the professional look so greatly admired on Guilds and Martins?

(2) What is the best glue to stick the bridge down, bearing in mind I use Fender Northumberlands and Martin "heavies"

(3) The best varnish to use on a guitar such as this.

(4) As I also play bass, do you recommend the SG215 and is there anywhere I can get hold of a good second-hand model?

C.J. Goodhew,
Kent

(1) Try getting your colours and clear lacquer from custom car suppliers such as Caldbrook Cars, but you'll probably have to use an airbrush. Basically, you just paint thinly and spray enough clear on top so you can cut it down without cutting it through. It's also worth experimenting with cryla colour, and something like French polish.

(2) If you're not very skilled at these things, clean every scrap of old glue off the bridge and soundboard, mask everything you want clean and use a slow-setting epoxy. It is also advisable to work in a warm room.

(3) By brush, you could use laxa white polish (but it doesn't wear well). By spray, try the best quality cellulose you can get your hands on. There are lots of other finishes, but that's a whole article by itself.

(4) A quick glance at the back pages of the music weeklies should give you an idea of the availability of second-hand guitars.

This month also marks the first in a series of articles by Stephen Delft on Renovating a Fender Telecaster. Although a lot of his remarks are particularly about the Tele, it's worth having a look at what he says regarding refinishing in general.

Sir: I am seeking information on the Selmer Zodiac Twin 30 combo amp or the Marshall 50 watt Artist Reverb combo amp. Would they be reliable and suitable for rhythm guitar, are they loud enough for the average size pub, and how much should I expect to pay for them approximately?

A.J. Taft,
Somerset

Selmer no longer do the Zodiac Twin combo, but the Super Reverb 30 combo (catalogue No. 7981) is a 30 watt amplifier and speaker (2 x 12") combination, which retails at £110.18 plus V.A.T. and is probably the nearest thing to the Zodiac in the Selmer range. The Marshall Artist Reverb, however, is still available and retails for £139.14 plus V.A.T. Both of these units are extremely reliable and either would be suitable for rhythm guitar in an average sized pub.

Sir: With regard to your National Gig Finder, I am Vice President of the North Staffordshire Polytechnic Student's Union of College Road, Stoke-on-Trent, Staffordshire. We have a capacity of 350 in the bar and 500 in the refectory; nights of gigs are Fridays, Saturdays and odd weekdays; and I can be contacted on 0782 45531 ext. 306 or on 0782 48912 after office hours and at weekends. Thanks for your help.

Phil Blizzard,
Stoke-on-Trent

Sir: I am writing to you on two counts (a) to congratulate you on a very good magazine and (b) to ask for help. I must be honest and admit that, as a guitarist, I like I.M. but also (and very important) because of the intelligent and informative approach you take.

The guitar check is the case in point, the reviews being the best and most honest I've ever had the pleasure to read.

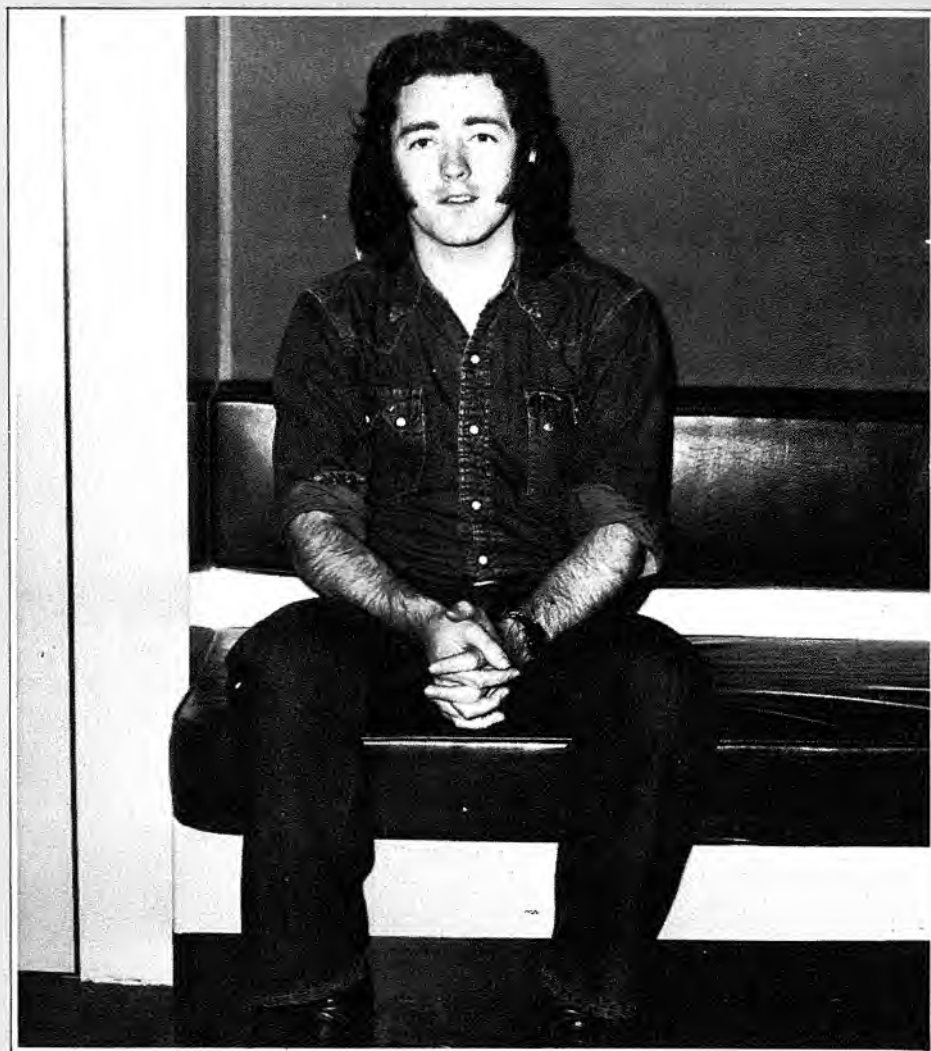
My only criticism, if any, is perhaps you could concentrate on the cheaper side a little more as there's still a lot of us that can't afford Gibsons, Fenders, Guilds etc. Reviews of cheaper amplification would be welcome too if possible. Actually, I suppose these criticisms are a bit unfair when you consider the bewildering array of gear at various levels, being a monthly magazine you can only fit so much in, although as I've said, you're doing better than any magazine before. By the way, all that isn't just to soft-soap you into answering my query - it's the feelings of quite a few people I know who read I.M.

To the query; I'm one of the great masses with cheaper gear. I've got a Gherson SG copy and an old Vox AC10. I live in a flat so I can't have the volume up too high and therefore cannot get any sustain at all. I thought of getting a sustain pedal - the Coloursound one - and rang up a shop in Manchester who told me that they were rubbish - not just them but all sustain pedals as they didn't work but supposedly kept on feeding back. Is this true? Could you suggest an alternative to a sustain pedal to give me what I need at a reasonable price if they don't work as I was told. On the other hand, if you consider they do work O.K., would you give me your opinion on the one produced by Electro-Harmonix called The Big Muff. If you could find time to answer I'd be very grateful as I don't know anything about electronics and with living in a place like Barrow, there's nowhere I can go to try them out without travelling a fair distance so they're all just a lot of names to me, I'm afraid. Anyway, thanks again for the magazine, hope it's in evidence for a long time to come.

J.M. Hawkins,
Barrow-in-Furness

Thanks for your comments on the magazine. Regarding your query on sustain units, I am very surprised your music dealer told you none of them are any good. There are quite a few excellent sustain pedals on the market, being a case in point. I am not sure which kind of sustain you mean, as the term is often misused. There are two basic types of pedals which will give you sustain - one is the fuzzy sustain usually associated with fuzz and distortion units and one is the pedals which give a clean, undistorted sustain. The Big Muff pedal is the fuzz type, whereas the Coloursound unit is "pure" sustain. It's really just a case of trying all the various models available.

RORY



Rory's into music and gigging. There's not a day goes by when he doesn't play guitar and he's studiously avoiding the normal pitfalls that beset successful Rock'n' Rollers. We talked with him around the time of an Albert Hall concert in London and we were able to attend the soundcheck to see the band routining to beat the dreaded Albert acoustics. On the check Rory was faithfully sticking to a really old Fender combo amp which insisted on playing up. He had a little trouble from his treble boost unit which was cradled in tin foil to avoid screening problems and sat on top of the amp. The final sound he wrung from his much loved but battered Stratocaster was phenomenal. Equally phenomenal was the sound Rod De'Ath was getting from an Arbiter Auto-Tune drum kit. Music biz executive Mark Goodwin had brought the kit down to the Albert at Rod's request and, as Rod said, the sound was "fucking amazing." After the usual problems the band settled down and played an exceptionally good gig.

Have you changed any of your equipment recently?

Well, I've still got the Fender Bassman amp with four 10" speakers. I've got a spare Fender Twin, which has two 12"s, but it's the old style without the reverb. That's in case the Bassman breaks down but I kinda like the Bassman tone. I still have the AC30 and I've got this Magnetone, which is not a very well-known American make. It's got a very fast tremelo on it — almost like a Leslie effect — with a long tubular bar thing. When I got it, the guy told me I'd have to get the valves changed so I hung on to it for months, but it's only this week that I've got it sorted out. It looks a bit like a Selmer. There's two Jensens in the back, it's got tremelo, reverb and the tremelo flickers when it's on. It's a bit fancy but it's a nice little amp.

How's the Strat?

Oh, it's great. I had it overhauled in L.A. because I thought it was getting a bit beyond it, but this guy took it apart and fitted a new nut, new machine heads, straightened out the neck a bit, new screws in the pickguard and put it back together again. Since then, it's been working great.

It made a nice album cover.

Yeah. It was the "eleventh hour" sleeve that we tried. Luckily, the photographer took some nice close up shots and they looked really atmospheric. So we went along with that and it came out great.

For normal tuning, you only use the Strat. Does this cause you any tuning problems during a two-hour set?

Oh, it holds up pretty well. I mean, I bend some of the strings really crazy sometimes, so you're bound to end up tuning up after a couple of numbers. Some guys actually bring on two guitars and change over halfway through the set, but that's probably gone out of tune anyway with the lights and the heat.

How do you tune up in the dressing room?

Harmonica, usually. Bass and guitar to harmonica. We didn't used to bother with a tune-up amp, but we've got one in there now. It's not essential.

Have you got a good ear?

I think so, yeah. In lots of cases, you have to be confident in your own ear. It's a psychological thing. It's like depending on these strobo-tuners — that's alright if you've got, like,

continued on page 20



RORY



from page 19

ten guitars to use on stage and the roadie has to do it. But I really think that's bad news. It's alright if you're Bo Diddley or Keith Richard — they use loads of guitars on stage — but it's something you've got to learn yourself.

Who does your repairs for you?

We've got a fellow called Ray Elgy who works in Shepherd's Bush. He does a lot of the repair work. It depends. If you're on tour, you have to depend on who's available. I tend to get a lot of repairs done in the States. Maybe that's because American tours are so concentrated and you need to get repairs done on the road. You often meet guys on gigs who happen to be guitar repair men who say! 'Hey, have you ever tried doing this with the guitar?' You might be lucky to have a day off, so you give them the guitar and they come back the next night with it. I don't like to fool around with the wiring, but Ray does most of the odd bits of repairs for us. It's only when you try out things that you find out. Like on the Telecaster, I've got an out-of-phase switch on that. I had that done in the States and I switched round the bass position pick-up to the Strat pick-up because the bass one is a bit thin.

How pleased are you with the album?

It's the album that's lasted the longest, in terms of satisfaction, for me. I still think it's the strongest album all round. It's got the best sound and the band are playing the best on it. *The album's got a very 'live' feel to it. How did you achieve that?*

Well, there was a two year gap, which gave me a chance to sit back and pull the other albums apart and see what was right and what was wrong. There were a lot of good things about the other albums. I stand up by those, but we tried a few different things. We put the drums outside the drum booth for instance. We spent weeks rehearsing the songs before we actually recorded them, so by the time we recorded them we had them off well. It was Wessex Studios and three quarters of it is carpeted and the other bit is tiled, so we used the tile place and screened it off slightly, so we had the quality plus the ambience thing. I don't think all the technical changes we made had all that much to do with it. It just sort of swung anyway. Also, I wasn't adverse to re-doing a vocal this time. Before, I used to be very insistent on doing live vocals and live lead guitar.

Do you always record the vocals at the same time as the guitar?

Yeah, I had this idealistic thing, which I still stand by to a great extent. Even if the track sounds just 99.9% right, sometimes a live vocal gives it that . . . it sounds like it's people playing live. Sometimes, with this strict approach, things can suffer. To get a good clear vocal, you'd have to cut down on the drum volume a bit, and stuff like that, so we compromised a bit. It's taken a lot off my shoulders to have to do a perfect lead guitar and a perfect vocal and for the band to be perfect as well. But there are some tracks that are completely live on the album and most of them are pretty live.

All we did was to take a slight step towards using the studio to our advantage — maybe double tracking a bit of organ or rhythm and lead guitar. You see, even if everything was right but you don't have that "zing" there, then the album won't be good. Let's put it this way — after making *Against The Grain*, I think we can only improve on that sound now. But I'm not going to become super-sophisticated in the studio, I'm still going to keep it rough, but not so rough that we lose quality.

Also, we taped it and kept it well within the twenty-minute thing. On one hand, you're trying to give the people value but then you take up too much room on the record, so you cut down your volume. It's one of those things, you know. I hate bands who do 15 minutes a side. I think that's real bad. But I'm just glad that this album has more "zing" than the others, but I still have a soft spot for the others. *You produced the album. How comfortable are you in the producer's chair?*

Well, for a start I was working with a great engineer — Robin Sylvester — and he's A1. I've worked with him before and he's caught us at gigs so I can leave a lot on his shoulders. I'm not super-technical. If he does something, I know what he's doing. Really, I try and stay in that little vacuum between being instinctive and saying 'I picture this thing this way'. I have a

very strong image of what I want the song to sound like, but if he comes up with an idea, I'll always listen. That'll be the argument for all time — what is a producer? On one hand, it means an awful lot of credit for the engineer and on the other hand, it's the guy who sees the sounds he wants.

Do you record at the same level in the studio?

Just about, yeah. It depends on the sound. If you want to get a clean sound, you cut it down a bit. We set the stuff up in a circle more or less, and it's pretty loud but not earth-shattering. Just enough to let the amps cook. *When you're writing, do you use a cassette recorder or do you have a 'home studio'?*

Well, I recently got a reel to reel, but I haven't used it for writing yet. We've got access to the garage underneath so I'll probably do some rehearsals there. Normally, I just use the cassette player. If it's something I've got to work on, I can go over and over it playing it back on the cassette. Normally, the songs are very strong when they hit me. The only time I have to put it down on the cassette is when the music comes first and I have to work on the lyrics.

Do you play a lot off stage?

Yeah, it depends how much we're working. In the States, I play in the hotel or jam a bit. Sometimes, there's only enough time to have a little play in the dressing room before a gig. *What's the longest time you can go without touching a guitar?*

A day is my limit. If I'm stuck in a city somewhere and the gear has to fly on and I can't get my hands on a guitar, I go nuts. It happened to me once or twice and I really felt like the guy in Peanuts without the blanket. I have to go down to a music store and play for half an hour. It's like a real hunger. I used to bring a Martin around with me but now I've got a tune-up amp called a Dwarf. It's like the Pignose, but you know the way the Pignose is very fuzzy — this one's dead clean but you can fuzz it up if you want. It's good because it's one thing rehearsing with an acoustic but the electric is such a different character. You have to work on both of them. Sometimes, you can't write on an acoustic and vice versa. But I have ended up with some crazy situations whereby I wrote an acoustic number and it ended up as an electric number. 'Sinner Boy' was one like that. *How do you spend your time when you're off the road?*

Well, I'm a guitar nut anyway so I'm always visiting music stores and getting my guitars fixed. I read a lot and do a bit of drawing and I'm a bit of a movie fan as well. I don't have any one real hobby. When I get home, there's always so many records I've missed out on, and I try and see a few bands and visit a few friends. There's lots of little things to keep you busy. *What's the longest amount of time you've spent off the road?*

Probably about a month, but then I'd be writing during that time. I wouldn't mind going off the road if I could play but in Europe, when you're off the road, it really is off the road. In America, there's lots of clubs and things going on.

Do you find time to jam a lot with other

people?

Not as much as I'd like to. It goes through phases. Some tours, you bump into a lot of people and there's a lot of jamming going on, and sometimes there's a long stretch without. That's a pity. It's because the rock scene has become so streamlined and organised. It's a pity but there you go.

Has the band got that empathy between them now that enables you to change a number around halfway through?

Oh yeah. I wouldn't change key or anything like that, but I often change numbers and arrangements about a bit. It's that E.S.P. thing going on. But the stuff I play has always been pretty instinctive.

Have you seen anyone recently who have impressed you?

Not in quite a while. I saw Bruce Springsteen in the States a while ago. He was good in relation to all the hype, but I haven't seen anyone new who really murdered me altogether. There's a lot of interesting bands but not really new. Like Little Feat aren't a new band — they've been going for years.

What do you think of American musicians?

I think it's levelled out a bit now. People used to say they always had the best players but there's a lot of mediocre bands as well. Being American doesn't automatically give you the licence to be raunchy.

What's next for you in the way of tours and recordings?

Well, after the American tour, we are going to do a fairly extensive European tour in March and then do the next album. It'll be out probably in August or maybe just before the summer. It'll be another studio album definitely. We might record it in the States in fact. I'd like to try some tracks in the States, just to see what happens. Something obviously happens to some people when they record in the States.

Out of all the studios you've worked in, which do you prefer?

Well, the last album was done as Wessex and it's really good there. It's a nice big spacious room.

Do you prefer large studios?

Well, at least on ground level and space. I don't like rooms within rooms. I like a room to have been a room at one time. Wessex was in fact a church hall at one time. It's been totally converted into a modern professional studio but you still know it was a room where people were. I don't know if that makes any difference but it must do.

I know you hate being called "hard-working Rory" but that fact remains you work a hell of a lot more than most other bands. How do you manage to keep fit on the road?

Well, you're supposed to get eight hours sleep. I do that if I can but it's not very often. I move round a lot on stage. I make sure I can get a bit of a walk now and then. It loosens up the old muscles. I like walking a lot, so I make sure I don't sit down and watch T.V. all day. Between that and playing on stage, it keeps you more or less fit. I never have big meals before I go on stage because that usually makes you sluggish. □

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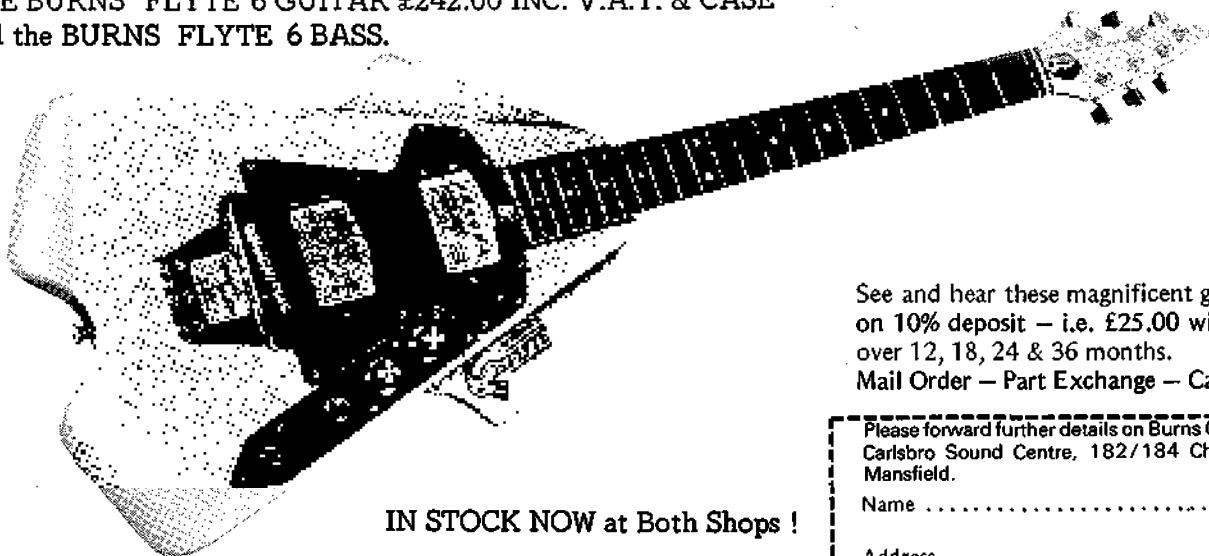
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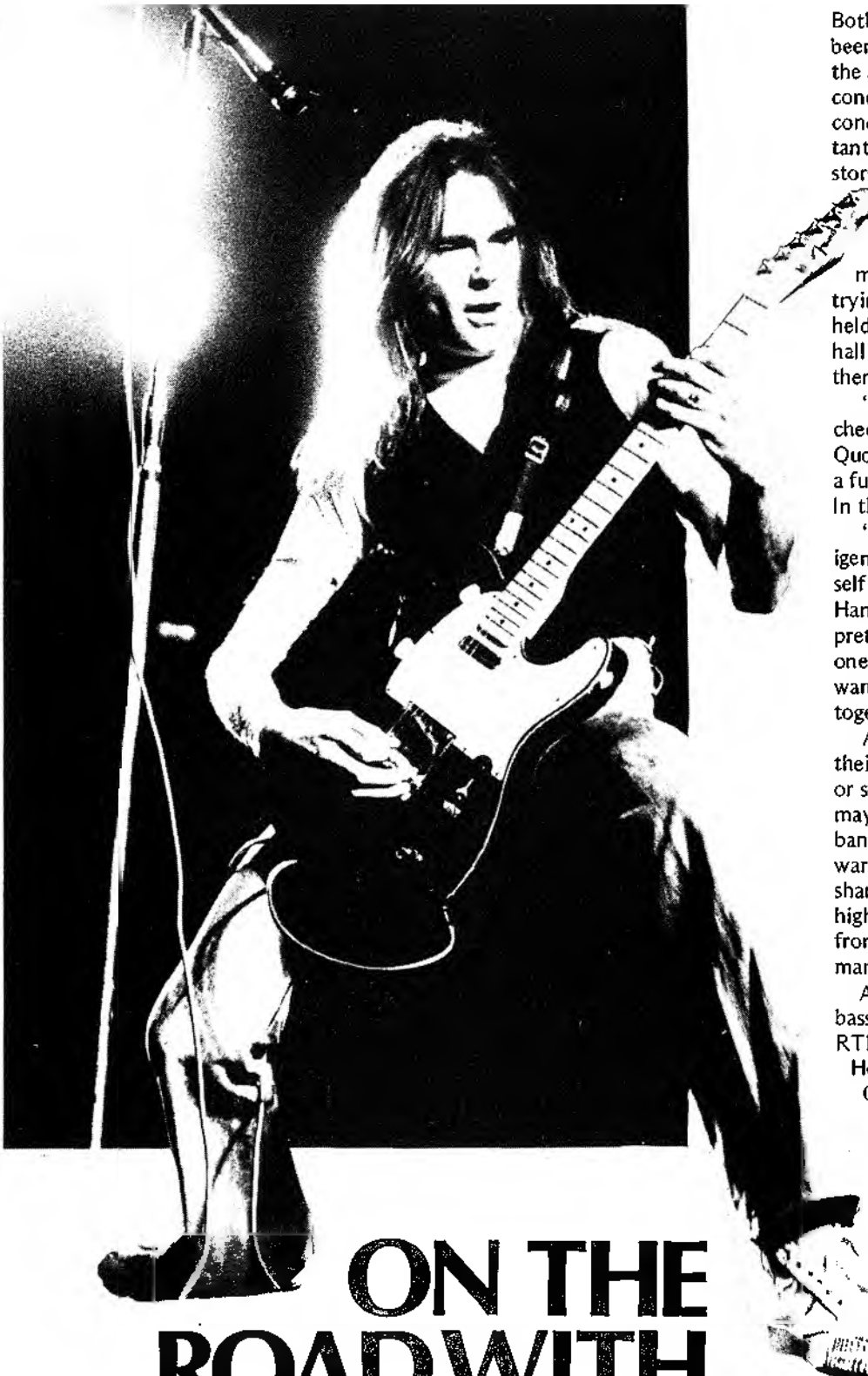
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ON THE ROAD WITH STATUS QUO

by Ray Hammond

Both of Rick's Acoustic cabinets had been playing up. The road crew had spent the afternoon battling to replace flapping cones with new drivers in time for the concert and one of the promoter's assistants was vainly ringing round Paris music stores trying to hire a couple of Acoustic cabs for the gig. Outside the Palais Des Sports, the crowd waiting to get into the Status Quo concert were mingling uncomfortably with the crowd trying to get away from an equestrian event held during the afternoon in an adjoining hall and the Gendarmerie were keen to let them in to solve the problem.

"We've got to have a fucking soundcheck", yells Parfitt at Bob Young — fifth Quo and tour manager — "We can't have a fucking soundcheck if the mob's in." In the end, the soundcheck is abandoned.

"The one thing we really envy is intelligence," says Francis Rossi enjoying himself hugely by recounting Quo's visit to Hammersmith to see Queen. "They're a pretty intelligent bunch really." (Someone tells Rossi that Patrick Lichfield wants to photograph Quo and Queen together and he creases up.)

Average Status Quo are at the start of their European tour. They're a bit rusty, or so they keep telling everybody, and the mayhem backstage is a fact of life the band have to live with. From 7 p.m. onwards the energy levels begin to escalate sharply. The boys are pushing towards a high that will finally get them on stage in front of 5,500 people and they get more manic as the flash point comes closer.

At 7.30, manager Colin Johnson and bass player Alan Lancaster leave to visit RTL promotion, in the centre of Paris.

Here the band are to be presented with a Gold Disc for LP sales and there's been much argument over who should go to get the award — no one really wants to bother. Eventually Alan accepts it, says a few words and it's back to the Palais. Nutz are supporting Quo on this tour. They're a recent signing to the Quo stable and the band play an excellent set of raunchy rock that winds up the packed audience for the treat to come. The

French publisher has provided the spread in the dressing rooms. There's beer, lager, crisps, nuts, pink champagne and everybody backstage must have a drink in his hand.

Phonogram have arrived. The multinational Dutch based corporation feel Status Quo important enough to dispatch chief executives from Amsterdam and the dressing room is filled with a constant stream of well wishers who smile at the caustic comments which usually greet them and offer body talk designed to make friends.

continued on page 25



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Rossi, Parfitt, Lancaster and Coghlan are really warming up now. Repartee reigns and much talk is of the new band Art Nouveau and The Backdrops who are threatening to break onto the international scene in a big way. Rossi and Young are composing an ad for *International Musician*, looking for an average bass player to join the band. "Must have own van, P.A. and a home recording studio would be useful," dictates Rossi to Young.

It's Rossi who's the real brains behind Art and the boys. He was instrumental in fixing Stanmore Stanmore-Stanmore to play intelligent lead guitar with the band (despite Stanmore-Stanmore's reputed desire to join Meher Baba) and he personally flew in Cory O'Grapher from Connemara to play good looking drums.

Someone smiles at me, they think I might just be one of the band, and the shuffling, introducing and drinking goes on apace. Rossi's up there with all the boys clowning and laughing but from a quiet corner seat it's possible to see him check the time at intervals before sharply getting the band together and disappearing into the next room for tuning up.

As he talks, he's been pulling his Fender Rock'n'Roll strings to loosen the new stretch and now he's ready to plug in to the little WEM practice amp that sits ready in the small room next to the main dressing room.

The dressing rooms crouch under the sloping floor of the main seat area. Above, the fans are stamping their feet in unison demanding Quo; below, the band spend 20 minutes getting in tune.

At last the new speakers are in Rick's Acoustic cabinets and he gives the crew strict instructions where he wants them placed on stage. Now the band slip into overdrive in preparation for their act. One minute the dressing room is crowded

with people, the next Bob Young has kindly but very forcibly emptied the place to allow the band to change and prepare themselves for that leap on stage.

Out front, the audience have been listening to records for three quarters of an hour. The darkness is intense and as dry ice begins to swirl out in quiet, almost ominous wreaths, the crowd send up a great cry and 2,000 lighters and candles flicker into life, competing with the dim stage illumination.

A short pause and the band are on stage. The roar goes on whilst the three front liners find their leads dangling down the front of their cabs, plug in and decide which mike is theirs, while Spud adjusts his drum heights and angles.

They look at each other, this band who have been together nearly 14 years, and they're off. Nobody counts 1-2-3-4-, they're just in and together.

Parfitt's tuned to E and the 12 bars go on and on. This is communication at its clearest; four people are transmitting pure rhythm to five and a half thousand who are responding with joy.

Rock'n'Roll is a common language and the 12 bar is the common denominator of the dictionary. Quo are so tight there's not room to slip a cross beat between verses and they're as exciting visually as they are musically.

Halfway through the set and Rossi's left hand must be getting tired. There's no E tuning for him, but major chords all the way with the little finger flicking out with a mechanical regularity that makes your wrist ache for him.

Quo don't waste time slipping in down tempo numbers for breathing space. There's one slow intro and that's the only respite there is.

Bob Young's changed into black T-shirt and jeans and he stands by the side of the stage directing all stage support

control; only the harmonica gripped in his right hand reveals he's about to play a far larger part in the performance than any other tour manager would. Into "Down The Dustpipe" — one of the numbers he's written for the band — and he's on stage, right leg flicking in time just like Elvis and harp clamped over the mike.

The gear's been working very well tonight despite the Acoustic hassles. The battered WEM P.A. (powered by Amcron amps) is performing beautifully although the Eliminator monitors aren't really giving enough back to the band.

Coghlan's the only one in trouble. The top hi-hat is working loose and despite several attempts by his road manager to control it, one number is sans hi-hat with a snare beat filling in. Next number and his 16 x 16 tom-tom is collapsing, one leg retreating into its fitting. That's fixed and he thunders on, watching the remainder of the Premier outfit carefully (most of the hardware is Rogers).

One of Parfitt's cabs hasn't been positioned correctly. They have to be angled slightly to stop phase cancellation and he has trouble getting anyone to move it for him. In the end, photographer Bob Ellis obliges and Parfitt can bob unworried.

Stage movement has always been an important part of Quo's act. They rush from side to side avoiding each other with the ease of much practice, leaving their leads in a spaghetti heap in the middle of the stage.

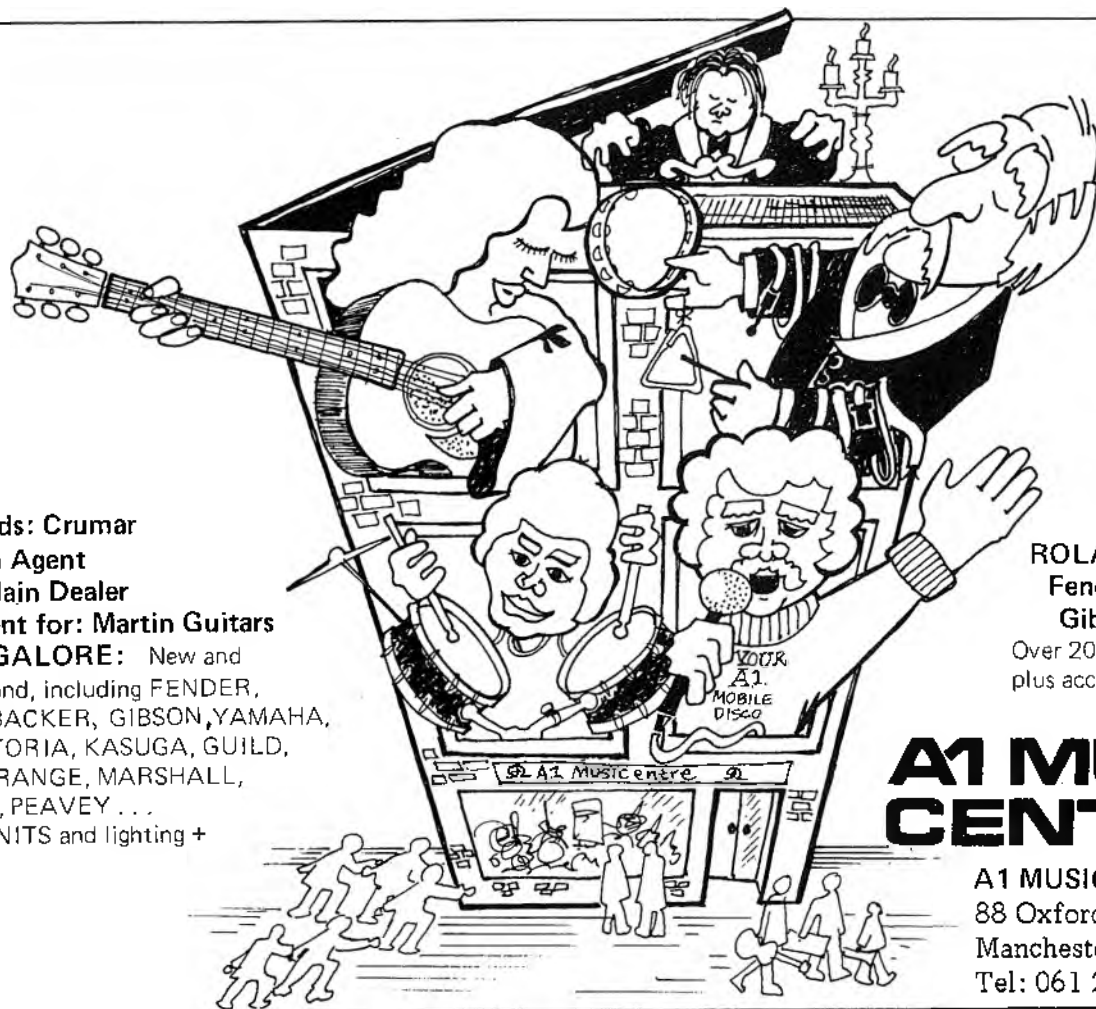
At the end of the set, the band force the crowd to wait for over 11 minutes before they're back for their encore.

"We don't have any set way of deciding how long before we go back for an encore," says Rossi after the show. "We left them over 30 minutes once and they were starting to make trouble. We usually just sit in the dressing room and someone says: 'Right are you ready?' and then someone says: 'No, give it a bit longer'".

It's "Bye Bye Johnny" for the encore and the audience need little encouragement to join in. Eventually they take over the song and Rossi and co. stand back, arms folded to listen to the really amazing sound of thousands of French voices singing the right lyrics. Only Coghlan keeps the beat.

Two hours later part of the band are in the Crazy Horse Saloon, one of the world's most expensive night spots where the first drink is £10 (have what you like) and a bottle of champagne is £20. Some of the band are back at the hotel in bed and two chauffeurs stand swinging their arms against the chill night of the Paris streets. Waiting. □





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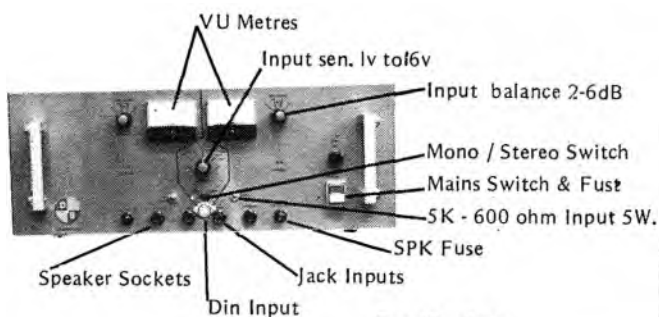
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ALBUMS

The Bothy Band: Mulligan LUN 002.

The Mulligan label? . . . This is the first album by The Bothy Band and it's also the first I've heard of them, but by God are they good. It's like a breath of fresh air when you hear an ensemble as tight as this on an independent label. Consisting of Matt Molloy, Paddy Keenan, Michael O'Domhnaill, Tommy Peoples, Donal Lunny and Tríona O'Dumhnaill, The Bothy Band are a group of extremely accomplished musicians who put across a fine blend of traditional Gaelic music. There are no less than 27 titles on this album, some of which have been compressed into medleys of three or four songs on one track. Between them, they play a multitude of instruments — most of which are utilised on the last track "The Salamanca/The Banshee/The Sailor's Hornpipe". Most of the material is in instrumental form, apart from "Do You Love An Apple", "Pretty Peg" and "Is Trua Nach Bhfuil Me In Elrinn," all of which contain beautiful vocal performances from Tríona and Michael O'Domhnaill. Instrumentally, The Bothy Band are amazingly tight — particularly so on "Julia Delaney" which starts with a solitary fiddle, followed by flute and then the rest of the band. Paddy Keenan excels on "The Rainy Day" and "Craig's Pipes", demonstrating the delicate art of playing Uilleann Pipes, while Tríona provides some beautiful harpsichord parts on "The Humours Of Lissadel". My personal favourite track on the album is "The Navy On The Lone" which closes Side One. A fast and furious jig, it can't fail to cheer up even the suicidal. The album is well worth a couple of quid, and almost worth a trip to Dublin to see the band.

Produced by Donal Lunny and Michael O'Domhnaill. Engineered by Pat Morley and Keith Mansfield. Recorded at Dublin Sound.

Eamonn Percival

Chilliwack: Rockerbox. Sire 9103 250 De Luxe.

Chilliwack are a new band from the Sire stable. The pressing I was given is bad: the last track on the first side kept stopping and starting and there were bits of noise all the way through, which I'll blame on the manufacturers. Even so, the rest isn't much to salvage. A sort of rock and rolling Hawkwind, and okay if you're very stoned and want primal singing and stereo heart-beat noises. The material is much of a sameness. The various riffs and vocals could be interchanged, track for track, with little conceivable difference. Lots of heavily laboured and ponderous percussion and bass work. The intro to each track is hopeful, some speedy guitar and you think "Oh A Bit Of Rock And Roll"! Then it deteriorates. Lots of energy but loose. It doesn't sound as though they're listening to each other. There's little to distinguish them from a hundred other bands, — except that someone recorded them.

Produced by Craig Leon and Richard Gottehrer. Engineer: Neil Ceppos.
Elaine Cooper

Bob Dylan: Desire. CBS 86003

He sings about injustice and about love with the same compassion and power. The first track is "Hurricane", innocent Reuben Carter imprisoned for murdering three men. Dylan says he didn't do it, says he was framed by the police. Believe him, Dylan bares his own soul so remorselessly that it is impossible to think that he is singing something untrue. His strength, Dylan's energy seems inexhaustable. How many songs? How much music and yet he goes on producing. A phenomenal output. Every album exposes a little more Dylan. He keeps right on bleeding and laughing and it keeps on coming. Waves of nostalgia. "Your loyalty is not to me but to the stars above." His voice is like a pumice stone. He can't sing and his voice and revolutionary fervour grates on otherwise quite rational nerves. So much passion and emotion. I started listening to Dylan about two years ago. A friend was totally obsessive about his music: that sort of obsessiveness inevitably generates some kind of curiosity. So I listened some more, and realised that his music is capable of totally enveloping you. It seems presumptuous to write about him. Back to this album. Lots of excellent musicians. Scarlet Rivera/violin. Dem Cortese/mandolin. Howard Wyeth/drums. Emmy Lou harmonises. Nice sounds. The album lasts for nearly an hour. Last track is "Sara" "sweet virgin angel, sweet love of my life" "staying up for days writing sad-eyed lady of the lowlands for you." "Loving you is one thing I can never regret." Harmonica and percussion intro. Violin accompaniment makes the song more poignant, bitter sweetness. Humming his songs and quoting his words doesn't convey the atmosphere his music generates. Relate Dylan to what? You have to listen.

Produced by Don Devite. Engineered by Don Meehan. Mastering by Stan Kalina.
Elaine Cooper

Limey: Limey. RCA SF 8463

Could this band be the new Bruce Springsteens? Are they the future of rock'n'roll? Well, not exactly. They are, however, a damn good band with a damn good debut album. A new signing to RCA, Limey are a five-piece who have yet to play live but, judging by this album, the transition from studio to stage should not pose too many problems. Limey are: Brian Engel (lead vocals), Ian Kewley (keyboards), Dave Bowker (bass), Robin Le Mesurier (guitar) and Mac McInerney (drums) and B.J. Cole also makes an appearance on Dobro and pedal steel. Although the band are British, the bulk of the material is very country-flavoured — almost a cross between The Band and Head, Hands and Feet. The Band's influence shows particularly on "The Man Who Killed Grant Tracy", while "The Stairway To Welfare Island" sounds not unlike Albert Lea and Co. Apart from B.J.'s magnificent steel playing, it's worth listening to Robin's tasteful guitar lines and Mac's faultless drumming. Robin particularly shines on a track called "A Patchy Sky" while Mac's Purdie/Jackson style is in much evidence

throughout the album. "Winning Fives And Losing Tens" is a really authentic-sounding country number written (as are all the tracks) by Engel, with a simple but effective melody. Lyrically, the best track, for me, is "Kensington Cowboys" — a tongue-in-cheek song about the Kensington "trendies". The only weak part of the album would seem to be Engel's vocals, which come over as a little unsure and slightly irritating, but all in all a good debut album from a very good band.

Recorded at Roundhouse Studios. Produced by Peter Gallen. Engineered by Mark Bearnsey.

Eamonn Percival

10cc: How Dare You. Mercury 9102501

A vital album for the band, it either confirms their massive promise shown on "The Original Soundtrack" or unmasks that superb album as a fluke. There was a strong sense of the unreal in that album, and in surpassing it, the band have stepped into the surreal and at the same time, because of that fact, into a new league which no longer insists they're only as good as their last hit. With albums as good as "Soundtrack" and "How Dare You" under their collective belt, the band can rely upon extended superstar status and it is to be hoped that the charge they received from the success of "Soundtrack" will be repeated and will push them on to make another album as good as this one. Hipgnosis — long elite sleeve designers — have been given a record to parallel their often surreal work and the telephone images snatched from real life and crystalised memory pictures we all carry is a strong echo of the style of music the band obviously decided on before collecting these tracks together. One of the strongest feelings from "Soundtrack" was of continuity, and the same applies to this record. By comparison to the other tracks, the album opens weakly with an instrumental, followed by "Lazy Days", which almost serves as an overture for the delights to come. "I Wanna Rule The World" is a song that is unconventional in musical construction and which is filled with images of juvenile power hunger. It could be a satire on union struggles, it could be memories of youth — you decide. The delightful "I'm Mandy, Fly Me" tangles together the twin fantasies of air crash and ultimate-woman taking in a web of imagery which rings bells rarely heard and reveals the lust and death relationship. "Don't Hang Up" is about the end of a relationship. He's calling — she's listening, and in the words that come lie tiny paintings of lives and errors most of us will recognise, sewn together with the musical magic that 10cc use as their pattern base. The music on the album's superb, but that goes without saying. There's something very real and important happening between these musicians and I would guess it will go happening a little while yet. 10cc will become an extremely important band.

Produced by and engineered by 10cc, recorded at Strawberry Studios.
Ray Hammond

TEST ON: *Cerwin Vega A1800-1 Dual Slave Amp*

DATE *January 1976*

PRICE *£550 (£450 w/o VU Meters) Ex VAT*

TEST BY *Bruce Gibbs BSc.*



INTRODUCTION

Americans take pride in doing things in a big way. Evidence of this is the specifications of Cerwin Vega's mighty power amplifiers. The A3000 and A30001 are rated at 700 + 700 watts and their "little" brothers, the A1800 and A-1800 1, at 400 + 400 watts.

The 1800 1, the subject of this report, is a two channel slave amplifier designed for standard 19 inch rack mounting. Feet are fitted so that it can be used free standing if required. The facilities provided are slightly more comprehensive than usual. Each channel has a switched filter which will let the amplifier pass either a full band width signal, bass only or treble only. With this built in cross-over, one

channel may be used to drive treble speakers and the other to drive bass units without having to have stray boxes of "bits" in the line.

Large, illuminated output meters, independent volume controls, separate D.C. rail fuses for each amplifier and output indicator lamps are all provided, together with a mains indicator light and on/off switch. All the input and output connections are made to the back of the unit. The inputs are connected to both jack sockets and phono sockets and the outputs are terminals which will also take standard 4 mm. plugs. The power cable is of the permanently retained type.

CONSTRUCTION

The mechanical construction is designed so that the whole case takes part in dissipating the heat generated by the output transistors. The transistors are mounted on two finned heat sinks which constitute the end plates and the heavy gauge front and back panels are thermally jointed to these. The strong bottom plate and the thin top cover are both perforated to permit free circulation of air through the unit.

The electronic construction is tidy and uncluttered. A large mains transformer and two large electrolytic capacitors fill the centre of the box and one amplifier is housed at either end. Each amplifier comprises two pick-a-back mounted, glass fibre printed circuit boards: one carrying all the drive components and the other, the power transistors and some large resistors. The drive board is "plug in

replaceable" for easy maintenance.

The quality of construction is good. All components are securely fixed, soldered joints are good and the wiring is tidy.

The top is fixed with self-tapping screw and spring clips. Though only a trivial detail, it seems a pity that a "consumer product" technique used in a fully professional amplifier allows a rattley top cover to detract from the otherwise immaculate finish.

A serious complaint found in many pieces of imported American equipment is the use of incorrectly colour coded power cables. Cerwin Vega have not only supplied wrong colour coding but have failed to provide an earth wire. The use of unearthed equipment is not a safe solution to earth loop problems.

PERFORMANCE

Parameter	RESULT	TEST CONDITION	COMMENTS
Power Output	605 W. r.m.s. 495 W. r.m.s. 410 W. r.m.s. 319 W. r.m.s.	@ 10% T.H.D. into 4 ohms. @ onset of clipping into 4 ohms. @ 10% T.H.D. into 8 ohms. @ onset of clipping into 8 ohms.	These measurements were taken using one amplifier only. Slightly lower powers will be obtained when both amplifiers are used together owing to loading of the shared power supply. The main's ratings are conservative. Very low levels by any standard.
Distortion	0.015% 0.01% 0.03% 0.02%	@ 300 watts into 4 ohms. Total harmonic distortion at 1KHz. @ 150 watts into 8 ohms. @ 3 watts into 4 ohms. @ 1.5 watts into 8 ohms.	
Noise	0.2 mV, r.m.s.	This is -106dB. below 400 watts into 4 ohms.	Very good.
Sensitivity	1.3 V. r.m.s.	For 400 watts into 4 ohms output.	
Capacitive load test	Good. approx 5% overshoot	2 uF and 4 ohm. load 10KHz. square wave	Very good.
Short Circuit O.P.	O.K.	Fuse blew after 35 sec.	Satisfactory: but no spare fuse.
Open Circuit O.P.	O.K.		
Thermal cut-out	Works		The thermal cut out will not allow 400 watts/channel continuously without additional cooling.
Hi Pass filter	-3dB	@ 160Hz.	
Lo Pass filter	-3dB.	@ 210Hz.	
Meter	0 VU	Equivalent to 270 watts into 4 ohms.	

CONCLUSION

The electrical performance, mechanical construction and appearance are excellent: Plenty of power, very low distortion, very low noise and good stability with capacitive loads.

Some people may find the sensitivity a little low but most mixers these days will drive at +6dBm levels.

The output protection is satisfactory. The thermal cut out prevented continuous sine wave operation at 400 W. r.m.s. but with music signals this is not likely to be a problem.

If it is to be used other than in a permanent in-

stallation, some thought should be given to the protection of the amplifier when being transported and how to protect people from the sharp corner of the amplifier when on stage.

The A-1800 1 can be used on 220/240 volts or 110 volt mains supplies. The transformer tapping is easily changed and can be seen through the perforated top cover. This could be useful to a travelling band.

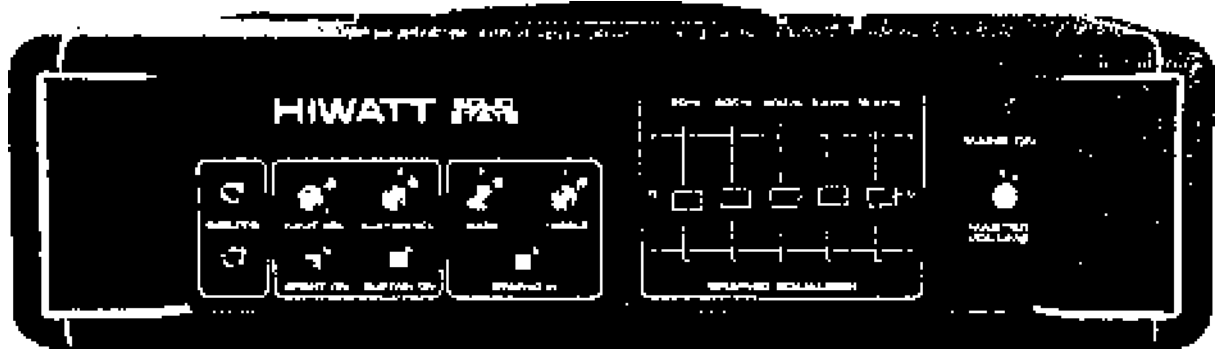
Apart from my dislike of wrong mains cables I consider this very good, professional quality engineering.

TEST ON: *HiWatt Model N.C.A. 108*

DATE *January 1976*

PRICE *£180-00 Ex VAT*

TEST BY *Bruce Gibbs B.Sc.*



INTRODUCTION

This Hiwatt solid-state amplifier stands out from the crowd by featuring a built in graphic equaliser. There are also some other distinctive features but let us start at the beginning.

Model NCA108 is a general purpose amplifier top with an output power of over 120 watts r.m.s. It has a single input channel with two input sockets of different sensitivities controlled by one volume control. A "bright switch" is fitted which cuts the bass to give the treble sound required for many lead instruments.

A "fuzz" facility is provided, but labelled as "sustain". This is controlled with an off/on switch and a level control.

The tone control system has normal bass and treble controls and a switch that adds in a five band

graphic equaliser. Five bands spaced at two octave intervals from 50Hz to 12.8KHz may not give as much control as normal graphic equalisers, which usually have nine or ten channels, but give far more control than most guitar amplifiers.

The remaining front panel controls are a master volume and an on/off switch. All four switches are of a neat push button design with illuminated centres.

The back panel carries two output sockets for driving load of 4 to 16 ohms, slave output socket, power amplifier input socket, three fuses, a mains voltage selector and a plug for the detachable mains lead. The provision of both slave output and power amplifier input sockets permits external effects units, such as echo, to be added in the chain.

CONSTRUCTION

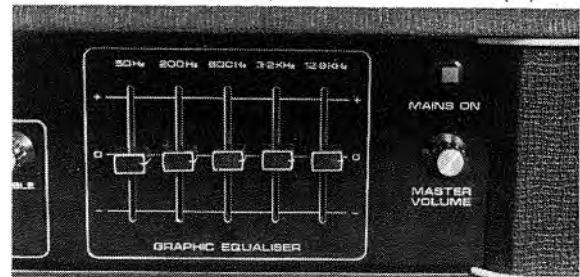
The main frame is an exceptionally rigid assembly of cadmium plated steel components which are bolted together. Strength is achieved by the unusual technique of bolting the mains transformer to both the back panel and a middle plate, so that the transformer becomes a structural member and not just a heavy weight which needs supporting.

This main frame, which carries all the electronic components, slides into a leathercloth-covered wooden sleeve which completes the assembly.

The front panel is very nicely layed out and the markings are genuine engraving! These days this is

very unusual. The resulting appearance can only be described as beautiful.

Most of the electronic components are on three separate glass fibre printed circuit boards. One carries the complete pre-amplifier; one, the graphic equaliser and the third, the output amplifier. The quality of components and workmanship is good and the design is rather more extravagant than usual in musical equipment. Attention to details like shake proof washers under nuts, ties on cable forms and the like should make this a very reliable amplifier.



PERFORMANCE

Parameter	RESULT	TEST CONDITION	COMMENTS
Power Output	170W. r.m.s. 127W. 195W. 136W.	@ 10% T.H.D. 4 ohm. load @ onset of clipping; 4 ohm. load @ 10% T.H.D.; 8 ohm. load @ onset of clipping 8 ohm. load	The 4 ohm. load causes current limiting while the 8 ohm. load causes voltage limiting.
Distortion	0.04% 0.05% 0.05%	@ 100W. into 8 ohms. Total harmonic distortion at 1KHz. @ 10W. into 8 ohms. @ 1W. into 8 ohms.	Very good.
Sensitivity	21 mV. 9.3 mV	I.P. 1 input required for 100 watts into I.P. 2 8 ohms. output	Satisfactory
Quiescent Noise	-72dB.	Referred to 100 watts into 8 ohms. Vol. = 0 Master = Max.	Good.
Noise referred to input	-94dBm. -100.8dBm.	Ref I.P. 1 flat E.Q. Ref I.P. 2	Fair.
Bright Switch	-11.5dB	Bass cut at 83Hz.	
Tone Control	+ 19.7dB. -17.5dB. + 17.6dB. -18.5dB.	Treble control at 12KHz. Bass control at 50Hz.	
Graphic Controls	+ 12dB -10.5dB + 12dB. -11.7dB. + 11.7 -11.6 + 11.7 -11.6 + 10.8 -11.0	50Hz. 200Hz. 800Hz. 3.2KHz. @ 12.8KHz.	Very good. Frequency response flat with all graphic controls central.
Capacitive load test	3% overshoot	8 ohm. and 2 uF load	Good
Short Circuit output test	O.K.	2 min. short circuit	No ill effects.

Switching in the graphic equaliser increases the quiescent noise by 7dB

CONCLUSION

This is the first Hiwatt amplifier I have tested and I am favourably impressed. The performance is very good, the construction quality is good and the controls are nice to use. Having a volume control, sustain level and a master volume makes it possible to go from fuzz to normal sound at equal volume by pre-setting the three controls and changing over with the sustain switch. This is far more convenient than the normal two control system.

I do not understand why normal bass and treble controls have been fitted as well as the graphic equaliser. The graphic is good enough to do the tone

control task without help.

The mains transformer has winding for 105v/115v and 215/245 volts. This is essential for bands who travel abroad.

The only points I found on the "debit side" were - that the case was difficult to remove and refit because one of the handle retaining nuts fouled the chassis and the screws which hold the rubber feet, wooden slave and chassis together were a little short. I think you will agree these points are trivial on an otherwise immaculate amplifier.

TEST ON: *Yamaha GX1 Polyphonic Synthesiser*
 DATE *January 1976*
 PRICE *Approx £30,000*
 TEST BY *George Gibbs*



Having spent more than two million pounds developing the World's first fully polyphonic orchestral synthesizer, Yamaha designers have produced the "Yamaha GX1". This machine is offered for sale at £30,000, but the price is not really the cost of making it, as no one can cost-cut a one-off such as this. The Large-Scale Integrated Circuitry alone must have cost a fortune to design and manufacture. Yamaha's chief demonstrator, Len Rowle, told me that the GX1 is really a test-bed for the new systems which will eventually find themselves inside other quite modest Yamaha instruments.

Most keyboard players have played one of the many monophonic (singenote) synthesizers currently available and some will have used a duophonic (two-note) version.

The GX1 has the equivalent of 16 separate monophonic synthesizers operating on each keyboard and one on the "Solo" manual and its portamento. In addition, the pedalboard has one generator which works through three channels. The amazing total is 36 "Voiced" synthesizers and the most realistically voiced electronic drummer I've ever heard.

CONTROLS

In order to "Manage" so many synthesizers, the average Ergo-gnome would be able, if he chose, to cover the entire area of Wembley Football stadium with knobs, levers, buttons, switches and other types of controls.

Fortunately, Yamaha's ergonomic experts are far from average and have devised a very straightforward control system for the GX1. This is, in itself, a remarkable feat of clear-minded objectivity.

MEMORY SYSTEM

All the various sections of the instrument have separate rows of ten "Preset" buttons, each of which selects a pair of "plug-in Memory capsules".

The 70 "Memory capsules" can each be individually programmed, with the aid of a separate remote control panel and a comparator unit, to reproduce almost any sound imaginable at the touch of one button.

UPPER MANUAL

Ten "Preset" selector buttons and a 1/1 + 2/2 switch chooses one (or both) of a pair of memory capsules. Each memory capsule comprises 26 variable resistors encapsulated with a plug-in connector. The resistors can be adjusted with a screwdriver and represent all the controls one would normally expect to find on a full scale synthesizer.

The "Remote Control" unit, previously mentioned, has a very clearly marked control panel on which one sets up the sound or effect one is seeking. By then unplugging the control unit from the GX1 and plugging it into a small comparator device, one can then set one of the memory capsules up to be exactly the same as the control panel. When this is completed, the capsule is then removed from comparator and plugged directly into the appropriate socket on the GX1.

To recall the sound instantly, one merely has to touch the correct memory button to rescue the exact sound without any fiddly setting-up.

Remote Control Panel

It is possible to use the remote control panel during a performance, but this is not really necessary, as most of its functions are duplicated elsewhere on the instrument.

LOWER MANUAL

The L.M. is as versatile as its upper compatriote, having an identical array of memories.

FACILITIES

In addition to the multiplicity of voice, equalisation and enveloping controls so far mentioned, there are an almost overwhelming array of other sound effects and tone modifiers included in this "Dream Package".

SPECIFICATIONS FOR GX-1				SOLO CONTROL LEVERS & SWITCHES		FOOT SWITCH CONTROL SELECTOR	
KEYBOARDS & TONE SELECTORS				Sampling & Hold: Pattern Selector Switch VCO (Voltage Controlled Oscillator) VCF (Voltage Controlled Filter) Sampling Hold Switch Sampling Indicator Lamp		Upper Sub Oscillator Cancel Lower Sub Oscillator Cancel Rhythm Stop Solo Portamento Upper Portamento	
Upper Manual	61 keys (5 octaves)	C-cd	10 Tone Selectors	Ring Modulator: Oscillator Level Oscillator Speed Solo Manual Control Switch Noise Level Noise Color Normal - Modulation Mixing Lever			
Lower Manual	61 keys (5 octaves)	C-cd	10 Tone Selectors	Envelope: Attack Time Sustain			
Pedalboard	25 keys (2 octaves)	Cl-c	10 Tone Selectors	Pitch Envelope: Initial Pitch 1st Decay 2nd Decay Final Pitch			
Solo Manual	37 keys (3 octaves)	c-c3	10 Tone Selectors	Sub Oscillator: Function $\text{C, V, N, A, FL, S/H}$ Speed VCO VCF VCA (Voltage Controlled Amplifier)			
Portamento	13 octaves			Volume Solo Portamento Knee Lever Control Solo Portamento Switch Solo Touch Response: 1st Touch 2nd Touch 3rd Touch		OTHER CONTROLS Tuning: Upper, Lower, Pedal, Solo Wave Motion: Upper, Lower, Pedal II, Pedal II' Over Tone Preset Button ①, ②, ③, ④, ⑤ Over Tone Preset Selector Switch ① Upper I ② Upper I ③ Upper I Upper II Upper II Upper II Lower I Lower I Lower I Lower II Lower II Lower II Pedal I Pedal I Pedal I Pedal II Pedal II Pedal II	
TOPE GENERATOR SYSTEM, OVER TONE & MIXING				Solo Manual Control Switch Noise Level Noise Color Normal - Modulation Mixing Lever		Expression Dynamic Range Compressor Upper Manual Lower Manual Pedalboard Solo Manual Rhythm Section	
Keyboards	Tone Generators - Channels	Over Tone	Mixing Lever	Attack Time Initial Pitch Pitch Brilliance Volume Sub Oscillator Speed, VCO, VCF, VCA Vibrato Wah-wah Resonance		Expression Pedal Foot Switch Knee Lever Power Switch	
Upper Manual	8 tones, 2 channels	1st channel 2nd channel	1, 2, 4, 3, 6, 8 1, 2, 3, 4, 7, 8	UPPER SUB CONTROLLER Upper Touch Response: Vibrato Wah-wah Resonance		AUTO RHYTHM (14 rhythms x 3 variations) Selectors Rhythm March I, March II, Swing, Waltz, Slow Rock, Jazz Rock I, Jazz Rock II, Tango, Beguine, Rumba, Mamba, Bossanova, Samba I, Samba II	
Lower Manual	8 tones, 2 channels	1st channel 2nd channel	1, 2, 4, 5, 6, 8 1, 2, 3, 4, 7, 8	Random Signal: Sub Oscillator: Speed VCO, VCF, VCA Solo Manual Control Switch		Variation A Variation B Image Control Tempo Control Swinger Volume Balance Start Synchro Start Tempo indicator Lamp	
Pedalboard	1 tone, 3 channels	1st channel 2nd & 3rd channels	1/2, 1, 2, 5/2, 3, 4 7/2, 4	Upper Portamento Knee Control Switch: Upper Portamento Upper Sustain Sub Oscillator VCO, VCF, VCA, Speed		OTHERS Power Consumption 220 V, 600 W Measurement Console Width 160 cm Height 113 cm Depth 80 cm Weight 300 kg Bench Width 145 cm Height 67 ± 4 cm (adjustable) Depth 66 ± 4 cm (adjustable) Weight 60 kg Pedal Weight 27 kg	
Solo Manual	1 tone, 1 channel	1st channel	1/8, 1/2, 1, 2, 4, 8	LOWER SUB CONTROLLER Sub Oscillator: Solo Manual Control Switch Function $\text{C, V, N, A, FL, S/H}$ Speed VCO, VCF, VCA Lower Sustain Sub Oscillator VCO, VCF, VCA, Speed			
Note: In the Over Tone, the number 2 stands for the basic tone, which corresponds with 8' in the conventional tone lever system. Likewise, 1 corresponds with 16', 4 with 4', and so forth.							
STANDARD TONE COLOURS							
The following tone colours are already preset as standard in the factory.							
Upper Manual	Lower Manual	Pedalboard	Solo Manual				
1. Diapason I	Diapason II	Contrabass I	Diapason III				
2. Flute I	French Horn	Contrabass II	Flute II				
3. Clarinet	Saxophone I	Bass Clarinet	Saxophone II				
4. Trumpet I	Trombone	Tuba	Trumpet II				
5. Violin I	Cello	Contrabass III	Violin II				
6. Electric Piano	Accordion	Woodbass	Oboe				
7. Electric Guitar I	Electric Guitar II	Electric Bass Guitar I	Electric Guitar III				
8. Harpsichord	Harp	Electric Bass Guitar II	Electric Guitar IV				
9. Electronic Sound I	Electronic Sound III	Electric Bass Guitar III	Husky Voice				
10. Electronic Sound II	Electronic Sound IV	Electronic Sound V	Electronic Sound IV				
Note: The "Electronic Sound" as mentioned above, stands for a tone original in this instrument, other than the tones named after conventional non-electronic instruments. Therefore, it is not necessarily restricted to the tone which sounds electronic.							
OTHER CONTROL LEVERS & SWITCHES							
Keyboard Couplers	Lower to Upper, Upper to Lower, Lower to Pedal, Solo to Upper						
Pitch Bend	Upper, Lower & Pedal Keyboards						
Sustain	Upper, Lower, Pedal & Solo Keyboards						
Volume	Upper, Lower, Pedal & Solo Keyboards						
Brilliance	Upper, Lower, Pedal & Solo Keyboards						
Resonance	Upper, Lower, Pedal & Solo Keyboards						
Reverb	Upper/Lower & Solo Keyboards						
Total Volume							
Manual Balance							

When it was featured on television in the "Tomorrows World" series recently, only a few of the GX1's assets were revealed. Had the programme lasted several hours, they would have still been unable to demonstrate more than a small sample of this astounding instruments capabilities. Such is the complexity of this instrument and yet, most suprisingly, it is very easy to play. Because the task of "setting-up" is undertaken before one starts playing it, the GX1 is, in many respects, easier to drive than many of the modern organs currently on sale in our music shops.

In the past, synthesizer recordings have tended to use the flashiest and most dramatic "Electronic" sounds available. I'm pleased to see that they are now advancing to the stage where the synthesizer is used more as a new musical instrument and less as a gimmick.

This swing towards musical ideas and away from electronic trickery and excesses of keyboard technique is a sure sign that the synthesizer is maturing into a respected area where

orchestral arrangers are more likely to call for one in their scores.

The Yamaha GX1 is a very good way to display the synthesizer musical and technological potential in a play-able system and, as such, is a worthwhile machine in its own right. Flexible but never uncontrollable, it is frightening in that many of the sounds it creates are so realistic that I, for one, could not distinguish them from the originals.

CONCLUSION

Few people could afford to buy a £30,000 instrument, but this is not likely to upset Yamaha because the GX1 is really a demonstration of where the next generation of keyboard instruments are going, rather than a commercial product. The only word to describe it is 'Breath-taking'.

Keith Emerson has had this "Dream-machine" on loan and has asked Yamaha when they could supply him with one. Unfortunately, only one exists at the present time, so we will not be seeing E.L. & P. + GX1 for a while yet.



Martin D28

Retail Price £305.58

I am sure you all know what a D.28 looks like. This guitar and the similar D.18 and D.45 are considered by many prominent musicians to be the American dreadnought shape and styling.

The D.28 is a large, but relatively light guitar. On the review sample, the back and sides appear to be made from Indian or African rosewood, the soundboard is some form of spruce, the neck is mahogany, and bridge and fingerboard appear to be rather good ebony. All woods are of good quality. The measurements are as follows - Scale length: 645 mm. String spacing at the bridge: 54 mm. String spacing at the nut: 36 mm. Width of fingerboard at nut: 42 mm. Action as supplied: 2.4 mm treble/3.2 mm bass.

I did not feel free to adjust this guitar, which was on loan from a retail shop, but the neck and fingerboard are so good that, with a little fret work, the limit on low actions is probably the style of the player and the gauge of strings used. The frets are well rounded at the ends, and 1.8 mm wide by about 0.7-0.8 mm high.

Either my sample is thoroughly untypical, or recent D.28's seem to have escaped the desperate problems which still beset some D.35's. I shall need to see several more to be certain, but this sample appears better in too many ways for it to be entirely coincidence. The bridge saddle fits, the bridge pins nearly fit, the neck is straight (although I still have doubts about its long-term stability), the soundboard is just sufficiently convex to stay that way, and everything I can see inside and out is commendably clean and well fitted.

The lacquer finish lets it down. Apart from the fact that the relevant decision makers seem to have ignored the significance of the texture of a finish, as it affects a well known product's image, the neck and the body simply do not match. The neck shows signs of an attempt to burnish semi-matt lacquer, which has produced a sort of glossy finish. In addition, the finish used on the head and fingerboard seems to suffer seriously from poor adhesion.

If this is the patent polyester finish, I can't imagine why anyone should want a license to use it. It looks to me as if someone has omitted to prime the edges of the head and fingerboard, but whatever the reason, I would give it three weeks of professional use before it starts flaking. While on the subject, the lacquer edge around the scratchplate is crude, chipped, and filled with buffing compo. The problem is the same as ever, the design is the same, why is the finish not the same. Could it be that lacquer again?

If the answer is that it won't stick to scratchplates, and we know it doesn't stick to rosewood or ebony, how long will it stay attached to the plastic edge binding? This is all pretty serious, but apart from the odd scruffy fret end, and my experience with similar necks a few years old, I can see little else to criticise.

I have found it a common occurrence in recent large Martins, for both the saddle and the nut slots to be too high off the fingerboard axis. I have heard first-hand, from a member of the Martin family, that "most of our production of dreadnaughts goes to Country Music players and that is how they like it" (or words to that effect). If the high action is company policy, should the guitar not be adjusted to play in tune with such an action? Far too many are much too sharp at the octave. Some play in tune when the action is lowered, some do not. The relevant point is that if a guitar is set up in the same way as my sample (and I have seen much worse) the high action so distorts the accuracy of intonation that I fail to see how anyone at the factory could tell whether the fretting was right or not.

Finally, in my repair shop I receive on average one Martin per month with excessively bowed necks, mostly from the last ten year's production. I would appreciate a technically comprehensive reply from a Martin representative, concerning these problems, as I am frequently asked to correct them.

In all other respects, this guitar is greatly improved, both in workmanship and materials, on those we received from the production of the last two or three years.

I have criticised the instrument's faults sharply; I hope its makers will take note and put them right, because the rest of the guitar is

well designed and well made and compared with other imported American products, good value for money. Reputations must constantly be earned - if you sit back on them they tend to evaporate. I sincerely hope this is the beginning of a new era of Martins.

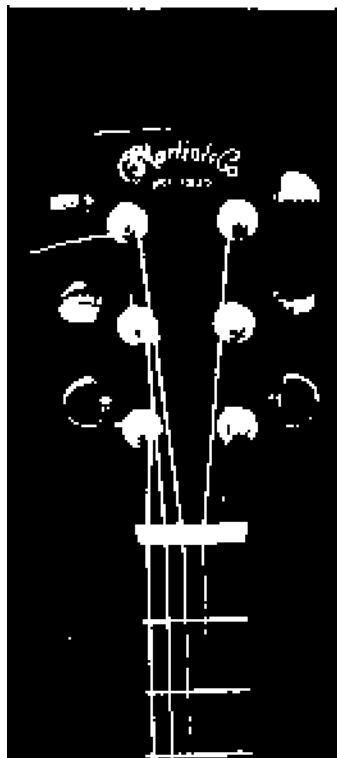
Comparison with other similar American guitars is a matter of personal taste, but I imagine the questions most readers would wish to have answered, are "is it worth the money?" and "how does it compare with a...?" (Insert your choice of similar-looking Japanese copy).

My personal answer to the first question would be, "This one certainly is. I have seen a few in the past which weren't; buy from a dealer who cares about his reputation and you should be alright."

On the question of comparison with any Japanese copy I have seen, THE MARTIN WINS OUT-RIGHT ON TONE AND DYNAMIC RANGE, and is about level with the best copies on finish. You can now pay about the same for a real D.18 or for a copy of a D.42/45, and the situation is becoming a bit silly. There is a whole section of industry geared up to selling us copies of the things we can't afford and it's time for utility furniture again.

Either save up (or borrow) for a real professional quality guitar, or buy the best undecorated copy you find.

If Martins would like to sell a few more guitars, how about some little Ditsons, adapted to the needs of impoverished English musicians - same sound, same wood, decent machines, minimum decoration, price the same as existing similar models. If it is uneconomical to produce obsolete models, why not sell blueprints of them? Goodwill is a strangely intangible commodity, and refuses to follow the ground rules; blueprints could be good for everybody.



Stephen Delfo

Ibanez 2663

Retail Price £160

This is a solid electric guitar of unusual shape and design. I believe it is an early production sample of a range of original-design Japanese solids soon to be released by Summerfields. It illustrates a growing opinion in Japan and amongst the more specialised English importers, that the "copy" guitar business is beginning to go over the top. There is almost a surplus of middle price/middle quality copies on the market, with the exception of a few on which there is a good price or some really distinctive feature, there is little to choose between them.



This guitar seems to combine parts of the images of several known instruments. Its mother was a Firebird and its daddy was neither an engineer, nor the proverbial fisherman's friend, but probably a left-handed Rick. It looks strange, but no more so than a Firebird or the Ovation solids, and it is comfortable to hold and play. The pickups have plenty of punch at the beginning of the note, but a rather middle tone on which you must make your own decisions.

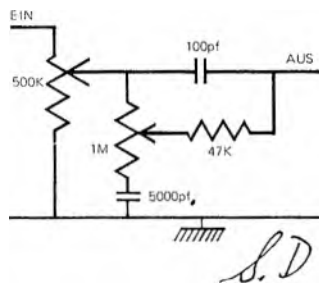
In general, I like it as a stage guitar, and for playing very loudly. At low levels, I prefer the tone of the Maxon pick-ups on Hohner's Sakai. There is not really anything seriously wrong with this sample, but it is rather roughly finished. As this has been well played, and is one of the first off the line, I would prefer to judge workmanship and finish when more of these guitars are available and in the shops. However, I do think the head is too thin and fragile.

If this is the beginning of the end of copying recent American traditions, please could we have proper screening at the back of the controls and wiring, and please could the tone controls be fitted with pots of an appropriate type to give smooth adjustment of the treble end.

Overall — a nice guitar, made sensibly from beautiful wood, but with minor teething troubles. However, at £200, it has a certain amount of competition from the second-hand American guitar market — in London at least!

The measurements are as follows — Scale length: 627 mm. String spacing at bridge: 49 mm. (Standard Japanese). String spacing at nut: 35.5 mm. (String well spaced). Neck width at nut: 43mm. Action as supplied: 1 mm. treble/1.6 mm. bass (Perhaps just too low, but it depends on the playing technique. The neck has a slight spiral warp on the instrument reviewed).

Da wir Schon von Klangfiltern sprechen — und Deutsche Musiker sind wohl noch stärker an originellen Klangreglern interessiert als die in andern Ländern — vielleicht wollen Sie mit diesem Volumenregler, der einen eingebauten Klangregler für das ganz leise spielen hat, auch noch experimentieren!



Mossman Flint Hills Rosewood Dreadn'ght

Retail Price £372

This guitar would appear to be competing for the same market as the Martin D.28, and the Guild D.50. I don't know very much about the Mossman company, except that Mossman used to work in the Martin plant, and that it seems everyone remotely concerned with the production of this guitar has signed the label. If this means that everyone in the plant knows what the end result is like, and what it's for, it must be the best production idea since round-topped fretwire.

This Mossman differs from the other two instruments mentioned in that a) it has an adjustable tension rod in the neck, and b) there is no coverplate on the head,

because the adjustment point is at the other end, inside, underneath the fingerboard. Definitely a case for a very long spoon! The neck and head therefore look something like Martin and work something like Guild. That can't be a bad mixture either. The nearest I could get to the shape of the neck at the back, would be a cross between the roundness of a new S.G. and the shape of an Epiphone Texan. (American, — not Japanese: alas, poor Epiphone).

The shapes of heel and head are blended prettily into the neck. All three seem to be made in one piece from straight-grained mahogany. Although the body is finished with a high gloss, the neck is (you guessed it) semi-matt lacquer, about which I have only one thing to say WHY?

The fingerboard is decent ebony with simple, neatly fitted dots. I don't like the head design. The machine heads are so placed that strings three and four touch rollers two and five; that is a very elementary mistake. The machine heads are Grovers and seem to work. The measurements are as follows — Scale length: 655 mm. String spacing at bridge: 58 mm. String spacing at nut: 38 mm. Width at nut: 43 mm. Frets: 1.8 mm wide and (average) 0.9 mm high away from the ends.

The neck and fingerboard are straight and rigid, and the action as supplied was 3 mm treble and 3 mm bass. It could certainly be lower than this, but like the Martin, the Mossman was on loan from a retail shop (Top Gear, Denmark Street) and I did not want to change it in any way.

The strutting inside the Indian rosewood body is reasonable, but neither the fitting nor finishing is really appropriate for a £350 guitar. The main weaknesses are untidiness under the fingerboard and the lack of reinforcement on the main cross-joint.

The bridge is simple but nice, and firmly stuck down. The bridge pins are plain nasty and their holes marginally too small. The saddle position would probably give a good compromise on intonation if the action were a little lower, but I can't see how anyone could have checked this properly. The top shape of the saddle in both planes is just fine, but the saddle itself is a loose fit in the bridge and so leans forwards. Didn't anyone notice that, either?

The nut suffers from some string "creak" when tuned, and neither the depth nor the spacing of slots are quite right, but overall, the action and playability near the nut end are good. The action becomes rather harder, further up the neck, but I suspect that lowering the saddle and adjusting the neck would improve this.

The frets are reasonably level; their top surfaces are finely scratched but should wear smooth quickly. The finishing on fret ends is just acceptable, but has a tendency to the sort of bevels which don't so much round over the fret end, as remove it entirely. Conse-

quently, the first string can sometimes fall off the edge of the fingerboard.

Somehow, in spite of these detail faults, the guitar manages to give the impression of very clean overall construction. Assessment of tone is a subjective thing, but my impression is of a slightly coy or veiled quality, with a combination of too much bass sustain and not quite enough bass volume. This guitar is not built lightly, and with luck, the sustain will stay, and the bass and treble ends will clean up with plenty of playing. If so, it could turn into a fine instrument, and I should like to hear one, after a year's use. This Mossman, like the Martin, is still well ahead of any Japanese copy, but its comparison with similar American guitars is more difficult. The company is new, and I am aware of the pressures, to get the first "paid" batches finished and shipped.

I think the fairest thing to say is that I prefer the very best of Martin's present production for tone and almost any Guild for reliability.

Viewed from another direction, if you prefer the character of average Martin tone to that of Guild (I don't), then the Mossman will get quite close to a Martin while having a more reliable neck, and comparable materials and workmanship.

This Mossman guitar was lent by Top Gear Retail, Denmark St., London, but they should be available (by direct import) to any dealer who wishes to write to the makers at: Mossman, Route 3, Strothers Field, Winfield, Kansas, 67156, USA. □



* ALL PRICES EXCLUSIVE OF V.A.T. *

Sakai Les Paul

I know that Japanese Les Paul copies are as many as the proverbial grains of sand in the desert, and there may seem to be little to choose between them, but there are differences, depending mainly on which Japanese company actually made the instrument. (Not which Japanese company exported it, or which English company imported it, or even what name is on the head.) I have not previously associated Hohner's name with Japanese copies, but they seem to have taken their time and chosen wisely.

The fretting, pick-ups and bridge, which are the really significant parts of a medium-priced solid, are rather better than usual, and while the good fretting could be my good luck, that could not account for the better design of bridge and pick-ups. Also, with the exception of the switch-mounting nut, the gold plating has a pleasing colour, adheres well and seems surprisingly thick. The pick-ups produce a tone which has neither the filtered treble, nor the punch at the beginning of each note, which one expects from an old original, but they are hot enough for almost any amp, the adjustments for balancing strings are effective (on some pick-ups they do very little).

The problem with the tone, (and you may consider it an advantage,) is that it sounds a little less like Clapton and a little more like the richness of a good acoustic. To put it another way, there is less middle to the tone. Many modern amps can compensate for this anyway. (The gap seems to be around 400 Hz.)

The machine heads are not economy Japanese Schaller copies, but gold plated cheaper ones, with pressed metal covers. They work well enough, but will probably need replacing in a year or so.

This guitar has the three problems most commonly found with middle-price copies.

1) The strings creak on the nut and the tuning is consequently less stable than I would like. It seems that Japanese makers insist on injection-moulded nuts, and use materials for this process which do not make adequate nuts. Either glass-filled nylon, or (preferably) Delrin would be much more suitable.

2) The fret ends have large, rough bevels which restrict the useful fret surface. At least this maker has realised his limitations and spaced the strings well in from the edges, although that is obviously not the best possible solution.

3) The tone controls do not work smoothly. I will insist on log pots for tone as well as volume.

Here are some measured details of the guitar. Scale length: 630 mm. String spacing at bridge: 49 mm. String spacing at nut 35 mm.

Neck width at nut: 42 mm. (This neck is a bit narrow for the extra edge spaces required by large fret bevels.) The action at the nut end was too high. Fret height: 0.7 mm (varies). Fret width 2.2 mm. Action as supplied: 1.3 treble/1.9 Bass. This was just too low to avoid buzzing.

This guitar is reasonably priced if you consider the gold plating, and the pick-ups, bridge and sustain are a little better than usual on similar instruments. Although the curved top is hollow, the blocking underneath is solid and in the right places, and I suspect this is responsible for the better sustain. If the ends of the frets were improved, the strings spaced wider, and the nut material changed, I would be quite pleased with it, and I would prefer it to some similar instruments costing £20 or £30 more. As it is, it still represents good value and Hohner are to be congratulated for getting their priorities right. It isn't your dream guitar or mine—but it's honest, it's a fair price, and with a few modifications, it will work well. Any decent guitar shop should be able to change two tone controls, and make a better nut. It also seems to have been checked pretty well: someone has actually initialled the check label, and from Hohner I believe it.



Colorsound Wersi Fuzzphaze String Machine

Retail Price £38.88

This is just one of the new range of effects pedals from Colorsound. Unfortunately, at the time of going to press, there were no photographs of the unit available, as the one we looked at was a prototype. As the name suggests, it is both a fuzz and phase unit combined. It measures 8" x 4½" and is 3" high (with the pedal depressed). There are the usual instrument and amplifier inputs located on either side of the unit, and rotary controls for Tone, Fuzz and Gain.

The speed of the phasing is controlled by the pedal sited (naturally) on top of the unit. As the pedal is depressed, the phase gets faster and there is a tremendous range, in terms of phase speed, via the pedal. The phasing sound itself is totally unlike any other unit I've tried. It's a really rich sound that seems to reach the pit of your stomach. Maybe that's the wrong way to describe it, but it's the only one that comes to mind.

Like a straightforward pedal, the phase part of it can be turned off by pressing the pedal down until the switch underneath is clicked off. The aforementioned rotary controls only affect the fuzz part of the unit. The fuzz control particularly impressed me — turned fully counterclockwise, it gives a very subtle distortion and, when wound right round, sounds like three fuzzboxes linked together!

The Tone control speaks for itself — from a smooth, bassy sound to a sharp, cutting treble. The Gain control is just that. It is a straightforward volume control linked to the fuzz unit. A click-down switch is situated just above these controls, enabling you to select fuzz, phase or both. Like all the Colorsound range, the unit is very durable and has two rubber pads underneath to prevent it slipping. E.P.

Retail Price £500

String machines are basically tamed synthesizers, pre-set to produce realistic string sounds without any of the inherent tape problems which tend to affect keyboard-operated pre-taped instruments.

The Wersi String-Orchestra is almost totally unknown to British Musicians and it is imported in the British Isles by Newman Organ Studios of Lincoln. Wersi are a West German firm who specialise in building keyboard instruments — including some fine home organs — and in producing kits from which home constructors can build their own instruments.

This little keyboard is housed in an extremely robust vinyl-covered wood and the ends are of teak-veneered chipboard. All potentiometers are of the linear type and the control panel and controls are all finished in brushed satin-chrome.

The sounds this instrument produces vary considerably. Three basic string sections are represented: cello, viola and violin and in addition, two separate pots control a bass section.

The keyboard is divided into two and the top and bottom section controls are duplicated. Thus it is possible to play a cello part with the left hand and a viola part with the right. It's possible to mix voices infinitely and, naturally, the keyboard is entirely polyphonic.

The percussion and bass controls bring in a deep bass accompaniment on the lower section of keyboard and the relative volume and attack of this can be governed by these controls. Top and bottom sections of the keyboard have individual attack and sustain controls allowing a gentle, laid-back feel on the lower keyboard to be produced at the same time as a sharp, piercing sound from the right. It's one of the most variable string machines on the market and can produce a quite astonishing range of sounds. It's performance improves with familiarity and in the beginning, it's all too easy to produce the most nauseating range of shrieks and squeaks.



Marshall 2200

Retail Price £215.28

In recent years, there has been a noticeable swing away from large stacks towards smaller, more portable units. Musicians have been going for small combination amps which, in turn, can be miked up through the P.A. The other alternative is to use a unit with the power of a stack, but the size of a smaller job.

With this obviously well in mind, Marshall have produced the 2200 combination. The amplifier section is of solid-state design, rated at 100 watts r.m.s. It's really what you could call a "work-horse" type of amp — there are no frills, but the input system is slightly different from the norm. There are three altogether — one is normal, one is bright and the other feeds both together, so a certain degree of "mixing" is possible. Treble, Middle, Bass, Presence and Master Volume controls are also provided linked to both channels, and the usual on/off switch and pilot light are situated to the right of the front panel.

An unusual departure for Marshall is the provision of two switches; one gives a considerable boost in level, the other a small cut.

The back panel houses a mains fuse, voltage selector (120/240), slave output socket, effects send/return socket and a socket for a "boost" footswitch. Extras like reverb, tremelo and sustain are not provided, but distortion can be obtained by turning the input volume up and the Master down. The "fuzz" produced is more akin to an overdriven valve sound than a fuzzbox, and therefore sounds a lot more natural.

The cabinet itself is made from ¾" thick plywood, partitioned into two sections — one housing the amplifier chassis, the other housing the speakers. These are two 12" Rola Celestions, specially made for Marshall. This lower section is sealed with a thick back panel, forming an "infinite baffle" speaker enclosure. The infinite baffle system may limit bass performance to a minor degree, but certainly compensates for this by protecting the drive units from undue damage.

The top of the combo, including the control panel, is slanted back at an angle of about 30 degrees so you can see the settings without bending down — a good idea for smaller amplifiers.

The 2200 is covered with good-quality black leathercloth matched with the standard Marshall grey speaker cloth. There is a recessed handle on either side and a carrying handle on the top, so top marks for portability. My only reservation is that perhaps it would be a nice idea to provide small castors on the bottom. As far as performance is



concerned, there was a certain amount of R.F. instability which could be a direct result of Marshall's attempt to duplicate the original Marshall "valve" sound.

However, this design approach must be questioned. On the other hand, this particular unit could have a fault in the pre-amplifier stage and unfortunately time did not allow us to exchange the unit or trace the component fault. We will ask Marshall to comment about this. All other aspects of its performance were very good, while the quality of workmanship and materials used was outstanding.

Fender F75 Acoustic

Retail Price £87.15

The high standard of finish traditional in Fender instruments can clearly be seen on this mid-price dreadnought-type acoustic. It's one of the more expensive of the new Fender acoustics and for this reason, it has particularly beautiful wood grain and ornamentation.

The sound board is of very white close-grained spruce which is renowned for its amplifying properties, the purfling is extensive and well laid, the sides and back are of rosewood, and the neck is mahogany.

The fingerboard on this model is ebony and that's typical of the quality materials used throughout. The machine heads are Schallers and they're really excellent.

There's volume to spare on this guitar, but some of it is achieved at the sacrifice of the action which gets quite high at the 12th fret. Here the bottom E string is 3/8 in. above the fret. This makes barring a little tiring towards the top end of the fingerboard. Some final trimming and adjustment of the neck would be necessary before using the guitar regularly.

The design of the instrument is thoughtful and details such as fret-position indicators are provided on the purfling along the upper side of the fingerboard.

I didn't like the strings fitted to this instrument, they were a little too heavy and the result was a bass heavy sound that lacked a little clarity. □



Burns Flyte 6-String

Retail Price £193.75

1976 should be a good year for Burns guitars. There has been a few years gap since we last saw Burns instruments in the windows of Charing Cross Road, but, nostalgia aside, the fact remains they made exceedingly good guitars during the "beat boom" of the 'sixties.

Anybody who has played a Burns Trisonic or a Burns Marvin knows what excellent value these instruments were. Their latest venture is the Burns Flyte six-string, solid electric guitar. I suppose you could say it's roughly styled after the Gibson Flying V in shape, in that it basically follows the lines of an arrow or dart, although there is a world of difference in the design. It is available in six-string and bass versions, finished in silver or natural mahogany. Burns supplied us with a mahogany-finish model, and we base our findings on this.

The body is made from fairly good quality Brazilian Mahogany, and gives quite a hard, bassy tone via Burns own patented Mach One "Humbuster" pick-ups. These are double pole, "super sensitive" pick-ups and are very effective on the bass strings. It's not too difficult to get a meaty octave sustain from them, but only on the 6th, 5th and 4th, unfortunately. I found the response on the treble strings more than a three little weak. The pole-pieces are individually adjustable, and the pick-ups can be angled or tilted via B screws. There are two pick-ups, both of which seem identical in response and quality. The controls consist of volume, tone and pick-up selector, all of which are easy to reach, and are situated on a separate scratch plate. The scratch plates themselves are worth mentioning, as they are about twice the normal thickness and therefore less liable to lift. The centre plate holding the pick-ups is secured by no less than ten screws, while the control panel scratch plate is held down by six screws. As well as preventing lift, the abundance of screws also virtually eliminates warpage — a common problem with many pickguards.

Burns' special "Dynamic Tension" bridge/tailpiece is employed on the Flyte, and it works very well. It's the micro-adjustable type, in that the string length can be adjusted, as can the height of the individual strings. The whole bridge unit can be raised or lowered at either end by two wheels located under the bridge-piece, and, unlike the Stratocaster (which has a similar bridge/tailpiece system), the strings are attached through the tailpiece, and through the body.

The neck is Canadian rock maple with an ebonised fingerboard, and, like the Flying V, the head is shaped to a point, causing



the Schaller machine heads to be placed out of alignment. The frets are nickel silver and the intonation precise. I found the fingerboard smooth and easy to play, and the frets were well-rounded and comfortable to slide over. Mother-of-pearl position dots are inlaid in the usual places, finishing off a very professional-feeling fingerboard.

I don't think this particular model was specially set up for us, and, bearing this in mind, it had an excellent action — fairly low, but completely without fret buzz. If you're not used to the Flying V-type shape, the Flyte will probably take a bit of getting used to, but it is lightweight, well-designed and very comfortable. E.P.

Dharma Sound Phaser

Retail Price £23.10

A relatively new name in effects units, Dharma Sound have come up with an excellent Phaser. It's the box type as opposed to a pedal, and is very compact measuring only 4 3/8" x 3 1/4" x 2 1/2". I'm pleased to see that the jack sockets are situated (side by side and clearly marked) on the FRONT of the unit. Too many pedals and effects units still have the "in and out" sockets on either side of the unit. I'm sure many people will agree that this really is impracticable for stage work as, no matter where you stand, you always run the risk of tripping over one of the leads the minute you step sideways.

The on/off switch is the click-down type and is positioned on top of the unit, as is the Phase Speed control. This is a rotary control and, as the name suggests, determines the "speed" of the phasing effect. There is a great deal of range here. With the control turned fully counter clockwise, there is a very slow phase giving a subtle, ethereal effect. The phase gets faster as you turn the Speed control and, when it is finally turned fully clockwise (i.e. to its fastest speed), it gives a Leslie-type effect.

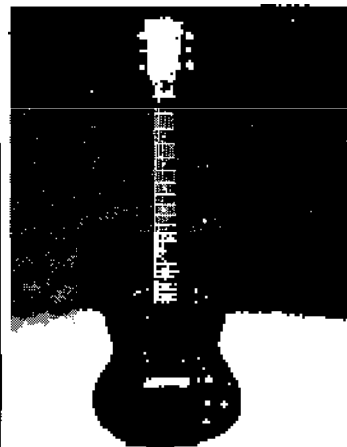
The construction of the box is extremely solid and very durable,

and certainly won't fall apart if dropped or kicked over. As well as stage work, it also performs well when linked to a tape deck. To my mind, it's definitely among the top three phase units available in the U.K. at the moment, and certainly well worth the price.

Zenta HEG 5006

Retail Price £28.50

This is something of a flawed gem. Everything about it seems much better than one has any right to expect for less than £40, except for the frets and fingerboard, which belong on a £20 brickbat. If this instrument could be fitted with the next grade up of fingerboard, and maybe cost £39.50 inc. tax, it would still be under the magic £40, and would be one of the best buys around for beginning bands. Meanwhile, I am sure that some samples will be better than mine and it is well worth looking for a good one. The basic problem is that the fingerboard is rosewood veneer, on (I think, mahogany, and the underneath wood will not hold the frets securely in place, unless they go in just right first time. Such veneered fingerboards are becoming increasingly common, and you should be aware of what you are buying, but generally they appear on guitars which are so poorly made that one does not take them seriously. This one I do take seriously, and if the frets and fingerboard were as good as the rest of the guitar, it would have merited a thorough review — and come out of it pretty well! The machine heads work well and will probably continue to do so for a few years, the nut is carefully adjusted (although it should be of a more durable material). The bridge/tailpiece is solid and compensated (for wound thirds), the electrics are well done and screened, and the overall finish is pretty good. The frets are smooth on top and the fingerboard is less curved than usual; both of which make string bending easier, and the sustaining properties are good and even throughout the range. The pickups are dressed up to look like those on an S.G. Special; in fact they are not the same, and are not even humbucking at all. However, they do sound reasonably like Melody Maker pick-ups and I like the sound.



Minor niggles are that the octave adjustment screws are missing from the bridge, and that the pick-ups exaggerate the second string and need a small strip of baked bean can, inside the cover and under this string, to cut down its output. (So do Melody Makers).

The veneered fingerboard cannot be planed flat if it has a kink, but the neck itself is straight and strong, so try to find one where the fingerboard is straight, the frets are all fitted down tightly and the fret ends are finished neatly. Alternatively, wind up the action, and it makes a great slide-guitar if you can't afford something like an old Melody Maker or Junior. If you want to improve your own guitar and you can make or obtain a proper fingerboard, (no I don't know where), this guitar makes a useful base for improvements and is absurdly cheap.

Soltan Cab

Retail Price £455.40



For years, organists have been the most troublesome of group members. They're always having hassles with their amplification and there's usually a war going on between the lead guitarist and the organ player. It's most often because the organist can't get his tone cabinet to cut through and he feels bitterly jealous of the joyfully sharp Telecaster that can be heard when his swelling Hammond only seems to blend into the backing. The Soltan might be the total answer to the problem.

The Rotary tone cabinet is as important to an organ as cream is to peaches. Without it, the tone is flat and can quickly get boring; with it, the sound is full and vibrant and by the very nature of the revolving speakers, echos the ringing vibration of the giant cathedral organs from which it is descended. But swirling vibrations aren't short sharp sounds, they're more drawn out and, until now, have been less impactful than guitars or drums. When the German Soltan manufacturing company decided to design and build a rotary tone cabinet, they deliberately utilised an amp which punched out an amazingly high treble response. They chose RCF drivers for both sections and they finished up with a rotary tone cabinet guaranteed to cut through the heaviest back line of sound.

The Soltan Cabinet's been around for three or four years, but it wasn't until the middle of last year that

British keyboard players were able to get their hands on them. Chingford Organs started importing them in limited numbers and, discovering their immediate popularity with professional musicians, then decided to import on a larger scale.

The U.K. price of the Soltan is £495 including V.A.T., a price which would be good for any rotary tone cabinet. It's extremely robust and the cabinet is divided into two sections for ease of carrying. The top section houses a two speed paired-horn section and motor drive for the treble unit and the bottom section houses the bass speaker section, two-speed motor and main amplifier.

The control panel is mounted on the rear of the bottom section and, most unusually, two inputs with separate gain controls are provided. The treble and bass controls are effective, offering considerable boost over wide ranges. Jack sockets are provided for signal input, but canon-type plugs are used for interconnection between top and bottom section and footswitch.

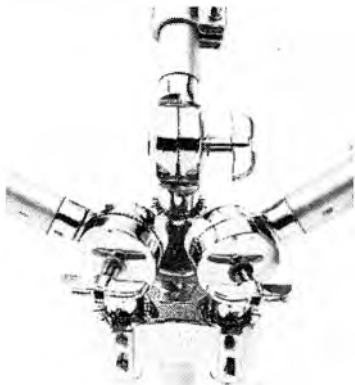
The output is between 130 and 160 watts and the general impression from this cabinet is one of great power levels delivered from a heavy duty cabinet.

The bright top end means that the cabinet does some very interesting things for a guitar. The amp design is pure solid-state, but the rotating horns seem to give something back to the sound that was lost when valve designs disappeared. On fast, the top horn can be tweaked to give the same sound that George Harrison (or was it Clapton?) used on "When My Guitar Gently Weeps" and on the slow speed, there's an infinite number of effects that can be obtained using intermediate units like reverb and fuzz. Turn the motors off and you've got a harsh brilliant amp that sounds like you're driving an HH amp through a horn system.

Chingford say they're happy to build in little mods like reverb send and return and will modify a Soltan exactly to individual needs.

Memri Loc

Retail Price £



As I arrived at the office to deliver my Maxwin Drum-Check article I walked into these two familiar fellows staggering under the weight of a large drum kit type cardboard box — on closer inspection I discerned not only our esteemed editor Ray Hammond but also the new ad for me long awaited

"MEMRI LOC" Drums. I intended to do a complete road test on these Rogers drums for the March issue but because I consider the "Memri Loc" system itself to be important I thought I'd describe it to you now.

Memri Loc is (to me) a Hybrid fixing system made up from pieces of the very best holders produced in the world over the past twenty years. Whilst the drums themselves have remained ostensibly the same all of the weight, angle and positioning adjustments on the whole kit have been changed dramatically. Gone is the old swivomatic tom-tom holder and cymbal filter, gone are the disappearing hexagonal-rod spurs and collets. Instead we have much, much more substantial cast aluminium fittings. In this article I won't attempt to evaluate these fittings merely to describe their application.

Basically the weight adjustment on all the fittings is held by a cast aluminium glorified jusilee clip which is secured by our American style drum key. This clip fits on to any of the extra large diameter tubes used on all the stands and once set, locates and locks securely into a groove with a new style substantial wing-bolt then neatly disappears into a cast aluminium block fitted on bass drum, tom-toms and stands.


On the triangular-configuration triple tom-tom holder they utilise an adjustable "L" shaped tube made from 1" diameter anodised mild-steel stock. This fitting is vertically moveable on a sprung, radial-splined ratchet. The three holes that locate these "L" shaped pieces have been ingeniously engraved with numbers around their circumference like a clock to enable us to more easily remember and accurately set the horizontal position of one tom. The tube itself very sensibly has three grooves around its circumference for very positive and safe set up. The aforementioned cast block with the shaped hole which locates these tubes is interchangeable for Tom-Tom, bass drum and spur fitting. (Except the bass drum's version has a sleeve attached to it which extends inside the drum right across its diameter.)

Those of you who are really paying attention will now have decided from this information that the spurs too are made from 1" tube which over extends at a very shallow and positive holding-angle. The snare drum stand too has been rebuilt using exactly the same principles and its playing angle adjustment is activated in the same way as are the tom-toms. The whole top fitting of this stand would fit neatly into the triple tom holder and it would then be possible to have an adjustable basket tom-tom holder or even convert the drum to a stand-up cabaret type set up.

The high-hat and bass drum pedal have also been Memri Loc'ed but to cut a long story short I'll tell you more about these in the March issue.



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DRUMCHECK

TEST ON: *Maxwin Drums*

DATE *January 1976*

PRICE *£165.74 Ex VAT.*

TEST BY *Bob Henrit*



For some time now, I have been planning to check out on your behalf the cheaper end of the Japanese drum-market. This is an important area, too often ignored in my view, where guidance is necessary for the newer drummer proudly progressing to his first real kit, or perhaps in some cases, for the more experienced drummer anxious to "get back into the game" again without spending too much money. So here's my report on what I consider to be the most attractive of the modestly - priced Japanese kits.

Maxwin drums are Pearl's "economy-line" set built not in Japan but in Taiwan. Since Taiwan is part of the peoples Republic of China and has a very low cost of living, it appears to be possible for the Masani factory there to produce a good quality drum set at a very reasonable price. One reason for this low price is because labour and expertise can be bought much more cheaply in the orient, another more important reason is automation. I think I'm right in saying these are the only drums in the world built completely by machine. The shells themselves are machine made and all the hardware is attached to them by another machine, which

in one operation drills holes and attaches all the fittings. When you consider how long it takes just to screw the nut-boxes on by hand it's not too difficult to appreciate the man hours saved by utilising a machine for the job. Obviously, a hand-built drum set in most respects would have the advantage on a machine built one, although, no one has ever built drums completely by hand. Nevertheless, for perfectly valid reasons of economy most of us are quite happily driving around in mass produced cars, even though hand-built models are available.

instead of being bent with the grain of the wood running horizontally around the shell, it runs vertically from top head to bottom head. It's evidently cheaper to form a drum this way and perhaps this is the only way a machine can cope with this procedure. I'm not sure whether a shell formed like this would have the overall strength of one built in the normal way. The set was fitted with Remo's Sound Master drum heads which are cheaper than normal because of their plastic rim. These would help to keep the cost down considerably.

Bass Drum: *The bass drum with the set I inspected was 22" by 14" deep. It had sixteen tensioning points with American style pressed steel claws, and rather small and awkward tympani-type tension screws. (I can't understand why an economy drum set should have tympani-type tuners. It must be cheaper to fit the same key-activated tension screws to all the drums and in this bass drum's case it would be a definite improvement.) The drum had chromed metal counter-hoops inlaid with plastic, disappearing type spurs like Gretsch, and the normal felt strip damper. The sound with a little experimentation became reasonably good, but to be quite honest, the bass drum suffered most from the slightly lighter Remo heads which Maxwin feature. Heavier heads if fitted would definitely give the drum more of a thump.*

Tom-Toms: *The three toms were 12, 13, and 16, no nonsense, solid sounding drums. With a little extra tensioning on their batter heads all three drums sounded equally as good as anything I've played at any price. (Tom-Toms seem to really benefit from sound master heads). All the drums had dampers fitted to their batter heads which work well enough. The floor standing tom-tom had extra high, wide-spread legs sensibly "kurled" where they locate in their leg blocks. These fittings were cast metal and, like the original Ludwig blocks had their retaining bolts trapped directly into them. (The modern Ludwig's use an "O" ring and screw inside the fitting, this can be replaced easily if the thread strips. This is of course a more expensive if advantageous method). The small tom-toms both have a cast fitting with a hexagonal hole which locates and retains the hexagonal arm of the swivo-matic type holder.*

Snare Drum: *My test example was a 5", metal-shell model. The light gauge shell had not one, but four horizontal beads pressed into it for extra strength, and a wide, but not too deep, snare bed which worked admirably. The rims were American pattern, triple-flange although of slightly thinner gauge-metal than normal, and the 18" strand snare was effectively attached to its mechanism by thin plastic strips. The snare strainer itself was something else! (I think it's a rough copy of Slingerland's Zoomatic model). It's definitely a throw back to the early days of Pearl and I think it would be technically described as a cam-activated snare-strainer. This is one of the things on the set which I found suspect, although to be truthful, apart from its flimsiness I couldn't possibly fault it because the bloody thing worked positively every time. Anyway, the drum itself sounded pretty decent although with its thinner shell, thinner rims and the thinner heads I can't guarantee it would carry to the back of the Albert Hall. However, it's certainly a sharp and responsive drum and more than good enough to cut through most "normal" bands. The sound could very easily be improved and made thicker by replacing the batter head with a C.S. or even an Ambassador. My test model needed a little extra batter tension but all in all, it sounded crisp and professional right from the start.*

Accessories: *To be perfectly honest, the accessories supplied with the set, whilst being reasonable in themselves, do not match up to the quality of the drums. However, I guess Pearl are well aware of this fact and I'm sure steps are being taken to bring these very important bits and pieces up to the same standard as their drums. The double tom-tom holder is an over-simplified version of Roger's hexagonal-rod, ball and socket model. In this example, the assembly angle is held by a single screw against the back whereas the model it's copied from has four. The substantial cast fitting on the bass drum has two hexagonal holes machined in it to receive the 3/8" rod from the holder. There's just one small screw to maintain the height of each drum within this holder which I feel is a trifle optimistic. The whole set up seems to work well on a brand new kit, but I would have to see one working positively after a year or so to be completely convinced. The bass drum pedal was an adjustable double expansion - spring model, with a two-piece cast footplate and more squeaks and rattles than my 15 years old W.F.L. speed king. (Evidently this was the worst example ever seen by Selmer's and definitely not a normal occurrence). However, extraneous noises aside, it didn't play too badly at all. It's the same principle as the cheaper Rogers or Gretsch models but unlike them, it has a metal-strap which may not prove to be an advantage. As I've mentioned before, as far as foot-pedals are concerned, it's a good thing to have the built in weakness of the leather strap since it's not the end of the world or the pedal if the strap breaks. The high-hat had the appearance of being very cheaply made but it's a centre-pull model with a cast foot-plate which with reasonable care could last for sometime. It had a fiddly little clutch for the top cymbal but all things being considered worked very well and gave me no other cause for complaint. Maxwin's snare-drum stand at first inspection seemed very good. It's a flush-based type with one moveable arm to retain the drum and secure it. The tilting mechanism is a large size version of an old-fashioned cymbal-filter. A bolt locates into a fixed-radius slot, the bolt is tightened in this gap and the drum is secured. To change the angle one simply moves the radius-slot around it's retaining-bolt and tightens the wing-nut. Unfortunately, the thin steel which the stand is made from is not substantial enough to hold the drum in a playing position without it whipping and bending. This means that an extra hard head instead of producing more volume merely sends the drum stand a little more. This type of stand since it can't be locked to the drum is usually fitted with much larger 'G' shaped accomodating arms which clamp around the rim. Maxwin's model had the same sort of stubby right angles arms normally found on the adjustable-basket-type model which of course can be locked to its drum. The three stage cymbal stand also had a flush-base and had the fixed-radius type tilters which I mentioned earlier. The top stage of the stand is tubular, (unlike most cheaper models) and fairly substantial. No problems here except that like all the other stands the adjustment wing-bolts were simply not "beefy" enough. These were by far the silliest adjusters I've ever seen.*

Conclusion: *The interior finish leaves a little to be described as I would have expected on a kit at this realistic price. Although, as far as the wooden shells are concerned, a judiciously applied piece of sandpaper could work wonders. Quite frankly I've seen much more expensive sets than these with the same faults. The reverse-flange on the metal snare drum was a little fagged but this couldn't possibly affect its sound or it's playing. In this case a peice of emery cloth would do the trick. The nut-boxes whilst they were the same shape as their "Pearl" counterparts I suspect were cast from inferior metal and their chrome finish would probably not be too long lasting. All these criticisms though are to be expected from an economy product. All in all, for very few pounds a month on hire purchase you could be the proud owner of a new-sounding and very professional looking drum set, - and providing you didn't want, or expect it to last forever, you couldn't do better.*



HENRIT ON EIGHTH AVENUE

There is one place in the whole world and only one place where you could, with a little patience, see all of the world's greatest drummers at one time or another. The only drummer of note who hasn't been to Frank Ippolito's shop at Eighth Avenue and Fifteenth Street is Ringo Starr. Other than Ringo, Ronnie Zito, Elvin Jones, Jo Jones, Billy Cobham, Max Roach, Buddy Rich, Alphonse Mouzon, Steve Gadd, Kenny Clare, Mel Lewis, Jim Chapin, Lennie White, Bernard Purdie, Ginger Baker, Tony Williams, Gerald Brown, Chico Hamilton, all come to the shop. It's simply not the sort of shop you send your road manager into. Everybody does their own shopping at the "Professional Percussion Centre".

Frank Ippolito started the shop in the early 'sixties as he says, "To fill the void left by the death of Bill Mathers, the owner of, up until then, the best drum shop in New York". For those of you who aren't familiar with the name, Bill Mather was an Englishman who was "Doc" Hunt's partner and who took care of the New York end of the L.W. Hunt Drum Company. According to Frank, he was the best drum engineer and technician ever. It was Bill Mather who first devised disappearing spurs, the "console" mounted tom-tom holder for the bass drum, and also the shell mounted cymbal arm holder or tom-tom leg block. He invented all of these in the 'thirties for Gene Krupa, for whom he would shut his basement shop and disappear on the road for weeks. He was possibly the first drum road manager!

Frank decided to take over Bill Mathers' shop with some trepidation and endeavoured to fill the great man's shoes. As Frank says, "What could be better than being a drummer and owning your own drum shop?". Up until the time he started the shop, Frank Ippolito had led a distinguished career as a band drummer. He started professionally in 1938 and was immediately conscripted into the Army Air Force Band, known as the Glen Miller band. The band needed two drummers because Ray McKinley was also a front man and compere. Frank has some interesting things to say about the band. Glen Miller had a very clever way of keeping his band on their toes. He was forever changing just slightly their musical arrangements, which of course meant that no musician ever got into a rut, since it was necessary to concentrate all the time. After Miller's death, the band continued under the directions of Ray McKinley only because the whole band blackmailed the army by threatening to send all their instruments (which were their personal property) and all their arrangements back to America if they put in any one to lead the band

other than McKinley. With the end of the war, Frank fell foul of a law stating that after Demob, the G.I. had to be given back the job he had held prior to the war. This meant that Mo' Pertill, Miller's original peace-time drummer, got his old job back. Frank joined Tex Beneke's big band among others and eventually got into studio work in New York playing and enjoying all kinds of music. He has an open mind to anything which is probably why he owns the most successful drum shop in the world. His philosophy is very direct and simple. "No matter who you are, and how good you are, you have something to learn from every other drummer."

The shop is intentionally very difficult to find and as far as I know isn't advertised anywhere, which makes it extremely exclusive. Frank's philosophy is that "cheap is cheap" and as such you won't find ridiculous bargains, but what you will find is the very best quality drum products at a very fair price, in most cases "breathed on" by Frank's people who offer the most comprehensive after-sales service you could possibly wish for. If the equipment isn't up to Frank's exacting standards, then he just won't stock it - whoever makes it! There are some famous manufacturers conspicuous by their absence from Professional Percussion's shelves since they fall short of perfection in one area or another.

I asked Frank whether he thought the quality of all drums had deteriorated recently. His answer was something of a surprise. He is forever arguing with every manufacturer about the quality of their products. His attitude is that by and large, it's the dealer who should be campaigning for a better deal for his customers. This philosophy is almost the same as his attitude towards retail prices. He strives to get the best possible price from the manufacturer and he does this simply by paying his bills on time. The discount Frank gets by his prompt payment he passes on to his customer - it's easy when you know how.

The Professional Percussion Centre is actually on three floors of a very old building. The first floor is the shop proper with the goods on display in a rather haphazard but intentional way. Frank wanted to keep the feel of the shop "funky" because he felt quite rightly that drummers like to buy their instruments from a shop which doesn't look too modern and doesn't appear to be a rip-off. The second floor is absolutely packed floor to ceiling with drums, heads, cymbals, parts, fittings cases and so forth. The third floor is a storage area full of old equipment and two teaching studios. One is occupied by Elvin Jones when he's in

town and the other by Jim Chapin. Fairly recently both Billy Cobham and Tony Williams have been giving lessons here. Evidently, most of the modern-day American drummers have had at least one spell of tuition here. As we wandered through the warehouse, Frank pointed out things of interest. "That's Gene's Radio - King set there and there's Buddy's old Slingerland there, and there's Lionel Hampton's original Deagan Vibes and there's an old Ludwig bass drum on wheels which belonged to Sonny Greer." He also has an interesting Ludwig set made during the war when, by law, you could only use 10 per cent metal in any project. This set has wooden nut boxes and wooden rims but certainly sounded really good. I think Frank said it was the outfit he used in the Glen Miller band.

Everywhere we looked there were dusty piles of drum history - it was really awe-inspiring. Frank actually goes out of his way to collect these things and swears he's going to get around to doing something with them one day. What he actually seems to do with all these souvenirs is recycle them. That is, if a drummer like Buddy Rich expressed enough admiration and desire for a particular article then he would eventually be given it. The beauty of this is that sooner or later all of these treasures will get to a sympathetic home where they will be admired and cared for with love and affection. It's a really laudable thing to do.

Frank is the very proud owner of a complete set of drums made long before the war by an inventor called Billy Gladstone. These drums were then the ultimate in technology and examining them now they have definitely stood the test of time. Both the snare and batter heads could be tuned from one position on the playing side by the ingenious use of an inner and an outer screw. The system, which incidentally was completely gold plated was activated by a beautiful four headed key. The drums didn't have nut boxes but instead the tuning rods went into solid locking eye hooks screwed to the stem. I have been looking for one of these sets for years and just as soon as I've got 2000 dollars or so to spare, I'll invest in Frank Ippolito's gold-plated beauties.

Frank was among other things the inventor of the practice drum set. Several years ago he came up with an idea for a soundless drum kit which he called F.I.P.S. (Frank Ippolito's Practice Set?) Since its inception, almost everybody knows about and uses them but when they were invented he had a really hard time. Everybody was convinced he was insane to want to build a drum set which didn't make any noise at all!

Another area of percussion which Frank is active in is the institution and presentation of "The Gene Krupa Award". A year before Gene Krupa died, Frank and a few drummer friends like Mel Lewis, Jo Jones and Elvin Jones decided it would be a fitting gesture to salute the innovator of modern drumming by giving an award each year to the drummer who they thought had contributed most to the world of percussion. The award is actually a certificate signed by about a hundred of the world's best drummers which so far has been awarded to Gene Krupa himself, and then Zutty Singleton and last year to Roy Knapp. Roy Knapp is a larger than life character who's now in his eighties. In his time, he taught Louie Bellson and Gene Krupa to play and even now goes to rock concerts to check out what modern drummers are up to.

It's a very casual award and five or six contemporary drummers get together with Frank and talk about who should get the award and why. I asked Frank how long it would be before the award got around to my contemporaries - I was astonished when he said that since the award was only really for innovators, within a few years Billy Cobham would probably be getting one.

Professional Percussion offer a service which seems to be peculiar to the American musical instrument business called customising. For a consideration, your Gretsch, Slingerland, Camco or Pearl drum set can emerge from their workshop ostensibly normal but just slightly different in lots of minute but important ways. For instance, since none of the new sets which arrive at the shop have spurs, tom-tom holders or indeed any extraneous fittings at all, it's possible to have the set filled out with any combination of fittings from any of the manufacturers. (The shells of course don't have any fitting holes drilled into them when the shop receives delivery). Frank "interrogates" his customers before he does anything to find out just what they have in mind and indeed need from their drum set up. If he agrees, he'll say so and get on with the job; if he doesn't agree, you won't find anyone pressuring you to buy something just because they want to sell it. If you want to buy it, they will be very happy to sell it to you. If you decide you don't want it, then that's cool too.

Of necessity, most of the shop's customising techniques are jealously guarded secrets but I don't think I'll be betraying any confidence if I pass on to you what I know or have guessed from reading between the lines.

If necessary, the shells can be worked on, although I don't know how frequently this happens. Their interiors can be coated with either a glossy-polyurethane type of finish or a matt slightly rubbery looking black finish. An educated guess would be that one finish brightens the sound and the other finish deadens it.

The nut-boxes are padded to kill their rattle and prevent them from influencing the sound of the drum. (Hollow nut boxes tend to echo). This is another secret process but my guess is that the inside of the lug is packed with something like foam rubber or even cotton-wool. The metal springs inside the nut-boxes which sometimes "sing" in sympathy with a note being played near them are replaced with a slightly over size length of polythene tube which grips the insert and holds it in place. Tom-tom holders are re-sited in most cases nearer the front of the drum to enable the small drums to be closer together. Since the drums are supplied without holes, this poses no problem at all. One very notable West Coast manufacturer refuses to supply the shop with drums without fittings and because of this Frank refuses to stock any of their products. There is a Chicago company whose drums are also not available at Professional Percussion, for more or less the same reasons.

Frank's people can do an awful lot of work

on snare-drums. These are sometimes supplied without snare-strings which normally means they will fit an old style Ludwig one. The older Ludwig still has the most positive action available. The snare bed is elongated by three inches or so - this makes the snare bottom head fit more snugly and evenly. It allows for more comfortable tensioning and completely cures the "wrinkling" of the head where it meets the shell directly beneath the snares. In some cases, Frank fits straight-edge counterhoops underneath the snare drum to give a more open sound. Sometimes he will recommend these Slingerland pattern counterhoops for the batter side too. Evidently, Buddy Rich has all of his rims changed to straight edge since he prefers the "duller" sound they give. Sometimes the tension rods on the drums will be changed for longer ones which give more positive tuning and a super tension. Slightly longer snares can also be fitted to the drums and these quite obviously give a more "brittle" sound. There is also an alternative snare available for the drum which is a combination of wire and more traditional gut. The sound is excellent but the drum is a lot more difficult to play.

Professional Percussion has an amazing selection of plastic heads including Remo's new composition one and the very best calf heads from Australia. The assistants seem to know exactly which sort of head is best for the job in mind and more importantly why it's best. So, we'll probably end up with completely different heads on our hypothetical drum set.

For the past few years, Frank and his ex-partner have been producing a really amazing and most positive foot-pedal. Basically, it's a Gretsch or Camco pedal (the leather-strap type) which has had its strap replaced by a miniature bicycle chain. The chain locates around, and is fixed at one point to a fairly low geared (large) bicycle cog. This cog is in turn fixed to the hexagonal top bar of the foot-pedal and at right angles to it. The other end of the chain is attached to the foot-plate and as we press the plate down it pulls the chain, which turns the cog on the bar and moves the beater. It's an extremely positive system and I suppose the only reason no manufacturer has copied it is because Frank Ippolito has a patent on it.

All of these innovations can be done to a drum set and yet its basic price is the same as the manufacturer's recommended retail price. (Normally Pro-percussion would give a discount on a "bog" standard kit but this saving is obviously offset by the substantial extra and costly work involved in customising).

At the present Frank is loudly singing the praises of a drum kit which has just re-appeared in the States after an absence of several years. Camco drums were first produced in the 'forties by an engineer who had worked for Ludwig in Chicago. The engineer's name was George Way and his drums were the definitive modern drum set and as such most of his innovative ideas have been stolen and bastardised by other companies. His shells were solid rock maple and exceptionally heavy; his nut-boxes were turned from solid brass and all of his fittings were machined from solid metal. The quality was breathtaking and so was the sound. Unfortunately George Way died and his widow was forced to sell the name and designs. For a time the drums were produced fairly badly in Kansas. The company has recently changed hands yet again and is now owned and run by a drummer in Los Angeles. If the new drums are as good as their beautiful catalogue suggests they should be making a big noise within very few months.

According to informed sources, one of the main reasons why drum making is deteriorating is because the factories are no longer run by drummers but by corporations. One company is owned by a magazine, another by a cement company, another by a piano company and yet another by a television/record company.

The whole shop is packed with percussion instruments at the moment. Most of these come from Latin Percussion (L.P.) on the East Coast or Gon-Bops on the West Coast. Almost all American bands have at least one percussionist and because of this demand, the companies manufacturing the rhythm instruments are really cleaning up in a big way. Latin Percussion for instance started off making their famous solid turned wooden bongos only a few years ago and are now a multi-million dollar organisation manufacturing dozens of different and exciting Latin and African instruments. Gon-Bops are responsible for making (among other things) the very best solid wooden conga drums around. Strangely enough lots of discerning Latin players who originally switched to fibre glass drums when they first appeared have since reverted to these wooden Congas because they evidently have a much more authentic and ethnic sound.

Some of you may have seen Billy Cobham's last British tour when he was using those strange looking drums with the "flared" shells. I checked these out in the shop. They're made by an East Coast company called North. Basically they are single-headed fibre-glass shelled drums which have a "Euphonium type horn" at their open end set at right angles to the playing surface. This "horn" is faced towards the audience and really amplifies the sound. A 16" tom-tom has an 18" flare and a 22" bass drum has a 24" flare. All of the drums are longer than usual to accommodate the horn unit. The snare drum is really weird and to my mind not at all successful. It's a 14" diameter tube about two feet long which is bent at right angles in the middle. As you can appreciate, the two heads are set at right angles to each other which gives a weird sound since much of the impact is dissipated by the time it bends the corner and causes the snare-head to rattle in sympathy.

Frank is really enthusiastic about a new pedal for the bass drum that he's just found. Made in America, it's the same idea as the English pedal which has two beaters working on one bass drum. However, the American version seems to be better made than the Rose-Morris version and has a facility on it which I personally think is fantastic. The unit itself is actually two pedals joined by a flexible bar rather like the goose neck on a microphone stand, and while it's made for single bass drum work, I worked out a way of using it on two bass drums using three beaters with devastating results.

The right hand pedal beats on just the right hand bass drum when you activate it. The left hand bass drum can beat on both bass drums when you activate it. This means that your left foot can now play two drums in "linked-unison". This is very, very heavy. The real beauty of this invention is that Professional Percussion sell it for about 100 dollars whereas its English counterpart the "power-mate" for my money has always been overpriced at well over a hundred pounds. A very up and coming modernist called Steve Gadd is using this pedal with amazing results on his single bass drum kit.

At the moment there is an Englishman called Mike Hough "hanging out" in Professional Percussion. (There seems to be a great tradition in New York to have an Englishman helping out in your shop.) Jo Jones also hangs out there as do several other really good drummers. Frank was saying he has this fool-proof way of getting rid of the people hanging out when he feels they've overstayed their welcome - he finds them a gig!

Frank Ippolito claims most of his success is because he recognised the importance of Rock n' Roll. Instead of turning his nose up at the new music like lots of dealers did, he became interested in it, researched it and eventually began to play it. It's because of his open mind to both music and the idiosyncrasies of modern drummers that Professional Percussion Centre have been, are and probably will be the best drum shop in the world.

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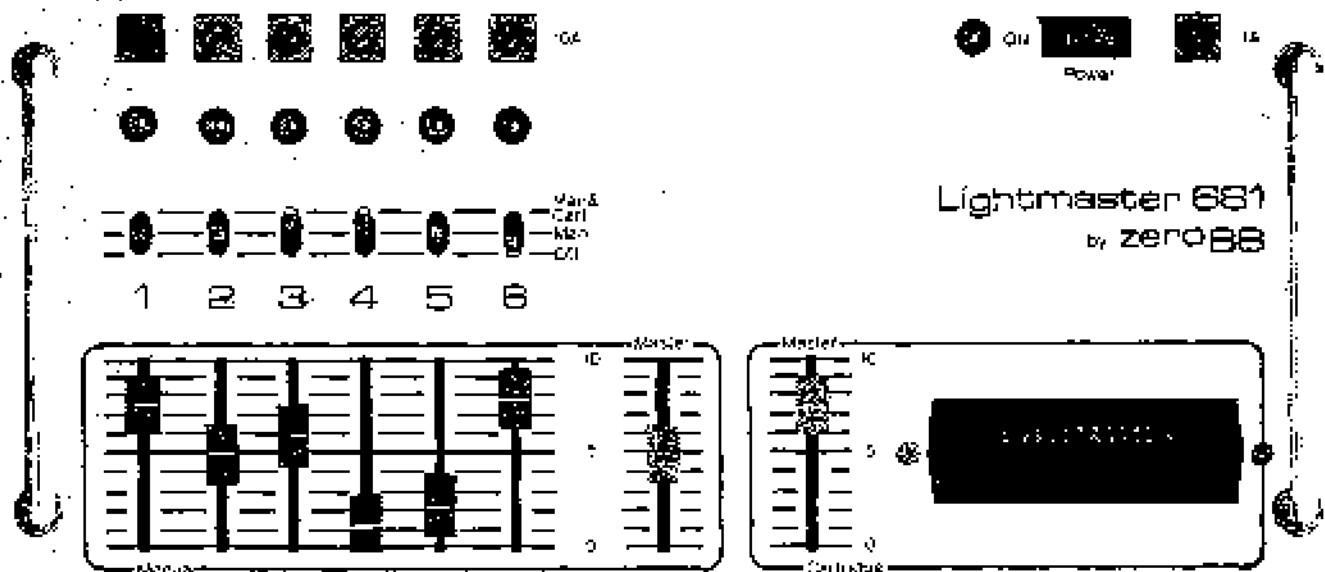
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PA SYSTEMS

Part 4 in Ken Dibble's series on P.A. systems

Having obtained the power and efficiency required of the loudspeaker system in part three (in last month's *International Musician*), all that now remains is the source of the necessary watts to drive them. To judge from the nonsense generally surrounding this subject, it would seem that a few lines on amplifiers would not go amiss. It is indeed unfortunate that manufacturers in this industry seem to lead the field in their reluctance to adopt a standard procedure for establishing the output power rating of amplifiers, and this alone leads to a considerable amount of confusion. It is also surprising to discover how many users of amplification equipment do not understand the nature of the equipment they use, and are surprised when they succeed in blowing up a perfectly good amplifier "with the volume knob only on number five".

For our purposes, any amplifier can be considered as a black box with a fixed gain factor. It is designed to give a certain output voltage across a given load impedance when fed with a given input voltage. Usually, it's fitted with a volume control, whose sole function is to regulate the amount of input signal fed into the amplifier, and therefore, regulate the output voltage in direct proportion. Suppose, by way of an example, we had an amplifier that was designed to give an output of 100 volts across a 10 ohm load, when fed with an input of one volt. In other words, it has a gain factor of 100, and is illustrated in *Fig. A*.

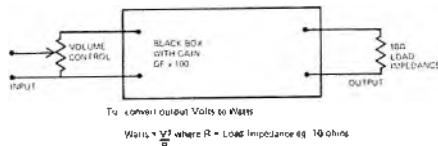


Figure A

- With 1 Volt input
 $100 \times 100 = 10000$ Watts
 (Severe Overload)
- With 1/2 Volt input
 $50 \times 50 = 2500$ Watts
 (Severe Overload)
- With 2 Volt input
 $200 \times 200 = 40000$ Watts
 (Severe Overload)

It will be seen that the 100 volts output will only be available when the volume control is at its maximum setting, and that if this control were turned down so that only 1/2 volt was fed in, then only 50 volts would be available at the output. However, if the input signal fed to the volume control was increased to two volts, with the control still at its half way setting, then the output would be back to its original 100 volt level, as we would still have the necessary one volt at the actual amplifier input. If the volume control were now returned to its maximum setting, the poor amplifier now has two volts applied to its input, and will be doing its best to deliver 200 volts output.

Because it was only designed to deliver 100 volts, we have a severe overload condition, and the outcome of such an overload will depend on the quality of the particular amplifier being used. Some amplifiers would quite simply pack up, necessitating expensive repairs before it could be used again, while others would simply

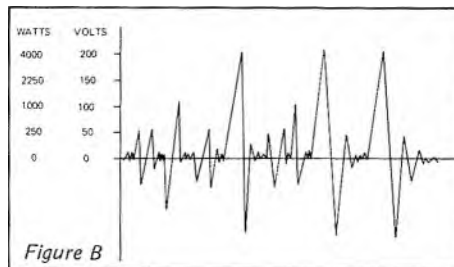


Figure B

distort badly, and it was by intentionally designing the amplifier to be overdriven in just this way that gave the famous "Marshall Sound" that was so popular with musicians in the 'sixties and early 'seventies. Still other types of amplifiers, mainly the more sophisticated solid-state types, would simply shut themselves down through an overload protection device and so prevent any serious damage. The output from an overdriven amplifier is almost a square-wave, and as a square-wave is very rich in harmonics, it is pleasing to hear, thereby accounting for the popularity of the "Marshall Sound" in instrument amplification. However, as far as P.A. is concerned, these square waves produce endless distorted peaks in the amplifier's response, giving poor clarity and untold feedback problems, thereby restricting the use of the power that might otherwise be available from the system.

We must therefore ensure that any amplifier used for P.A. is not overdriven. In fact, we must go several stages further than that, and consider the dynamic range of the signal being fed through the amplifier. *Fig. B* shows, in simplified form, the wave form of a typical programme signal at the output of the "black box" amplifier used to illustrate the previous point on amplifier gain. Although the figure is scaled in both volts and watts to allow comparison between the two, we will refer to watts. A study of the waveform will show that most of the signal lies in the region below 250 watts. Several peaks touch the 1000 watt line, and a few reach the 4000 watts maximum. What size amplifier would be necessary to reproduce that particular signal, 250, 1000, or 4000 watts? The answer is any of the three, but if a 250 watt amp was used, there would be noticeable distortion due to the amplifier clipping every time the wave passed the 250 watt level. If a 1000 watt amp were used, it can be seen that there would be much less amplifier clipping, and so, much better quality of reproduction and an altogether cleaner sound would result. It is probably surprising to note that to effect any real improvement on the quality, an amplifier of four times the power would be needed, and at this level, there would of course be no distortion at all. (That is, disregarding the amplifiers own inherent distortion figures, but these days, this is usually low enough to be ignored.) In fact, a 1000 watt amp would be the sensible choice to handle the signal shown, and would be capable of delivering an average power of 250 watts all day long, with little or no risk of overheating or breakdown. If the power figures given are divided by ten, so that

the 250 watt line becomes 25 watts, the 1000 watt line becomes 100 watts and so on, it is easy to see why a 100 watt P.A. amp is not capable of clean sound at high output levels, as the average programme level should not really exceed 25 watts if quality is to be kept at a reasonable level.

When reports are read in the musical (and medical) press, of tens of thousands of watts being used by this band or that on a P.A. system, it usually means that the maximum power output at clipping level of all the amplifiers used on the rig total the amazing figure quoted. Reasons for these apparently huge power levels are explained above, and it is usual for such P.A. rigs to be run at only 10% or 20% of the power available. In fact, most of these rigs are manned by guys who really understand the technology of high power P.A. and the quality of sound produced at some concerts from these systems is really quite incredible. (I have a pet theory that when the medical profession get their knickers in a twist over decibels and people going deaf in the music industry, they should start measuring the distortion of sound as well as the decibels. I have experienced levels approaching 120 dB (A) on several occasions from such P.A. systems, and derived great pleasure from it. Certainly no pain has been felt, and there really does not seem to be any detriment to my hearing as a result, while levels in the order of only 90dB (A) in a distorted discotheque has given me a severe headache and left my ears ringing! But I am digressing, and this is really another story.)

It must be appreciated that the figures given for the "black box" are convenient figures to illustrate the various points. Obviously, 4000 watt amplifiers are out of the reach of most readers, but the same comparisons will apply at any power level. Also, 10 ohms is not of course a standard speaker impedance, but it is a convenient number to use for easy calculations. Before leaving amplifiers, it should be stated that there is an alternative to using large amplifiers operating at about one quarter power, and this is to introduce some form of compressor or limiter in the input line to the amplifier. This will have the effect of compressing the signal peaks so that a lower amplifier power is required to reproduce them, and limiting the maximum excursion of signal beyond certain pre-set levels. Although the use of these devices has the added advantage of protecting the loudspeaker system from damage under excessive signal conditions, it does not, in my opinion, provide the same clean, exciting sound of live electric music as does a high power amplifier, with power in reserve to handle and reproduce those peak levels. Gramophone records are compressed, and even the best disco cannot compete with live music for excitement.

There seems to be a lot of current interest by the "soundcheck" crew of this magazine lately, in reviewing mixers, so next month, we will explain mixers. The purpose of the sometimes baffling numbers of knobs fitted, the operation of a desk and its electrical construction will be covered for the many readers not familiar with mixer practices. □

Stephen Delft

Stephen Delft's name will be known to all readers of *International Musician* for his regular features in the magazine, but he is also well-known as a guitar maker and repairer to musicians like Long John Baldry, Davey Johnstone and Paul Simon. He operates from a shop/workshop in Stepney which he describes as "the untidiest shop in London".

After leaving school, Stephen pursued a short career in banking, following unsurely in his father's footsteps, but eventually resigned, realising his heart was in music. He started doing local gigs, playing and singing in folk clubs, but found he couldn't cope physically and emotionally with more than three a week. His love for wood was inherited from his grandfather, who used to teach Stephen basic woodwork. His parents bought him a cheap guitar which eventually went wrong and, rather than pay the local music shop what was then the equivalent of six week's pocket money, he decided to do the job himself.

Things progressed naturally from this, and he soon found all his schoolfriends were bringing their instruments along for repair. By now, he had realised that building musical instruments was where his future lay. He went on to work with other instrument makers, including John Bailey, and also did a course at the London College of Furniture (where he now lectures) to supplement the already vast amount of knowledge he had accumulated. Apart from writing for *I.M.*, running his shop and lecturing, he also finds time to build instruments and do the occasional gig. As well as guitars, he also builds dulcimers, lutes, and a host of other stringed instruments including electrics.

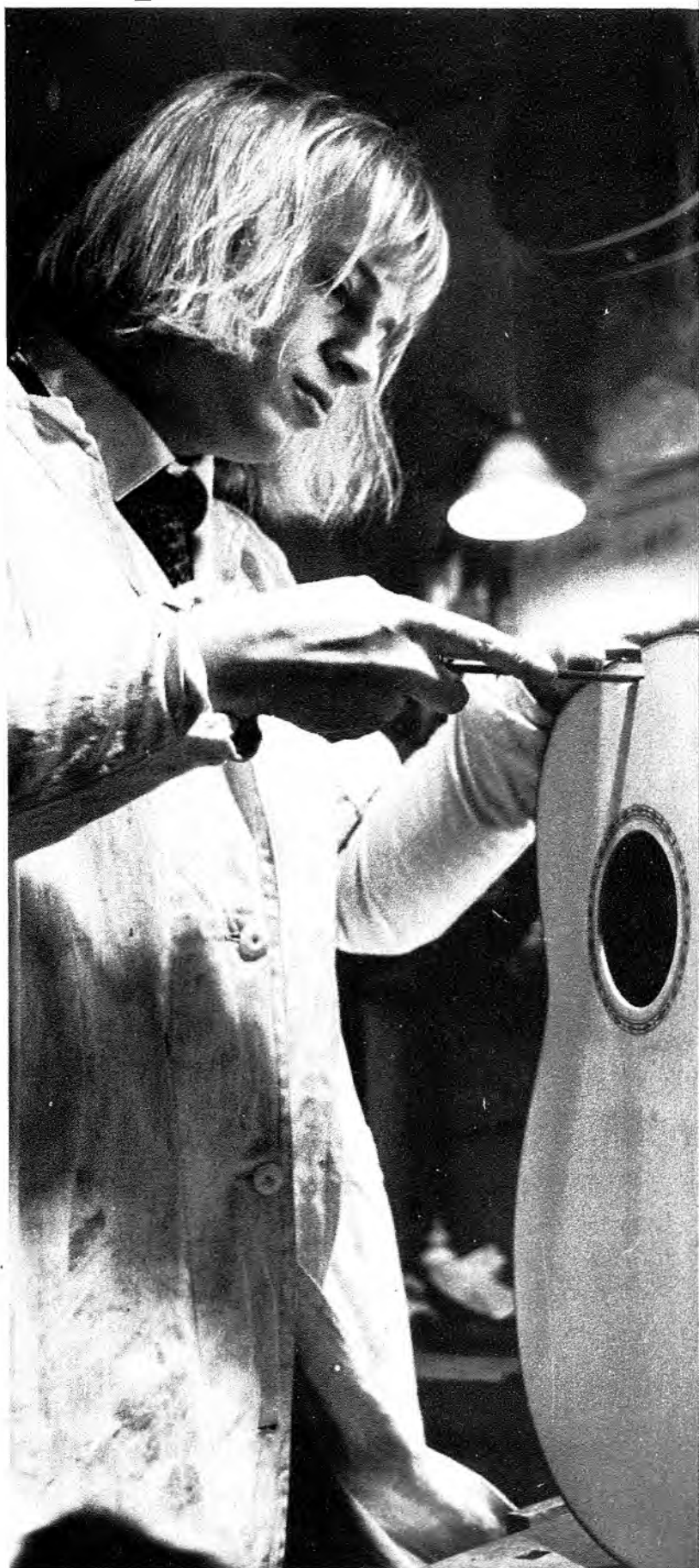
He recently made an electric doumra, a round-bodied relation of the balalaika with three nylon strings. Stephen explained: "Someone came along to me who had written some songs on an ordinary doumra and had built a band around it. His problem was that the band had to play in discos, and therefore had to play loud. Consequently, the doumra couldn't be heard, so he asked me to build a doumra that would be loud enough for a band, and yet would still retain its tone, which is something like playing the bottom three strings on a classical guitar with the ball of your thumb."

As a result, Stephen built a solid electric doumra using a series of tone-filters and other electronic devices built into the instrument. While this is a breakthrough in itself, it also means he can build a solid classical guitar or a solid lute.

After all this time building instruments, I wondered if Stephen still enjoyed the actual "hard labour" of it. "It depends," he replied. "I have never enjoyed the bit which is one step removed from an axe and a tree. For that, I use machinery to cut pieces of wood flat and roughly the right shape. After that, when it gets round to bending it, carving it and shaving it, then I enjoy it."

Stephen sees the recent growth in the popularity of custom guitar makers as "a division now between things that are definitely factory made and instruments that are not. Things which had well-known names often were, in the essential details, hand-made. Now it is only too obvious that, like the Tate & Lyle sugar, they're untouched by human foot!

"Therefore, those where the essential bits are made by hand are noticeably different. There is now a distinction between custom-made instruments — even if they're standard models on a conventional pattern — it is possible for one to make a replica of what most people would understand by a Les Paul Junior. Compare it with one that is made now, and most people would say that that's obviously a custom-made one and that's obviously a factory made one, so custom doesn't necessarily mean made to a special shape or size. I think it is a direct reflection of what has happened to the standards of large-scale guitar making.





"Nobody spends twice as much just for the joy of it. It's either for prestige, or these days, it's the simplest way of getting what you want. It's not the cheapest, but it's less hassle than getting a standard instrument and making it do what it's supposed to do."

"Custom guitar making, in its other sense, is making things that don't exist already. If someone has developed a style which runs up against the limitations of what an instrument can do, then they may want an instrument that is refined so that that particular limit is extended. If they find that they can do more than the instrument will do, then they want something with fewer limitations, and my job is to do that."

"At least part of the skill is translating what the musician is saying into metal and wood, because it's not his job to think in terms of mechanics. It's his job to think in terms of what he wants it to sound like. So when someone comes along, I look at the size of his hands and I try to find out exactly what he wants. I usually let him try various types of guitars and he'll say: 'I like the neck on this and I like the feel of this one,' so we work out what is going to suit him."

The choice of woods is obviously very important, but Stephen places most emphasis on the quality of woods used. "The problem is really acoustic instruments where the sound is produced by what it's made of. They're either Canadian or European spruce for the soundboards. They do sound different. For the rest of it, the sort of maple that grows up near the snow-line, some mahogany, Victorian Post Office desks reclaimed, old furniture — and I generally splice the necks with black walnut of which the best source is harmoniums.

"Electric guitars are nice made out of ash. It's got quite a course grain, so you can't slice it very thin for making acoustics, but where you're using it more than a 1/4" thick, ash makes very nice solids. The old Broadcasters and Teles were made out of ash.

I won't make a neck out of it because it's too rough, but it's nice for bodies."

As far as fingerboards are concerned, Stephen is very much an "ebony" man. He'll use rosewood on repairs to cheaper basses "because it's a shame to use the few long pieces of ebony you can get." On his own guitars, he usually employs ebony for the fingerboard unless the colour of the instrument suggests that ebony would be wrong, in which case he uses one of the harder rosewoods.

Machines are obviously very important in the early stages of instrument making. Stephen uses a bandsaw to cut the wood to a rough shape. "It's so I can buy woods that aren't the shape I want them in, then I can buy a block of mahogany and turn it round the right way to get what I need. I really use it in place of being in a country where there are firms who supply a wide range of woods at a reasonable price the colour, shape and size you want.

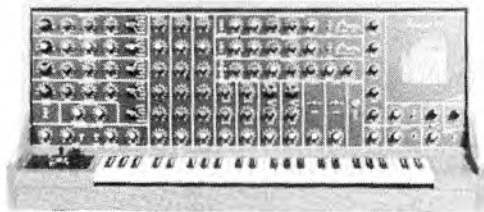
"I have a planing machine which I've modified, so that I can cut wood down to the size I want without tearing out the planed bits. I do most of the planing by hand because I don't like machine planing down to fine limits. The machine is basically for taking out all the saw marks left by the bandsaw. The rest of the machinery I have is really to maintain the hand tools and to modify them to do what I want. A lot of the tools I need cannot be bought in this country, so I virtually have to make them."

I asked Stephen what metal parts he makes himself. "The engineering that goes inside. The bits that you can't get at when it's finished. I machine and weld them until I'm satisfied that they will last longer than the rest of the guitar. The outside fittings I tend to buy — mainly because of the difficulty of getting them plated. There happens to be one particular Japanese bridge which isn't bad — it would be difficult at a price to improve upon it. If I'm doing an unusual instrument, then I start from scratch, but I don't see any reason to needlessly put many pounds on the bill if the part exists and works. Some things don't work so well — I tend to use slightly unusual switches because I find them more reliable than the standard ones."

Stephen's future plans now include taking on somebody to help with repairs and therefore alleviate some of the pressure from him enabling him to concentrate on building instruments. Stephen explained: "I think I have finally found someone who can assist me with repairs where I am happy about the standard of his work. I've had a few attempts before over the last five years and for various reasons in both cases, it wasn't successful. They were not at a standard of craftsmanship where I felt that I could say I would be happy if I'd done it. Now, quite out of the blue, someone came to me and I think that within a year or so, I would be quite happy about the standard of his work, which means that hopefully I can do just a little less of repairs. Obviously, antiques and things that belong to friends of mine, where I know more about how they want guitars restored than they know how to tell me — I would take care of myself but it would still leave me time to do what I want to do. It would mean that I no longer have to tell people with a Japanese guitar that needs repairing: 'No, I'm sorry but I haven't got the time', because I've only got time to do the real ones. I think that now I will be able to cope with roughly double the quantity of work that comes here.

"We've also been doing things like refretting jobs where he takes the frets out and cleans up the fingerboard, and then I fret them and file them. Then he puts the strings on and adjusts them. He's also got an engineering background so he can make tools and things. It'll be a great help all round because it means that I can make more things." □

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GUITAR RENOVATION



Mirror finish of original lacquer, after restoration

International Musician asked Stephen Delft to do a series of articles on restoring and refinishing a second-hand Fender. He collected the instrument, a blonde Telecaster supplied by Rose-Morris, and set to work. This is the first of his reports.

I am working on the assumption that, when possible, it is always preferable to preserve the old finish. There are many reasons for this, not least among them the danger involved in stripping lacquer and paint. Next month I will discuss the procedure for paint and lacquer stripping.

Before you can attempt any serious refinishing or repairs, you will probably have to remove all metal parts and fittings from the guitar. As this series is primarily about solid guitars, I shall only cover dismantling the Telecaster, but the photographs of lacquer before and after restoration show the back and sides of an old dark brown National/Dobro guitar. The same process is applicable to almost any old cellulose finished guitar, including the blonde Tele which we have borrowed, but it is almost impossible to get usable photographs of lacquer faults on a pale coloured instrument.

The basic material I have used is Cellulose Amalgamator, which is brushed onto the cleaned and prepared old lacquer and (if you are lucky) melts the cracks together on the surface and glues down loose flakes and crazed patches. I do not know of any commercial amalgamator for sale in this country, although Behlen's in the States probably make one. I have always used a solvent called Celiosolve Acetate. This is a very good solvent for cellulose, but evaporates fairly slowly, giving plenty of time for the lacquer to flow, and minimising the amount you breathe while doing the job. If any lacquer manufacturer can supply something better for the job, I would be pleased to hear from them. Celiosolve Acetate is highly inflammable and should be treated with rather more respect than petrol in an open can! (No cigarettes, no open flames, no red-heat radiators, no sparks, or anything of the sort.) Its toxic level makes it relatively safe to breathe small amounts, but please get out of the room as soon as you have finished, and don't return for more than a few moments until the lacquer has become touch dry and dust proof and it is possible to ventilate the room thoroughly.

People were designed to breathe air, not chemical solvents, and none of them are exactly good for you. Your easiest way to get this solvent is probably to check your local business directory for lacquer or polish manufacturers. Cellulose thinners will *not* do!

You may have two problems with amalgamator. Either it will not soften the finish within a few minutes, in which case your guitar is finished with a more modern catalysed material (see later on for re-touching of chips and next month for complete stripping, if necessary), or you may get a jammy mess. In this last case, you can let it harden for a week and then strip it all, and you are no worse off except for the loss of a day's work and a pound or so for materials.

If there is a chance of preserving the old finish, amalgamator is always worth a try. Whatever happens, don't try again, in fact don't touch the guitar for at least a week, or two weeks if you can't hang it in a warm place. Remember the room in which the guitar hangs to dry will also collect unpleasant and inflammable vapour and needs ventilation, although the quantity of vapour is usually insignificant.

If you are going to take a guitar apart, you will need: Pencil, paper, several colours of self-adhesive tape, screwdrivers to fit every screw you can see, wide masking tape and soft tissue to wrap delicate parts, a box large enough to contain the largest part (usually the scratchplate), screw-top glass jars for small parts and screws, solder and a hot soldering iron (as well as a spare place to store it while in use) with enough cable to reach any part of the guitar, old cushions or blankets to rest the guitar on, and enough room to work without the risk of dropping anything.

It helps if you sweep the floor before you start. Everybody drops small screws occasionally; this way they are easier to find if you know you have lost them, and if you don't realise until later, there's a good chance the floor will not have been swept in the meantime. Small or miniature pointed wire cutters can be useful, and if you're really panicky about losing bits, spread an old white sheet on the floor beneath you.

First remove the strings, machine heads, strap buttons and any other small fittings. Remove the bridge and tailpiece, (if possible, without changing the bridge adjustments) and all fixing screws which appear to hold on the scratch plate and/or control panel. Try to see which screws hold the pick-ups and switch to the panel and leave them alone.

Gently lift up the pick-ups, unscrewing them where necessary from the body and check where the wires go. If you have to disturb any spring or rubber pad, make a small drawing of the set-up as soon as you can, and label each part with tape showing which way up and which way round. Follow these wires to the controls. If you can

solder competently, label each wire with tape and then cut it neatly away from its fastening on switch or pot. (Unsoldering wires takes too long, and the excess heat may damage wires and components.)

As each wire is cut, its identifying tape colour(s) should be entered on a drawing of the underside of the control panel. If your soldering is doubtful, and you can't get help from your local radio shop or guitar repairman, probably the best thing to do is to wrap tape round the middle of each wire and cut through the centre of the wrapped bit, thus ensuring that both ends are coded the same colour. Gently feed the wires through the body and remove and wrap up the pick-ups.

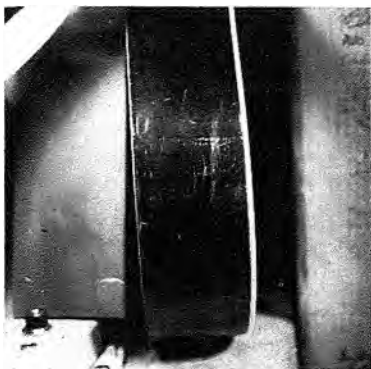
Don't try to see how fine the winding wire is unless you want to pay for a rewind. Fender pick-ups are rather fragile when removed from the guitar and under no circumstances should you try to bend any "bent bits" straight. Wrap them in plenty of tissue and store them away safely until you have finished. All these details refer to a Tele, but I am sure you can adapt them to other guitars. Gibson screened wires are relatively soldering iron proof and tend to be skimpy. You should unsolder these.

Any work done on joints to the backs of pots will need a Weller solder gun or a minimum 50 watt iron. The other joints need a small instrument iron of 15 to 25 watts. I have used a small gas heated iron from Woolworth's for the large joints. When the flame goes green it is just too hot and you must wipe and tin the tip after every heating. You may find you can mark some of the wires with a felt-tip pen — this reduces the number of different colour tapes you need, but makes it much easier to get confused.

While you are busy cutting wires, also disconnect those which go to the jack socket and tailpiece (or bridge.) You should now be able to lift out and wrap the controls and panel. On a guitar with back access to the controls, you should now be able to remove the control knobs and control mounting nuts and lift out a maze of pots and wiring. Lay this in a large box and try not to disturb its shape. On some guitars, you may need to remove the selector switch with its leads, like the pick-ups. (If the wires slide out easily, I would rather do this than have to re-wire the switch in a cramped space.)

This leaves the neck and the jack socket and plate. The neck comes off easily enough if you remove the four screws and plate on the back, but as you lift it off, look for card or plastic shims in between the neck and body. These affect the neck angle and the

GUITAR RENOVATION



Scuffs and scratches on the side before restoration

action. Keep these shims and record exactly where they were placed.

The jack plate on most guitars is held on with screws in an obvious way, but the plate on a Tele is something else. It is amazing how many people fail to grasp the way this recessed plate is held in. Look at any old Tele and you will probably find scars where someone has tried to prise the plate out — unsuccessfully. All you have to do is find a 1/2 inch A.F. tubular spanner, remove the jack socket fixing nut, the plate falls out, and the socket falls inside, leaving a small bracket fixed inside the hole. But then there is a hard and an easy way to do anything. This bracket should not be removed unless it's so loose that the socket plate cannot be clamped firmly. If badly loose, it can be removed, straightened, reinserted from inside, and after trying the plate for a tight fit, glued in with two spots of Epoxy. You should now have a neck and body completely bare of fittings.

The amalgamation trick which follows has probably the best

chance of success on an original cellulose finish, where the colour coats (if any) have several clear coats on top. This was, and still is, considered good practice, as it minimises the chances of chips and/or wear taking off the colour. It also will work best on a fairly thick finish, with small holes and crazed parts like ground glass or like crazy paving. Small holes will probably remain after treatment, but can be spotted in later.

If the guitar's finish is simply worn away in large patches then amalgamator, which adds nothing to the surface, will not help much, although it may bind the rest of the finish together and make it worthwhile to patch the bare bits. If the finish is good in most parts and completely bare in others, amalgamation is unnecessary; you either rub down and patch, or you strip the lot. If the finish is good and firmly attached, but has lost its surface shine, de-grease as described later, spot in the chips and holes first with amalgamator (just a touch) and then next week patch

with lacquer in daily applications. When level, flat and burnish (see next month) and perhaps spray or pad over if necessary.

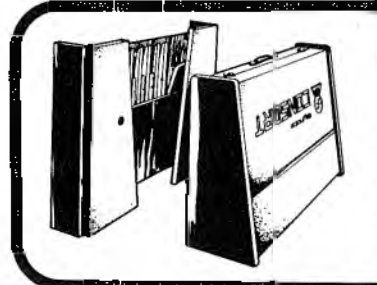
This all sounds fairly complicated, but I have tried to give some idea of the decisions I make before choosing a refinishing method. Your job should fit one of the descriptions above and the rest of the sentence will give you the re-finish method which will probably give the best value for time spent. Obviously, common sense must make the final decision: if you can't stand the colour, then strip it off, cover it up, or sell the beast!

If you have a case for amalgamator, first clean off all traces of grease and wax with White Spirit and an assortment of abrasives, starting with old tooth-brushes and nail-brushes, assisted with Ultra Fine Scotchbrite pads. If you are impatient, you might use very fine pads, or (if you can't get anything else) 3-0 wire wool or 600 wet and dry. I try to avoid these because they tend to remove some lacquer with the dirt and wax.

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Chips, cracks and holes will have absorbed more old wax, and will need a determined cleaning job repeated four or five times, with clean spirit, a rinsed brush, and the area dried with clean tissues between attempts. (The rest can be treated and dried two or three times, or until clean.) Especially avoid abrasive paper or wire wool over patches of what might be bare wood. There may be an unprotected coat of stain and/or filler on the surface. If you rub through this you will have to replace the colour later on, and that's a job you should avoid if possible. If you can't remove the neck, then you will have to mask it and do the body first. The next week, you can mask the body and do the neck, not sooner than this or the masking tape may pull off the new (and apparently dry) body finish. Rub down the edge of the mask hard with the back of your thumbnail to prevent leakage underneath.

Work in a good light, and in a dust-free place away from draughts, with a high quality professional's

house-paint brush, about 1 inch wide for the sides and 1½ inch wide for back and front. Either make a cradle to hold the guitar entirely off the ground or do one panel per day. You may have to brush a little harder than you expect and the surface should be horizontal if possible. Both these forbid hanging the guitar from a string or hook. Even on the sides, I try to rotate the body so that the bit I am actually working on is nearly horizontal and sloped so that any surplus runs away from the patch I have just finished.

The actual use of amalgamator is all over in a few minutes. You brush it on until the surface becomes slimy. Then you cross brush at about 10 or 20 degrees to the wood grain making a pattern of overlapping long X-shapes.

Try to pull the lacquer into holes and cracks, but work diagonally and start the brush from a different place each time. You should have several minutes before the finish begins to become tacky. This is usually enough time to

finish diagonal brushing and lightly remove brush marks in the direction of the grain. If the lacquer has hardened and will not flow-out after the brush, don't try to add more amalgamator, but dip the brush in it and shake it hard before returning to the guitar. This rinses the bristles but adds very little extra solvent to the finish. Whenever the brush begins to stick, repeat this rinsing. I should warn you that flying spray from a brush can easily travel 15 feet and will etch almost any glossy surface.

When you have finished each section, leave it. Don't try again on the bit which didn't come out to well. Don't add a bit more solvent to a dull patch. Just leave it or you may pull the lot off. If you really think you can do better, wait at least a week, or two, if the guitar does not hang in a warm room. If you must put your guitar back together for a gig, try to wait for at least 24 hours after the last spot becomes touch dry.

Don't expect a mirror finish yet. There's a lot more work ahead, and I'll cover that next month.



Scuffs and scratches on the back, before restoration

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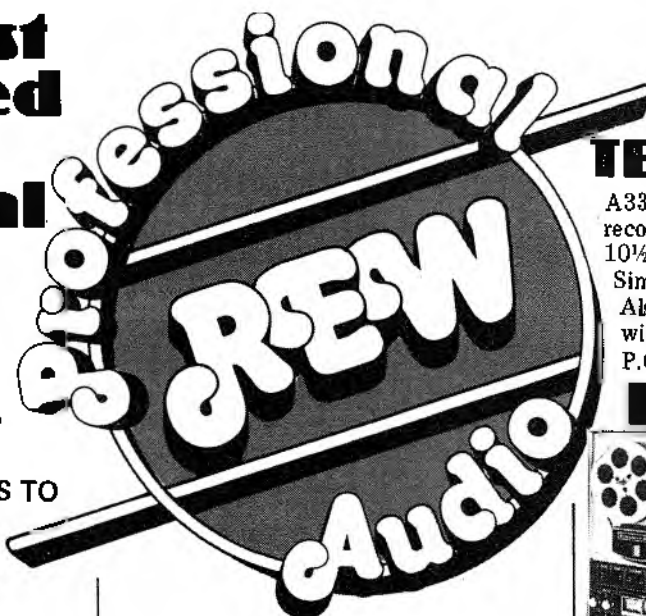
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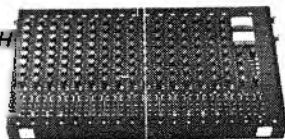
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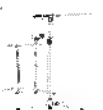
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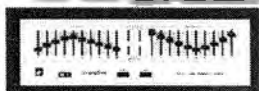


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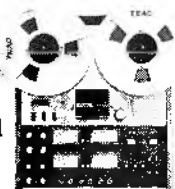
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STUDIO DIARY



ADVISION ... Alan White of Yes mixed his first solo album, with friends Steve Howe, Peter Kirtley, Colin Gibson, Kenny Craddock, Alan Marshall, The Chanter Sisters and Madeline Bell, engineered by Bob Potter ... Barry Ainsworth was engineering some jingles ... Greg Lake was working on some solo material ... Jeff Wayne was mixing some recording by David Essex for Supersonic ... Guy Gregory and Christian Solo have each recorded a single for Word of Mouth Records with producer Stuart Bruce ... Aj Webber was recording for Anchor Records ...

CENTRAL SOUND ... The Brotherhood Of Man were recording with producer Tony Hiller and engineer Simaen Skofyfield ... Diamond Jack were working with producer Tony Hiller ... Barry Blue was in ... Mick Flynn (ex-Springfield Revival) was producing Pussyfoot ... Design were working on a single with Mick Flynn producing ... Max Bygraves was recording with David Riley and Tony Bygraves producing ...

FREERANGE STUDIO ... Thin Lizzy recorded an album with engineer Laurie Dipple... Tim Hardin was doing some tracks for an album with producer Phill Chilton ... Cole Younger was recording a demo single with producer Phill Chilton and engineer Laurie Dipple ... Dave O'List (ex-Nice) was recording with his new band and engineer Simon Tassano ...

IMPULSE STUDIOS ... Alan Hull was in with engineer Micky Sweeney ... The Steve Brown Band were recording with producer Jimmy Gallagher and engineer Micky Sweeney ... Mike Harding was working on a single with Geoff Heslop producing ... Pete Scott recorded an album with Geoff Heslop producing ... John Leonard and John Squire were recording with Geoff Heslop producing and Micky Sweeney engineering ...

KINGSWAY ... The Sweet have been finishing off an album and working on a new single with engineer Louis Austin ... Stack Alice were recording singles with producer Clifford Davis and engineer Louis Austin ... Chevy were recording with producer Paul Dean and engineer Paul Watkins ... Tony Ashfield was producing Norman Brown with engineer George Sloane ...

MARQUEE STUDIOS ... Gus Dudgeon was producing Colin Blunstone with engineer Phil Dunne ... Stephanie De Sykes recorded a single with producer Barry Leng and engineer Geoff Calvert ... Lynsey De Paul was working on a single with Barry Blue and engineer Geoff Calvert ... Leroy Brown recorded a single for E.M.I. with engineer John Eden ... John Richardson and Alan Williams of The Rubettes were recording a solo single with producer Alan Blakely and engineer John Eden ... Polly Brown worked on a single with producer Gerry Shury and engineer Geoff Calvert ... Barry Mason recorded a single for Magnet Records with Gerry Shury pro-

ducing ... Moon Williams has recorded a single with producer Kaplan Kaye ... Shanghai were recording with producer Rob Dickens and engineer Steve Holyrod ... Ozo were recording with producer Kaplan Kaye ... Peter Beckett Brown has recorded a single with producer Paul Phillips and engineer Phil Harding ... Wig-Wam from Finland were recording for Virgin Records with producer Ronnie Leahy ... Rivendell recorded a single for D.J.M. with producer Graham Layden and engineer John Eden ...

THE MASTER ROOM ... A George Harrison album and single were cut ... A Roxy Music album was cut ... A Monty Python single was cut ... A Slade single was cut ... A Carla Bley album was cut ... A Jigsaw single was cut ... A Jethro Tull single was cut ... A Pretty Things album was cut ... A Julie Tippett single was cut ... The Richard Dignance album was cut ... An Edgar Broughton Band album was cut ... A John Cale album was cut ...

MUSIC CENTRE ... Showaddywaddy were recording with producer Mike Hurst and engineer John Acock ... Keith Emerson was recording with engineer John Richards ... Wizzard were working with engineer Richard Goldblatt ... Roy Wood was recording with engineer Dick Plant ... The Sweet laid some tracks for the Supersonic television programme ... Bruce Welch was recording with engineer Dick Plant ... Raymond Froggett was recording with engineer Richard Goldblatt ... Arthur Mullard was in with engineer Kenny Denton ... The Pickwick Company recorded a Top Of The Pops album ...

ORANGE ... Paul and Barry Ryan were recording with engineer Keith Allen and producer John Bachini ... Jimmy Haynes was recording with producer Mike Worray and engineer Steve Churchyard ...

RADIO WORCESTER ... Kevin Gavin (ex Bronco) was recording a single with engineer Colin Owen ... Dulcimer were in with engineer Colin Owen ... Big Front Yard were laying some tracks for an album with engineer Colin Owen ...

RAMPART ... Stackridge were overdubbing with engineer Denny Bridges ... Pavlov's Dog were mixing with engineer John Jansen and producer Murray Krugman ... Paul Korda was in recording ...

ROCKFIELD ... Dave Edmunds was recording ... Gus Dudgeon was producing Howard Werth with engineer Pat Moran ... The Flaming Groovies were produced and engineered by Dave Edmunds ... Sean Tyla was recording with engineers Pat Moran and Dave Charles ... Motorhead were working with Dave Edmunds engineering ...

RONNIE LANE'S MOBILE STUDIO ... The Unit was in Wales with Ronnie Lane working on his album for the last two months with engineer Ron Fawcus ...

SCORPIO ... Carl Palmer has been working on his solo album with engineer Andy Hendriksen ... Back Door were recording with engineer Andy Hendriksen and producer Carl Palmer ... Robin Cable was producing and engineering Jorge Ben ... Clancy have been working on an album with engineer Ray Hendriksen ...

TRIDENT ... Genesis were recording with Dave Henshaw producing and engineering ... Spiders From Mars were in with producer Dennis McKay and engineers Joe Smith and Peter Kelsey ... Charlie were recording with engineer Peter Kelsey ... Jaque Morelli was recording with producer Bernard Saint-Paul and engineer Peter Kelsey ...



Roy Wood was recording, both on his own and with Wizzard, at The Music Centre

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"My attitude towards the studio complex is complete and total involvement. Everyone who works here cares. Our job is to give the customer complete satisfaction, and we're all working with the same aim, like a big family." — Dave Carey, CBS' Studio Manager.

Dave often uses the word "family" to describe the CBS Studios staff. If the employees are the "family," then Dave must surely be the "godfather." He has had a long career in music, and worked with the Lew Stone Band, Cyril Stapleton and The Stargazers. He later went into publishing as head of Flamingo Music, which later became Intersong, and then went back to writing and arranging.

He took over as Studio Manager in 1974, four years after the present complex in Whitfield Street opened. There are three studios housed in the complex, Studio 1 being the largest, and measuring 65 x 45 x 20 and it can accommodate up to 70 musicians comfortably. Acoustic panels can reduce it to 45 x 30 for a smaller session. Suspended acoustic clouds are provided on the ceiling to reflect unwanted signals. These clouds are also featured in Studio Two, which measures 25 x 27 x 14 and can accommodate up to 28 musicians. The smallest, Studio 3, is 24 x 21 x 10 and situated on the top floor. This is suitable for a "smaller" session of up to 15 musicians.

All three control rooms are identical, box-within-a-box areas linked by tie-lines. Rupert Neve consoles are fitted, with full equalisation on each channel. Push-button selection minimises time-wasting "patching". Studer tape machines are fitted throughout, offering 2, 4, 8 and 16-track formats. All the monitors are Altec Lansing and there are four EMT reverb plates linkable with four "natural" echo chambers in the basement.

Chief Maintenance Engineer George Balla designed and supervised the construction of the complex and was also responsible for features like the time-delay system and the fact that the acoustics in each studio and control room are exactly the same. "We developed a way of using time-delay" he explained,

"with a configuration of tape delays, as opposed to digital delays; making a shorter delay time. The idea really is that we play what we need to hear, ahead of time, so the resulting delay is shorter."

A lot of care and attention to detail went into the design of the studios and control rooms as George explained "Regardless of the depths of the control rooms, as far as possible the sound you hear at Central Listening Position should be the same. It's basically an aid to mixing firstly, but it also means that we can break a session and continue it in another room, or perhaps do half the recording in one studio and half in the other, and then mix in a separate room. The acoustic treatment of every room is similar and the monitor system in each room has been equalised, therefore the listening frequency response, acoustics and sound pressure are absolutely identical. It's a fairly unique situation in this country.

"The other thing is that every room or studio is completely and totally isolated from the main building structure. It's a box-within-a-box design, but in a very sophisticated way. Normally, when people do a 'floating floor' it is really little more than a rubber mat laid down and the floor built on top, so the whole room is vibrating. Any sound can make it vibrate to some extent. Ours are very heavy — the floor is approximately six feet of concrete slab, so vertical transmission in the building is practically nil. You can bang on the floor above and nothing will come through. The thing is, in the past, the main aim was to isolate outside noise from the studio — now it's the reverse."

As well as being fully air-conditioned, every studio and control room has an intricate lighting system. A choice of colours can be selected for atmosphere, and they can also be dimmed to the client's requirements. Anyone who has spent some time in a studio will know how important air-conditioning is, and the facilities for "mood lighting" is an excellent idea.

CBS Studios don't just cater for CBS artists. The second floor houses two cutting rooms with Neumann and Ortofon lathes and artists whose records have been cut here include Elton John, David Essex, Sailor, The Drifters, Abba, Lynsey De Paul, Chris Squire, Leo Sayer, Kiki Dee, The Walker Brothers and many of CBS' American artists. Arun Chakraverty is Chief Cutting Engineer and Technical Manager, and the cutting staff include Allen Landau and, to prove there's no sex discrimination at CBS, Beryl Ritchie. Arun told me "We're gradually killing the idea that only CBS artists are looked after here. In fact, 90% of Warner Brothers' and Atlantic's output is cut here, along with labels like Jet, Polydor, United Artists, Rocket and Bradleys."

CBS Studios



continued on page 57

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CBS Studios

Dave then introduced me to Chief Balance Engineer Mike Ross, a personable young man who has been with CBS Studios since the beginning. Dick Palmer, Bernie O'Gorman and Steve Taylor are the other balance engineers at the studios and, between them, they have recorded acts like Jonathan King, Hello, Smokie, Johnny Nash, Argent, Sutherland Brothers, John Williams and Vince Hill. "Mike, in fact, is becoming internation-

ally valuable to CBS," said Dave. "CBS recently opened a new Studio in Brazil and he's going over there to advise on European recording techniques."

Junior balance engineers and tape operators include Simon Humphries, Doug Bogie, Damien Korner and Norma Denys, and they are an integral part of the smooth running studio complex. "No matter who we're talking about —

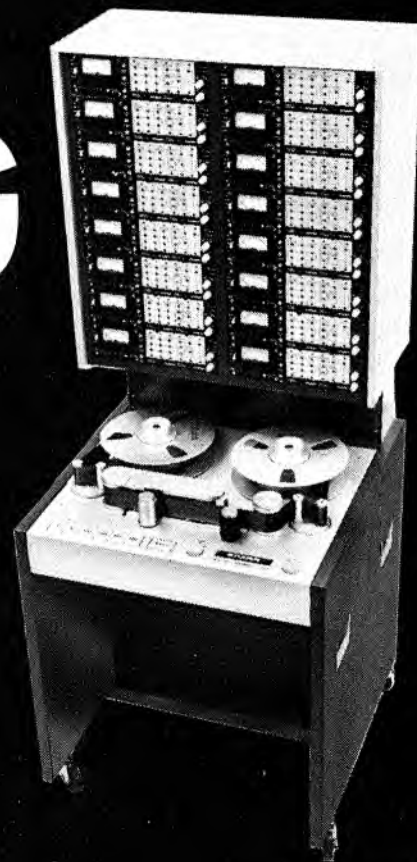
whether it's a junior tape operator or a balance engineer — they are all creative and all have their own ideas," Dave explained. They are all totally involved and very important. Being a service organisation, our main concern is always the client. We bend over backwards to give them what they want. CBS Studios is a very creative-gearred organisation, and this helps us to understand producer's and artist's needs.

"I would like to stress that we literally give a 24-hour service. You have to be able to offer this, in order to be successful. If a client is doing a session at 3 a.m., there is always a maintenance engineer there. If they need an engineer for any little thing that goes wrong, there's always one available."

According to Dave, CBS' success is due to a mixture of "really caring about the customer's needs, and the fact that we all know and care about what we're doing here. Everybody is important in their own way. Although we're part of the CBS organisation, the studio complex is run entirely independently. We all have our own job to do, and, because of this 'family' feeling here, we all do our jobs well. There is no room for weak links and, because of that, there are no weak links." □



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Peter Newhouse Hamiltons of Teesside

Hamiltons of Teesside started in 1950 as a record shop, run at that time by Mr. Willy Hamilton. Stacks of 78's and the odd piano were the standard stock in those days, but as skiffle grew into rock 'n' roll, Hamiltons grew into a bona fide musical instrument shop. Out went the HMV 78's and in came guitars, drums and, probably, bongos. The expansion carried on until, in 1966, brothers Peter and Richard Newhouse bought the shop.

A year later they opened a keyboard division in a separate building, probably the first keyboard shop outside London. They bought J.W. Whiteleys of Stockton in 1968, which was then a rather old world sheet music shop, and two years later transferred it to Hamiltons. The shop was then in Corporation Road, but moved to their present premises in Newport Road, Middlesbrough two and a half years ago, taking the keyboard division with them, the idea being to have everything under one roof. Peter Newhouse: "We had 1800 square feet in the old shop, but gradually ran out of space, so we spent £80,000 on modernisation to this place and have ended up with 9,000 square feet. Even now, we find it a little cramped!"

The 9,000 square feet is certainly not wasted. The front of the shop is devoted to records and tapes, and the back houses a giant musical instrument department and sheet music area.



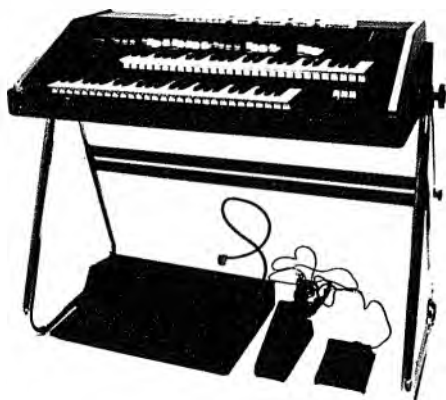
continued on page 61

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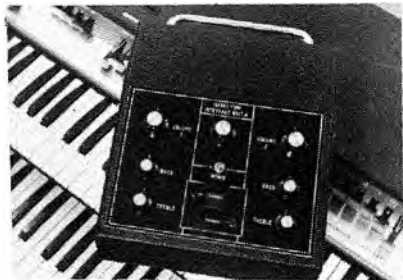
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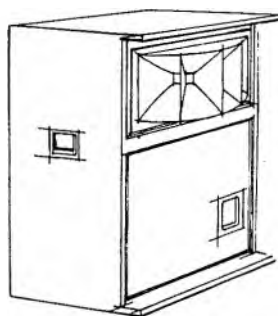


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Fender Strat	£305	£281
Fender Tele	£236	£213
Guild S100	£280	£252
Gibson Les Paul D.2.	£465	£419
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HAMILTONS from page 59

The record department must be one of the largest in the North. Peter Newhouse: "It's based on an American system. Basically self-service, but also with counter service. All the albums are indexed and the numbers are put onto cards in a file which is updated three times a day."

Guitars range from Fenders and Gibsons down to the cheaper Japanese copies, and they are all economically stored on large, sloped stands. Most leading makes of amplification are on show, along with a wide range of percussion instruments. The keyboard department is on the first floor, and houses instruments for home, group or church use. On the same floor there is a gigantic stockroom literally bulging with spare everything, and Hamilton's electronic and instrument repair departments.

"A big slice of our business," Peter told me "is our educational instruments. We started to do them in about '67 because there appeared to be a big market for it. It was about the time when the local education authorities started to buy instruments. We've kept it up because it's gone so well."

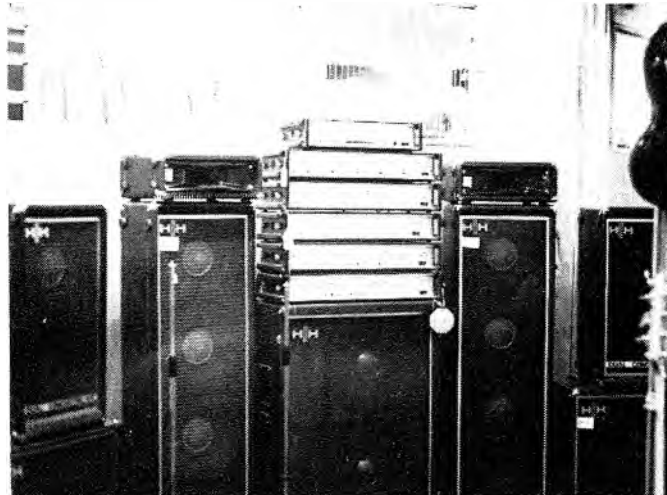
Spare is a vital word in Hamilton's vocabulary. They recently began selling cabinet components like corners, speaker grilles and carrying handles for the large number of customers who build their own equipment. "We went into that side of things accidentally," explained

Technical Manager Tony Atkinson. "There were a lot of enquiries about cabinet components and nobody seemed to be able to get hold of them, so we began to carry a few items and it rapidly built up. We're now getting orders from all over the world, including Australia, New Zealand and South Africa."

Peter Newhouse: "You could say that we've built the business up in bits and pieces, in a way. We always carry a large stock of components and spares, and we always try to have what people want."

"Everything is checked before it leaves the shop" Tony stresses, "and I mean really checked — not just plugged in to see if a light comes on. We open all the cabinets and see if there are any loose screws floating about, we virtually take all the organs apart — you just can't afford not to check everything." Tony initially joined Hamiltons to take over the repair department, and went on to build a multitude of things. He built P.A. systems for installation in Town Halls and local clubs as well as building various units for disco application like strobes and decks. He now has four service engineers working for him on the electronic side.

"We won't sell anything unless we can service it within reason," he explained, "because we don't really believe in sending things away. On brass and woodwind alone



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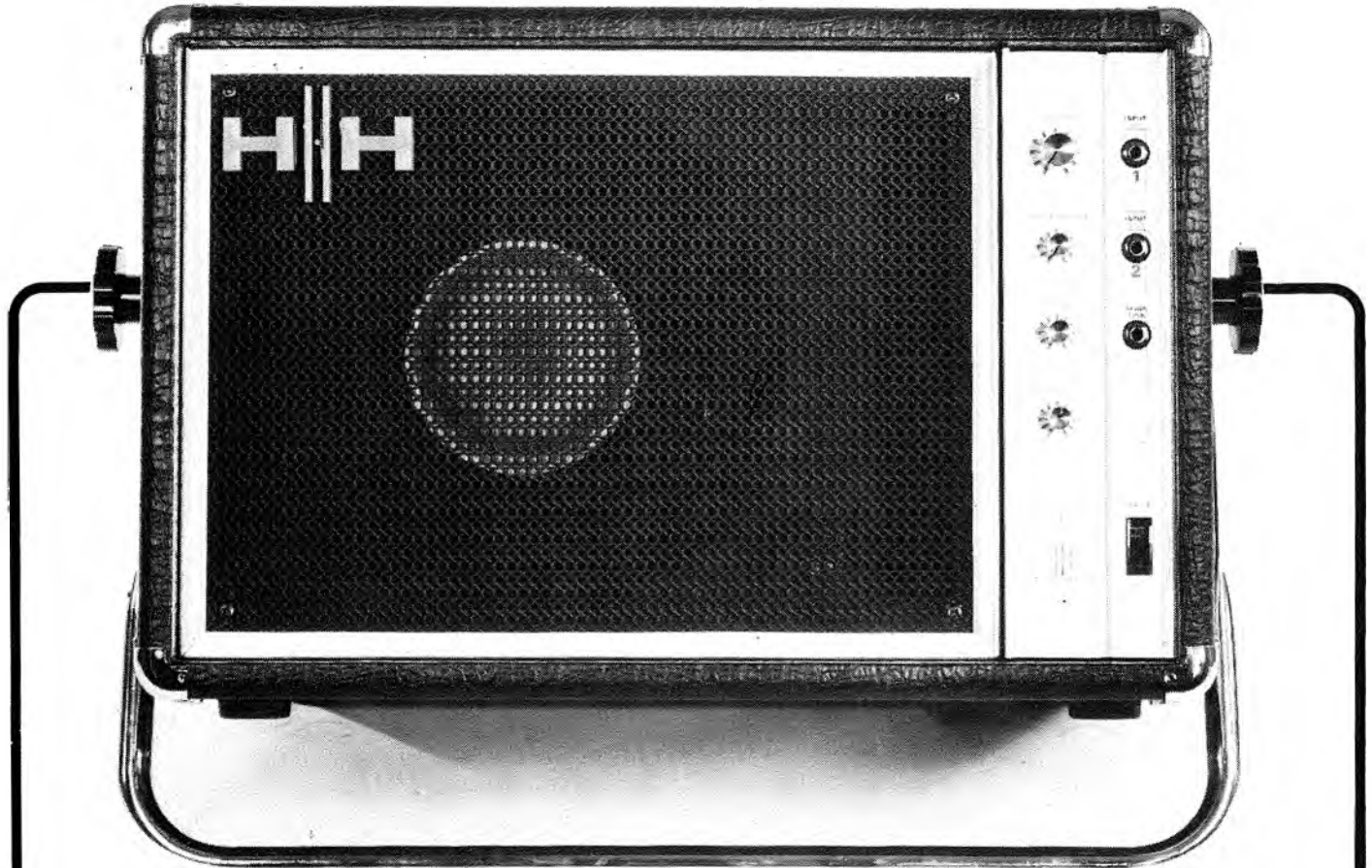


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HAMILTONS

we have two people to do repairs. The thing is that most people can't afford to wait for weeks on end while their equipment is sent away somewhere to be repaired, so we can do most stuff on the premises. That's the main reason why we won't stock gear that we think is badly built. If it's badly built or unreliable we won't stock it, and that includes some well-known gear"

"We don't service organs we don't have agencies for, as that can lead to obvious difficulties, but we've got a guy who does keyboard repairs and he's really good on synthesizer technology so there's no real problems with synthesizers." As well as holding all the main amplification agencies, Hamiltons are also a Gibson Star Dealer and, judging by the numbers of Gibbo's in stock, it's not too hard to see why.

H/H amplification "sells like hot cakes," according to Peter. "It just seems to fit the bill for our customers in general. We don't do big P.A.'s and mixers because there are hardly any bands around that need large systems. There are no real rock bands in the area, because there are no colleges or Universities around. Most of our customers tend to be cabaret acts - duos and trios - because there are so many working mens clubs around."

Hamilton's customers generally fall within a 50 mile radius of Middlesborough, although in the educational field they come from all over the country. On the subject of education, Hamiltons also run a guitar course. "It started in 1968," Peter explained, "because we found people just couldn't get teachers, so we started our own guitar courses and they've gone extremely well. We normally have about eight different classes on Saturdays. There are two teachers who take four classes each."

Hamilton's also do a fair amount of second-hand equipment but, according to Peter, they "can't get enough. That's one of our biggest



problems with second-hand gear. It just doesn't seem to come our way. Again, even with second-hand equipment, everything is checked. We even give a guarantee with the gear because it has been checked and overhauled."

Percussion-wise, Hamiltons are also very healthy. They usually carry about 16 kits in stock and are Premier agents for Middlesborough and Stockton. They used to import a lot of Latin American percussion when it wasn't so easily available in this country. "We don't carry a large amount of the more expensive American kits, because of the lack of beat groups in the area."

On the subject of disco equipment, Tony says: "We seem to go up and down, really. One week, we'll sell a tremendous amount and then there will be a lull for a while. We carry Citronic, SAI, and Zero 88 disco gear, but we've found that most of the mobile operators around don't seem to go in for complicated equipment. They seem to be happy with just a couple of decks and some rope lights. A lot of our business on the disco side comes from the local clubs. We've done a lot of permanent installations locally."

Local work figures prominently in Hamilton's trade. Peter: "We do a lot of public address hire. With being surrounded by industry, there are a lot of business conferences and things like that. We build our own mixers specifically for this, and we've done quite a few for local authority outdoor events. There are a lot of really interesting jobs, like the time we had to provide a P.A. for an oil-rig launch

to cover 5,000 people. There was a big religious procession which covered a mile of Durham streets, and we did the sound for that using two-way radio telephones and running cables across roads, rivers and under viaducts."

Of the stock, Peter says: "I think, in our position, a shop has to stock as much as possible. We decided at the outset that we would try and go into every aspect of music from records, through sheet music and educational instruments, to drums and guitars. I think it's worked and we've now got as complete a shop as you can

get. If we can't get anything, we usually import it ourselves. At the moment, we import oboe and bassoon, reeds, violins and pianos."

Hamiltons of Teeside now have a staff of about 40 and are open six days a week. There are no problems with parking as there is a giant car park directly opposite the shop and loading is easy because of the delivery doors at the back of the premises. There is also a large lift enabling heavy equipment to be brought up to the repair department on the first floor.

Peter attributes the success of Hamiltons to one word - service. "It's by far the most important thing as far as we're concerned. It's good for our customers to know that they can get virtually anything done in a reasonably short time. If someone gets a faulty amplifier to us by 10 a.m., we pull out all the stops to get it fixed. It's very rarely that we can't do it." □

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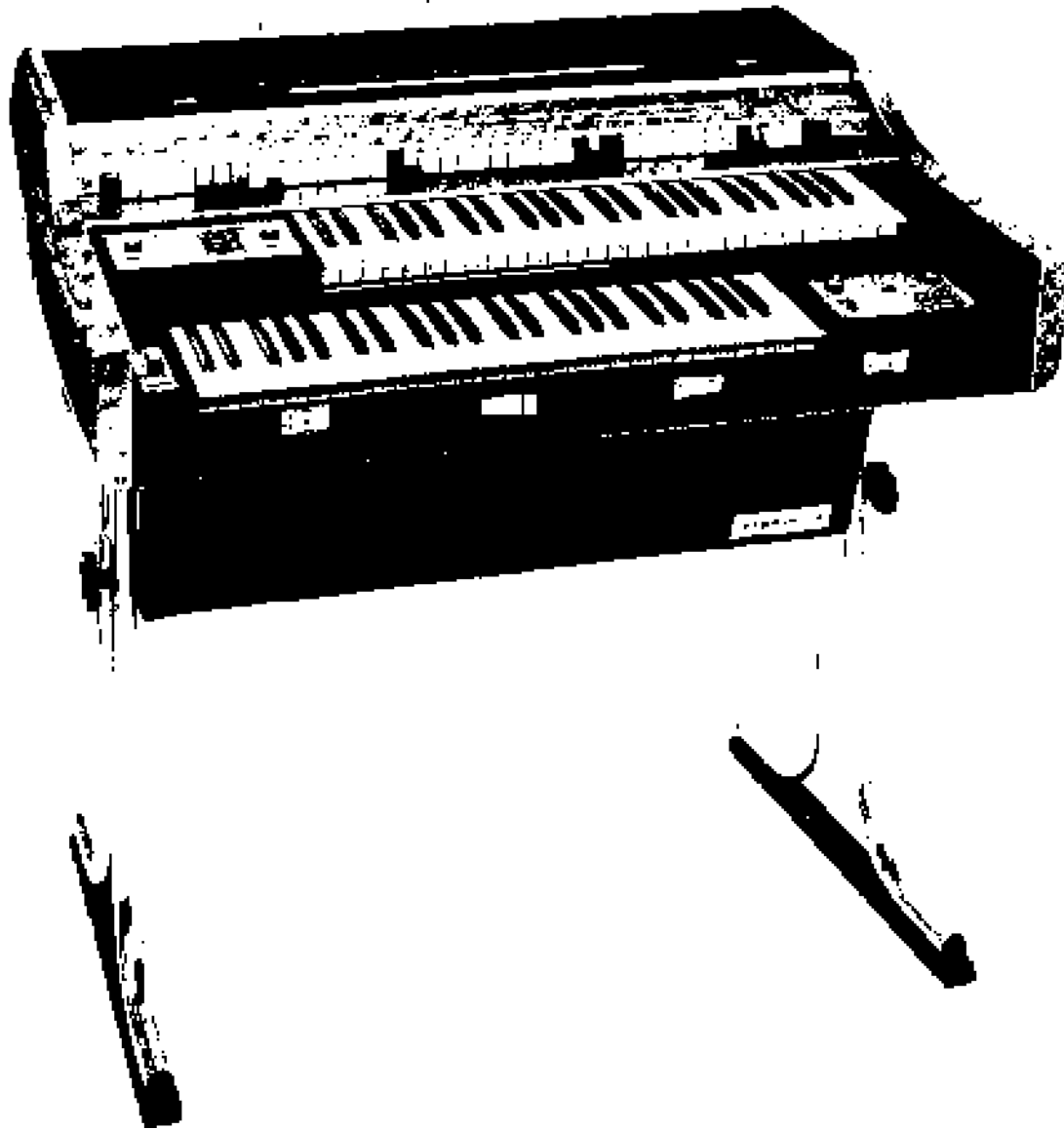
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BUZZ BIRMINGHAM



ONE-WAY City, formerly known as Birmingham, is the second largest city in the U.K. Its musical importance parallels this fact and during the middle 'sixties, the city rivalled Liverpool for the production of home-grown talent and the "Brum Beat" had an incandescent life cycle.

The "Planners" decided to experiment with the city. Spaghetti junction typifies the madness of the road scheme and whilst Birmingham is easy to get in and out of, the one thing you can't do is stop. As a first time visitor to Birmingham, try finding New Street Station. After a thrilling 20 minute ride around a one-way system elevated so often it felt like a switchback, a policeman told me: "It's over there but I don't know how you're going to get to it." If you know Birmingham well enough to risk being caught in a perpetual orbit in the outer, middle or inner ring roads, here's a guide to the musical activities of Birmingham.

It's been a year of change and development for Grosvenor Studios of Birmingham. They've emerged as undoubtedly the best recording studio in the Midlands and they're now equipped to rival and win over London studios by offering similar facilities at provincial rates.

Grosvenor has re-emerged following a major rebuilding programme and a name change. As

Hollick and Taylor, the studio was known to every band in and around Birmingham and during the 'sixties it enjoyed an incredible expansion which catapulted a small business into the professional league.

The recording business started shortly after the last war when two friends, John Taylor and Charles Hollick, got together making recordings. John was the man at the controls, Charles the man with the soldering iron and the design board.

Soon the pair had a small studio catering for the dance bands of the 'fifties and when Birmingham started to rock hard in the late 'fifties and early 'sixties, John found himself rocking behind a control panel knitting together the sounds made by bands like The Move, Black Sabbath, The Moody Blues and hundreds more. They were hectic days and John and his wife Jean responded by throwing themselves into the business with gusto whilst Charles Hollick pursued his beloved theoretical studies of electronics.

The late 'sixties and early 'seventies saw the development of "The Studio Complex" and John realised that the time was right for him to step into the big league. Fortunately, the premises he was using for his original sound studio had some spare ground and building started apace to open a

complex that would boast a huge studio with a 16-track control room, a smaller studio for commercial productions and film overdubbing, a copying suite, a film editing suite and full cassette and cartridge master manufacturing facilities.

At the beginning of 1975, the new complex opened. It had been five years in the planning and two years in execution. Major hold-ups had been caused through problems with planning permission, bad weather and similar set-backs. At the time John and Jean despaired of getting a new studio at all.

Today, Grosvenor Studio offers 16-track recording on a Studer, 24 channel recording via a Neve desk with a full complement of echo systems, Eq banks, and all the usual equipment found in a first division studio.

The expansion has caused a subtle shift in the type of work being taken on by the studio. The enlargement of the main studio area has meant that full orchestras can now be recorded with studio room to spare and it is for this reason that a great deal of orchestral music has been recorded during 1975.

Jasper Carrot's hits were recorded at Grosvenor. Jeff Lynne, an old friend and firm believer in the Grosvenor sound, recommended the studio for the recording. New tracks are currently being laid there now.

Grosvenor has had its own label for quite a few years and a great deal of material for Grosvenor release has been recorded recently. Brass bands particularly like the studio and most of the award winning outfits have chosen to record albums there. Visit Grosvenor and as well as finding the best recording money can buy, you'll also be working

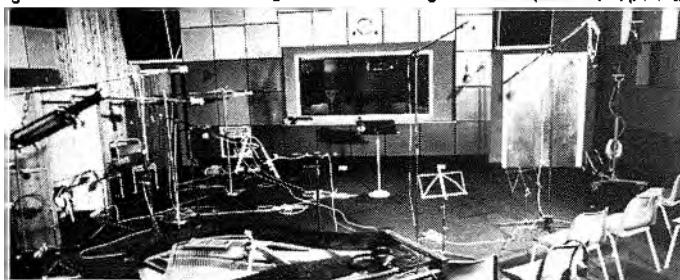
with the nicest people in the business

Yardley's is one of those shops that old pro musicians in Birmingham talk of with a misty look in their eyes. Perhaps the mist is tears for instruments never reclaimed, because Yardley's started out as a pawn brokers and the hard times that hit musicians in the 'twenties resulted in an awful lot of instruments going to the three balls. The end result was a shop specialising in buying and selling instruments.

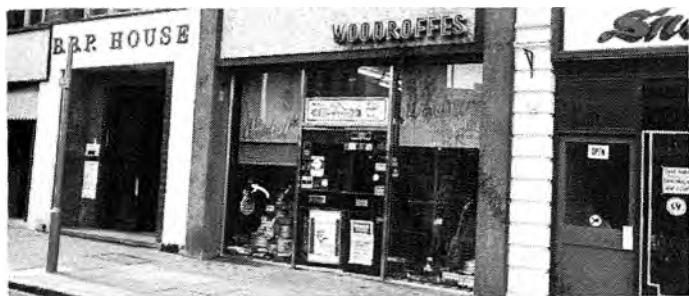
Started in the early 'twenties, the shop is still in the hands of the Yardley family, although for the past forty years, the man at the wheel has been the much loved Charlie Hewitt. He's to Yardley's what Ron Cooper is to Kitchen's in Leeds: the business is built upon his great knowledge.

During the tough 'thirties, he forced the business into a position of prominence in the Midlands by pursuing a policy of quality service in brass and wood wind. Today the visitor finds a really incredible array of brass and wood wind on show. Not many shops boast two dozen saxes on show, 20 clarinets sitting in a window (out of a total stock of 200) and people on hand who actually know about those instruments. At the other end of the scale, there's a pretty heavy amplification section as well. Harry Collins looks after the shop, with particular attention to the wind instruments, leaving Pete Oliver to deal with electronics and guitars.

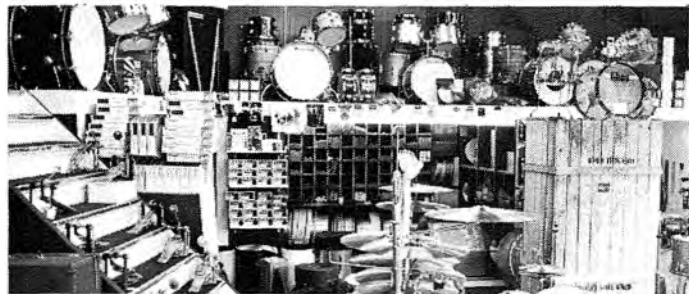
Pete's been around, if you know what I mean. He started out with Yardley's more than a few years ago, he's been in business making amps and flogging them and now he's directing the Yardley group gear retail effort. The main line for the company is ubi-



Grosvenor Studios



Woodroffes



Drumland - Percussion Paradise



Keith Tonks & Roger Heafield of Cleartone

quitous HH. Pete reckons they're the best amp he's seen arrive in the last eight years and he should know, as he sells vast amounts out of a comparatively limited shop area. Other lines stacked up in the shop include Acoustic, JBL, Custom Sound, and Marshall and there's a vast array of electronic effects units like pedals to be tried from the accessory bar. Guitars litter the walls with the usual, big names like Fender and Gibson dominating but better copies like Antoria are also shown in prominence.

Of particular importance in the shop are pedal steel guitars. Yardley's are lucky in that they have an excellent pedal steel teacher to start students off on the instrument and they consequently sell quite a few of these delightful and underrated instruments. Sho-Bud and Emmons are the most popular makes, with Z-B also a fast seller - when they're available.

Two doors away from the main Yardley's shop which is very close to the city centre, there is Yardley's drum shop. When this shop fell vacant a few years ago, it seemed an obvious move for Yardley's to expand and Charlie decided that percussion deserved an outlet of its own. Colin Smith is manager of the drum shop and it delights in having a Premier agency, but naturally enough a wide range of the better known makes like Rogers and Ludwig are also carried.

Wholesalers play a far larger part in a musician's life than might be imagined. The guitar he plays, the kit he uses are dictated in the first instance by the readiness of wholesalers to import or handle the lines. Without this kind of promotion and distribution, the range of instruments available would be woefully small. The biggest wholesalers on the Birmingham scene are Cleartone, who operate from spacious premises in delightfully named Legge Lane.

Cleartone also make the CMI range of amps and guitars. These items have a particular quality which makes them very attractive to the vast majority of musicians, - they are inexpensive.

Getting the right price for the right product is an art in itself and directors Roger Heafield and Keith Tonks have become expert in that art over the eight years or so the company has been trading.

Cleartone started out manufacturing and distributing Park amplification. Thousands of these sturdy and attractive units can still be seen in gigs up and down the country, and the company prospered and realised that as they distributed amplifiers to dealers in the wilds of Scotland, (for example), other items might successfully be included in the shipment. Quality instruments like Grimshaw guitars were added to the catalogue and when Roger joined the company six years ago, the wholesale operation started in earnest.



Pete Oliver of Yardley's

CMI amplifiers were developed to be marketed along side of Park. Valves for the Park units - like KT88s - were getting hard to come by in quantity and it was decided that CMI should be a range of transistor amps as an alternative to Park. In the end, the new range proved so successful that it took over completely from Park.

CMI amps continued successfully until an effort towards corporate identity meant that Cleartone wanted amps and guitars to bear the same name. The transformation took place and CMI is now the name carried on a wide range of amps and guitars that come from Legge Lane.

The products handled by Cleartone represent a select choice from the world market. The lines are CMI, Slingerland Drums, Latin Percussion, Hashimoto guitars and a wide range of accessories such as mike stands, guitar straps and tambourines.

It's the export market that has now attracted the attention of Keith and Roger. It's early days yet, but the best markets for CMI are proving to be Sweden and South Africa. Enquiries are however regularly received from all over the world and a sizeable shipment has just been dispatched to the Seychelles.

Virgo are quite a new band on the Birmingham scene. It's not the best place to work in the country, although quite a few more pubs are beginning to take bands. Virgo are a three piece band who describe their music as "rock-funk". Despite this, they're prepared to play almost anything to get a gig and the result is that they're working up to four nights a week. The line up is Pete Briggs-Fish on drums, Graham Wall on bass and vocals and Robert Fryer on lead and vocals.

The transport problem for the band is taken care of by a Luton-backed Ford Transit and in the 13 months they've been together, they've played some of the better Brum gigs like Bogart's and The Forresters.

The gear the band use includes a Fibes drum kit, a Rickenbacker Stereo bass, a Gibson Les Paul with 100 watt Vamp amp for bass

driving Music City and Vox cabs and two AC30's for lead guitar. The P.A. system is 300 watts of Hiwatt driving two 8 x 12 cabs and two 8 x 10 cabs. Unusually, the band also carry 5,000 watts of lighting. Poor stage lights persuaded them to gather together some decent illumination and Steve Hood looks after both sound and light for the band.

Drumland is a fantasy world. It's a vast shop situated on the corner of Navigation Street and it's crammed full of the stuff of drummer's dreams.

Every percussive goodie imaginable is stocked here and some really exotic kits are on show. The big names are out in force, names like Ludwig, Rogers, Fibes and Premier and there's a wide variety of tuned percussion also available.

Mike Evans is the man in charge of the show. Previously he worked for another drum shop in the city and he's had quite a few years in the business, learning the likes and dislikes of Brummy drummers. One thing they obviously like is a wide range of kits to choose from. The interior of the Drumland shop is as impressive as the exterior. The walls are lined with fantastic kits and there is a raised floor around the walls that carries more outfits. There is plenty of space for customers to try out the kit of his (or her) fancy and naturally Mike doesn't mind the kits being tried out.

The shop's a popular meeting place for local musicians, with its pleasant and unhurried atmosphere. This is the way Mike discovered to build a successful drum centre.

Woodroffes is a name synonymous with music making in Birmingham. For over 25 years there's been a music shop of this name in the City and today Mike Woodroffe is the second generation to be trading in musical instruments.

But Woodroffes wouldn't be open today if it wasn't for Mike's courage. The business was set to fold three years ago when Mike's father Jack decided he'd had enough. The shop prospered in the Beat Boom but in the backlash of flower power and protest songs, Jack took a left turn instead of a right. He decided that music was moving into classical and acoustic fields, and the shop went over to selling these sorts of instruments exclusively. Of course, the underground revolution was only 12 months away and suddenly at the beginning of this decade he found himself with a business as relevant to the contemporary music scene as a hard boiled egg.

Because of the nature of the business, Mike decided not to join it and was busy training as an estate agent. The news that his father was planning to close the

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Jones & Crossland



from page 67 Don Rogers and Alan of Green Lane Music Centre

shop jolted Mike, and he asked to be allowed to give it a facelift, do an about turn in marketing policy and have a go.

The whole Woodroffe family is intensely musical. Mike's brother Gerry is the keyboard player in Black Sabbath and the old man was a pro pianist with the Jack Hilton band before he started his shop.

Now that Mike's ideas have been proven right, he received a great deal of help from Jack and his brother Nigel in the administration of the business and the image of Woodroffes is one catering solely for the semi-pro and the professional musician.

Enter the shop in John Bright Street and you're faced with dozens of amp lines and as many types of guitar. Leading amplification names here are Fender, Traynor and Yamaha but, like the rest of Birmingham, MM is also making an appearance with their fantastic 12 channel mixer. There's a reasonable amount of second-hand gear to be found in the shop, but Mike admits that he can't get hold of as much of the stuff as he would like.

The business has done so well in recent years that expansion seemed on the cards. When the shop on the corner of John Bright Street and Navigation Street became vacant following the departure of an old established tailor, Mike seized his chance. After acquiring it, he had to decide what to put in it and he decided that percussion was the obvious line in need of space. This became Drumland and its success was assured when Mike Evans joined the company.

If enthusiasm was the engine to stardom, the Second Hand Band would already be in orbit. Together only nine months, the band are led by dynamic Bob Ensor who plays a double Premier kit and does his best to get things right for the band. The rest of the band are Clive Hunt, bass (Sound City 120 amp, Custom 1 x 18 and a 4 x 12), John Patchet, lead guitar (Gibson SG Special, Laney 100 watt valve amp, two 4 x 12 Laney cabinets), Greg Wooley (vocals with a custom built 1,000 watt P.A.). The band are currently considering buying a mixing desk (following *International Musician's* review).

An indication of the band's enthusiasm is the recent opening of their own club, Mr. Bojangles, at the Good Companions pub on the A45. The lads have booked a disco and they will be the resident band. They will ensure another bands debs when they're playing elsewhere.

Describing their material as "Commercial rock," the band's set consists of entirely original material which gives them some difficulties in finding the right venues. West Coast Promotions is the agency currently looking after the work load for the band, and the first two months of this year sees a string of dates scattered all over the country.

Manager of the Second Hand Band is DJ Ricki Dee. He's resident DJ at Bogart's disco pub in Birmingham and he has a good knowledge of the work possibilities in the city. The band have yet to record, but they're planning for 1976 to be the year when it all happens for them,

Jones and Crossland is a shop in the heart of the city familiar to three generations of Birmingham musicians. It's another one of the area's family firms and today it occupies two large shops near the Bull Ring. Once inside those portals, almost everything is possible — like a double bass, or an English horn, or a 100 watt Fender amp, or a sousaphone, or a cello. The enquirer can usually take his pick from many instruments in stock — even items like cellos — indicating the fantastic range of musical merchandise the company is famous for.

Jones and Crossland started out in the 'twenties in old Birmingham. Like the other old established musical businesses in the city, their prosperity was initially founded on brass and woodwind. Their tenacity during the fairly lean post war years and into the late 'fifties was rewarded with a flourishing musical empire resting on foundations as firm as could be wished for.

John Jones still takes an active part in the business. He's semi-retired and the Crossland in the story bowed out long ago. The day-to-day running of the retail side of things is left to Tom Mac-Alpine. A genial man with a warm smile, he's an ex-pro keyboard with a liking for organs and just about everything musical. Most of his time is spent overseeing the massive array of keyboards, whilst the band shop next door carries on selling the more specialist group equipment. It's the sort of shop where you can expect to find what you want. You'll certainly find a Fender Stratocaster and a Gibson Les Paul (more than a few of each adorn the walls) and you'll also find a wide range of student-priced guitars. There's plenty of the heavyweight amplification as well. Like everything in the Jones and Crossland empire, accessories are so well stocked it must make some of the competition weep. Most musicians can satisfy their musical needs in a single trip to this emporium.

Parking's not so easy, but then there's almost nowhere in the existent one-way madness to stick a transit whilst loading. Jones and Crossland can fairly be described as a "straight" shop. They'll furnish the individual musician with just about anything he needs, but Elton John might be out of luck if he nipped in for 10kW worth of radial horns.

Keyboards present include Thomas organs — the main line stocked — and Kemble, Eminent, Welmar, Crumar, Moog, ARP and Diamond.

If your car's wheezing a bit or you're fed up with your camera, there's a good chance you can get the amp you wanted just by a straight trade. Barter is the oldest form of business known to man, and a quick nip into the Green Lanes Music Centre, in Small Heath, Birmingham, reveals that the idea is still going strong.

Don Rogers started the shop eight years ago and it grew out of the original exchange and mart shop he opened. So many musical instruments found their way into his shop that he decided to devote himself entirely to musical merchandise. Today the shop has a reasonable selection of new and second-hand equipment with a modest range of guitars also on show. Second-hand equipment and instruments are understandably a big part of the business and one of the reasons for this is a willingness of Don's part to take something in part exchange for a new item or to accept almost any re-saleable item against an amplifier or musical instrument.

One important amenity the shop boasts is a snooker table. This came in as a part exchange some time ago and proved so popular that it was kept to form a social focal point for visiting musicians.

In 1974, 60 per cent of the shop's business was in the new sector, whilst it was 60 per cent second-hand in 1975. Some of the bigger cabs and amps can be found in the shop and there's a fair chance that you may find odd or peculiar items here that can't be found elsewhere.

Manager of the shop is Alan Gardfield. He's a bass player who's been there five years and he knows a great many musicians on the Birmingham scene. The shop doesn't undertake any hire — they used to at one time, but found the equipment was being abused.

Ranges available in the shop include Carlsbro, Orange, Acoustic, Premier and the usual Fender and Gibson guitars.

Hocken is a name that's been familiar to people involved in sound in the Birmingham area for more than a decade. Red Hocken started life as a sound enthusiast. Always interested in electronics, he started his career in trade as

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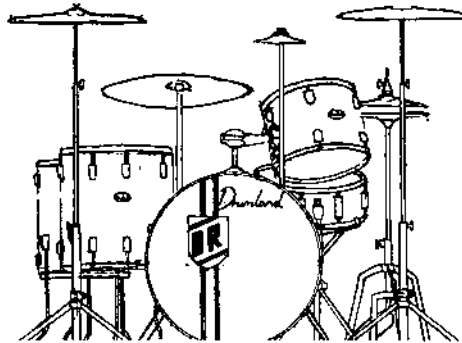


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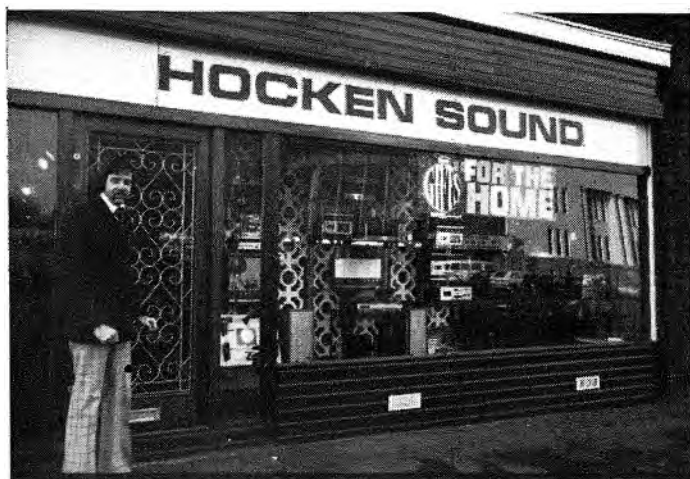
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from page 68

a small department in the Jones and Crossland Organisation. Red's company, Hocken Sound, started to undertake repair work for J & C and they were eventually offered workshop space in the J & C premises.

Today Hocken sound covers many areas of the musical scene. There's a shop in Pershure Road which deals in ultra-high-quality hi-fi and also has a department dealing with semi-professional and professional gear such as Revox tape machines and studio type mixers. Occupying pride of place in this section is an MM mixer (they're everywhere) and Bose equipment.

Sound installations are also a major part of the Hocken occupation. Over 50 per cent of the work is involved with fitting high quality professional equipment such as Midas/Martin, JBL and Crown systems in disco, clubs and cabaret spots.

Red's initiation into the business was via a P.A. company specialising in supplying sound reinforcement to outdoor events such as garden fetes. The equipment was made by companies like Vortextion and Tannoy. Today, P.A. is still a major concern at Hocken and a new shop is due to open in Birmingham within the next couple of months, a Hocken outlet dealing solely with professional P.A. needs.

Swans have long been established as successful keyboard retailers. The original Swans opened in Manchester some 45 years ago and since then virtually every year has brought new shops under the wing of the mother company. Swans of Birmingham is a comparatively new addition to the chain. The shop opened three years ago and the present shop manager has been there since 1974.

His name is Mr. Skett but he prefers to be known as Ketch by friends and regular customers. Ketch has been a professional musician for many years and still plays in a local band, Ses Dee. His favourite instrument is the guitar but he has enough knowledge and experience of keyboards to competently aid any customer. Swans stock only Hammond and Farfisa keyboards but these ranges include every conceivable kind of option that a musician could ask for. Ketch has found that the instruments which retail between £800 and £900 are most in demand, although the fastest selling individual keyboard is the Hammond X55 portable organ.

Ketch is helped by his assistant Bill, who is also a musician, and between them they try to keep as many second-hand keyboards in stock as they can. Like most shops which keep second-hand stock, the number of instruments can vary enormously and Ketch has become aware of the very rapid turnover in old Hammonds. Even organs which are somewhat damaged might be bought because there is a workshop on the premises which carries out repairs and modifications, and even rather sorry organs can to some extent be renovated.

Swans also has teaching facilities and a large basement which local bands use as re-

hearsal rooms.

Zella Recording Studios are situated in Edgbaston, in Birmingham, and enjoyed a rapid growth in the 'sixties. Former school-teacher Johnny Haynes started the original studio in 1965, mainly because he was interested in music and he used to do the sound effects for the local dramatic society. In those days, it was a simple two-track affair, but in 1971 Zella moved to their present premises in Ampton Road and "went four-track". It was upgraded to eight-track in 1972 when a Klark-Teknik eight-track machine was installed. The move was a good one for Johnny, because the studio was previously owned by the BBC and was already soundproofed. The equipment was brought in and wired up and Zella was ready to go. The equipment now includes a custom-built desk, Tannoy monitors, Neumann, Calrec, AKG and Beyer microphones and Grampian spring reverb. Two Revox's and a Sony TC850 are also employed.

The studio itself is spacious, measuring 20' x 40' and housing drum and vocal booths. There is a tea machine and call box and, more important, a large car park directly behind Zella. The absence of any stairs also ensures easy access to the studio.

Apart from demo discs, Zella do a complete album package for their customers and this includes recording, sleeves and pressing. They have also cornered the Asian

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Kim Holmes on the Nest board as Jake looks on



market in the Midlands, having recorded over 40 E.P.'s and 30 L.P.'s of Asian music. Most of these were issued by Star Records but Johnny also has his own label — Ash Records — which helps local acts get exposure.

Johnny's assistant is Alistair McCullough and, between them, they once recorded and mixed a total of 14 tracks in six and a quarter hours! Regular visitors to Zella include locals like The Soundbusters, Keith Lloyd, Tony Martell and up and coming Phonogram band City Boy.

There can't be many musicians who have not heard of guitar maker John Birch. Since the mid-'sixties customers like Roy Wood, Black Sabbath and Slade have been queuing for his services. It was mainly repairs and customising at that time, and, after seeing all the Gibsons and Fenders that needed repair work, John decided to start making guitars himself.

Five years ago, he moved to his present premises in Rubery on the outskirts of Birmingham and

he has virtually outgrown them already. Every square inch is utilised and he now feels the need to expand (he already has a staff of fourteen). His interest in electronics goes way back to the 'forties, when he was experimenting with pick-ups during his days with the R.A.F. He now makes five different types of modular pick-ups which can be inserted through the back of his guitars and changed within five seconds, enabling the guitarist to select any two of ten combinations. Further to this, he designed the Multi-flux pick-up which is virtually two pick-ups in one box. Anything up to 26 combinations can be selected by switching either stereo, mono, out-of-phase or quad. Over the past few years, John has built guitars for Slade, Sabbath, Mud, The Glitter Band, Smokie, Roy Wood and Wigan's Ovation. With so many bands and musicians in and around Birmingham, it's a safe bet that John will be kept busy for many years to come.

On January 7th, Nest Studios celebrated their second anniversary. Kim Holmes is the man in charge of operations at Nest and he is enjoying a fair amount of success with what is probably the most central studio in Birmingham (Nest is only about a mile from the Bull Ring.) His assistant engineer, Jake Commander,

was formerly a sound engineer with the Electric Light Orchestra and Kim describes him as "The best around".

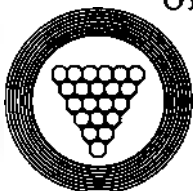
The studio started off as a modest four-track operation, but they have now upgraded it to eight-track with a Klark-Teknik eight-track machine. A Klark-Teknik SM2 Stereo with variable speed, and an Ampex Stereo are also used, the Ampex mainly for copying, ADT and echo. Their Allen and Heath console is a 14 in, 8 out model and the monitors are Tannoy Gold 15's.

The microphones are mainly AKG 451's and Calrec 1000's. Nest also have a cutting lathe and they can do any combination from tape-to-disc to cassette to tape. The majority of work comes from rock bands and these include locals like Muscles, Magnum, The Fortunes, Judas Priest and Trapeze, who demoed their last album at Nest. Rehearsal facilities are also available at Nest and among artists who have taken advantage of this are Del Shannon and Limmie and the Family Cooking. For both rehearsals and recording, Nest can supply a Hammond organ, Leslie, baby grand, congas, timbales, Ludwig drums, Fender and Traynor amplifiers. The future looks rosy for Nest as they are becoming so popular, they are thinking of "going 16-track". □

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In the middle of the "swinging 'sixties", rock bands decided that a small 30 watt amplifier was O.K. for weddings, working-men's clubs and bar mitzvahs, but the Watford Trade Hall clientele wanted a 'bit more than a guitar played at a level just above that of a baby-alarm. So the 100 watt amp was born, Marshall and WEM were among the first companies to start catering for high powered amplification, and others soon followed. Even by the end of the 'sixties, there were only a handful of companies whom you could really call successful, in that their amps were instantly recognisable and widely used. Marshall and WEM were still there at the top, but they had been joined by names like Simms-Watts, Carlsbro and Orange.

100 watt amp tops at that time were mostly valve jobs, although the majority of the WEM range was transistorised. It took a fair time for transistor amplifiers to become widely accepted, as valve amps gave a tasty "dirty" sound when wound up, and their transistor or "solid-state" counterparts were too "clean" for most guitarists brought up on a diet of Hendrix and Beck.

Over the last three years, most of the companies have entered the "transistorised" market now that there is a wider acceptance of solid-state circuitry, but one major company has so far resisted the temptation; Orange held off because for the past two years, they have been planning and designing a revolutionary new amplifier, a prototype of which was shown at last year's Trade Fair. Orange's managing director Cliff Cooper explained "It literally is a thing of the future, because it's a digital amp — there are no rotary controls — and we're the first

company in the world to market a digital amp."

The original idea came from Cliff three years ago when he made a remark about an amp of the future having no knobs at all. The future, it transpired, wasn't that far away. Peter Hamilton, who was then working part-time for Orange immediately set to work with Cliff and formulated the basics of the digital amplifier. Now working full-time on research and development, Peter explained the concept.

"I think it's worth considering the disadvantages of the standard type of amplifier. Potentiometers always wear, and they tend to be a bit too noisy. This also applies to switches to a certain extent. In the digital amp, although there are switches, there are no pots. The signal doesn't go through the switches at all. The switches actually control a memory circuit and the settings can be recalled by remote-control. The memorised signals directly control the audio circuitry, so in fact the signal never leaves the circuit board."

"As you're storing the signals, there is no reason why you shouldn't store more than one set, so you can store the information for getting four different sounds from the amplifier. The idea being that the musician can set up the amplifier for the four sounds he wants. He's got control over master volume, bass middle, treble and reverb level. Two unique features are built-in compression which will give a true sustain effect, and variable distortion. The distortion effect is produced by the wave form being modified slightly — not clipped — so you get a 'valve' sound as opposed to a 'fuzz'."

There are more innovations to come as Peter went on to explain:

"Because these four settings can be selected electronically, there's no need to limit them to a front panel control, so we are going to bring out a remote-control unit which will probably be a floor-standing unit with foot switches, so once it's been programmed, the four sounds can be selected by this unit. The obvious advantage is that when the musician is playing, there is no need to go back to the amplifier. Not only that, but in the future, the remote-control unit could be installed in the instrument, and there are also possibilities, of an ultra-sonic controlled unit making cables virtually redundant."

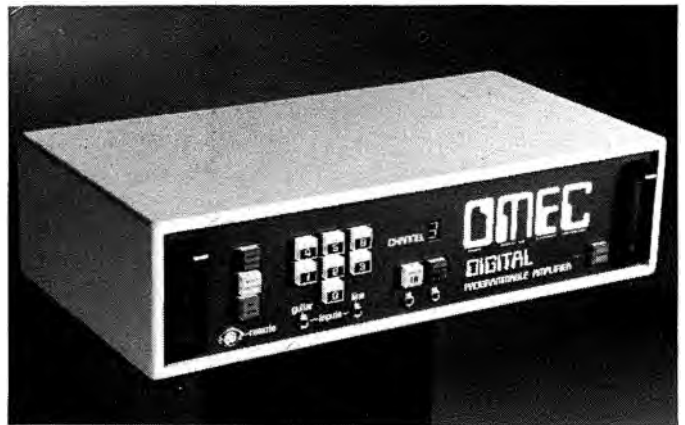
The internal workings of the digital amplifier are fairly complex, with around 40 integrated circuits in the pre-amp and control sections, each of which contain the equivalent of between 20 and 100 transistors. It all sounds very complicated so just how easy is it for the average musician to operate? Peter's theory is that, just as with an ordinary pocket calculator, it becomes very easy and fast to work. The front panel houses an array of push-button switches. There are four

"channels" and on each of these channels there are the seven functions which can be set at different levels. Each level is in 6dB steps, which is about the smallest change the average human ear can detect, so there are literally thousands of different sound combinations/permutations.

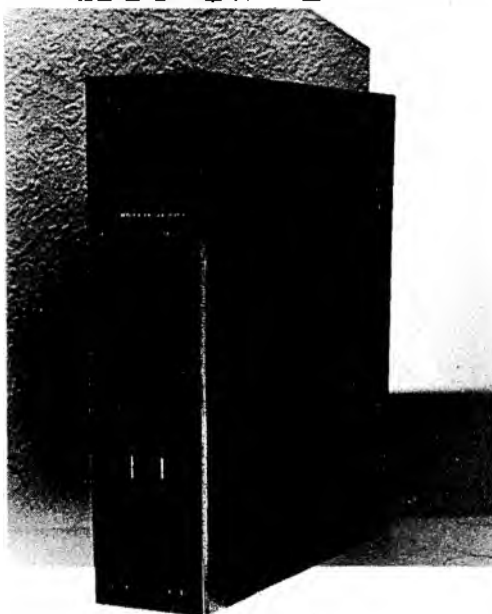
Another important advantage is that if the musician sets it in a particular way one night, he can take note of the settings, punch them out the following night and the sound will be exactly the same.

"It's not just a gimmick," Peter insists "but it's the next logical step forward. It's also very low-noise, as we use low-noise I.C.'s in the pre-amp. We could have used noisier I.C.'s but we decided to spare no cost."

The digital amplifier should be on the market by June or July and, according to Peter and Cliff, "should catch on fast" but this technique doesn't stop at instrument amplifiers. Orange envisage a mixer using the same techniques, making it possible for a 16 channel mixer to be built the size of an attache case.



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ALAN PARKER



Even today, the session man is looked down upon by many rock musicians. He is often thought of as the guy who turns up at a studio at a given time, plugs in his guitar, puts on the cans, reads all the dots, plays all the right notes and leaves without having a clue about who or what the session was for. He does what is required of him, picks up his wages, and trots off home to wife and kids and turns on BBC 2 to watch the midnight movie.

"Oh, they're just breadheads man — they've got no feel — they're not into music, man," is often the cry. Why does this attitude still prevail? Are they really only faceless mercenaries? IM spoke to one of the busiest session guitarists around — Alan Parker, late of Blue Mink — to discover what the mystery was surrounding the dreaded "session man".

Alan started playing guitar at the tender age of eleven, when his father bought him a Gibson Kalamazoo and sent him to a local teacher for lessons. He went on to take various exams and diplomas, and eventually studied under Julian Bream for six years. After listening to Django Rheindhart, Alan decided to veer away from classical guitar and formed various groups to gain experience in playing electric guitar. He also sat in occasionally with the Denny Boyce Band, and eventually landed a job as guitarist with the Johnny Howard Band at the Tottenham Royal. This was where his first taste of session work came. "I played with them for about three years, and it was a great experience because the band were doing a radio series called Easy Beat and we had to back different artists every week. This meant having to sight-read many different pieces, and I got my name about from these broadcasts, so this is where the session work stemmed from."

I wondered what Alan thought of the "breadhead" attitude often directed at sessionmen.

"Yeah, there is that attitude, but like anything, you can't put everybody into one category. I do resent it sometimes, because you can get kicked in the teeth in a lot of ways. Sometimes, I'll read a newspaper article quoting somebody saying "Oh yeah, session musicians are crap." This is when I do get a bit uptight. Session guys are not necessarily breadheads. They obviously want their money, but so does everybody and if they say they don't then they're bullshitting. If you're a solo artist or in a band and your record company won't pay you your royalties, you don't say "Oh that's alright. It's all for love, man."

Their managers will be screaming blue murder, so it's exactly the same. A lot of the work I've done has been very creative, so that attitude gets up my nose. There's some guys around who have literally *made* or saved a recording session.

The point is, like today, I'm booked in at Lansdowne from 10 until 5, and all I know is that the session is for Claude Francois and I'm playing electric, acoustic and banjo. I get here and we're doing six numbers, which is plenty of time, but if I balled up one of those numbers, I wouldn't be asked back. So when it comes to being called a breadhead — O.K. we earn our money, but our heads are always on the chopping block."

Alan is known throughout the business for the many sessions he's done, but he was also the guitarist with Blue Mink — a band formed by session musicians, who often found themselves working together, and decided to team up. It consisted of Madeline Bell, Roger Cook, Barry Morgan, Alan and Herbie Flowers. They scored a hit with their first release "Melting Pot" and followed it up with a succession of hit singles and a lot of live gigs. After a couple of years, they went their separate ways, but it was great experience for Alan.

"We all really enjoyed it. It was great to play live, and it improved my playing a hell of a lot. I love playing live, but it goes back to the old attitude towards sessionmen — I just don't get asked to do gigs."

Alan is, as he says, "a bit of a collector" where guitars are concerned. He owns about fifteen altogether, including an old Stratocaster, Gibson Les Paul, Custom, Fender Telecaster, Martin D28, Epiphone Jumbo, Gibson Kalamazoo, Gibson 12-string, Dan Armstrong sitar guitar, Fender pedal steel, a Jazz Bass plus three banjos and two ukeleles. "In the studio I mainly use either the Strat or the Les Paul. I use the Telecaster sometimes, but only for certain things. I don't find it a good all-round guitar, but that's just my opinion. I did have a very old Les Paul, but had it stolen at Top Of The Pops, so I bought a new one, but it's not quite as good as the first one. At the moment I'm looking for an old Vega 5-string banjo, so if anyone knows of any, I'd be grateful if they'd let me know. I'm also keen to get hold of any old pre-war Martins, as they are excellent instruments."

Bearing in mind the vast number of sessions Alan has been involved in, I asked him if there was any style which he felt uncomfortable or weak playing. "Well, country and rock are my favourite two things. I'm a very ardent country fan, and I love the heavy side of rock. I suppose the only thing I might come unstuck on is jazz, and I mean legit jazz, not just tearing around like a lunatic. Basically, it's because I never get a chance to play it, and it's a thing you've got to play."

One of Alan's favourite guitarists at the moment is Amos Garrett, the man who did the amazing solo on Marie Muldaur's "Midnight At The Oasis."

"I really like him because, if you analyse what he plays, he plays very little, but what he does play Jesus. You see, I'm not knocked out with flashy guitarists who tear about. They might have the best technique in the world, but it's how you use it. I loved Duane Allman when he was alive. That guy was such a melodic player. The lines he played, his style, his taste, an absolutely brilliant player. I like Jimmy Page a lot. I know him quite well because we used to play a lot together on sessions."

Alan has recently formed a company called Themes International, an operation designed to provide incidental music and themes for films, T.V. shows and jingles. He has already written and recorded music for "The Sweeney", "Quiller", "Angels" and "Moody and Pegg" among others.

"I'm trying to get more into that side of things at the moment. It's really interesting to do, and it presents a bit of a challenge."

With so many things going for him, I wondered if Alan had any ambition left which he'd like to see fulfilled.

"Well, I always believe in trying to go forward all the time. As a player, I like to listen to as many different styles as I can. I don't necessarily play every style, I just adapt and absorb everything to my own particular style. I like the composition side now. I'd like to get more into writing. Not songs, I'm not really into songs as such, I like doing documentaries or film scores. There's a bit more scope and you have to use your brain a bit more. Let me put it this way, I've been accepted as a reasonably good session guitarist, and I'd like to earn the same reputation as a writer. But by no means will I stop playing. I can still do other things, but I'm still a player and that's all there is to it. Whether I do one session a week or a hundred, I'll still be playing. □

* * * * *

DEALER NEWS

DRUMS ALONG THE AVON

IT IS unlikely that a percussionist in Bath could do better than to visit Assembly Music on the corner of Alfred Street and Saville Row. The shop is owned by Steve Gardner who is a professional drummer and has been for many years. As a result, Assembly Music is somewhat drum orientated. There are 22 kits in stock including Tama, Sonor, Summerfield, Premier, Shaftesbury and Ludwig drums.

Percussion is not all that Steve Gardner sells. He is a Traynor agent and two of his staff, Howard Richardson and Keith Wheeler, are bass guitarists and their interests are represented by a specialist selection of guitars. The prices of the 100 acoustic instruments in stock range from models at £19 to Maccaferri copies at about £120.

Assembly Music is a main Gibson dealer and also carry Les Paul, Antoria, CSL and Johnny

Smith instruments.

There is also some P.A. equipment, "combo amps and bits and pieces", and the shop is becoming increasingly crammed. Assembly Music has been at its present address for five years but there are plans to move to more spacious premises within the next few months. Whatever happens, Steve Gardner means to stay in the same area: for this, local musicians can only be grateful.

Bill McMillan Retires

BILL McMILLAN has retired from J.T. Forbes of Edinburgh. Manager since the shop opened six years ago, Mr. McMillan has passed the reins to Mr. John Sirrey.

Mr. Sirrey is no stranger to the music business. As a member of Stage Five, he has been active in the Edinburgh club scene, and he still plays today in the John Henry Duo.

The Forbes approach is an all-out effort. Their aim is to serve the public, from chanters for school boys to the fine range of copies which CSL offer, right up to the top ranges of professional amplification.

As a main HH stockist, they have the answers to most amplification and P.A. queries, and, at the same time, they are still one of Edinburgh's largest stockists of accordions.

Forbes also offer lessons. Their only problem, it would seem, is a shortage — not of students, but of teachers.

John's of Scunthorpe

JOHNS MUSICAL Hi-Fi has dealt in musical instruments for six years. It's owned by John Matthews and shop manager Mick Strangleman joined the shop a few months after it opened. "We sell a wide variety of equipment and instruments and everything we sell, we repair," Mick Strangleman informed JM. With that kind of service, it's not surprising that John's counts among their customers many of the local bands, including Blondell, Wall Street Krash, Seagull, Cadillac and Prestige.

There is a staff of seven, including their versatile engineers. The bulk of their business comes from the near-by towns of Grimsby and Lancaster, where they are also involved in installing P.A. and electronic equipment in many of the clubs. John's also deal in part-exchange and, consequently, second-hand equipment and instruments. Among the new stock is a select range of percussion and many different makes of amplification, including HH, Carlsbro, Yamaha, Fender, Simms-Watts, Davoli and WEM.

Freedmans E11



TWENTY-FIVE years ago a Mr. George Deutz and a Mr. Alfred Freedman became partners and opened a small musical instrument shop in Leytonstone which specialised in selling accordions. Mr. Freedman left the business many years ago and it is now owned by Derek Deutz, the son of the original Mr. Deutz. Not surprisingly, the shop has changed considerably over the years. Today Freedmans is large enough to warrant a staff of 11. There are two workshops on the premises, one dealing with woodwind and brass repairs and the other customising, building and repairing electronic equipment. There is a large organ showroom, a tutorial room, a great deal of storage space above and below the display area and even a selection of music books.

There is a wide range of percussion and among the P.A. stocked are names which include HH, Yamaha, Nolan, Fender, WEM, Shure and Vox.

Derek Deutz told us that the discount on Fender equipment was particularly good and that Freedmans has a very rapid turnover in effects pedals, of which he carries a large selection. Another very popular line which Freedmans carry are the cash and carry equipment and instruments which they sell.

Among the most recent customers to the shop have been well known musicians like The Dooley Family, Mud, Humble Pie, Joe Brown and Nigel Pegrum of Steel-eye Span.

Frobisher's Return

TWO YEARS ago Len Frobisher tried to retire. After thirty years in the music business and ten years running his own shop in Dumfries, he decided that it was time for a less hectic life style. He sold his business to Clinkscale Musical Instruments Ltd., and settled down to what he thought would be a happy retirement. After only 18 months, Len Frobisher had had enough peace and quiet. On June 1st of last year, he bought the music shop back from Clinkscale and has rapidly succeeded in re-establishing himself in his old business.

The amount of instruments and equipment in stock is as varied as it has ever been. Among the P.A. systems are Mar-

shall, Simms-Watt, HH, WEM, Peavey and Carlsbro equipment. There are one hundred guitars in the shop including Fender, Gibson, Guild and Yamaha models. Len Frobisher also has a selection of keyboards and brass and woodwind instruments as well as a stock of accessories and sheet music.

The population of Dumfries is only about 30,000 but the surrounding towns and area manage to support many bands. Those who are customers of Len Frobisher include Redhouse, Sunny, The Omegas, New Dimension, The Road Runners, Phazze, Country Breeze and The Mardi Gras.

Buoyant Miller

BRUCE MILLER & Co. have been well respected as retailers in Scotland for some 30 or 40 years. One of their most successful shops is a musical instrument and hi-fi shop in Inverness. Bruce Miller's stands in the arcade which is part of the original market place. The shop is run by Mr. L.E. Catherwood who has worked there since 1971. To quote Mr. Catherwood: "We offer very good service and as a result, business is buoyant".

On the ground floor is a selection of records and hi-fi equipment. The large display area on the second floor is delegated to band gear. There is a large stock of amps, guitars, accordions and keyboards, of which the most popular are the HH and Carisbro range. Amongst the guitars displayed are Fender, Gibson, Rickenbacker, Guild, Yamaha and Epiphone.

Carpet Shop Rolls Up

JUST OVER a year ago, Music Ground was a carpet shop in a fairly quiet part of Stainforth. Richard Harrison, a musician for 12 years, took the shop over and has transformed the building into the sort of music shop that musicians are always hoping to find. While there are few musicians in the immediate area, many of their customers come especially from other towns like Leeds, Sheffield and Doncaster, because they know that they'll receive the kind of service they need. Most of the equipment Music Ground sells is of the expensive, up-market sort, big P.A. systems and original and good copy guitars rather than the cheaper instruments and equipment.

There is a large cash discount and fair prices on part-exchange as well as a wide choice of second-hand equipment. Richard Harrison is helped by two other musicians, John Wilchinsky and Tam Jones, both of whom play in local bands. Customers include local bands New Jersey Turnpike, Captain Hornblower, Kentucky Rain, Too True and Monkey Business.

Hammonds of Watford

HAMMONDS OF WATFORD is reputed to be one of the largest musical instrument shops in the country. Situated almost directly opposite Watford High Street Station, it is a gigantic three-storey building and attracts both pro and semi-pro musicians alike. The ground floor houses three departments - an extensive range of sheet music, organs and pianos, and an accessory bar and service which caters for all instruments. The first floor has an organ teaching laboratory, acoustic and classical guitars, and drums and percussion. Electric guitars, amplifiers and disco equipment are on display in the basement and names like HH, Yamaha, WEM, Simms-Watts, Fender and Gibson figure prominently. Hammonds of Watford is a Fender Soundhouse and they are also agents for Hammond, Yamaha, Baldwin and Riha organs.

Hammonds success story began about six years ago, when they outgrew their first shop in Queens Road, Watford, and moved to their present premises in the High Street. Three years later they opened a branch in Aylesbury, and more recently they acquired an in-store in Welwyn Department Stores. The old Queens Road premises now houses their repair department, which has recently been updated and they are now willing to undertake virtually any repairs. Hammonds now have a staff of 16, headed by Senior Sales Executive Ron Pettie and Vic Morris, Administration Executive. Ron is also kept busy with his own five-piece dance band, The Metro-nomes, and this, he explains, "Keeps me up to date and in touch with musician's requirements." Hammond's latest claim to fame is the new range of amplification built by local lads Andy Cannon and Ron Newson, called Maine. "We are the main outlet for Maine amplification," explained Ron, "and it's catching on fast. The boys who build it really know their onions. It's excellent equipment and I'm proud to have my name attached to it." Apart from the many local bands around the area, Suzie Quatro, The New Vaudeville Band, S.O.S., and Druid have all been recent visitors to Hammonds of Watford.

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INSTANT FLANGER

New Effects

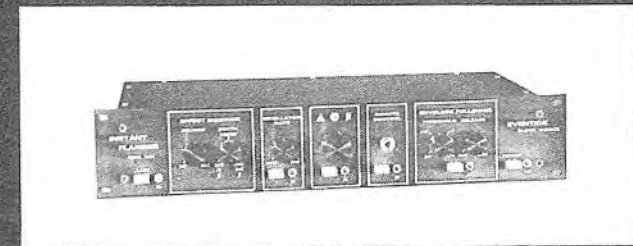
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MUSIC NEWS

AKG PUSH INTO GROUPS

AKG MICROPHONES are mounting a major sales drive in the group market for their professional range of microphones in 1976.

Under the direction of U.K. Managing Director Peter Eardley — of Bunnie fame — the company are entering into a period of marketing intensity aimed at informing professional musicians about the versatility of AKG mikes.

"Microphones used on stage are now of far higher quality than a few years ago. Studio type mikes are commonly to be found and for this reason we feel that alternative microphones might not be up to job and we are anxious to let musicians know about the AKG range."

AKG mikes have an extremely strong hold in British studios, the BBC and ITV. Over the 25 years, the company has been in operation in the U.K., marketing has been concentrated on professional users which has resulted in wide acceptance for the range in this area, but the (then) lower quality end of the marketing — live music performing — was less well serviced.

In conjunction with their retail distributors, the mighty CBS/Arbiter, AKG are planning a series of dealer promotions which include point of sale material distribution and free advice to musicians on miking technique and problems.

This latter service is available to all musicians who purchase AKG mikes and the company are keen to help customers obtain the maximum benefit from the mikes without interfering with the traditional relationship which exists between dealer and customer.

"Placing a mike in the correct position relative to the sound source is of vital importance for the best result," says Peter Eardley "AKG technicians can advise on this subject."

The home studio market has also developed greatly in the last couple of years and this is probably an area in which more detailed advice will be required.

"We've supplied many rock stars with mikes for their own studios and we've also supplied lots of people who just want to record at home with AKG mikes. The same advice service carries in this area. As every single application is different it's not possible to print any guides to mike usage, individual advice is far better. AKG mikes are perfect for using with machines like the Revox which is probably the most

common recorder for home demos."

One important area in which AKG has made considerable inroads is the DJ field. As the mobile discotheque has flourished, so the inaudible DJ has perished and the new breed of professional insists upon a good quality mike which will assist in, rather than hinder, communication.

AKG has an image synonymous with quality in sound applications — in the trade the image is combined with glamour as flamboyant Peter Eardley introduced Playboy bunnies to their company's exhibition stands.

This year — in tune with the liberated woman — bunnies are out, but glamour is still in. The AKG girls will still be found brightening up those sometimes dull exhibitions.

Recommendations for professional musical applications from the range cover 6 main series of microphones. The D 12 mike, particularly suitable for bass drum miking (high or low impedance £51), the D 190 general purpose mike at £33 low-imp. and £35.50 high-imp., the D1200 best used for vocals sells for £42 and £39 (high and low respectively), the D.2000 with a spherical shape producing a slightly different sound is at £43 low, £49 high. The D202 has a double system providing an ultra flat frequency response and is sold in studio and broadcast applications. Price is £56 for low impedance.

Stepping into a different league the company markets the C451 range of condenser mikes. These are delicate, high quality mikes suitable for stage use when studio quality is desired and this system starts at £69.70. All mike prices quoted are without V.A.T.

Additions to the range of mikes will be made during 1976 to increase penetration into the group area and the company are confidently expecting success in this field similar to that experience in recording, theatres and broadcasting.



Peter Eardley, A.K.G.'s M.D., keeps up the glamour for the '76 campaign

ELKA-ORLA (UK) Limited have acquired a new joint Managing Director, to share the management of the U.K. company with Mr. Nando Fabi. Mr. Declan McLoughlin took up his new position on January 1st, 1976. He joins the company directly from Italy where he settled 12 years ago, after attaining an Oxford degree in languages. For the last few years, he was Export Manager for the Italian EKO Company.

CO-Director Nando Fabi: "I met Dec at the Chicago NAMM show three years ago, and have always been impressed by his competence in the organ field, and by the respect shown for him, both by Italian manufacturers and by international buyers. We have since become good friends and so when it became apparent that new blood was needed in the U.K. Company's expansion programme, Dec was the obvious choice. He has a profound understanding of the problems and philosophy of Italian manufacturers, and will be the perfect liaison man between our Italian companies and ourselves. I feel sure that in view of this, and the fact that British customers will at last be dealing directly with an Englishman, Elka-Orla (UK) under the McLoughlin-Fabi team will do greater things in 1976 than ever before."

Elka MD



Declan McLoughlin

PRIZE WINNERS

THE WINNERS of our recent P.A. system competition were presented with their prizes on the 15th January at the Bonnington Hotel, London. First prize, consisting of two Carlsbro Mini-Bins, two Carlsbro 130 watt slaves and a Hill M102 ten channel mixer, went to Nigel Holder of Gloucester. Nigel is road manager with a band called Pendulum, who are based in the Cheltenham - Gloucester area.

Pendulum have been together for five years and are hoping to turn professional soon. An eight-piece band - consisting of guitar, bass, drums, keyboards, trumpet, lead vocalist and two saxes - they gig mostly around the Gloucester area playing a mixture of soul and pop. "I didn't believe it," was Nigel's reaction on learning he had come first in our competition. "I wandered around all day reading the letter. The band couldn't believe it either - you think you'll never win competitions and then something like this happens."

Second prize - a Custom CS700B Twin Reverb 150 watt lead/bass amplifier - went to 19 year-old Malcolm Pepper, an electrician's labourer, from Nottingham. Malcolm plays lead guitar for a four-piece band called Zachariah. Semi-pro at the moment, Zachariah are hoping to turn fully professional in the near future. They play all their own material which Malcolm describes as "heavy rock - Sabbath-type material" in pubs and clubs

around Nottingham. Malcolm was "shocked" on hearing the results. "I saw the envelope and thought I'd probably won an album. I didn't know whether to open it or not."

The 25 runners-up who won the "Teach Yourself Rock Guitar" albums will be notified by post.



Malcolm Pepper and Barry Phillips



L-R Dave Cottam of Hill, Malcolm Pepper, Tony Taylor of Carlsbro, Rick Desmond IM, Nigel Holder, Malcolm Green IM and Barry Phillips

Hammond Moves

C.E. HAMMOND Group have announced a change of address. As of the first of February, all enquiries regarding Revox should be made to 105-109 Oyster Lane, Byfleet, Surrey KT14 7LA, Tel: Byfleet 41131.

Enquiries regarding all other C.E. Hammond Products should be made to 111 Chersey Road, Byfleet, Surrey KT14 7LA, Tel: Byfleet 41131.

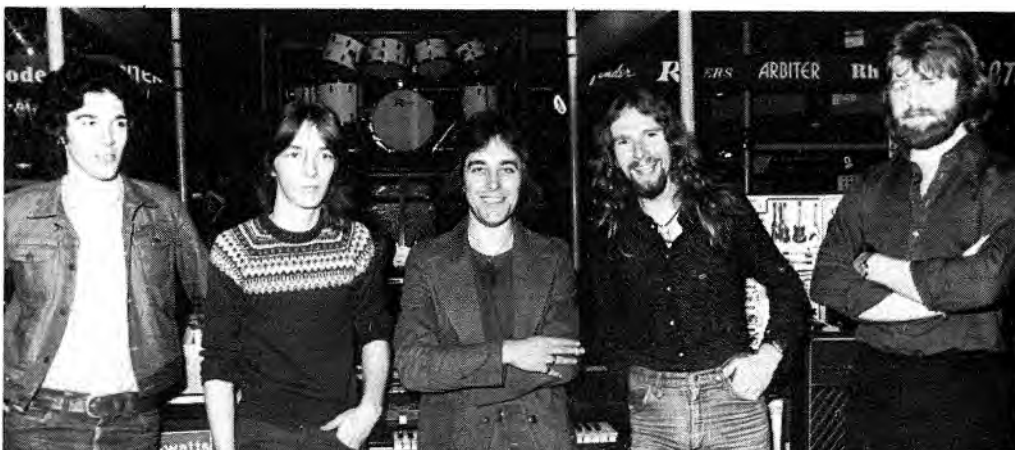
Vox Boom

WITH QUEEN'S rise to international fame in recent months, Vox amps are experiencing a similar boom. Queen's highly individual guitarist Brian May takes no less than six AC30s on stage with him to produce the sounds that have made the line "and no synthesisers were used" (from the sleeve of the band's albums) well known.

Brian uses Vox AC30s for their highly original sound and claims that no other amp produces quite the same sound. He produces his initial sound through two, re-amplifies, plus effects, through the second pair and then re-amplifies, again plus effect, through the final pair. The result is incredible.

Three Soundhouse Staff Missing

FOUR MEN, three of them members of the staff of the Fender Soundhouse, are presumed dead following the disappearance of their light aircraft over the channel.



George Cantley, far left, and Chris O'Kelly, second from right

Vic Creed, head of the Soundhouse drum department, took Nick Beekcroft, Vic Cantley the assistant manager, and Chris O'Kelly a senior salesman for a trip to Amsterdam on Sunday January 4th. Creed gained his pilot's licence last year.

On the return trip, the aircraft radioed a distress message to Southend Airport seeking permission to land. The plane failed to arrive and despite a massive air and sea search, no sign of the aircraft was found. It is known that the plane was forced to ditch at sea.

Vic Creed was 25, George Cantley was 21 and Chris O'Kelly was 25.

MUSIC NEWS

PEARL PUSH HARDER

A NEW company to distribute non-percussion instruments made by the Japanese company, Pearl, has been set up in Britain. Pearl manufacture a range of copy amps and guitars that have been distributed throughout the rest of the world for some years, but have not previously been available in Britain.

The company — still to be named at press time — has Michael Lee and John Dodds as founders, both of whom are well known in the instrument industry — and the first shipments of amps and guitars should be arriving in British retailers at the end of March.

It is believed that this is the first time that a copy range of

amplifiers has been widely sold in the U.K. and two famous brands are the initial object of Pearl's marketing strategy. Prices are expected to be about 40% less than the "name" originals.

Gerry Evans was recently appointed head of Pearl Marketing in Europe and will be overseeing the entire operation.



Masani Yanagisawa, Vice President of Pearl, and Gerry Evans

B & H Fire

THE ENTIRE wholesale offices and warehouse section of Boosey & Hawkes, Edgware, were ravaged by a fire in January. Despite a temporary disruption, B&H were quickly functioning normally in most departments.

B&H's own production facilities were unharmed, although stocks of some imported instruments suffered. The company reports that worldwide suppliers have rallied round to replace stocks speedily. No one was injured in the fire.

GMS

DICK THOMAS has joined General Music Strings. He joined shortly before the end of last year and is responsible to Dave Martin.

His title is Promotions and Dealers Liaison Manager,

Selmer Sales

HENRI SELMER & Co. Ltd., of Braintree have recently opened a new Sales and Service office which provides dealers with a direct link, via five lines, to the department. Staffed by five of Selmer's experienced girls, it is purposely designed and built to give fast, efficient and economical dealer service. Each girl has a designated area to deal with sales and service enquiries. The number to dial is 0376-20886. Each dealer should by now have received details of the new service, along with a photograph of his own Sales and Service girl so that she is not just a voice on the telephone.



Selmer's sales and service girls

Second Birthday

MUSICAL SOUNDS — a drum specialist shop in Sheffield — has just celebrated its second anniversary. Opened at the end of 1973 by John Dodds — a well known figure on the Northern music business scene — the shop has rapidly developed into a percussion centre.

John claims that it's the biggest percussion centre in England and over 70 kits are held in stock. "We specialise in stocking hard to find imported percussion items which the more sophisticated trooper drummer requires. We deal with the player who often has a really huge kit."

Through staff man Kenny Slade — a fine drummer who has worked with many bands, including Joe Cocker — the shop has set up direct import schemes with American based manufacturers and many hard to find items are thus readily available. Recently, the shop has been importing the Lyricon — a wind operated synthesiser — and a recent sale was made to Jack Lancaster, an ex-Blodwyn Pig session man.

In addition to selling kits and accessories, the shop offers drum lessons by four drum tutors and operates a gig finding agency for musicians.

Drumming Cassette

DRUMLAND PERCUSSION of Dartford in Kent has launched a rock cassette course to teach rock style drumming. The course is claimed to be the first of its kind made available in the U.K. and the package contains an easily read book and an hour long cassette or tape on which patterns are demonstrated slowly.

The course has been compiled by Drumland's resident drum tutor Paul Whiteside — himself a well known drummer and a consultant on percussion matters to *International Musician* — and it sells for £9.98. Drumland's address is Drumland School of Percussion, 11 Homleigh Avenue, Dartford, Kent.

Premier Gear

THE NEW Top Gear retail shop at Worthing, Sussex, has secured several important agencies and franchises. The shop has been appointed a Premier agent and has also secured an HH franchise. Other exclusive agencies held include Moog and ARP synthesisers and Roland Keyboards.

New Era For Rose-Morris

THE QUESTION immediately prompted by even the briefest examination of Peter Clarke's life style is: "How do you find the time?"

Peter Clarke is Managing Director of Rose-Morris. He took over the post officially just before Christmas although he'd effectively been advising Rose-Morris on its marketing activities since early summer last year. Many would think that post exhausting enough, but the information that he regularly involves himself in amateur operatics — to the point of producing and leading entire productions — gives a clearer indication to the man's remarkable energy.

"I don't play golf," is the answer Peter usually gives.

The musical instrument industry, both national and international, is holding its breath to see how Rose-Morris is going to shape up with a new hand at the helm. The new man's an unknown quantity and outside of Rose-Morris, there's been little indication of change. Inside the company there's a new wind blowing along the corridors of Gordon House Road.

Peter Clarke's business background is strictly marketing. Names like Letraset, which are legends in the places where marketing men meet, litter his track record. His personal background has music as the dominating factor and the Rose-Morris job has provided him with a chance to combine the two interests.

In his twenties he attended The Trinity College of Music as a part-time student. He was still considering music as a living. Eventually, he decided that he had a better chance of eating regular meals if he went into business and music became a consuming hobby.

In 1965, he started an operatic company called Opera '65 and since then they have regularly presented two operas a year at the delightful Richmond Theatre. As a child, Peter's background in Reigate included popular musical influences as well as sacred and classical music. To this day, he has vivid memories of sitting on air raid shelter benches singing Vera Lynn songs.

Bringing a strong musical interest into his work aligns Peter with most of his colleagues. The

music industry is unique in that most reps and salesmen are musicians themselves, as well as being involved with the sale of instruments.

"I think this can be a bad thing," says Peter. "We all know the rep who'll talk forever about music but won't sell anything at all." Striking a balance between selling and caring for music is one of his aims for the industry.

Things started to change at Rose-Morris when its parent company, Grampian, decided that Rose-Morris would be designated a development sector and Metra, a business consultancy group, was brought in to study GROWTH POSSIBILITIES.

Peter Clarke was one of Metra's chief consultants and he was given the job of studying Rose-Morris. Things went so well for him there that his transition from Metra to R-M was imperceptible until the announcement about his new appointment was made.

Peter Clarke believes that growth within Rose-Morris relies on maintaining good relationships with the dealers. This will be a key point in R-M's future.

"We are in partnership with each and every one of our dealers," says Peter. "We are interdependent."

ROSE-MORRIS' main London office has a new phone number. All calls to the company should now be made to 01-267 5151.

ROSE-MORRIS have appointed a new Sales Manager for Great Britain and Southern Ireland. He is Roy Forder, who took up his position shortly before Christmas. Before joining the company, he worked in marketing business machines.



Peter Clarke

Bose UK

BOSE (UK) Ltd., of Sittingbourne, Kent, are now operating as the autonomous subsidiary of the Bose Corporation. Since the formation of the company in March 1975, Bose (UK) has been controlled through Bose Europa, the Frankfurt-based European Head Office.

Nick Pierce has been appointed Managing Director, with full authority for policy decisions at all levels. He was previously in charge of administration at Bose UK. Tony Gannan, formerly in charge of field sales, has been appointed Sales and Marketing Director.

Skewes Party

FRIENDS, CUSTOMERS and staff of John Hornby Skewes met in Leeds shortly after Christmas to join the company in their annual dinner.

The traditional menu of superbly cooked and presented. Turkey dinner, followed by Christmas pudding, was served before John Skewes thanked his guests for coming and thanked his staff for their efforts over the past year. Despite general economic difficulties, John Skewes was pleased to report that the company had enjoyed a good year and that they were looked forward to an even stronger 1976.

Sonor Heads

IN THE middle of last December, Mr. Horst Link, Head of the Sonor Drum Company, visited the offices of Hohner-London, accompanied by his Export Manager, Mr. E. Friedrich. They were here for discussions with Hohner Director Dirk Kommer, U.K. Sales Manager Laurie Westall and Drums Marketing Consultant Gordon Williamson, in connection with the launching of the 1976 marketing campaign for Sonor drums.

This new campaign includes a "new look" kit for 1976, a

re-appraisal of Sonor's position in the U.K. drum market and a series of drum clinics featuring top drummers, to be organised by Gordon Williamson. This campaign happens appropriately enough just after Sonor's centenary celebrations in Germany. At the London Hohner office, Dirk Kommer presented Mr. Link with a Centenary gift and a commemorative scroll on behalf of the company and the U.K. retailers who were present at the celebrations in Aue, Westphalia.



Left to right: Dirk Kommer, E. Friedrich, Horst Link, Laurie Westall, Gordon Williamson

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Whether you've got a Gibson or a cheap, Japanese copy guitar, the one common denominator is STRINGS. Everybody needs them. No guitarist can do without them. Obvious statements, maybe, but the fact remains that guitar strings are a very important part of making music. It's not uncommon to find a guitarist using cheapo-cheapo strings on an expensive guitar, nor is it strange to discover a cheapo-cheapo guitar fitted with a set of strings worth half the price of the guitar!

In conjunction with The Cardiff Music String Company, International Musician is offering a year's supply of Sound City strings to the winner of the competition detailed below. We estimate a year's supply of strings equals 50 sets of guitar strings or 25 sets of bass strings.

All you have to do is answer the questions below and then say, in no more than 25 words, why you would like to win a year's supply of Sound City strings. Closing date is Wednesday March 31st, 1976. Please send entries to:

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International Musician and Recording World,
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1. What was the name of the band that consisted of Eric Clapton, Rick Gretch, Ginger Baker and Steve Winwood?
2. Where was their only London concert?
3. Name two instrumentals Clapton has recorded.
4. Who was "Layla" supposedly written about?
5. What was the title of Cream's first single?
6. Which group did Clapton play with prior to John Mayall's Bluesbreakers?
7. Which other English musician guested alongside Clapton with Delaney and Bonnie?

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3002	2nd Plain	.012	.30
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3005	5th Wound	.030	.76
3006	6th Wound	.038	.96

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3003SU	3rd Plain	.014	.36
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3005SU	5th Wound	.030	.76
3006SU	6th Wound	.038	.96

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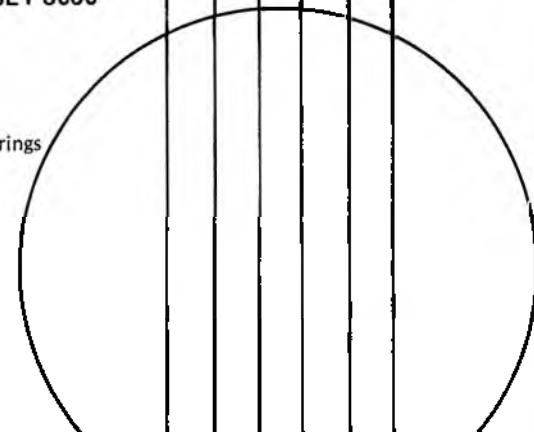
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7003	3rd		
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At any rate, no matter what your speaker requirements are, you'll soon find that Altec Musical Instrument Loudspeakers represent the ultimate in increased efficiency, tonal response and reliability.

To make your job of installation a little bit easier, our new 15-inch speakers have all new cast aluminum frames for hassle-free front mounting. (In fact, the frame is really 16" to be sure you've got a good, tight fit during travel). All Altec Musical Instrument Loudspeakers, with the exception of the 421 series, now use a brand new cast magnetic structure for even more uniform efficiency and frequency response.

The "H Series II" speakers are the high powered versions of the old reliables. They feature special heat dissipating aluminum coil supports and ultra rugged copper voice coils that allow you to play louder for longer periods of time, with much less worry of burnout.

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Speaker Specifications

Model	417-8H II	418-8H II	421-8H II	425-8H II
Size:	12"	15"	15"	10"
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Pressure Sensitivity 1/watt at 3 ft.	100 dB SPL	103 dB SPL	102 dB SPL	98 dB SPL
Frequency Response:	60-8000 Hz	45-8000 Hz	35-3500 Hz	60-10,000 Hz
Application:	Full range	Full range	Bass	Full range
Impedance:	8 ohms	8 ohms	8 ohms	8 ohms
Magnet Structure Weight:	11½ lbs.	11½ lbs.	17½ lbs.	11½ lbs.
Weight:	17 lbs.	20 lbs.	22 lbs.	16 lbs.
Warranty:	Five Years	Five Years	Five Years	Five Years

*May be used with amplifiers having up to equal continuous RMS power rating.

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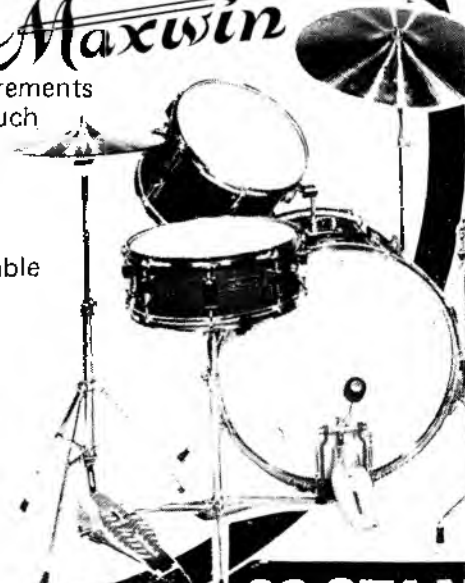
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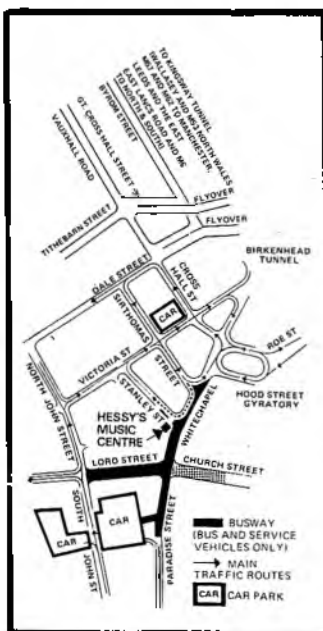
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62 STAN

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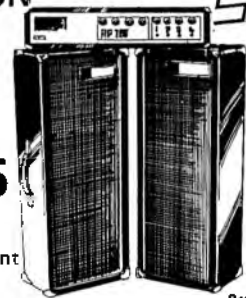
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Hank Marvin



Hank Marvin was unquestionably the original "guitar hero". In July, 1960, The Shadows' first release, "Apache", rocketed to the top of the charts, and suddenly everyone was wearing spectacles and working out variations on the Shadows' choreography. Twenty-five hit singles followed during the next seven years until they disbanded in 1968, and Hank went on to form Marvin, Welch and Farrar — a harmony orientated group who recorded three superb albums but, by and large, went unnoticed. The Shadows reformed early this year to take part in the Eurovision Song Contest and do occasional concerts.

What are you involved in at the moment?

I'm producing an album by a Danish group for BASF. It's gone really well so far, and it's been quite exciting. I've done some producing before with the Shadows, Marvin, Welch and Farrar, and a little bit with Cliff Richard and it's something I'd like to get involved in. I've never had the time before.

What guitar are you using with The Shads?

Well, onstage I'm using a Stratocaster I've had for 4½ years. It's been quite heavily customised

'though. I experimented first of all with a Gibson humbucker by the bridge and it was quite a fat sound, but I wasn't crazy about it, so I tried a Fender humbucker. It had slightly more edge on it. It still sounds like a Fender, but there's a slightly richer sound to it. I put a Gibson humbucker on the front and left the normal Fender pick-up in the middle. Then I had it resprayed black, all the hardware gold-plated and fitted Schaller machine heads on. I've also got a switch on the Fender humbucker which just gives me the back half of the pick-up, and there's a switch which can give any combination of pick-ups. It's a nice guitar with a slightly chunky neck and a great fingerboard. I can thrash it on stage for an hour and it's still perfectly in tune.

What other guitars do you have?

I've got a standard Strat with a much flatter neck and a good fingerboard which Sam Li did up for me because the neck was twisted. He refretted it with the Gibson thick wire and it's really nice to play. Incidentally, I had the first Strat in England years ago, which Bruce has now. Cliff and ourselves were talking about getting a new guitar and we'd been listening to James Burton on the old Ricky Nelson records, so we decided to get a Fender. We sent away to the factory in Santa Monica and we got the brochures. The most expensive one was the Stratocaster, so we thought that was the one James Burton used. We found out later that he actually used a Telecaster, but we ordered a gold-plated, maple-neck Strat and that was in 1959.

I've also got a Martin D28, a Yamaha, a Ramirez Flamenco guitar, Hayman, a Fender six-string bass and a Burns Double Six.

How did the Burns Marvin guitar come about?

Well, we went through a little problem with the Fenders — intonation and things like that. Bruce nearly had a nervous breakdown over his tuning problems, so Jimmy Burns heard about the problem and approached us. We thought we could have a change anyway, so we gave him a few ideas and things we wanted. Obviously, we wanted a sound not too unlike a Fender because people were used to that sound, a shape a bit like a Strat with double cutaways, and the scroll on the top of the neck which we thought would be a nice idea. I think we had a five-way switch for pick-up selections as well. It didn't turn out exactly as I'd envisaged it. I thought it looked a bit clumsy and it was very heavy, but it played well. I hear a few people are paying a lot of money for them now.

When did you change back to Fenders?

It was when we had Marvin, Welch and Farrar. We hadn't been together long and I had some guitars stolen from a van including the two Burns electrics, and

we were due to open at the Palladium. I borrowed the Strat from Bruce and liked it, so I used it for about six months and then bought the one I've got now, which is the customised one. Incidentally, with this humbucking pick-up I think that you lose that kind of Fender bite. It seems to have a deader sound and I can't work out why.

I know the Shadows work together occasionally now. Does this mean Marvin, Welch and Farrar are no more?

We sort of abandoned things when The Shads got together for Eurovision. We (The Shadows) did a few concerts which were very successful, not only from the audience reaction, but it was nice to be able to play both old numbers and the newer Marvin, Welch and Farrar stuff. Actually, they released the last album in the States, and it got fantastic write-ups over there, and a lot of airplay. They were considering taking off a single to release but I haven't heard anything more about it.

It's difficult to know which way The Shadows are going to go at the moment, because John (Farrar) is going to the States permanently in January so obviously he won't be with us any longer. We'll have to re-think things. If we do another album — and I think we will because we've got some instrumental stuff already recorded which is quite nice, and some vocal stuff — we would have to re-think the vocals because we wouldn't have John's falsetto. Even instrumentally, we used to do a lot of dual guitar lines so all that would change.

Are you still using an AC30?

Yes, I use the AC30 onstage because I think it's the sound that's right for the Shadows' stuff. It also works very well for other stuff, particularly when I use my little phaser, which gives a bit of extra colour to it. I have been through periods of using little Fender Reverbs in the studio sometimes, but on the Shadows' stuff, I always use an AC30. *Do you feel restricted when you do concerts now because people always expect the old Shadows material?*

Well we didn't on the concerts we did after the Eurovision Contest. They were marvellous. People were really going for us because it was The Shadows and people were willing to listen to anything we did, so we did some of the old stuff and some of the newer stuff.

Are you ever tempted to plug into a stack and do a Hendrix or a Clapton?

Obviously, when I first heard that kind of sound I liked it very much when it was done well. Unfortunately, a lot of people did it very badly. I think, if we hear a sound we like, we tend to try and emulate it in some way, even if it's just in private, but we didn't try to get into that type of thing with The Shadows. I think we would have been kind of stepping

out of our role, folks. In Marvin, Welch and Farrar, we tried to get a more meaty guitar sound without going over the top too much. But I used to read a lot of interviews with very well-known guitarists who would often say how great The Shadows sound was, so I thought "Hang on. A lot of people associate me with that sound and so why not own up and get back to it?" It's no good trying to copy Hendrix or Beck because people will only say he's trying to copy Hendrix or Beck. So I just try and sound like myself. It doesn't have to be the same approach that we used on records ten years ago, the sound can be similar but up to date. *When did you last practice a scale?*

A long time ago. John Farrar and I used to feel a bit guilty sometimes, and so we would work up a few scales and exercises together, and then try and play them faster and faster — just for a bit of fun, really. I have spasms of practicing. I actually haven't touched a guitar for a couple of weeks now, because of tense sessions and things.

You mentioned the fact that a lot of people say how good The Shadows sound was. Who did you listen to in the early days?

Well, just about anybody who was on a record in those days. We used to listen a lot to the early Presley records, Buddy Holly, Gene Vincent — most of the rock and roll guitarists and even a few rhythm and blues artists like Bo Diddley and Little Walter. Not that there was a great deal of knockout guitar playing on them, but there were a few little bits of 'feel' things on them that could be adapted.

Who do you listen to now?

I listened a bit to Wishbone Ash to see what they were up to. Eric Clapton, Jeff Beck and Jimi Hendrix now and again. I think Amos Garrett is a very tasty player, along with jazz guitarists like Joe Pass — even a bit of classical or Flamenco things just to listen to completely different facets of guitar playing.

Where do you see your future?

Well, that's very difficult to answer, because of my religious beliefs. I'm one of Jehovah's Witnesses so obviously my sense of the future is coloured by that. I'd like to carry on recording. I feel that The Shadows will do another album, at least. I'd also like to do some other things in the studio that I'm involved in, playing-wise and producing. I've got a few ideas which I haven't really formulated properly so it needs some thinking about. I'd certainly like to do some more writing. I haven't felt the need to write for awhile, but now I feel I want to and the only way to do that is to take some time off other things and sit down and try to write some more. As regards live performances, I don't really know. I don't want to go away much, so my future lies really in writing, producing and recording. □

Rose-Morris

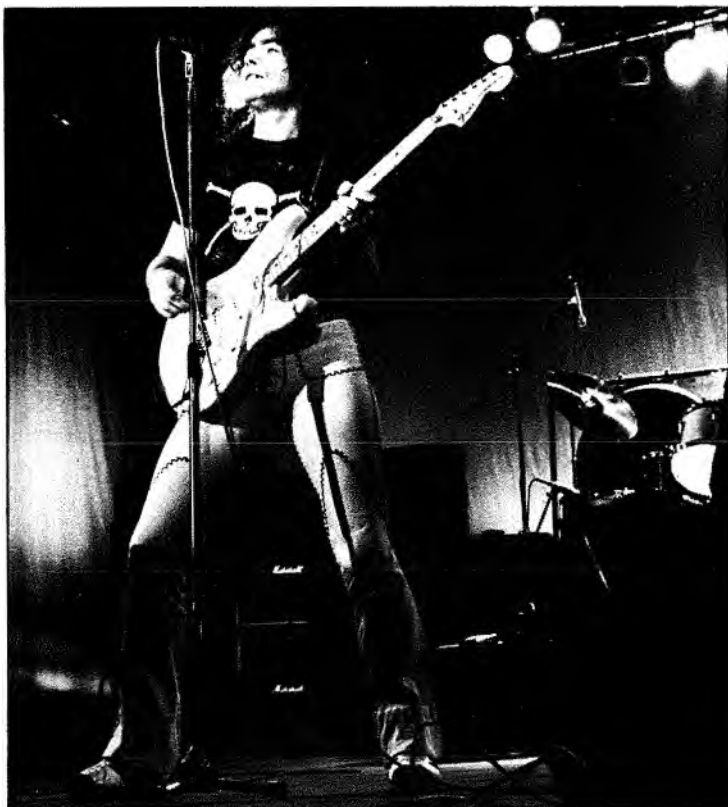
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Bad Company lead the all star line up and Paul Rogers took the band through wild encores with the superb sound patched through their Marshall amps.

Status Quo closed the concert on the first night and this great British Boogie band has returned entirely to their first love, Marshall amps. The band have got themselves a completely new set of Marshall gear and their great, strutting riffs will go on, tighter and harder than ever before. The crowd loved them. The band danced their way through all their best known numbers, Rossi, Parift, Lancaster and Coglan thinking together and playing together.

Steve Marriot and his All Stars weren't at their happiest on the gig. Their on stage sound was great - Marriot's been a Marshall user for many years - but the band was poorly billed by promoter Mel Bush and the audience were a little tired of fast action work after sitting through a fine set by much improved Thin Lizzie and stubborn Budgie, a band exhibiting all the signs of paying their dues without getting that big breakthrough.

Nazareth one of the most important British bands, played a set on the last night - just before Bad Company, that brought tears to the eyes of the fans down from Dunfermline - and joy to the hearts of the sassenachs. Manny Charlton pulled heights of ecstasy out of his Les Paul and Marshall combination.

MARSHALL IN OSAKA

Japan, the second biggest rock 'n' roll market in the world, has fallen under the spell of Marshall amplification. Perhaps the success of Marshall amps in the USA influenced Japanese musicians to try out Marshall, but certainly the efforts of Nippon Gakki as agents on the island have brought fantastic sales.

Last year the Osaka branch of the company staged a festival at the World Exposition Memorial Hall, in the City. Marshall amps dominated the stage and 20 local bands delivered their sets via Marshall, Osaka, the port on Osaka Bay and capital of Japan in the fourth century, has a large student population and sits in the middle of an industrial belt. For this reason large numbers of young musicians have formed themselves into bands and they are finding Marshall the best as musicians all over the world have found already.



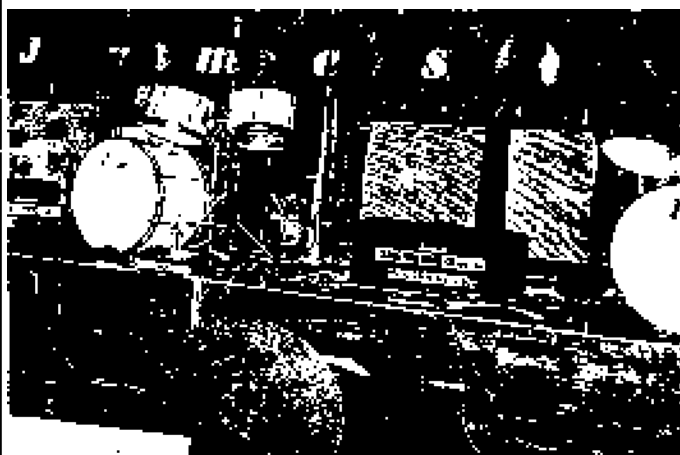
LULU IN LONDON

Lulu, long time Marshall user, poses beside a Marshall PA column at the opening of a leisure centre in London recently.

Lulu, and her original band the Luvvers, bought their Marshall equipment from Jim Marshall's original shop in London and she and the band remained faithful to Marshall throughout their career.



LAST MARSHALL GIG!



Just to prove the versatility of Marshall. Here's a shot of the James Last orchestra's set up during their tour of the Far East last year.

This shot was taken just before a concert in Hong Kong and it reveals that the rhythm section use Marshall exclusively.

BEE GEES IN FAR EAST



These pictures are from an outdoor festival in Japan where the Bee Gees were headliners. Marshall users since the beginning, the band have found a great revival support in Japan and as the pictures show, the equipment, including the Marshall stacks, was supplied by the Tsang Fook Piano Co., who were established in 1916.



GUESS WHO?

About the only thing we do know is that there's an impressive array of 100 watt Marshall stacks on stage.

Meantime, somewhere in Japan; an urban festival. On a stage surrounded by flats, a band of unknown origin gets into a set.



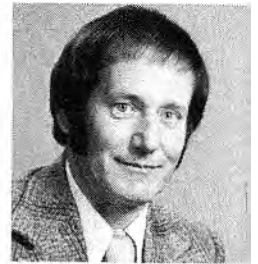
MALAYSIA MEETING



Marshall in Kuala Lumpur: seen here in the capital of Malaysia, Phua Sin Loke (on left) Marshall's agent in this important commercial centre shaking hands with Sam Hui, Hong Kong's top singer who uses Marshall amplification exclusively. Note the Marshall sticker behind Sam's left shoulder.



EDITORIAL



Welcome to the new style Marshall International, I hope you'll enjoy reading it. Over the years we've been publishing this magazine we've made many friends around the world and musicians and dealers tell us how Marshall's getting on in distant places. I hope you'll continue to let us know how things are going in the future.

We're delighted that the new transistor range of Marshall amplification has been received so well everywhere it's been sent and I hope you'll like the additions to the new range that are announced in this issue.

There are several new features in this Marshall International. We've a letters and queries section written by our Editor and I hope you'll write to us if you're in any doubt about Marshall equipment or you have any ideas that you'd like to pass on to other Marshall users. We want Marshall International to be a meeting place for the thousands of Marshall users and Marshall dealers around the world and we welcome all comments and news for these columns.

Above all, thanks for your interest in Marshall Amplification, we hope you enjoy reading every issue of Marshall International.

Rose-Morris NEWS

Rose-Morris, the London based wholesale company responsible for marketing Marshall products, world wide, have appointed a new Managing Director. He is Peter Clarke who took over his position shortly before the end of last year. The former Managing Director, Roy Morris becomes President of the company.

Peter Clarke is a new face to the music industry, but he's no newcomer to music. Trained as a singer as a lad, he still sings regularly on a semi-professional basis and has a deep interest in all things musical.

His professed aim for the future of Rose-Morris, and in



Roy Forder

turn Marshall, is to develop a far closer relationship between Rose-Morris and their dealers and naturally all customers.

"I believe that we are in partnership with our dealers," he says, "We are inter-dependent."

Also new to Rose-Morris is sales Manager Roy Forder. He's responsible for Rose-Morris sales in Great Britain and Southern Ireland and that means it's his job to look after such famous items as Marshall amps, Ludwig drums and Ovation guitars.

Roy's background is in Business Machines and he brings to Rose-Morris a sales track record consistent with the aims of the company to bring even more success to these fabulous instruments.



Peter Clarke

Marshall MEMORIES



ABOVE
Trower Power! Here's Trower at a Festival and though some people say he sounds like Hendrix (he was a Marshall fanatic as well) he looks more like Townshend here. Those stacks must have been pretty loud.

RIGHT
We reckon this is the Ivy League posing proudly with their collection of Marshall. It's obviously before the days of really big stacks, but Jim had already invented the sloping front cabinet which he developed out of his original 4 x 12 cabinet that was to become the standard cabinet of the amp world.



ABOVE
This is going way back. The High Numbers had only just become the Who and they were still to be found lounging around the Marshall shop that Jim had at Hanwell near London. The band must have had their first hit because they've got 200 watts of Marshall each. Spot the union jack grill cloth on Townshend's stack. This was the cabinet he used to plunge into with his guitar at the end of the show. If anybody recognises the gig we'd like to hear.



ABOVE
When the Marmalade kicked out drummer Alan Whitehead they got a lot of bad publicity in some of the Sunday newspapers. This is a gig they did before the big split and they're proving that they had got taste in amps any rate.

LEFT
This is a famous picture we've used in Marshall catalogues in the past. I think everybody knows who the young man is and we're also pretty sure you know what amps he's using. It was at Wembley Stadium, London some time ago.



ABOVE
Here's an unusual sight. Gary Glitter and the Glitter Band letting go with Marshall. Just proves how different Marshall can sound!



ABOVE
"Bo Diddley buy Baby A Diamond Ring". Here's the legendary guitar player Bo Diddley, we don't know when and we don't know where. But he's out front of an awful lot of Marshall power.



COMBO CREDIT

Dear Sir,

Thanks for a really great amp! I'm referring to the new 30 watt lead combo that I've bought just two weeks ago. I've been looking for the right amp for my type of work for nearly six months and I was certain that I was going to have to buy a 50 watt or 100 watt combo to get what I wanted. I'm the guitarist with the Denny Hayes Quartet here in Blackpool and most of our work is in clubs and pubs. We do a lot of standards in the act but we've also got a reputation for being able to do some heavier numbers and I find the little Marshall great at lower volumes for the jazzier numbers we do but when I crank it up it sounds just like a huge 100 watt Marshall. Thanks very much for solving my problems.

Ray Griffith,
Blackpool,
England

Thanks for your letter Ray, glad you liked it. Get your bass player to hear the 30 watt bass version.

Treble Hum

Dear Sir,

I've been a Marshall user for over five years now and my 100 watt valve amp has performed well under the silliest conditions. About six months ago I bought a treble boost unit and I've been getting a problem with hum and hiss on the amp. This unit is of the type that you switch on or off by hand, not by a foot switch and it's usual to either attach it to a guitar or sit it on an amp top. Because

I don't want to muck up my guitar — I've got a new Stratocaster — I've been keeping it on top of the Marshall. I think it is this proximity which causes the hum but is there anything I can fix to the circuit which will eliminate this.

Jim Oggantue,
Nairobi,
Kenya.

There's not a lot you can do about the hiss in this kind of set up. The upper frequency boost which gives you that ultra bright treble will also amplify the "silence" in that frequency area and thus cause the hiss. The hum can be quite easily cured. It's caused by lack of screening. The braid wrapped round the inner cable of your guitar lead is designed to stop outside interference with the guitar's signal to the amplifier and the treble boost unit represents a break in this protection. Obviously the unit isn't screened properly — quite a common fault — and this interference from the electrical presence of the amp close by can enter the signal path to the amp and can be amplified. You don't really need to alter the circuit of the treble boost unit to solve the problem. If you did you would probably end up re-wiring the whole thing. The best solution is to place the treble boost unit on a piece of tin foil, cooking foil is ideal for this, and wrap it up around the edges of the unit. This might not be particularly pretty but it's an effective way of forming an electrical screen between the unit and the amp and this should solve the worst of your hum problems. Hiss you have to live with, I'm afraid.

VALVES ARE OK

Dear Sir,

I've liked the Marshall sound for years although I've never been able to get myself a Marshall amp. A friend of mine has offered me a chance to buy a valve 100 watt Marshall as he is planning to buy a new transistor Marshall. I've

heard rumours that it is getting difficult to replace valves in these amp if they go, what's the truth about this.

Robin Day-Johnson,
Seattle,
U.S.A.

There's no more problem at all about getting spares. We're still turning out valve amps and the thousands and thousands of people who own valve Marshall's around the world are a big enough market to ensure that the valve manufacturers will be keeping a supply going for many years to come. It's unlikely you'll have any trouble with the amp, but if you do, you'll have no problem getting spares. Welcome to the Marshall Club.

Cabinet Problem

Dear Sir,

I've bought one of the new 100 watt transistor Marshall amps for bass guitar which I've been using very satisfactorily with an old 18 inch speaker in an infinite baffle cabinet. A few weeks ago I swapped it for a newer cabinet with two 12 inch speaker in it and I can't seem to get a good sound from the set-up. I naturally expected a change in sound but I'm getting less volume than I did before and I'm thinking of trying to find

another 18 in cabinet instead. Can you help?

Roger Sweetman,
Southend-on-Sea,
England

As you say you would be likely to get a different sound from two 12 in. speakers, slightly more topky and a generally brighter sound, but you don't say what type of cabinet the speakers are in or what the ohmages are. I presume it's an infinite baffle cab but the way the speakers are wired will affect the impedance. On the back of your Marshall you'll find a plug with three alternative settings. These are ohmage matching settings and it would be a good idea if you tried using the set-up with this switch on different settings. If you are not sure of the ohmage (impedance) of your new speaker you may well find that this ohmage selector will solve your problem as you may not be correctly matched, amplifier/speaker wise.

Do make sure that your new speakers are capable of handling 120 watts at least as this amp is extremely powerful and if you still find problems with the sound see if you can borrow a Marshall cabinet somewhere so you can hear how good a complete Marshall set up can sound, and then you know what to aim for.

TECH TALK

Safety is our number one aim when we design any amplifier and I'm delighted to say that despite the fact that Marshall amps have outsold all others in the world, we have a really good safety record.

This does not mean that accidents can't happen. The best protection against a piece of electrical equipment going wrong is a good earth. If you haven't got this and you're attached to that faulty equipment in any way (by a guitar lead or through a mike for example) you become the earth and the "wild" current will run to earth through you.

Several patent testing systems are on sale around the world. They usually sell for around £10 or \$20 and

by plugging them into a socket you intend to use you get a visual indication of the state of the circuit. Failing this connecting a wire from the live socket pin and the earth pin to a light bulb it will tell you if there is a fault in the system. If you get current passing through and lighting the bulb, don't use the system.

If you've got a problem like the guitarist who wrote to me and have no earth at all, you can use water pipes as an earth point. Whatever you do don't use gas pipes. Run a connection from the earth wire of the amplifier (the green and yellow striped wire) to the water pipe. Doesn't matter how long this lead has to be, but when it reaches the water pipe make sure there's a good contact between the wire and the metal of the pipe.

NEW PRODUCTS FROM MARSHALL AND ROSE-MORRIS

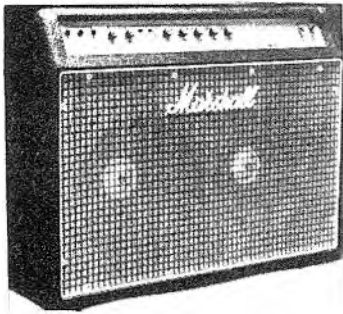
Several exciting new products have been launched by Marshall. They're distributed in the UK and to countries all over the world by Rose-Morris, the London based musical instrument wholesale organisation.

These new models make the Marshall range the most complete and up to date range available in the world.

Marshall
PRODUCTS

100WATT COMBO

This is a fantastic new Marshall 100 watt combo amp. Perfect for the travelling professional of session musician, Marshall have packed the superb sound of their exciting new 100 watt solid-state amp into a compact cabinet along with two 50 watt Celestion speakers which have been especially developed for this new amp.



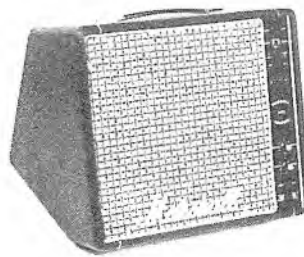
30 WATT COMBO



This sprightly little combo is fresh out of the Marshall stable, and is the perfect answer for the musician who wants a top quality amp without having to invest in a 100 watt amp. This amp has a 30 watt output (RMS) and the single channel amplifier drives two 12 inch Celestion loud-speaker to produce a clean, effortless sound.

MONITORS

Cunningly designed to be stood at a choice of angles on stage, the monitor with built in slave takes a direct signal feed and can be controlled at the point of output via a control panel mounted beside the speaker grill. Power output of this unit is 30 watts. The pure cabinet monitor operates as any speaker cabinets and naturally all Marshall monitors can be interlinked.



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**Marshall
DEALER**

MIKE COOPER, KITCHENS OF LEEDS



Mike Cooper of Kitchens has been selling Marshall Amplification since the beginning. The shop, in Leeds, pioneered Marshall in the West Riding of Yorkshire in the mix-sixties and as Mike says "Marshall amplification stopped the sales of all other amplification for years."

Kitchen's is an old-established music shop. It was founded 100 years ago last year and in the late fifties the company started selling a great deal of group equipment. Amplification was rudimentary in those days and often a guitarist would be forced to plug into an amplifier designed to amplify records or speech rather than the guitar. Marshall amps were among the first to be produced especially for the guitar and the Marshall sound swept the area. Kitchens were keen to stock Marshall and they rapidly build up a huge amplification retail business almost solely based on Marshall. As joint-managing director Mike Cooper recalls:

"It was Marshall, Marshall and more Marshall. The imitators came along and had a go and they usually failed. It was years before there was any other amp to even approach a Marshall stack."

The mid-seventies have seen a revolution in group amplification design. The transistor is in and the old heavy equipment is out. Marshall waited years

before launching a transistor range despite the fact that the company had working transistor prototypes as long as nine years ago. Jim Marshall listened to the amp; his technicians were designing and insisted that it was possible to re-create exactly the valve Marshall sound that is world famous in a transistor design. Eventually, at the end of 1974 Jim agreed that his laboratory had succeeded in capturing that elusive sound and the second generation of Marshall amplifiers were produced. It is generally accepted that transistor amps offer several advantages over valve designs. A saving in weight is an obvious advantage that nobody would dispute but it is also generally accepted that there is a far higher degree of reliability attached to transistor amps. If this is the case, the gain will seem negligible to Marshall owners who have enjoyed world-renowned reliability for years. Mike Cooper:

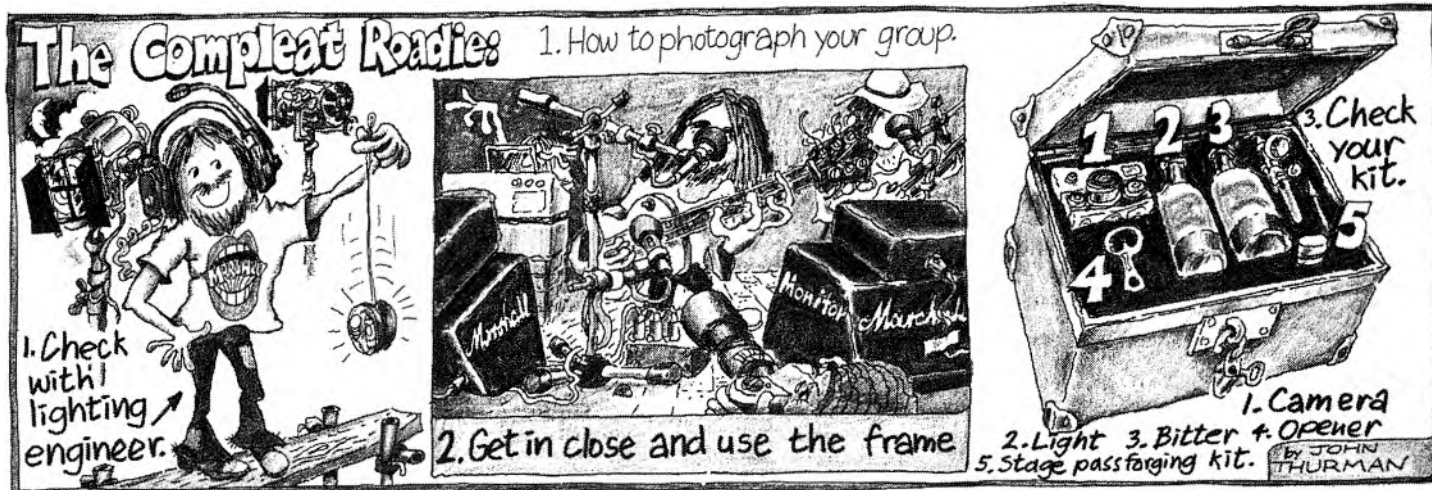
"We decided that Marshall was the perfect amplifier for professional sound systems installations. We've built a big business fitting PA systems and general amplification systems into clubs, pubs, ballrooms and cabaret spots and we had to decide on a basic amplifier to use in our installation system. We decided to use

Marshall because of its fabulous popularity with our customers in the shops and today there are many clubs using systems we've installed with Marshall amps and they've been in there for ten years and they're worked seven nights a week and we've never had to touch the amplifier."

Today the new range of Marshall transistor amps, combos, monitors etc. can be found in all the Kitchens shops across the north of England. "The transistor Marshall amplifiers are now proving much more popular than the valve amps," says Mike, "and I'm pleased to say that the new amps image definitely got the Marshall sound."

"One thing we've always liked at Kitchen's is the Rose-Morris Marshall tie-up. Rose-Morris are really excellent to deal with and they've played a vital part in Marshall's success story."

The near future sees the opening of a brand new Kitchens shop in Leeds. This is opposite the existing shop in Queen Victoria Street and is a large area that will specialise in group amplification only. On the days it opens, you may imagine, Marshall will be on prominent display. Kitchens and Marshall is a continuing story of a successful partnership.



GILLAN CHOOSES MARSHALL

Ian Gillan, the superstar who dramatically retired from fronting Deep Purple two years, has announced his return to the world stage.

AGAIN!!



The Ian Gillan Band has been recording and rehearsing before starting their British and World tours and millions of Purple fans have been holding their collective breath to discover if Gillan has the same old magic.

To ensure, he has, the lad spent several days at the Marshall Complex in new city, Milton Keynes, getting his massive PA and mixing systems prepared. Throughout his long career Ian has in-

sisted on Marshall amps and has relied on their superb sound and reliability to project his amazing voice.

Ian's been working with Johnny Gufstafen (a legendary bass player), guitarist Ray Fenwick, Mike Maran on keyboards and Mark Nauseef towards forming his band and the whole back line will be cranking up Marshall's of different descriptions.

Ian recalls "I was with

a band called the Javelin's in West London in the early sixties and I bought the first 60 watt PA Jim Marshall ever made. It was so good the bass player bought one as well and since that time I've always used Marshall, I just love that lively spitting sound.

"The new bands isn't setting out to be very loud so I'm using 2,000 watts for main PA and 1,000 watts for monitors."

STAR VISITS

There's been an all star list of visitors at the Marshall plant in recent months; It's important for stars to keep their equipment up to date and here's just a few names who crossed the threshold recently;

Wings, Paul Kossoff (Back Street Crawler), Status Quo, Robin Trower, Clancy, Ian Gillan, Nazareth, Bad Company, Alex Harvey, U.F.O., Chapman, Witney Street Walkers, Suzi Quatro and Jeff Beck.



T IS FOR TERRI IN T-SHIRTS

Marshall girl Terri Haynes dons a Marshall T-Shirt to show how attractive they can look. Marshall T-Shirts are available from your Marshall dealer.

FOR FURTHER DETAILS

If you'd like to know any more about Marshall Products just fill in your name and address on this coupon and send it to: Bob Wilson, Rose-Morris & Co., 32/34 Gordon House Road, London NWS 1NE.

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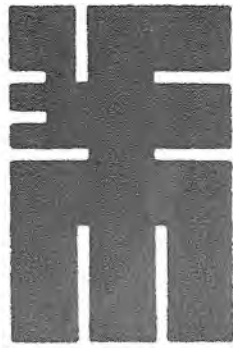
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Frankfurt '76



WEL FRAI



Welcome to Frankfurt and welcome to *International Musician*. We are sorry that this magazine is not printed in your native language, but in this issue we are printing details of exhibitors at Frankfurt in your language to assist you in your business.

International Musician is published in Great Britain every month and circulates around the world to musicians and members of the musical instrument and recording industries. Each month this magazine publishes interviews with leading musicians, scientific tests on amplifiers and musical equipment and information about recording studios and the musical instrument trade. This magazine is sold in musical instrument shops, newspaper shops and by direct mail subscription. If you would like to receive this magazine mailed directly to your own address each month, please complete the subscription form at the back of the magazine. If you are interested in distributing this magazine in your own territory or have any other type of enquiry to make, please visit us on Stand 50356 in the British section of the exhibition hall or contact us at our address, which is printed at the front of this magazine.

We hope you enjoy your visit to Frankfurt and we also hope you enjoy reading *International Musician*.

COME TO FRANKFURT

Soyez la bienvenue à Frankfurt ainsi qu'à International Musician. Nous regrettons de ne pas imprimer cette revue dans votre langue, cependant pour vous aider dans vos affaires, nous publions dans ce numéro, des détails sur les exposants à Frankfurt.

International Musician paraît en Grande Bretagne chaque mois et atteint musiciens, industries d'enregistrements, et fabricants d'instruments de musique dans le monde entier. Tous les mois cette revue publie des interviews avec de grands musiciens, des tests scientifiques d'amplificateurs et autre matériel de musique, de même que des renseignements sur les

que des renseignements sur les studios d'enregistrements. Cette revue est en vente dans les magasins d'instruments de musique, chez les marchands de journaux et par abonnement direct. Si vous désirez recevoir la revue chaque mois, nous vous prions de bien vouloir remplir le coupon d'abonnement page

Si vous voulez devenir 'point de vente' ou avez d'autres questions à poser, nous serons très heureux de vous accueillir au stand 50356 de la section britannique du Hall d'exposition. Vous pouvez également nous contacter à l'adresse indiquée au début de la revue.

Nous vous souhaitons une agréable visite à Frankfurt et espérons que vous aurez plaisir à lire International Musician.

Willkommen in Frankfurt und willkommen beim International Musician. Es tut uns leid, daß diese Zeitschrift nicht in Ihrer Muttersprache gedruckt ist, aber um Ihnen die Geschäfte zu erleichtern, bringen wir in dieser Nummer nähere Einzelheiten über die in Frankfurt vertretenen Aussteller in Ihrer Sprache.

International Musician wird in Großbritannien monatlich herausgegeben und von Musikern sowie Firmen der Musikinstrumente- und Tonaufzeichnungsindustrie in allen Teilen der Welt bezogen. Jeden Monat erscheinen in dieser Zeitschrift Interviews mit führenden Musikern, die Ergebnisse wissenschaftlicher Tests, die mit Verstärkern und Musikgeräten durchgeführt wurden, und Informationen über Aufnahmestudios und den Musikinstrumentehandel. Die Zeitschrift wird in Musikgeschäften, Zeitungsläden und an Direktabonnenten verkauft. Wenn wir Ihnen diese Zeitschrift jeden Monat direkt an Ihre Adresse schicken sollen, bitten wir Sie, das Abonnement-Formular hinten in der Zeitschrift auszufüllen. Wenn Sie am Vertrieb der Zeitschrift in Ihrer Gegend interessiert sind oder irgendeine Auskunft wünschen, bitten wir Sie, uns an Stand 50356 im britischen Teil der Ausstellungshalle zu besuchen oder sich schriftlich an uns zu wenden. Unsere Adresse steht vorne auf dieser Nummer.

Wir hoffen, daß es Ihnen in Frankfurt gefällt und daß Ihnen die Lektüre des International Musician Spaß macht.

Benvenuti a Frankfurt ed alla International Musician. Questa rivista, sfortunatamente, non è stata stampata nella Vostra lingua, tuttavia annovera dettagli inerenti gli espositori di Francoforte, in lingua italiana.

International Musician viene pubblicata in Gran Bretagna ogni mese e viene letta dai musicisti di varie nazioni e dai membri delle industrie produttrici di strumenti musicali e apparecchiature per la registrazione del suono. Ogni mese appaiono interviste con musicisti eminenti, testi scientifici sugli amplificatori ed apparecchiature musicali ed informazioni sulle sale di registrazione sonora e sul settore degli strumenti. La pubblicazione è in vendita presso i negozi di strumenti musicali, edicole o viene inoltrata direttamente agli abbonati. Se desiderate ricevere la rivista, direttamente al Vostro indirizzo, ogni mese, dovrete compilare il modulo di abbonamento figurante al fondo della rivista. Se desiderate distribuire la pubblicazione nel Vostro territorio o se Vi occorrono delucidazioni supplementari, visitateci al posteggio 50356 della sezione britannica, nel salone di esposizioni, oppure interpellateci direttamente, al nostro indirizzo figurante in copertina.

Ci auguriamo che la visita a Frankfurt e la lettura di International Musician Vi apportino la più profonda soddisfazione.

Frankfurt市に来られたこと、インターナショナル・ミュージシャンに来られたことを歓迎致します。残念ながらこの雑誌は日本語版にはなっておりませんが、Frankfurt展示会の詳細はこの日本語のパンフレットによって貴方のビジネスの手引きの形で皆様方を知っていただけたらと思います。

インターナショナル・ミュージシャンは英国の月刊誌で、全世界の音楽家のみでなく、楽器製造界、録音レコード業界の方々にも広く愛読していただいている雑誌です。月々の記事は、指導的な音楽家訪問、アンプリファイヤーや楽器の科学的なテストの結果、レコードスタジオに関する情報、楽器業界の動向に関するニュースなど盛りだくさんであり、楽器店、新聞雑誌スタンドで取扱われており、また直接ダイレクトメールにより購読されています。

もし貴方の住所に直接送付により毎月入手購読されたい場合はこの雑誌の裏面に申込書が付いていますから、お書込の上、郵送するか、会場スタンドの係にお渡し下さい。もし、貴方の地域の取次店としてこの雑誌に興味があつたり、他の何等かの御意向が御ありの際は、どうかこの会場スタンド50356号に送付して下さい(この雑誌の表紙にこの番号がのっています)。

皆様のFrankfurt滞在が楽しいものであること、インターナショナル・ミュージシャンが皆様にとって興味のある読みものを提供することを目指します。



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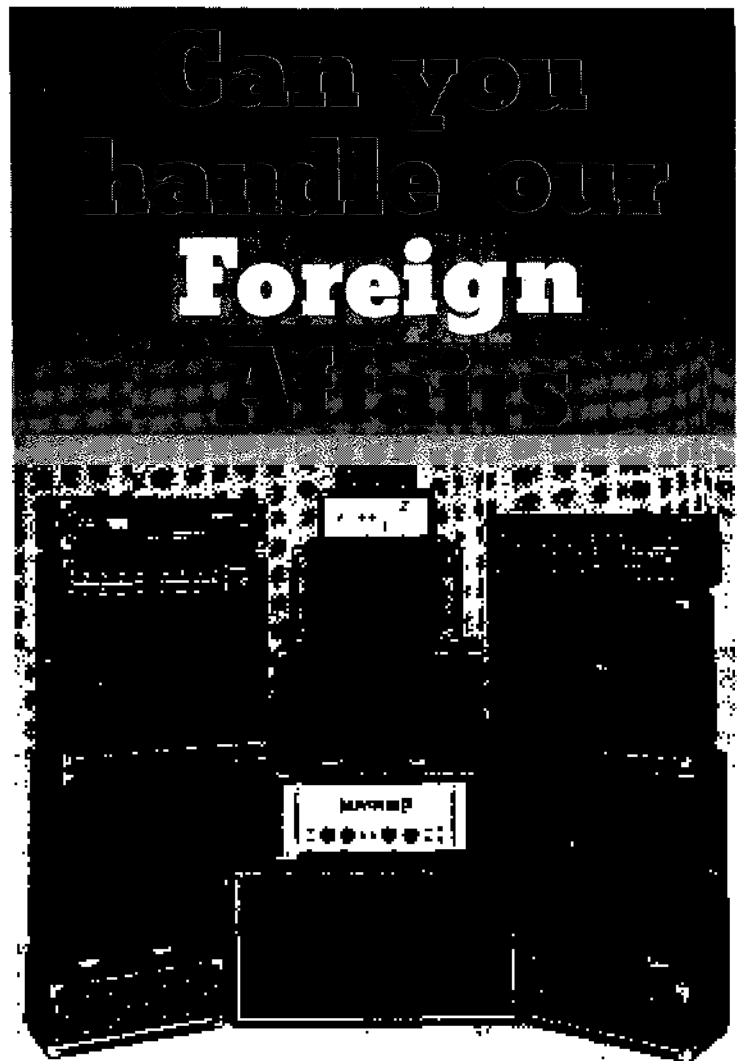
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Whats more we're also sole export agents for several top British P.A., Disco and Lighting manufacturers e.g. Custom Sound, Matamp, McGregor disco equipment and Hammer sound lighting units.

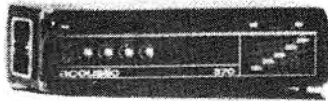
Infact all in all we're able to offer a complete package deal on some of the best British equipment around today. So all you'll have to do is come along and see us in Frankfurt to solve all your supply problems on British sound and lighting equipment.

LEECH

LEECH MANUFACTURING COMPANY
6, Rennie Street, Salford 5, Lancs, England.
Telephone: 061-872 7916

Frankfurt '76

Acoustic, 7949 Woodley Avenue, Van Nuys, California 91406 Tel: (213) 997-6631



Acoustic amps have enjoyed a fantastic year in Great Britain. The amps have long been held as a status symbol among U.K. bands because of the difficulty of obtaining one, but last year U.K. agents were set up for distribution and 1976 should be the year that U.K. musicians can get their hands on these amps for the first time. It's odd to note that it's quite common to see bass players plugged into a lead set up and vice-versa. It's certainly not what Acoustic recommend, but it must say something about the equipment's durability. The fabulous U.S. range will be displayed in all its glory.



Acoustic est un des amplificateurs americain les plus connu. Leur amplificateur le plus renommé est le model 360 pour guitare basse. Une importante gamme d'amplification solid state est également exposée.



Acoustic ist einer der bekannteren amerikanischen Musikverstärker. Der berühmteste Verstärker der Firma durfte der Babgitarrenverstärker Modell 360 sein. Die Firma stellt auch eine große Reihe von Solid-State-Verstärkern für viele Anwendungszwecke her.

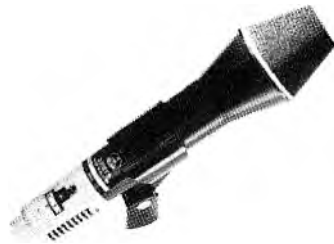


Acoustic e una tra le piu affermate serie di amplificatori americani. Probabilmente, la versione piu famosa e il modello 360 per contrabbasso. La ditta produce parimenti un'ampia gamma di amplificatori solid state per svariate applicazioni.



アコースティック社 (Acoustic) は有名なアメリカの音楽アンプで知られています。その中で一番知られているものはモデル360バス・ギター用アンプでしょう。その他多種のソリッドステートを使ったアンプを作っています。

AKG, 184-186 Campden Hill Road, London W8. Tel: 01-229 3695



Fast becoming a by-word amongst professional musician, AKG's Austrian parent company are mounting the main display of AKG microphones at this year's exhibition. The company has long enjoyed a premier position in studio and broadcast markets and in the last couple of years, has started to make real inroads into the professional group scene. As groups have become more sophisticated in their on-stage sound, the company's microphone's have fulfilled roles made necessary by such innovations as low-impedance stage miking and multi-channel mixing. On show will be the company's full dynamic range of microphones and the excellent condenser range.



AKG est un des plus grands noms dans la fabrication de microphones. Située en Autriche, la compagnie produit des microphones de haute qualité utilisés en radio diffusion. Plusieurs radio diffusions nationales ont adopté les microphones AKG.



AKG ist einer der prominentesten Namen in der Mikrofonherstellung. Die in Osterreich ansässige Firma stellt hochwertige Mikrophone für Rundfunkstudios und öffentliche Lautsprecheranlagen her. Verschiedene nationale Rundfunkstationen haben sich für AKG-Mikrophone zur allgemeinen Verwendung entschlossen.



AKG e uno tra i nomi piu conosciuti nel settore dei microfoni. La ditta, situata in Austria, produce regolarmente microfoni di alta qualità per gli studi di radio-diffusione e per gli impianti di comunicazione interna. Parecchi sistemi di radiodiffusione nazionale hanno adottato i microfoni AKG.



AKG社はオーストリアの会社でマイクロフォンメーカーとしては一流の社です。同社は放送局用公共放送用の高品質マイクロフォンを作っています。幾つかの国営放送局が一般用としてAKG社のマイクロフォンを使用しています。

Baldwin Piano & Organ Company, Unit 4 Sterling Industrial Estate, Rainham South Road, Dagenham, Essex. Tel: 01-595 1212



Baldwin is a name internationally famous for producing fine electronic keyboards and the American parent company will be proudly showing their range which includes models such as the Fun Machine, the Cabaret, and the Interlude.

These instruments are aimed for the home musician and incorporate easy-play aids and percussion sections. The Fun Machine, an independent keyboard instrument in its own right, is also incorporated into the Cabaret and Interlude organs. Both these are full size console-model instruments featuring two manuals and a wide variety of pre-set tones.

In the U.K., Baldwin markets the well known Gretsch range of guitars and drums.



The Baldwin Piano and Organ Company, située à Cincinnati, Ohio, U.S.A. expose leur gamme d'orgues et pianos de même que la gamme de guitares et batteries Gretsch.



Die in Cincinnati, Ohio, USA, ansässige Baldwin Piano and Organ Company ist eine alteingesessene Firma, die ihr hervorragendes Sortiment an Orgeln und Klavieren sowie das Gretsch-Sortiment an Gitarren und Trommeln ausstellen wird.



L'antica società Baldwin Pianos and Organ Company di Cincinnati, Ohio, U.S.A., esporrà la propria perfezionata serie di organi e piano, oltre alla selezione di chitarre e gruppi per batteristi Gretsch.



ザ・ボールドワン・ピアノ・アンド・オルガン社 (The Baldwin Piano and Organ) はアメリカのオハイオ州シンシナティ (Cincinnati, Ohio) にあり、オルガンとピアノの優秀なラインジを展示し、グレッチ (Gretsch) という名で呼ばれるギターとドラムを陳列します。

Beyer Dynamic, Elektrotechische Fabrik, D7100 Heilbronn, Theresien Str. 8, P.O. Box 1320, West Germany. Tel: (0 71 31) 8 23 48.



Of importance on the Beyer stand this year is the Wireless microphone system the company announced in Britain last year. At the time of going to press the British company, Beyer Dynamic — headed by Stan Duer — did not have details of the display this year.

The Beyer range of microphones, headphones and audio accessories are well know, both in Britain and Germany (their source of origin) and in the rest of the world. The range includes dynamic microphones, (ribbon and moving coil), microphone accessories, headphones and the "Transistophone" wireless microphone system.



Fabriqués a Heilbronn, Allemagne de l'Ouest, les microphones Beyer Dynamic sont utilisés sur scène et en studio ce qui prouve leur haute qualité.



Die in Heilbronn hergestellten Beyer-Dynamic-Mikrophone werden viel auf der Bühne oder für Tonaufnahmen eingesetzt, wenn es auf hohe Qualität und Zuverlässigkeit ankommt.



I microfoni Beyer Dynamic della Heilbronn, la ditta della Germania Occidentale, trovano esteso impiego nei teatri e nel settore della registrazione sonora in cui sia indispensabile il piu alto livello di qualità ed affidamento.

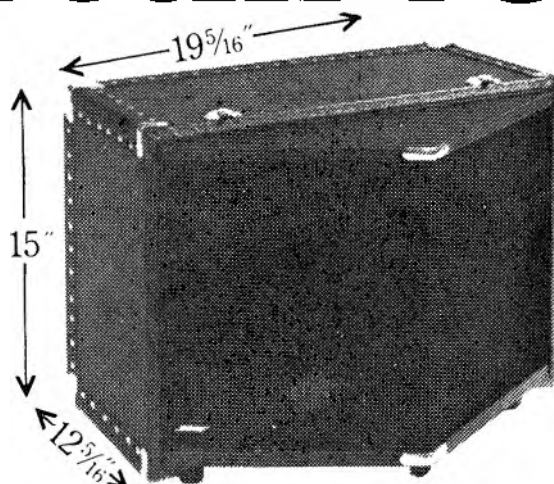


バイヤー・ダイナミック社 (Beyer Dynamic) はドイツのハイルブロンで、ステージ用のマイクホンで、広く使用されている高品質・高信頼性のあるものを作っています。それは又レコーディング用にも使用されています。

BOSE ***800/1800***



The International Sound of Success



Bose 800 speakers.

Our speakers have multiple drivers in an air-sealed enclosure.

This gives smoother response than ported bass cabinets (which are often 'boomy') and horn-loaded drivers (which often sound 'peaky').

Excellent transient response is another feature of the 800.

Small cones powered by massive magnetic structures provide rapid response to transient signals. (Drummers soon find that they've never heard their drums sound so good before.)

Finally, with every pair of Bose 800 speakers you get our active equaliser.

This means that a flat power spectrum is radiated. Not just in the vocal range. But from the deepest tones of a bass drum to the highest treble of a snare.

Bose 1800 amps.

You can't get clean power from an amp without knowing how much is going in.

This is why the Bose 1800 is equipped with twin arrays of light-emitting diodes (LED's) which monitor the instantaneous power level supplied.

The LED's also provide rapid response and a wide dynamic range.

A special delay circuit is used to limit

power supply inrush currents at the instant of turn-on. This extends the life of power supply capacitors, rectifiers and pilot lights.

While in order to cut power transistor stress, our amp shares out the power between 14 transistors.

The 1800 also has a special overload recovery circuit which senses power load and adjusts to feedback to ensure rapid recovery.

And just in case there are abnormal load conditions, it's equipped with electronic current limiting.

James Last, Vicki Leandros, Peter Alexandre, The Tymes and many many other top international musicians choose the true sound of international success - BOSE.

For further information & details of prices etc in your country contact:-

ENGLAND: Bose U.K., Sittingbourne/

Kent 0795/75341 FRANCE: Accord

Diffusion, Paris 222-1193 GERMANY:

Bose Europa, Bad Homburg 06172/42042

HOLLAND: Bose BeNeLux, Amsterdam

20-255123 SWITZERLAND: Bose AG

Swiss, Basel 061-222434 ITALY: Bose

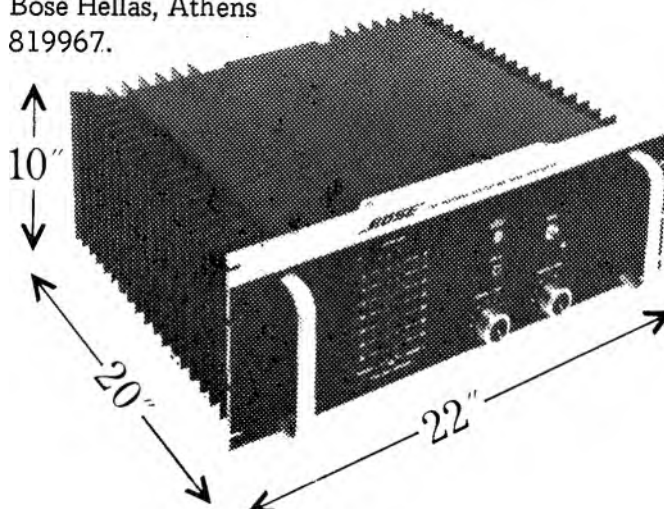
Italia, Rome 06344493

SWEDEN: Bose Sweden, Stockholm

08-670180 GREECE:

Bose Hellas, Athens

819967.



BOSE®



midas amplification

Modular system consoles built to no compromise recording and broadcast standards.

54-56 Stanhope Street, Euston, London NW1 3EX Telephone 01-387-7679
Louis De Potesia, ARC, S.P.R.L., Rue Th. Decuyper 134, 1200 Brussels, BELGIUM Tel. 7-71-30-63

MARTIN AUDIO LTD.

High power monitors from 125w. RMS input to a tri-amp system of 700w. RMS input.

54-56 Stanhope Street, Euston, London NW1 3EX 01-388-7162.

ATC

Acoustic Transducer Co. Ltd. (Acoustic engineers)

Pier House Laundry, Strand on the Green, Chiswick, London W4, Great Britain. Tel. 01-995 3654

Louis De Potesia, ARC, S.P.R.L., Rue Th. Decuyper, 134, 1200 Brussels, Belgium. Tel. 7-71-30-63

From page 99
Frankfurt '76

Boosey & Hawkes, Deansbrook Road, Edgware, Middlesex. Tel: 01-952 7711.

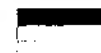


The long established British company of Boosey & Hawkes will be exhibiting their full range of musical instruments and equipment this year. New entries include the Golden Strad bow, a new cornet to complement the Sovereign range, and the Emperor flute.

The ranges Sovereign, and Edgware, familiar to all in the music trade, will also be on display.



Boosey & Hawkes est une des plus anciennes compagnies anglaises d'instruments de musique. Ses cuivres et matériels d'éducation fabriqués sous les marques telles que Sovereign et Edgware lui ont donné une renommée mondiale. Boosey & Hawkes vend également l'amplification Ampeg.



Boosey & Hawkes ist eine der ältesten Musikinstrumentefirmen in Großbritannien. Sie ist für ihre Blech- und Schulinstrumente, zu denen z. B. die Marken Sovereign und Edgware gehören, weltberühmt. Zu den von der Firma verkauften elektronischen Musikgeräten gehören auch Ampeg-Verstärker.

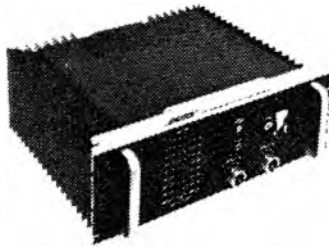


La Boosey & Hawkes, una delle più antiche costruttrici britanniche di strumenti musicali, gode reputazione internazionale per i propri ottoni e strumenti che annoverano, tra gli altri, i marchi commerciali Sovereign e Edgware. La serie di apparecchiature elettroniche della società include gli amplificatori Ampeg.



ブーゼイ・エンド・ホークス社 (Boosey & Hawkes) は英国の楽器メーカーの草分けのひとつです。真ちゆう楽器や教育用楽器のメーカーとして世界的に有名で、それらは「ソヴァリン」「エッジウェア」などと呼ばれています。商品の名前には「アンペグ」アンプリフィケーション・システムが含まれています。

Bose, Milton Regis, Sittingbourne, Kent. Tel: 795 75541



In the last 12 months, Bose P.A. systems have begun to make an important impression on British group members. For some time musicians have been familiar with the peculiar looking angled-front P.A. cabinets made by the company, but as a result of publicity achieved last year, bands are beginning to understand that Bose is offering an alternative way of achieving loud, efficient P.A.

Bose claim that the P.A. system they offer is infinitely more portable and compact than any of the competition, but it still, offers the clarity that bands have come to expect in recent years. At this year show the Bose Corporation will make a point of driving home that message.



Bose UK est la subsidiaire de l'American Bose Corporation. La compagnie est spécialisée dans la fabrication de public address systems portatifs très compactes. Leurs petits haut-parleurs à facettes sont connus dans tous les pays.



Bose UK ist die britische Tochtergesellschaft der amerikanischen Bose Corporation. Die Firma ist auf die Herstellung sehr leicht transportabler kompakter öffentlicher Lautsprecheranlagen spezialisiert. Ihre kleinen Lautsprechergehäuse mit winkelförmiger Front sind in fast Jedem Land ein vertrauter Anblick.



La Bose UK e la consociata britannica della Bose Corporation americana. La ditta si specializza nella costruzione di impianti per comunicazione interna portatili e compatti; i piccoli mobili per altoparlanti, ad angolo, sono ormai diventati famigliari in praticamente qualsiasi paese.



ボーズ UK社 (Bose) はアメリカのボーズ・コーポレーションが親会社です。この社はポータブル型コンパクトな公共放送用システムを作っており、アングルのついた小型ラウドスピーカーは世界のほとんどの国々で見られるものです。

Continued on page 109

£300 REWARD



WANTED

WATKINS COPICAT SERIAL No. 01

This reward is offered for the return of the first COPICAT echo machine built 21 years ago in Balham — London by WATKINS GUITARS LTD.

SECONDARY REWARD of £50 paid to any person giving information leading to the recovery of this machine.

DESCRIPTION: — Gold control deck with white printing. Two colour box — grey and light blue. Words "WATKINS — LONDON" on top right hand corner of deck. Jockey bar is flat type and finished black. Erase magnet mounted on bracket to left of motor spindle.

Known to have been in HAMBURG — Germany 1968 and LIVERPOOL — England 1970.

CLAIMS to

C. Watkins, 66, Offley Road, London SW9.

AMPEG SR6
 Sound Reinforcement System
IS HERE



The console power amplifier output is 120 watts RMS minimum. Frequency response is 20 Hz to 20,000 Hz ±1 db at a! power levels. Features include a numerically graduated master reverb level with one detented 'set' position and lo and hi band continuously variable anti-feedback notch filters. Speakers are 8" special design with high power dome tweeters.

Write for leaflet to:

Boosey & Hawkes (Musical Instruments) Ltd.,
 Deansbrook Road, Edgware, Middlesex HA8 9BB



Frankfurt '76

Burns U.K. Ltd., Home Sales Division, 9 Olive Street, Sunderland, Tyne and Wear. Tel: Sunderland 40974



Burns U.K. Ltd. will be exhibiting officially for the first time at Frankfurt this year. Representing them will be Chairman and Managing Director Mr. J.A. Wright and Marketing Director Grahame A. Wright. Burns will not only have display and demonstration facilities but they will be showing at least one new model for the first time. This new guitar, the ARTIST, has been especially developed to fulfil the "requirements of the mature established performer, while offering a conventional design with a superb action and brilliant tonal range". The company anticipates that there will be yet another new model available for exhibition which will be of a very modern design and marketed in a wide range of colours.



Burns UK Ltd. compagnie relativement nouvelle vend les fameuses guitares Burns qui depuis plus de dix ans ont été utilisées par amateurs et professionnels. Le tout dernier modèle, le Burns Flyte, qui est une guitare électrique solid, sera exposée cette année.



Burns UK Ltd. ist eine relativ junge Firma. Sie vertreibt die berühmten Burns-Gitarren, die von Amateur- und Berufsmusikern schon seit über zehn Jahren verwendet werden. Auch das neueste Modell, die Burns Flyte, eine massive elektrische Gitarre, wird dieses Jahr ausgestellt.



La Burns UK Ltd., una società relativamente nuova, in quest'ambiente, è responsabile per la vendita delle famose chitarre Burns che da ormai dieci anni vengono usate regolarmente da musicisti delectanti e professionisti. Quest'anno verrà presentato il modello più recente, ossia, la chitarra elettrica Burns Flyte.



バーンズ UK 社 (Burns UK Ltd) は比較的新しい会社で、有名なバーンズ・ギターを出しています。これは10年以上もアマチュア及びプロの音楽家に愛好されています。最新の製品、バーンズ・フライト (Burns Flyte) は電気ギターでソリッドなものであり今年の展示されるはずで、

Cardiff Music String Co., Pontygwindy Industrial Estate, Caerphilly. Tel: 0222 883804



Under the enthusiastic marketing of Alan Marcuson and the careful piloting of MD George Ostreicher, Cardiff Music Strings have enjoyed a busy year. The important news for the company since the last Frankfurt exhibition has been the launch of Sound City strings and the campaign mounted by Alan "Mr. String" Marcuson for "Pluck Me" Sound City T-Shirts has, most certainly, given the brand a remarkable prominence in a very short period. In this issue, we're delighted to be offering competition prizes of a year's supply of Sound City strings.

Other important and well known CMS brands on show at the fair will include London and St. David.



Cardiff Music Strings, est une compagnie britannique, située au Pays de Galles, spécialisée dans la production d'une grande gamme de cordes pour instruments variés. Leur gamme de cordes pour guitare appelée Sound City est très importante.



Cardiff Music Strings ist ein in Wales ansässiger britischer Saitenhersteller, der eine sehr große Reihe von Saiten für die verschiedensten Instrumente produziert. Von besonderer Bedeutung ist das unter dem Namen Sound City bekannte Sortiment an Gitarrensaiten.



La società gallese Cardiff Music Strings produce una serie completa di corde per una varietà di strumenti musicali. Particolarmente importanti sono le corde per chitarre Sound City.



カーディフ・ミュージック・ストリングス社 (Cardiff Music Strings) はウェールズにある英国の弦専門メーカーで、色々な弦楽器のための色々なタイプの弦を作っています。その中で著名なものは、ギター用の「サウンド・シティ」と呼ばれる一連の弦です。



Steve Wonder

Rick Wakeman

Helen Reddy

Neil Young

These are just some of the fine musicians who recognise the quality of THAT GREAT GRETSCH SOUND!

Need we say more?

Find out why these discerning musicians choose Gretsch by contacting your local dealer, or write to:

Gretsch Division, BALDWIN PIANO & ORGAN COMPANY, Unit 4, Sterling Industrial Estate, Rainham Road South, Dagenham, Essex. Phone: 01-595 1212

We gave you the solid guitar... now try our semi acoustic!

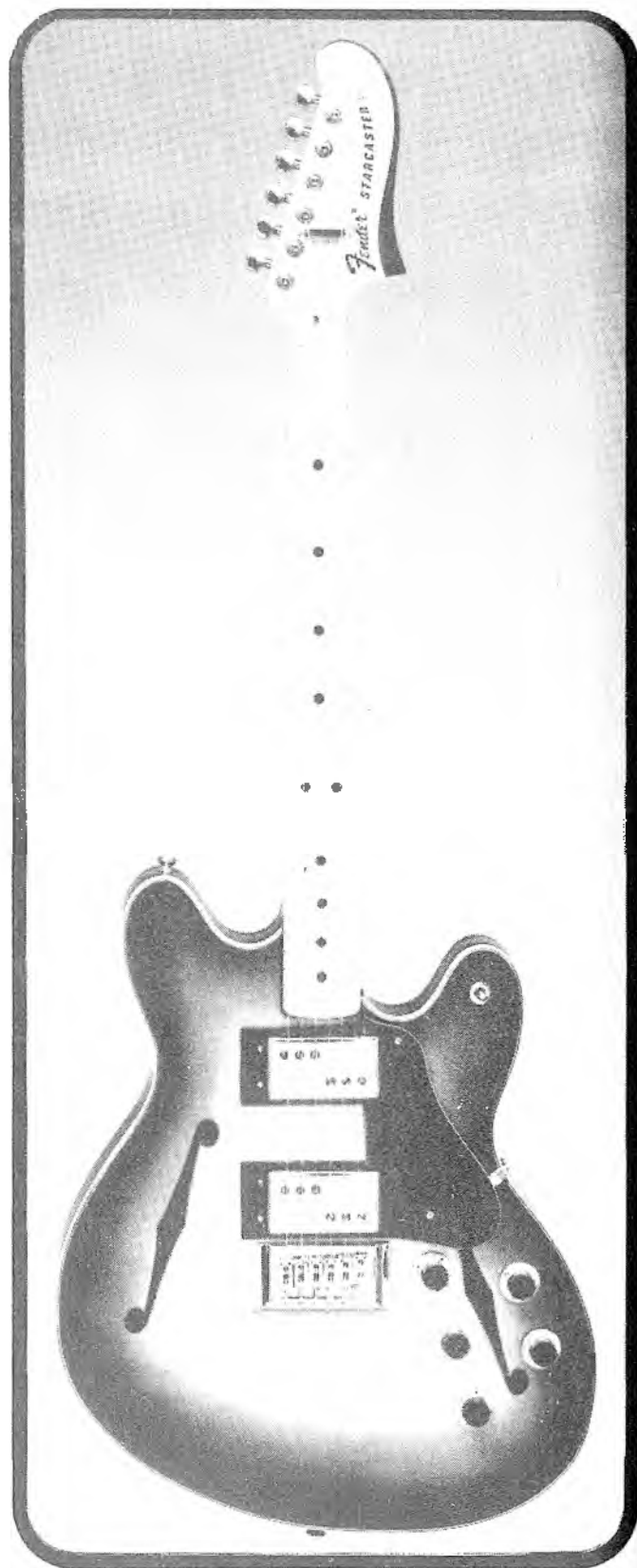
Fender, for over twenty years renowned the world over for the finest solid electrics, now offer the ultimate electric semi-acoustic — THE FENDER STARCASTER.

The Fender Starcaster with single piece hard rock maple neck with flat radius and wide frets and six specially designed bridge sections. Unique body design with offset waist and arched maple top and back. Solid centre block minimises feedback and increases sustain. De-luxe precision machine heads and individual controls for each humbucking pick-up, plus master volume control.

With a name like FENDER it has to be the best. We at CBS/Arbiter invite you to try the new Fender Starcaster at your local Fender Soundhouse for this will be a journey to a new age for your creation in music.



CBS/ARBITER LTD.,
217 TOTTENHAM COURT ROAD,
LONDON W.1.



STARCASTER



See a still bigger and still stronger 76-Programme....

An extract of our 76-novelties
We have many other surprises

REVO 30

a new sound-production unit. Rotating sound effect.
Can be connected to any type of electronic organ or
other electronic key-instruments



RHYTHM ARRANGER

a new automatic rhythm unit

- 27 rhythms (9 rhythms with rhythm selector, 18 rhythms with variation selector)
- 3-shift arrange (Variation A/Variation B/Auto Arrange)
- Continuously variable Tempo Control
- Continuously variable Balance Control

JC-120

a 2-channel guitar amplifier with chorus effect

- 120 Watt RMS
- 2 inputs (2 x high/low)
- 3 tone controls
- Built-in distortion
- Vibrato
- 3 outputs
- Chorus/Vibrato changeover switch
- Dimensions: 75 cm (W), 54 cm (H), 27 cm (D)
- Weight: 28 kg
- Accessory: Vinyl cover



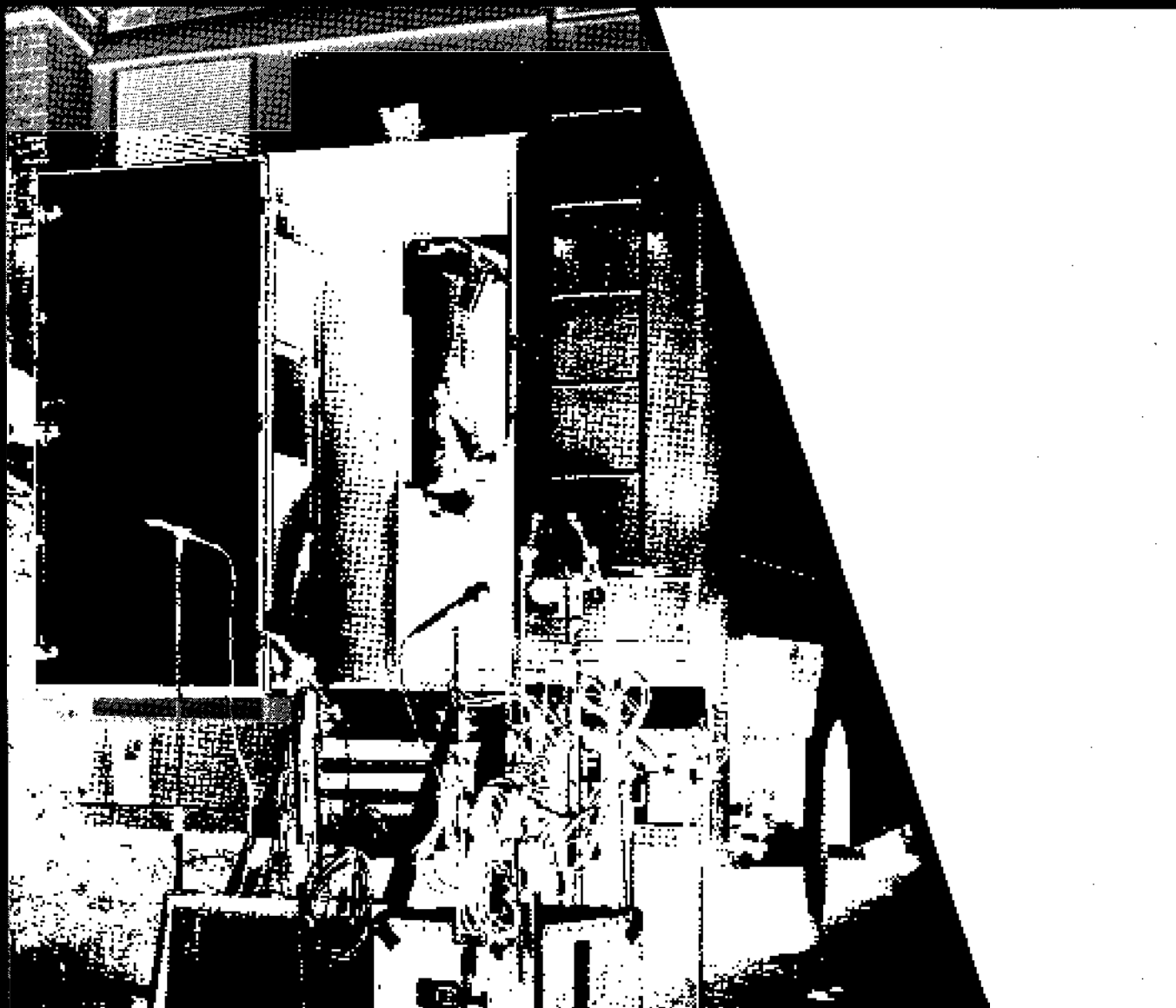
SYSTEM 100

is a synthesizer which has provision for the addition of optional units for the expansion of the system. At present 4 units are available, others are in preparation. This system permits an individual composition.



We are looking forward to your
visit at the Frankfurt Spring-Fair,
Hall 5, Gang H, Stand No. 51301

BRODR - JORGENSEN (U.K.) LIMITED, STRAND HOUSE, GREAT WEST ROAD, BRENTFORD, MIDDX
Tel: 01 568 4578 TELEX 8811794



Stones' Rolling Studio

A complete recording studio in a van? For Mick Jagger, it is almost a necessity. Mick and the Stones can be inspired to produce their next hit anytime, but when they're on tour or on vacation, the best recording studios aren't always around the corner. The Stones rely on their Shure-equipped mobile studio for the unmatched recording perfection they insist upon, for these moments of mid-night inspiration. Whether in a recording session or on stage, the Stones' SV58, SM58, SV5C, SM58 and SV5C microphones are their assurance of consistent quality and natural sound.



Shure Electronics Limited
Eccleston Road, Maidstone ME15 6AU
Telephone: Maidstone (0622) 59881





Soundcraft-Series II

Soundcraft=Mixers

Soundcraft Electronics, specialist mixer manufacturers, offer a range of consoles for music sound reinforcement (P.A.), and music recording.

Our policy is to make our product range available worldwide at competitive prices through local dealers and distributors.

We look forward to hearing from potential users and dealers, and assure you of an even better range of mixers for 1976.

See us at AES 53rd Convention Exhibition, Zurich, Switzerland. International Hotel, March 2-5, 1976.

Soundcraft (U.K.)—mixer manufacturers to the world of music.

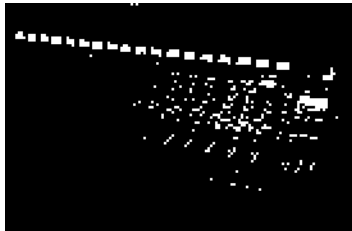


5-8 Gt. Sutton Street, (4th Floor), London EC1V 0BX Telephone: 01-251 3631/2/3 Telegrams: Soundcraft LDN EC1 Directors: PSDudderidge, GH Blyth, BSC, ARCO, ARCM

Registered Office: 5-8 Gt. Sutton Street, London EC1V 0BX Registered in London No. 1132171 Telegrams: Soundcraft LDN EC1

Frankfurt '76

Canary Mixing Desks Ltd., 61 Normanton Avenue, Wimbledon Park, London SW19. Tel: 947 0677



1976 will be the first time that Canary have had their own stand at Frankfurt. Some special new lines and all of the established range of Canary equipment will be on show. Visitors will be able to see both the 12 and 15 channel mixers, as well as the new 18 channel mixer, which was first shown at Chicago in June.

Canary are also introducing a completely new mixer to the show. This mixer will be small and low-priced, aimed at the home studio and with different facilities from the P.A. range.

C'est la deuxième année que Canary Mixing Desks expose à Frankfurt. La compagnie se spécialise dans la fabrication de consoles de mixage pour Public address systems et enregistrement. La nouvelle console produite par cette compagnie est de prix modéré et destinée à vos besoins d'enregistrement.

Canary Mixing Desks stellt schon zum zweiten Mal in Frankfurt aus. Die Firma ist auf die Herstellung von Mischpulten für öffentliche Lautsprecheranlagen und die Tonaufnahme spezialisiert. Das neue Pult dieser Firma ist ein preiswertes Modell für Heimanlagen.

La Canary Mixing Desks parteciperà per la seconda volta all'Esposizione di Francoforte. La società è specializzata nella costruzione dei quadri di missaggio, per l'uso con gli impianti per comunicazioni interne e per apparecchiature di registrazione. Il nuovo quadro della società, di prezzo assai modesto, è specificamente indicato per gli appassionati della registrazione

カナリー・ミクシング・デスクス社 (Canary Mixing Desks) は前回はフランクフルトで展示をしました。この社は公共放送用システムと共用又はレコーディングのために使うサウンド・ミックス・デスクの専門メーカーです。この社の新製品のデスクは家庭でレコーディングをする際便利な低価格な型です。

Carlsbro Sound Equipment, Cross Drive, Lowmoor Road Industrial Estate, Kirkby-in-Ashfield, Nottinghamshire. Tel: 0623 753902.



Carlsbro believes that their stand this year will be one of the most exciting yet. On display will be many new and improved products which have been developed by Managing Director Stuart Mercer and his team. A great deal of attention will be given to the new Echo Unit, which uses the latest digital technology to provide Echo, Reverb and rotary phasing effects. Something which Carlsbro believe has already proved its success is their range of solid state 130 watt amplifiers which now incorporates many new features among the Mk II models.

Carlsbro établie en Angleterre depuis plus de 10 ans est très demandée des musiciens professionnels. Une bonne gamme d'amplificateurs solid state produite par la compagnie il y a 2 ans a été améliorée par l'introduction des versions Mark II.

Carlsbro-Verstärker gibt es in Großbritannien schon seit mehr als 10 Jahren. Sie erfreuen sich unter den Berufsmusikern außerordentlich großer Beliebtheit. Ein ausgezeichnetes Sortiment an Solid-State-Verstärkern, das von der Firma vor zwei Jahren herausgebracht wurde, ist jetzt durch Einföhrung der Mark II Versionen verbessert worden.

La Carlsbro Amplification, istituita in Gran Bretagna dieci anni addietro, si è imposta all'attenzione dei musicisti professionisti. L'elaborata serie di amplificatori solid state, realizzata dalla società due anni addietro, è stata attualmente migliorata mediante l'introduzione delle versioni Mark II.

カールスブロー社 (Carlsbro) はアンプリフィケーション・システムを専門とし、英国で既に10年の歴史を持ち、プロフェッショナルな音楽家の間に非常にポピュラーなものです。ソリッド・ステート・ユニットを使った同社のアンプリファイヤーは2年前に出ましたが、それを改良したマークII型が出ました。同社はまた非常に多種のスピーカー・キャビネットを作っています。

CBS/Arbiter, 67-87 Hampstead Road, London NW1 2PR. Tel: 01-388 7971



Particular excitement will centre around the first new Fender electric guitar to be launched in the last four years. It's called the Starcaster and it's a two pick-up, semi acoustic of completely original design. Also of importance on the stand is the new Fender Super Twin 180 watt amplifier. No details of this amplifier are being released before the fair.

CBS/Arbiter est la compagnie britannique établie par la géante compagnie américaine CBS et la compagnie britannique Ivor Arbiter. Les produits CBS qui comprennent les guitares et amplificateurs Fender, les batteries Rogers les pianos Fender-Rhodes, de même que les guitares et amplification Arbiter seront exposés à la Foire.

CBS/Arbiter ist eine britische Firma, die von dem amerikanischen Riesenunternehmen CBS und der britischen Firma Ivor Arbiter gegründet wurde. Zu den ausgestellten CBS-Produkten gehören z.B. Fender-Gitarren und -Verstärker, Rogers-Trommeln und Fender-Rhodes-Klaviere sowie Arbiter-Gitarren und -Verstärker.

La CBS/Arbiter è la società britannica istituita dalla gigantesca organizzazione americana CBS e dalla Ivor Arbiter della Gran Bretagna. Verranno esposti i prodotti CBS che annoverano le chitarre ed amplificatori Fender, i tamburi Rogers, i pianoforti Fender-Rhodes, le chitarre e gli amplificatori Arbiter.

CBS/アービター社 (CBS/Arbiter) は英国の会社で、アメリカの大手会社のCBSと英国のイヴォー・アービター (Ivor Arbiter) との合併によって創立されました。CBSのフェンダー (Fender) ギターとアーリアファイヤーを含む製品と、ロジャース (Rogers) ドラムとフェンダー・ロードス (Fender-Rhodes) ピアノなども扱い、またオービター・ギターやアンフ類も展示される予定です。

Cleartone Musical Instruments, 27 Legge Lane, Birmingham. Tel: 021-236 6100.



Pride of place at the Cleartone stand is reserved for the new Maximin range of cabinets. Designed for the professional musician, they strive to combine economy, efficiency and quality in one. The CMI Maximin 152 is chief in the range. A folded horn cabinet incorporating a 15" speaker and two H-F horns, it is completely versatile and can be used with either lead or bass guitars. The smaller 121 bin features the same design and handles 50 watts, but — like the 152 — it can be fitted with higher powered speaker on request.

Cleartone est un grossiste anglais qui fabrique également une gamme d'amplificateurs sous le nom CMI. Les amplificateurs CMI sont solid state et munis de divers impédances de sortie ce qui permet de les utiliser avec la plupart des haut-parleurs.

Cleartone ist einritisches Großhandelsunternehmen, das unter der Markenbezeichnung CMI eine Reihe von Verstärkern herstellt. Alle CMI-Verstärker sind Solid State und zeichnen sich durch schaltbare Ausgangsimpedanzen aus, so daß die Verstärker auf fast alle Lautsprecher abgestimmt werden können. Auf der Messe werden auch CMI-Gitarren und allerlei Zubehör gezeigt.

La Cleartone, la nota società britannica per il commercio all'ingrosso, costruisce la serie di amplificatori CMI. Tutti gli amplificatori CMI, del tipo solid state, sono dotati di impedenze d'uscita commutabili per cui possono venire usati con praticamente qualsiasi mobiletto per altoparlante.

クリャートン社 (Cleartone) は英国の卸売業務をしている会社ですが、又CMIという名でアンプリファイヤーを作っています。これはソリッド・ステートを使ったスイッチのきつ出力インピーダンスを特長としています。ほとんどどのスピーカー・キャビネットにもマッチするアンフです。各種のCMIギターやアクセサリーも展示してあります。Continued on page 111

The Governor
ALF BIGDEN
Top British Session Man
Plays Exclusively on

Camco. Some Drum.



To say simply that a drum is a drum is to claim that any grape can make a fine wine. With professional percussionists, there are distinguishable differences in quality, tone and performance that set some drums apart.

Camco, one of the greatest names in percussion, is such a drum. In design, construction, choice materials, finish and tonal crispness, Camco offers consistent quality.

Only the finest of materials are used in hand-crafting Camco drums — choice grade hard rock maple shells, heavy duty hardware, solid brass snare shells, and full response heads. Anything less would compromise Camco quality. Anything less would not be acceptable to those drummers who rely and insist upon Camco quality for either enjoyment or employment.

Camco is indeed Some Drum, and unlike other mass-produced brands, the Camco line is selectively limited. Whether the music is acid rock, rhythm and blues, country and western or middle of the road, the Camco has the flexibility to respond. As drummers have their own styles and their own individual playing temperaments, their drums should fit like a glove. The Camco is a natural extension of the drummer. That's the way we build them; that's the way you'll play them.

No wonder so many of today's top drummers insist upon Camco quality — drummers such as Eddie Tuduri of Stone Canyon Fame, Joe English of Wings, Mel Brown of The Supremes, Dennis Wilson of The Beach Boys, and Craig Krampf of The Turtles. Hollywood's Cherokee Studios has selected the Camco as their studio drum for recording, and top drummers — such

as Jimmy Smith, Bart Hall, Ralph Humphrey, Jan Washington, Tony Dee, and Don Worth, Jr. — are Camco pros.

We invite your inspection of our drums. We urge your critical examination of Camco-quality hardware and accessories, including that famous Camco bass drum pedal and Hi-Hat. Consider the aesthetics as well — twelve dynamic new finishes to make your Camco drums a thing of beauty.

Most importantly, we want you to play a Camco — your local music dealer is the man to see — to see, hear and feel for yourself, the Camco excitement. Once you do, you'll understand what we mean by unparalleled value.

Camco. Some Drum. And it's back again.

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The M500 (Illustrated) is only one of a range of microphones now serving thousands of users who still demand high quality performance and reliability.

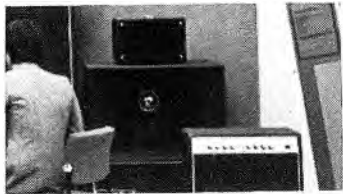
Brochure showing the full range of microphones, headphones and accessories available on request.

BEYER DYNAMIC

BEYER DYNAMIC (GB) LTD
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Frankfurt '76

James T. Coppock (Leeds) Ltd., Highfield House, Royds Lane, Leeds LS12 6LJ. Tel: 0532 634652



This year will be the third year at Frankfurt for Coppock of Leeds, and, as previously, the major part of the stand will be taken up with the range of Elgen Amplification and P.A. Equipment. Elgen Amplification will in future be known as Elgen Mastertone, an indication of the improvements which have been made to the equipment. The amps are now fully transistorised and incorporate an impedance selector which the manufacturers believe will ensure accurate speaker matching. The prize exhibit in the Mastertone range is the PA100R.

J.T. Coppock est une compagnie britannique qui représente une gamme variée d'instruments, équipement et accessoires. L'amplification Elgen, les instruments à clavier Elgam et les guitares par Dobro, Antoria, Tama et Yamaki

J.T. Coppock ist eine sehr bekannte britische Großhandelsfirma, die eine breite Auswahl an Musikinstrumenten, Geräten und Zubehör bietet. Elgen-Verstärker, Elgam-Tasteninstrumente und Gitarren von Dobro, Antoria, Tama und Yamaki

La J.T. Coppock, la nota rivenditrice britannica all'ingrosso, pone in commercio un'estesa serie di strumenti musicali, apparecchiature ed accessori. Gli amplificatori Elgen, gli strumenti a tastiera e le chitarre Dobro, Antoria, Tama e Yamaki

J. T. コポック社 (J. T. Coppock) は有名な英国の楽器卸売業者で多種の商品を扱っています。それは楽器、器具、アクセサリを含みます。エルゲン (Elgen) アンプ、エルガム (Elgam) 鍵盤楽器、ドブロ、アントリア、タマ、ヤマキ (Dobro, Antoria, Tama, Yamaki) などの名前をついたギター類はすべて J. T. コポック社の製品です。

Crumar, 60022 Castel Fidario Cas. Postale 98 Italy. Tel: 739233



Crumar, the Italian based manufacturing company, specialises in producing electronic keyboard instruments. Toward the end of last year, top jazz keyboard player Alan Haven announced an exciting new portable organ with a highly professional specification manufactured by Crumar under the Haven name. This organ joined the existing stable of Haven organs and made the range even more attractive to professional and home organs alike. Crumar also produce some very attractive electronic pianos and the full range of organs and pianos will be displayed.

Crumar est un fabricant italien d'instruments à clavier. Les orgues Haven sont fabriqués par Crumar, et le nouvel orgue portatif Haven sera exposé.

Crumar ist ein italienischer Hersteller von Tasteninstrumenten. Die Haven-Orgeln werden von Crumar hergestellt, und auf der Messe wird die neue transportable Haven-Orgel zu sehen sein.

La Crumar e una costruttrice italiana di strumenti a tastiera. Gli organi Haven sono un prodotto della Crumar; alla mostra verra presentato il nuovo organo portatile Haven.

クルエマー社 (Crumar) は鍵盤楽器専門メーカーデイタリーの会社です。ハヴェン (Haven) オルガンはクルエマー社の製品で、展示にはハヴェン・ポータブルオルガンを出します

Continued on page 112

ROTSOUND

the only strings played by Chris Squire

...AND NICK ADAMS AND JOHN ANTHONY AND ROY BABBING AND TONY BOURGE AND TONY BOWERS AND MICK BOX AND LEE BRILLEAUX AND MARTIN BURROWS AND JON CAMPBELL AND ROY CARTER AND DAVE COUSINS AND CHAS CROMBIE AND STEVE CURRY AND JOHN DEACON AND CHRIS DUMMIS AND STEVE EMERY AND JOHN ENTWISTLE AND DAVE DOUG FERGUSON AND MEL GALLEY AND GARY AND GORDON GILTRAP AND EDDIE GOLGA AND GARY GREEN AND JOHN GRIMALDI AND DAVE AND MARTIN HANNETT AND JIMMY HIBBERT AND COLIN HODGKINSON AND NODDY HOLDER AND GLEN HUGHES AND WILKO JOHNSON AND DAVEY JOHNSTONE AND ALAN JONES AND JOHN PAUL JONES AND JOHN KNIGHTSBRIDGE AND GREGG LAKE AND DAVE LAMBERT AND PAUL ANDY LATIMER AND JIMMY LEA AND RAY MAJOR AND AND BRIAN MAY AND NICKY MOORE AND DEE MURRAY AND BILL NELSON AND ROGER NEWELL AND VALENTIN COLIN PATTENDEN AND JOHN G. PERRY AND RICK PRICALEB QUAYE AND NOEL REDDING AND JOHN RENBOU AND JIM RODFORD AND MICK ROGERS AND MIKE RUTHERFORD AND BURKE SHELLEY AND RAY SHULMAN AND JOHN PR AND MIKE THORN AND BILLY TORMA AND CHARLIE AND JOHN VERITY AND ROGER WATERS AND OVEREND WATT AND



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AD 031 and AD 007

The Portable Mixers with the professional qualities and the professional performance.

Both have 8 inputs that drive into 4 or 2 groups.

All inputs and outputs balanced using XLR connectors throughout.

Peak Programme Meter to BS4297/1968 specification. (V.U. meter optional.)

Auxiliary for use on either echo or foldback.

Stereo linkable compressors on the AD 007.

Extender Units that can incorporate 10 extra input modules

Size: 540 x 480 x 225 mm AD 007

420 x 335 x 127 mm AD 031

Weight: 22.7 Kg AD 007, 10 Kg AD 031

Modular construction to promote serviceability.

Both mixers can be hired and national sound reproducers of Northolt Road, South Harrow, Middlesex, are agents for hire in the London area.

There are agents in Belgium, Canada, France, Holland, Norway and Sweden to date.

AUSTRIA

Mr. Drott,
M. R. Drott K.G., Johannesgasse 18,
A-1015 Wien,
Tel. 0222/524545.

CANADA

Mr. Derek Roughton,
Double Diamond Electronics Ltd.,
209 Consumers Road, Suite 105,
Willowdale, Ontario,
Tel. 494 1453.

FRANCE

M. Gerard Buisser, R.E.D.,
Rue de Telegraphie, 705020 Paris,
Tel. 636.73.10.

NETHERLANDS

Mr. D. Zijlman,
Sound Techniques, Postbus 206,
Alkmaar,
Tel. 072-12944.

ITALY

Dr. Paolo Curti Gialdino,
Labaocustica, Via Settembrini 9,
00195 Rome,
Tel. 381.965-355.506.

NORWAY

Mr. Bjorn Benum,
Siv. Ing. Benum & Co., Boks 2493,
Selli, Oslo 2,
Tel. (02) 56.57.53.

SWEDEN

Mr. Jan Setterburg,
Tal & Ton, Brevkortsgratan 11,
431 36 Molndal, Sweden,
Tel. 031.130205.

Audio
Developments

Hall Lane
Walsall Wood
Walsall
WS9 9AU
Brownhills 5351/3

From page 111

Frankfurt '76

CBS/Arbiter, 67-87 Hampstead Road, London NW1 2PR. Tel: 01-388 7971



The world's music trade will have a chance to see Arbiter Auto-Tune drums for the first time in Frankfurt on the CBS/Arbiter stand, in the British section. These revolutionary drums, which are tuned by a single lever, caused great excitement at their introduction during the British trade fair last year.



Dallas Musical Ltd ont une longue histoire dans le commerce d'instrument de musique. L'année dernière ils ont célébré leur centenaire après avoir été repris par CBS/Arbiter. A la place d'honneur cette année se trouve le nouvel instrument de percussion Arbiter Auto-Tune, de même que leur gamme d'instruments de musique et accessoires.



Dallas Musical Ltd. kann auf eine langjährige Tätigkeit im Musikinstrumentehandel zuruckblicken. Letztes Jahr feierte die Firma nach ihrer Übernahme durch CBS/Arbiter ihr hundertjähriges Bestehen. Ein besonderer Ehrenplatz gebührt dieses Jahr der neuen Arbiter Auto-Tune-Perkussion sowie den Musikinstrumenten mit Zubehor.



La Dallas Musical Ltd e una societa che, da lunga data, svolge attivita nel settore degli strumenti musicali. L'anno scorso, la ditta, recentemente assorbita dalla CBS/Arbiter, ha celebrato il primo centenario. Particolare risalto, quest'anno, verra posto sulla nuova serie di strumenti a percussione Arbiter Auto-Tune e sulla speciale serie di strumenti ed accessori musicali.



ダラス・ミュージカル社 (Dallas Musical) は業界で古い会社です。CBS/オービター・グループの傘下に入ると同時に百年祭を祝いました。今年の展示中には新しいオービター・オート・チューン打楽器と他の種の楽器とアクセサリー類です。

Davoli, Davoli House, 859 Cornonation Road, London NW10. Tel: 01-965 8646



An astonishing amount of Davoli equipment has been made available to the British musician in the last two years. The range extends from the Compact six channel mixer through to a huge 12 channel version with all possible facilities. Slave amps, combo amps, bins and horn cabinets all add up to a really comprehensive range of sound equipment.

Added to that there is a complete range of guitars marketed by the company under the Gherson banner.

In Frankfurt, there will be a full display of all the equipment produced in Lombardi, Italy and more exotic items like Echo Mixers.



Davoli compagnia italiana, situata a Parma, fabbrica una grande varietà de prodotti comprendant amplificatori, haut-parleurs, orgues et équipement de disco. La compagnia a des bureaux a Londres, Bruxelles et Hilversum en Hollande.



Davoli, eine in Parma ansässige italienische Firma, stellt vielerlei Musikprodukte her. Sie unterhält in London, Brussel und in der holländischen Stadt Hilversum eine Niederlassung und ihr Lieferprogramm umfaßt Verstärker, Lautsprecher, Orgeln und Disco-Ausrüstungen.



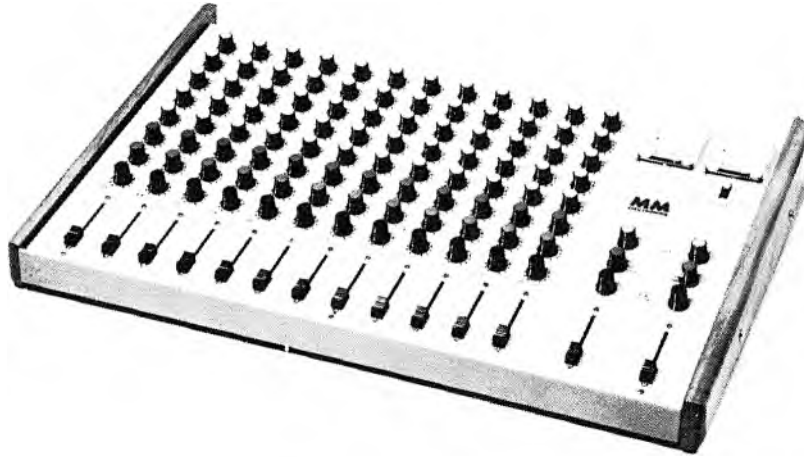
La Davoli, una societa italiana con stabilimenti a Parma, produce un'ampia selezione di articoli musicali. La ditta possiede uffici a Londra, Bruxelles ed Hilversum in Olanda; i prodotti includono amplificatori, mobilietti per auto-parlanti, organ ed apparecchiature disco.



ダヴォリ社 (Davoli) はイタリアの会社で、パルマ (Parma) にあります。多くの音響製品を作っており、その中にはアンプ、ラウドスピーカー・キャビネット、オルガン、ディスク用器具を作り、オフィスをロンドン、ブラスセル、ヒルヴァサマ (Hilversum [オランダ]) に持っています。

Continued on page 114.

12 CHANNEL STEREO MIXING CONSOLE



The MM Electronics MP175 with 4 band equalisation giving 12 DB cut and boost at frequencies: 100 Hz; 600Hz; 2 kHz and 10 kHz.

Continuously variable pre-fade foldback and post fade echo.

Stereo headphone amp incorporating VU metering.

6 CHANNEL MIXER AMP

6 Channel Mixer Amp comprising six independent channels, each with Treble, Middle, Bass and Echo controls, Slider Volume Control. Monitor volume – Treble and Bass, Echo Return powered by a 150 Watt amplifier with heat sinks for cool running.

Hi & Low input sensitivity switching
Preampifier Distortion typically 0.01% at 1KHz.
Power amp distortion typically 0.05% at 1KHz.
Hums & Noise – 116dB.

£187.50



Currently provisions are being made to manufacture Graphic Equalisers, Guitar Amps and Combos. Details will be released in the near future.

For further details contact TONY GIPP (0223) 66559.

PERFORMANCE

Noise reference to input – 123 dBm

Hum ref input (with internal power supply) – 122 dBm

Distortion better than .05% typically .01%

Overhead level at 22 dBm all outputs buffered

£250 Retail

150 WATT POWER SLAVE



150 Watt Power Slave 150 watts r.m.s. into 4 ohms T.H.D. typically 0.05% at 1KHz. 25Hz – 20KHz. + 1dB.

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MM ELECTRONICS

French's Mill, French's Road, Cambridge (0223) 66559

Frankfurt '76

Arnold Dolmetsch Ltd, Kings Road, Haslemere, Surrey GU27 2QJ. Tel: Haslemere 51432/3.



Arnold Dolmetsch Ltd has been established for more than 80 years as the manufacturers of "fine Early Musical Instruments". Among the instruments which will be on display at Frankfurt will be a range of hand made recorders, instruments which, it is said, are notable for their beauty, fine tone and impeccable tuning. Dr. Dolmetsch is believed to check and play each instrument personally to ensure that they reach true virtuoso standard.

Also on display will be the Triangular harpsichord which, we are assured, produces a greater volume of tone than many larger instruments.

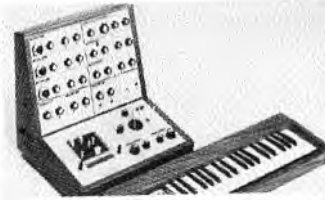
Dolmetsch est un nom attaché à flûtes et harpes. A la fin du siècle dernier Arnold Dolmetsch a grandement contribué à la renaissance de ces instruments et la compagnie qui aujourd'hui porte son nom est dirigée par son fils.

Dolmetsch ist ein Name, der unzertrennlich mit Blockflöten und Cembalos verknüpft ist. Gegen Ende des letzten Jahrhunderts hat Arnold Dolmetsch bei der Wiederbelebung der vorklassischen Instrumente bahnbrechende Arbeit geleistet, und heute wird die Firma, die seinen Namen trägt, von seinem Sohn geführt.

Il nome Dolmetsch richiama immediatamente alla memoria il flauto ed il calavicembalo. Verso la fine dello scorso secolo, Arnold Dolmetsch riportò in auge gli strumenti pre-classici; attualmente, la società è diretta da suo figlio.

ドルメツチェ社 (Dolmetsch) はレコーダーやハーブシコードと昔から切っても切れない関係を持つて来ました。創始者アーノルド・ドルメツチェはクラシック以前(中世以前)の楽器のリザイヴアルに先鞭をつけた人で、同社の名前はその姓からとり、彼の息子が現在社長です。製造品目はレコーダー、リュート、ハーブシコードです。

Electronic Music Studios, 227 Putney Bridge Road, London SW15 2PT. Tel: 01-788 3491



EMS have done a great deal to pioneer synthesizer development in Europe. In the industry since the beginning, the company now produces 22 products in a very comprehensive range of ultra-sophisticated electronic products.

The main items are the Synthi E, a battery powered synthesizer for educational use, the Synthi Quag, for quad use, the Synthi Hi-Fi for instrument processing, the Synthi Vocoder for oral processing, the Synthi Phase Frequency Shifter for harmonic addition to phase spectrums and feedback suppression and the Synthi Spectron, a video synthesiser. The company has agents in 25 countries around the world and look forward to welcoming them in Frankfurt.

Electronic Music Studios sont un des plus anciens fabricants anglais de synthétiseurs. Leurs synthé-

tiseurs sont utilisés depuis de nombreuses années par de grands musiciens professionnels.

Kaum eine andere Firma in Großbritannien befaßt sich schon seit so langer Zeit mit der Herstellung von Synthesizern und der elektronischen Entwicklung wie die Firma Electronic Music Studios. Ihre Synthesizer werden schon seit vielen Jahren von führenden Berufsmusikern verwendet.

La Electronic Music Studios, una delle più antiche costruttrici britanniche di sintetizzatori, si dedica al perfezionamento delle apparecchiature elettroniche. I sintetizzatori sono stati usati, ormai da anni, dai più noti musicisti professionisti.

エレクトロニック・ミュージック・スタジオ社 (Electronic Music Studio) は英国の最も古いシンセサイザーメーカーです。同社は電子楽器を南産しています。そのシンセサイザーは多年指導的な音楽家によって使われているものです。

Continued on page 116

Phor Phunky Phinger Phreaks

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SWITCHES FOR LOTS OF SOUNDS

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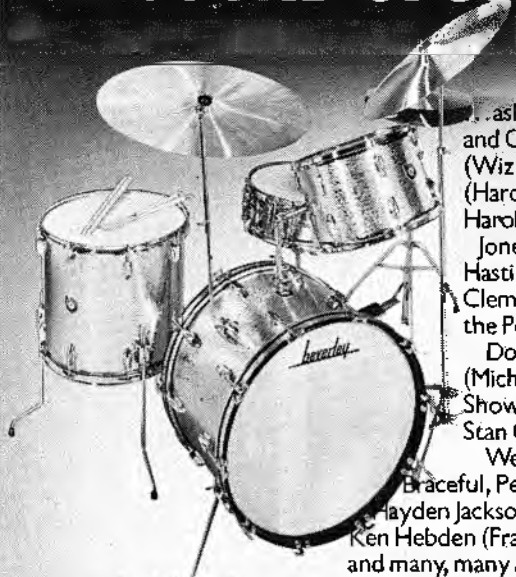
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For full details contact



Boosey & Hawkes

(Musical Instruments) Ltd

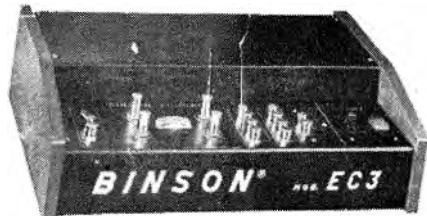
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ALL NEW EC3

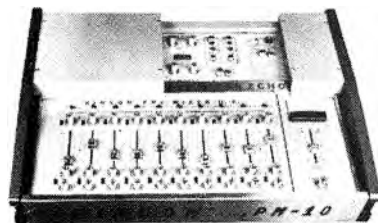


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Frankfurt '76

Elka-Orla (UK) Ltd., 19 Bluebridge Industrial Estate, Halstead, Essex. Tel: Halstead 5325



Elka Orla have taken the positive step of setting up a British company to distribute the Elka range of keyboards in the U.K. The products are produced in Italy and perhaps the best known keyboard to readers of this magazine is the Elka x 55 twin manual portable organ.

This is an instrument aimed at the professional musician, and features a 49 note upper keyboard and a 37 note lower manual. A bass pedalboard is available as an optional extra and overall effects available include slow and fast vibrato, sustain of both keyboard, brilliance and noise attack. The models in the range which will be on show include the Elka piano (available as a portable model in the 88 form), the Elkarhapsody 490 and the Elkarhapsody 610 portable keyboard.

Elka Orla est une compagnie italienne qui fabrique une large gamme d'instruments à clavier allant du piano portatif au clavecin, de même que des claviers à effets. Le Elka X55 est très populaire en Grande Bretagne.

Die Firma Elka-Orla, die vielerlei Klaviaturen herstellt, ist ein italienisches Unternehmen, dessen Lieferprogramm von transportablen Klavieren und Klavichorden bis zu Tastaturen für die verschiedensten Effekte reicht. Das Modell Elka X55 erweist sich in Großbritannien als besonders beliebt.

La società italiana Elka-Orla, la cui produzione abbraccia i pianoforti portatili ed i clavicembali, costruisce parimenti speciali gruppi a tastiera per la produzione di un complesso di "effette". Il modello Elka X55 si sta attualmente affermando, in modo particolare, in G.B.

エルカ・オルラ社 (Elka-Orla) はイタリアの会社で、ポータブルピアノ、クラヴィコードから多くの異なる効果を持つ鍵盤楽器まで作っています。同社のエルカX55は英国で特に人気があります。

Exports in Sound, 8 Highfield Road, Cheadle Hulme, Cheadle, Cheshire. Tel: 061-485-1007



Colin Barrat, "Exporters to the world", will again be in attendance at the fair. The European and world representative to a number of British firms, including Carlsbro and Sola Sound, Colin Barratt will be in attendance to help the overseas distributors who are looking for new and exciting musical instruments and products.

Exports in Sound est une compagnie britannique, dirigée par Colin Barrett, qui se spécialise dans l'exportation d'instruments et équipement de musique britanniques à travers le monde. Les produits représentés comprennent Carlsbro et Sola Sound.

Exports in Sound ist eine britische Firma, an deren Spitze Colin Barrett steht. Sie ist auf den Export britischer Musikinstrumente und -geräte in alle Länder der Welt spezialisiert. Zu den Produkten, mit denen sie sich befaßt, gehören Carlsbro und Sola Sound.

La Exports in Sound, la società britannica diretta da Colin Barrett, si specializza nell'esportazione di strumenti musicali ed apparecchiature nel mondo intero. Alcuni prodotti, trattati dalla ditta, includono i Carlsbro ed i Sola Sound.

エクスポート・イン・サウンド社 (Exports in Sound) は英国の会社で、コリン・バレット・グレア (Colin Barrett) が社長で、全世界に英国製楽器や器具の輸出を専門としています。そのなかにはカールスブロ (Carlsbro) とソラ・サウンド (Sola Sound) 社の製品を扱っています。

Continued on page 118

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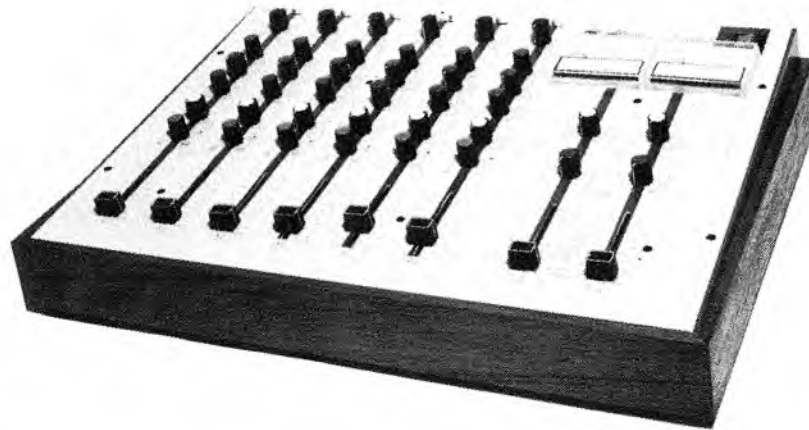
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Frankfurt '76

Farfisa, Corringham Road, Gainsborough, Lincs. Tel: 0427 4776



Farfisa, the giant Italian keyboard building company will be proudly exhibiting the new range of home organs that were unveiled in the UK in the summer of last year. These are very much "state of the art" instruments which embody every possible playing aid to encourage the home musician to make music. Farfisa's organs incorporate a particular realistic percussion box (on some models only) and, despite being quite expensive instruments, blend with the tonal capabilities of the instrument to produce a one man orchestra that has made the organs fast sellers in Britain.

Farfisa compagnie italienne, fabrique et vend une grande gamme d'orgues pour usage domestique et professionnel. Ils fabriquent également pianos, accordéons, et amplificateurs pouvant être utilisés avec leurs instruments à clavier. Farfisa U.K. représente la compagnie en Grande Bretagne.



Farfisa, eine italienische Firma, befaßt sich mit der Herstellung und dem Vertrieb einer großen Reihe von Orgeln für den Heimgebrauch und für den professionellen Einsatz. Sie produziert außerdem Klaviere und Akkordeons sowie Verstärker zur Verwendung mit ihren Tasteninstrumenten. In Großbritannien wird die Firma von Farfisa (U.K.) vertreten.

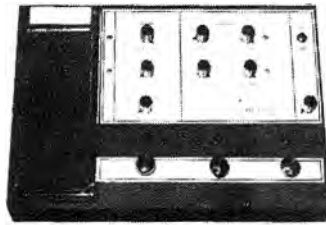


La Farfisa, una società italiana, costruisce e vende una serie completa di organi per dilettanti e professionisti, pianoforti, fisarmoniche ed amplificatori usati con i propri strumenti a tastiera. La Farfisa (U.K.) rappresenta la suddetta società, in Gran Bretagna.



ファリファ社 (Farfisa) はイタリアの会社で家庭用とプロフェッショナル用多種のオルガンを作っています。その他ピアノ、アコーディオンも作り、またこれらの鍵盤楽器のためのアンプも作っています。英国ではファリファUKという会社を組織しています。

FM Acoustics Ltd., SSH Division, P.O. Box 18, CH-8702 Zollikon-Station, Switzerland.



The SSH VDF- Super Pedal Synthesizer is the product from FM that has been intriguing British players recently. It's quite an expensive unit and FM will undoubtedly be at the fair, seeking to find new markets for this sophisticated effects pedal.

In the U.K., it sells for around £80 which puts it in the big league as far as pedals are concerned, but it does offer controls covering volume, voltage controlled amplifier, distortion, sustain, filter, modulation, wah, vibrato, phasing and effects that are combinations of these functions. The pedal is mains powered and it is claimed to have a very low noise level.



F.M. Acoustics est une compagnie Suisse qui a eu beaucoup de succès avec sa Super Pédal Synthesiser. La

pédale s'alimente par courant domestique avec ajustement de une grande variété d'effets.



F.M. Acoustics ist eine schweizer Firma, die mit ihrem Super Pedal Synthesizer einen gewaltigen Erfolg erzielt. Er bietet eine große Vielfalt von Effekten, und das Pedal zeichnet sich durch Netzanschluß und Elektronische Spannungsregelung aus.



La società svizzera F.M. Acoustics ha raccolto un invidiabile successo con il Super Pedal Synthesizer. Detto complesso, azionato mediante l'alimentazione di rete e dotato di un regolatore elettronico di tensione, fornisce un notevole numero di effetti.



F.M. アコースティクス社 (F.M. Acoustics) はスイスの会社でそのスーパーペダル・シンセサイザーは成功した製品です。これは多種の効果を出し、電力でペダルが動き、エレクトロニックのヴォルト調整装置がついています。Continued on page 123

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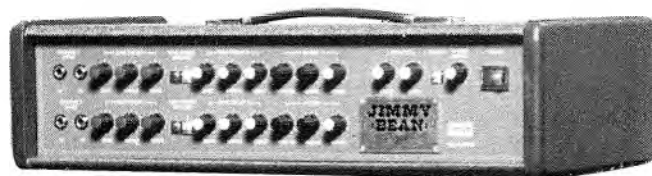


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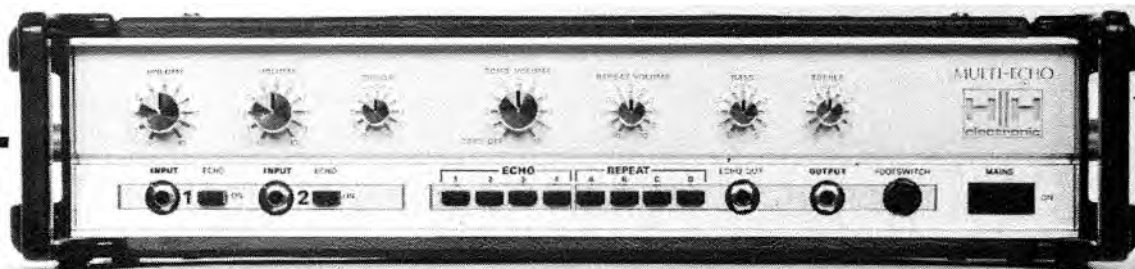
INTRODUCES...



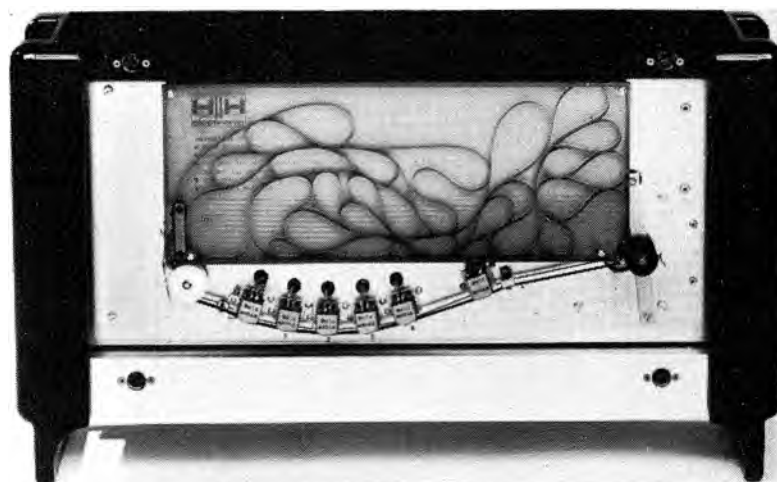
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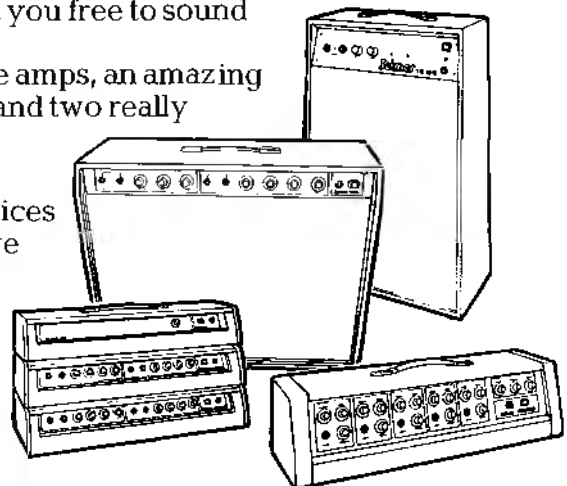


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Frankfurt '76

Galanti Group, (distributed by)
CSD, S. Maria Del Monte,
47040 Saludecio. Tel:
0541/981548



The Galanti group always have a vast stand at Frankfurt and as usual, the full range of Galanti keyboards, mixers and amps will be shown.

Under the GEM title, the company produce a wide range of professional P.A. equipment including compact mixers, slave amps, speaker cabinet (including horn units) and equipment accessories such as telescopic speaker stands.

In the U.K., Galanti are particularly well known for their range of console organs. Two models in the range are the X 300 de luxe and the F2 de luxe. The F 2 is a double manual incorporation of a 40 watt internal amplifier and two 44 note keyboard both F-C.



Galanti de Gruppo Galanti est une compagnie italienne qui fabrique des instruments a clavier, orgues, pianos et synthetiseurs.



Die Firma Galanti, die der Gruppo Galanti angehört, ist ein italienisches Unternehmen, das vielerlei Tasteninstrumente herstellt. Außer Orgeln macht Galanti auch Klaviere und Synthesizers, die speziell für Gruppen gedacht sind.



La Galanti, del gruppo Galanti, e la ditta italiana costruttrice di una varieta di strumenti a tastiera. Oltre agli organi, la Galanti produce pianoforti e sintetizzatori specificamente indicati per i complessi musicali.



ガラランティ社 (Galanti) はガラランティ・グループの一社で、鍵盤楽器専門のメーカーで、オルガン、ピアノも作っており、又シンセサイザーはグループのバンドのためのものです。

General Music Strings, Treforest Industrial Estate, Pontypridd, Glamorgan. Tel: Treforest 044385



The extensive GMS range of musical instrument strings, which includes Picato, Monople, Red Dragon and Ambassador, will be on display, as well as many new promotional aids for Picato.

The Picato range, designed for guitars and banjos, is available in sets for both electric and classical/acoustic models. Monople strings also do a range of strings for guitars, as well as violins, and the Red Dragon range includes strings for violin, Violincello, Double Bass and guitar.



Les cordes Picato sont probablement les cordes les plus connues faites par General Music Strings, compagnie située au Pays de Galles. La compagnie produit des cordes pour instruments très variés allant du violon à la guitare basse.

Picato-Saiten dürften die bekanntesten Saiten sein, die von General Music Strings, einer in Wales ansässigen Firma, hergestellt werden. Die Firma bietet ein außerordentlich großes Sortiment an Saiten für Instrumente wie Violinen und Babgitarren.



Le corde per strumenti Musicali Picato sono probabilmente le più note tra la serie prodotta dalla società gallese General Music Strings. La società produce una serie completa di corde per violino e contrabbasso.



ジェネラル・ミュージック・ストリングス社 (General Music Strings) はよく知られているピカト (Picato) 弦を作っているウェールズの会社です。ヴァイオリンやバス・ギターなどの楽器のための弦など各種を作っています。他の展示品のなかに、ピーター・ニコラス・エンジニアリング社 (Peter and Nicholas Engineering Company) が作っているマイクプロフェッショナルスタンドやディスクスタンドなどの各種アクセサリが含まれています。Continued on page 127



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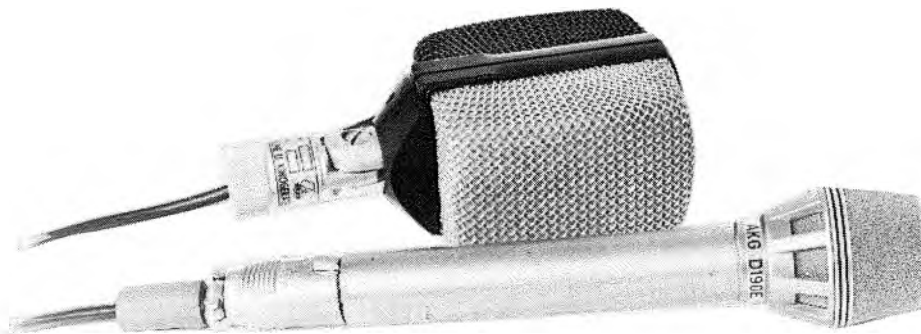
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Frankfurt '76

Terry Gould Music, 28 Frognal Lane, Hampstead Village, London NW3 7DT. Tel: 794 2233



Terry Gould Music, the company run by guitarist Terry Gould, will be exhibiting their range of improved accessories for musical instruments at this year's fair. Last year at Frankfurt, Terry had some success with a fingernail strengthener for guitarists, Tuff-Nail and this year, they hope to repeat that success with a new product, String-Glide. String-Glide is a lubricant for metal or nylon strings.

It is intended to reduce friction between strings and fingertips, with Terry Gould believes will aid faster fingering without being oil or greasy. Terry anticipates that the reduction in friction will help relieve soreness in fingertips and almost eliminate the noise produced by rapid fingering on wound strings.

Terry Gould International est une compagnie specialisee dans la production d'aides pour guitare acoustique tels que Tough Nail, destine a proteger les ongles du guitariste, et des capodastres.

Terry Gould International ist eine Spezialfirma, die Hilfsmittel für den akustischen Gitarristen herstellt. Typische Produkte aus ihrem Lieferprogramm sind Tough Nail zum Schutz der Fingernagel des Spielers und Capos für die Änderung der Tonart.

La Terry Gould International è una società specializzata nella produzione di accessori per gli appassionati della chitarra elettrica. Tipici della serie sono i prodotti 'Tough Nail' per proteggere le unghie del chitarrista, e capos, per il passaggio di tonalità.

テリー・ゴウールド・インターナショナル社 (Terry Gould International) は電気ギター用器具メーカーです。製品は「タフ・ネイル」と呼ばれる弾き手の爪を防護する物とか、カポスというキー・チェンジのための用具とかが主力です。

Hamiltons (Middlesborough) Ltd., 26 Newport Road, Middlesborough, Cleveland TS1 5AE. Tel: (0642) 47314.



Hamiltons will be showing their range of accessories and musical aids. Of particular interest to trade visitors will be the company's range of cabinet components. Items such as handles, corners, edging materials and covering cloths are included in this range.

The Hamilton Interface Unit, a stereo pre-amplifier control unit for connecting tone cabinets to keyboards and other instruments will also be on show. This unit allows the user to amplify different instruments through rotating cabinets without complicated connections.

Hamiltons also produce aids for the educational market and on display will be the Electronic Music Chalkboard - an audio-visual aid for teaching music - and the Electronic Organ Teaching Lab. This last system is used for teaching up to eight pupils the organ at the same time.

Hamiltons est une compagnie très établie, située au Nord Est de l'Angleterre, qui fabrique une gamme d'accessoires de musique et matériels d'éducation de même que des pièces pour haut-parleurs.

Hamiltons ist ein alteingesessenes Einzel- und Großhandelsunternehmen im Nordosten Englands. Die Firma stellt eine große Reihe von Teilen für Lautsprecher sowie allgemeines Musikzubehör und verschiedene Lernhilfen her.

La Hamiltons, un'antica società dell'Inghilterra nord-est, svolge attività nel settore commerciale all'ingrosso ed al dettaglio. La ditta costruisce una serie panoramica di componenti per mobili degli altoparlanti, accessori musicali generici ed apparecchiature didattiche.

ハミルトンズ社 (Hamiltons) は英国イングランドの北東部地域で長年小売及卸をしております。又、ラウドスピーカー・キャビネットの色々な部品を作っており、他に一般の音楽アクセサリや聴覚教材類も手がけています。

Hammond Organs (U.K.) Ltd., Deansbrook Road, Edgeward, Middlesex. Tel: 01-952 7711



The opening of Nihon Hammond seems to have done Hammond Organs nothing but good. Pride of place in this exhibition will obviously go to the widely successful Hammond X5 portable that was introduced in the U.K. last year. Speculation about the organ was rife at the fair last year, but this time around, the keyboard's available to all Hammond dealers and, with its stable mate, the X2, has proved that Hammond was right to wait to introduce portable organs and to manufacture in Japan.

As you might expect, Hammond's range of home, concert and theatre organs will also be on show.

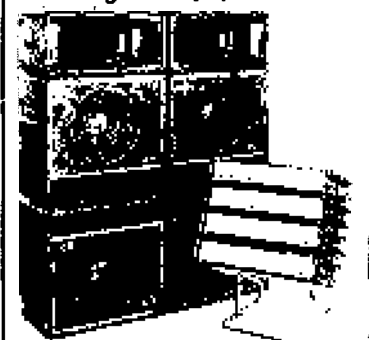
Hammond Organs produit les orgues électroniques qui sont certainement les plus connus dans le monde entier. L'introduction du modèle portatif X55 l'année dernière, offrant un instrument versatile pour le musicien qui voyage, a mis la gamme Hammond au goût du jour.

Hammond Organs durfte die berühmteste Elektronenorgelfirma der Welt sein. Mit der Einführung des transportablen Modells X55 im vergangenen Jahr, das dem umherreisenden Musiker ein vielseitiges Instrument für seine Band bietet, wurde das Hammond-Sortiment den modernsten Bedürfnissen angepaßt. Diese Orgel wird großes Aufsehen erregen.

Il modello portatile X55, introdotto l'anno scorso, fornisce alle orchestre un versatile strumento. Questo aggiornato esemplare della serie Hammond richiamerà indubbiamente l'attenzione generale.

ハモンド社 (Hammond) は世界で一番有名なオルガンメーカーといえます。去年発表された X55 型ポータブル・オルガンは同社のオルガン類のレンジを更に強化するもので、バンド演奏を行う旅行用に使用され、音楽家に便利なもので注目を浴びるものです。

HH Electronic, Industrial Site, Cambridge Road, Milton, Cambridge CB4 4AZ. Tel: Cambridge 67945



HH claim a breakthrough in amplifier technology for the design of their new 500 watt power amp - no less! The amp is the S500-D twin channel Power Amplifier and it is claimed that using a new heat dispersion systems, called Force Cooled Dissipators (FCD), it is possible to produce a single amp and FCD section measuring 3 1/2 in. x 4 in. x 6 in. This exciting product will naturally be on show, along with the Multi Echo unit and monitor cabs introduced last year.

Output of the new amp is given as 500 watts per channel into 2.5 ohms, 340 watts into 4 ohms and 180 watts into 8 ohms. All figures are R.M.S. measurements.

Formée il y a 7 ans, la compagnie HH Electronic a établi sa renommée avec sa gamme d'amplification solid state. Située dans le Comté de Cambridgeshire en Angleterre, HH Electronic produit des amplificateurs et des haut-parleurs servant à sortes d'applications.

In den sieben Jahren ihres Bestehens hat die Firma HH Electronic mit ihrem Sortiment an Solid-State-Verstärkern großen Beifall gefunden. In Cambridgeshire, England, stellt die Firma Verstärker und Lautsprecher her, die sich für die meisten musikalischen Anwendungszwecke eignen.

Nei sette anni trascorsi dalla fondazione, la HH Electronic ha raggiunto un'invidiabile reputazione per la serie di apparecchiature di amplificazione solid state. La società, situata nel Cambridgeshire, Inghilterra, produce mobiletti per amplificatori e altoparlanti addattati per la maggioranza delle applicazioni.

HHエレクトロニック社 (HH Electronic) はソリッドステート型アンプで有名です。英国ケンブリッジシャーにある同社は、色々な目的のアンプとスピーカーを作っています。

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From page 127.
Frankfurt '76

Hohner, 39-45 Coldharbour Lane, London SE5. Tel: 01-733 4411



Long established as suppliers and wholesaler in the U.K., Hohner have a clear image formed by their long-sustained ranges such as melodicas and harmonicas. The company market's perhaps the most comprehensive range of Harmonicas available and it includes the fabulously effective but simple "Echo Vamper" which was the backbone of the British blues scene in the 'sixties and highly sophisticated slide operated chromatic models.

Educational instruments are also of great importance to the company and instruments such as accordions and concertinas are marketed.



Hohner est une compagnie allemande qui fabrique et vend une gamme très variée d'instruments du son. Leurs produits vont des

harmonicas aux pianos, orgues, guitares et synthétiseurs, c'est une compagnie très internationale.



Hohner ist eine deutsche Firma, die eine große Reihe von Musikinstrumenten und Tongeräten produziert und vertreibt. Die Firma ist eine wahrlich internationale Gesellschaft, die von Harmonikas bis zu Klavieren, Orgeln, Gitarren und Synthesizern praktisch alles herstellt.



La Hohner e una società tedesca ben nota nel settore degli strumenti ed apparecchiature musicali. I prodotti includono le armoniche a bocca i pianoforte, organi, chitarre e sintetizzatori. La ditta è di carattere prettamente internazionale.



ホーナー社 (Hohner) はドイツの会社で、広範囲の楽器とサウンド器具を製作・販売しています。製作種目は、ハーモニカ、ピアノ、オルガン、ギター、シンセサイザーなど。国際的な会社です。

John Hornby Skewes & Co. Ltd., Salem House, Main Street, Garforth, Leeds LS25 1PX.



The Hornby range of educational tuned percussion instruments will be the main display of the J H-Skewes stand. Contained in this range is the Hornby range of school glockenspiels - British made instruments - which have heavily chromium plated steel bars mounted in wooden cabinets. The Hornby Chime Bars, are a more recent addition to the Hornby range and they feature tuned metal bars mounted on resonator tubes.

Milos Platting amplification represents the "rock" side of J H-Skewes' business. This range includes models with 50 and 100 watts output ratings and they place themselves as "competitively priced" in the amplification market.



Hornby Skewes est un grossiste britannique renommé qui offre une gamme très variée d'instruments de musique. Depuis un certain temps

Hornby Skewes vend l'amplification Miles Platting.



Hornby Skewes ist ein bekanntes britisches Großhandelsunternehmen, das eine außerordentlich große Vielfalt an Musikerzeugnissen vertreibt. Miles-Platting-Verstärker, die sich für die meisten Einsatzzwecke eignen, werden von der Firma schon seit geraumer Zeit verkauft.



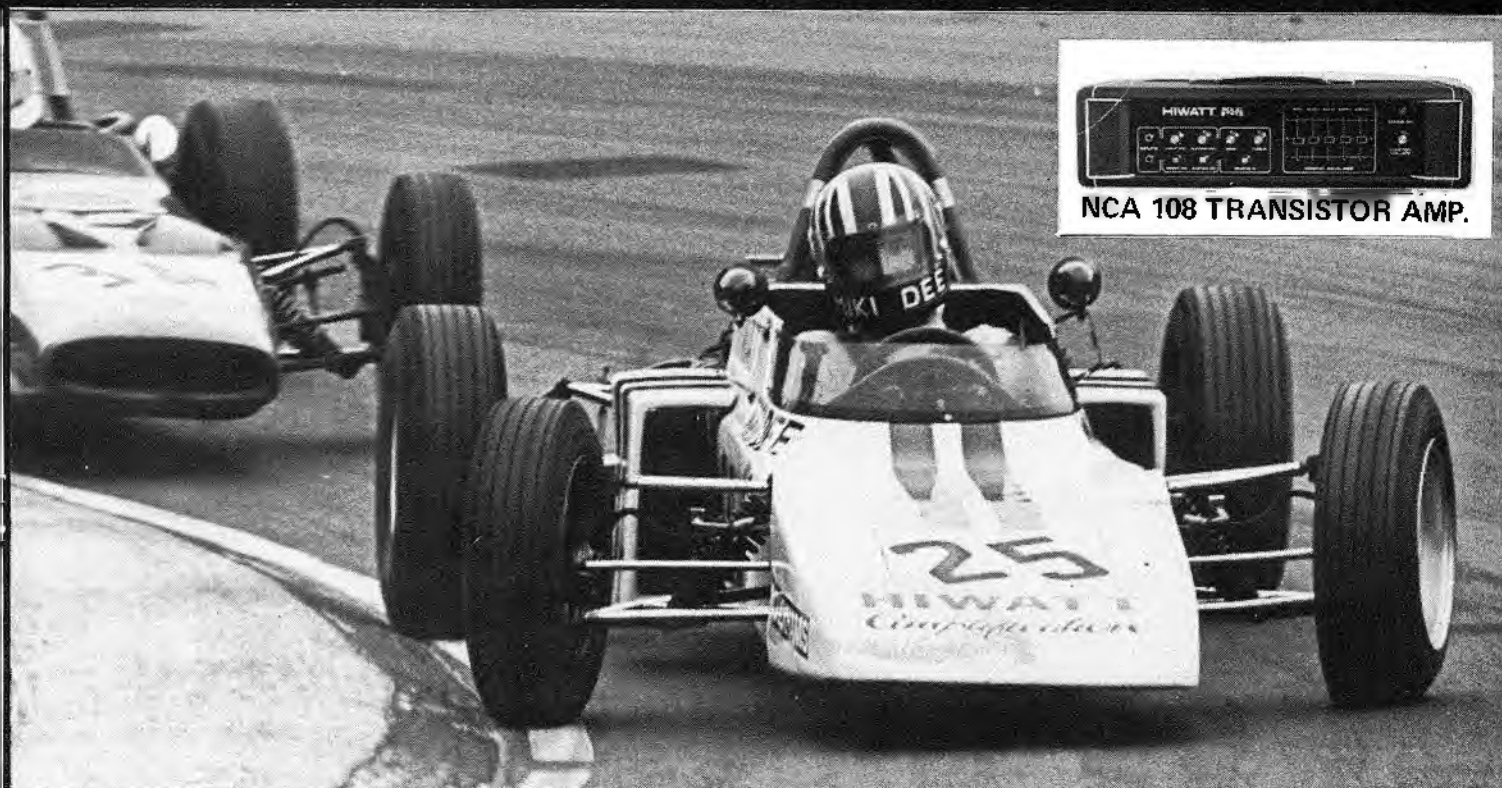
La nota società britannica, rivenditrice all'ingrosso Hornby Skewes tratta una serie assai vasta di strumenti ed apparecchiature musicali. Gli amplificatori Miles Platting, trattati ormai da tempo dalla ditta in oggetto, sono adatti per la maggioranza per le applicazioni.



ホーンビー・スキューズ社 (Hornby Skewes) は著名な英国の卸売業務をしている会社で楽器類を手広く扱っています。マイルス・プラッティング (Miles Platting) アンプは多目的でこの数年前に市場に出たものです。ゼンタ (Zenta) はギターの名稱でこの会社で作られています。

Continued on page 130.

ANOTHER HIWATT FIRST



NCA 108 TRANSISTOR AMP.

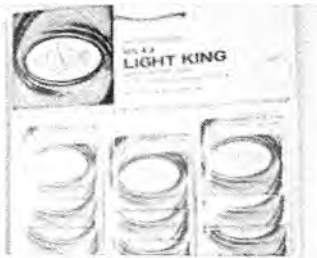
HIWATT

HIWATT EQUIPMENT LTD.

Park Works, 16 Park Road, Kingston-on-Thames, Surrey, England. Tel: 01 549 0252/3

Frankfurt '76

James How Industries, 20 Upland Road, Bexleyheath, Kent. Tel: 01-304 4711



James How Industries will again show their comprehensive range of Rotosound music strings. A unique new guitar string range will be shown for the first time and new gauge selection presentations will also be displayed along with the "Swing Bass" series - the world famous bass guitar strings of which 30 tons alone were exported last year. Brochures, catalogues, T-shirts and stickers will be available from the stand and both old and new customers are welcome to participate in the annual How hospitality.

Une gamme de cordes de guitare utilisee par le superstar international Greg Lake va etre vendue par James How Industries. Ce fabricant produit les cordes de guitare et guitare basse Rotosound qui sont de renommee mondiale.

Ein Sortiment an Gitarrensaiten, die auch von dem internationalen Superstar Greg Lake verwendet werden, wird von James How Industries vertrieben. Dieser Hersteller produziert die weltberühmten Gitarren- und Baßgitarrensaiten Rotosound und führt damit die große britische Tradition der Saitenfabrikation fort.

La James How Industries, fra poco, introdurrà sul mercato la serie di corde per chitarra Greg Lake, usate dai superdivi internazionali. La ditta prosegue la grande tradizione britannica di questo settore con le corde per chitarre e contrabbasso Rotosound, di reputazione mondiale.

ジェームス・ハウ・インダストリーズ社 (James How Industries) は世界的なスーパー・スターのグレグ・レイク (Greg Lake) の使用しているギター・の弦を扱っています。世界的に有名なロト・サウンド (Rotosound) ギター・及バス用の弦を以て同社は英国の楽器製造の伝統を守っています。

Kentucky Organs, Wilverley Building, Fleets Lane, Poole, Dorset. Tel: Poole 78031.



Designed with family participation and enjoyment in mind, Kentucky organs will display their range of products. The Petit 4, although the smallest in their range, is among the most popular. It boasts eight solo voices, and produces chords, alternating bass, rhythmic strum and a choice of four rhythms.

The standard range of Kentucky products, including the proven Challenger, Explorer, and Adventurer models will also be on display.

The Kentucky Organ Company, située a Poole, Dorset, Grande Bretagne, fabrique une gamme d'orgues de bonne qualité à bon

prix. Destinés a l'usage familiale les orgues Kentucky offrent une bonne selection.

Die in Poole, Dorset, Großbritannien, ansässige Kentucky Organ Company stellt eine Reihe von Organen her, die sich bei günstigem Preis durch hervorragende Qualität auszeichnen. Die Kentucky-Organen sind für den Familiengebrauch gedacht und bieten dem Kunden mehrere Optionen.

La Kentucky Organ Company, di Poole, Dorset, Gran Bretagna, produce una serie di organi contraddistinti da un alto indice di perfezione e da prezzi accessibili. La ricca serie di organi Kentucky e ideale per gli appassionati.

ザ・ケンタッキー・オルガン社 (The Kentucky Organ) は英国のドーセット州のポール (Poole, Dorset) にある、各種の家庭用の低価格でしかも品質の良いオルガンを作っている会社です。ケンタッキー社では顧客に各種のオプションを提供しています。

Continued on page 134

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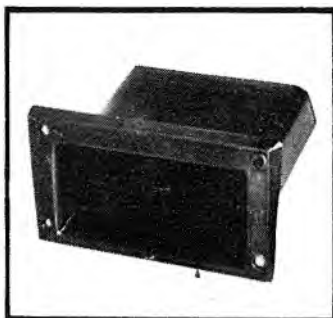
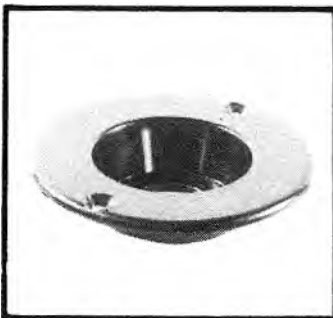


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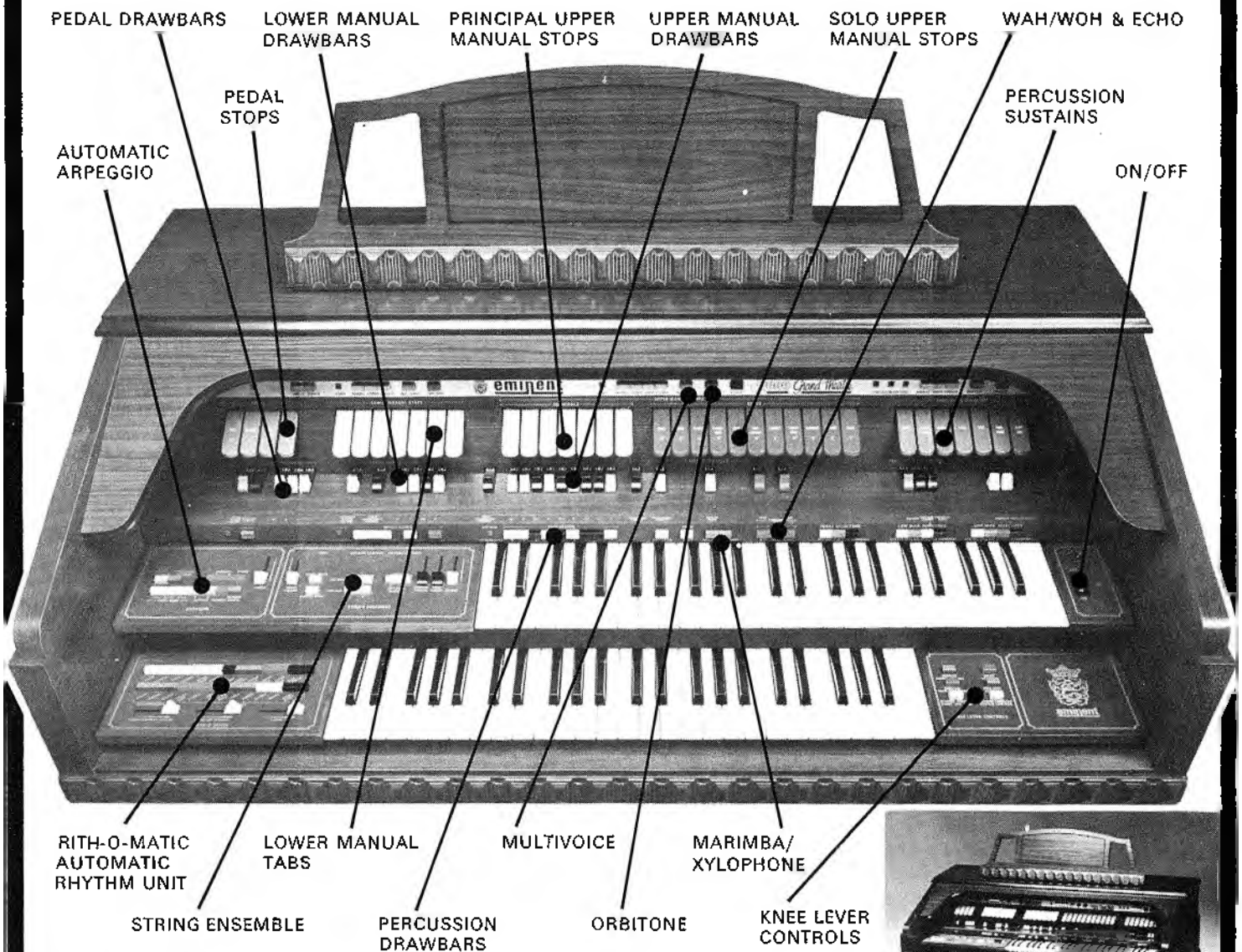
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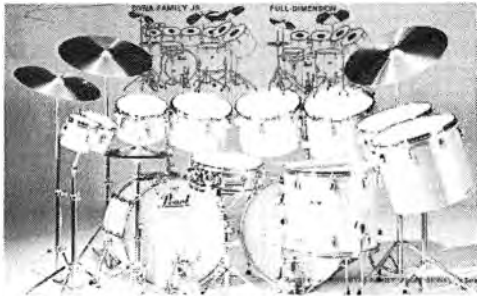
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MARKETING DIRECTOR: GERRY EVANS
LONDON TELEX: PEARL MUSIC 27659



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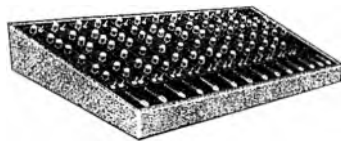
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From page 130.
Frankfurt '76

Leech Manufacturing Company,
 46 Riverside Drive, Flixton,
 Urmston, Manchester. Tel:
 061-748 0625.



Leech are established cabinet makers who supply a number of British amplifiers makers with cabinets. They will be displaying a variety of their products, from simple 1 x 12 to very sophisticated cabinets.

Leech will also be displaying the full range of Custom Sound amplification, including the new 12 channel stereo mixer, which provides gain, hi/lo imp. switch, presence, treble, bass, pan, fold-back, echo send, routing selector, P.F.L., channel fader, and a master control panel which offers a variety of effects.

Leech Manufacturing est spécialisé dans la fabrication d'enceintes de bois pour les fabricants d'amplification. Ils produisent des enceintes de haut-parleurs et d'amplificateurs

qu'ils exportent dans toute l'Europe.

Leech Manufacturing ist auf die Herstellung von Holzgehäusen für Verstärker spezialisiert. Die Firma kann Lautsprecher- oder Verstärkergehäuse in großen oder kleinen Mengen produzieren und exportiert jetzt auch fertige Gehäuse in fast alle Länder Europas.

La Leech Manufacturing si specializza nella produzione dei mobili di legno per i costruttori degli amplificatori. La ditta costruisce mobiletti per altoparlanti o amplificatori, in piccoli o forti contingenti ed esporta, attualmente, i prodotti ultimati in diversi paesi d'Europa.

リーチ・マニファクチャリング社 (Leech Manufacturing) はアンプ・ファイヤー製造業者のために木製キャビネットを作っており、この会社は、ラウドスピーカーやアンプ・ファイヤー用キャビネットを、大量又は特定の注文により作っており、現在製品はヨーロッパのほとんどの国々に輸出されています。

Nashville Music Strings Ltd.,
 203 Ystrad Road, Pentre,
 Rhondda, U.K. Tel:
 044-348 2428



The "Nashville" strings have only been available in Europe for about six months, but are already distributed by wholesalers in most countries on the continent. Jeff Jeffery, a director of the company, feels that sales have exceeded all expectations.

The 80/20 Specially Tempered Brass range for C & W work have been selling well and the company are particularly pleased with what they feel to be successful sales of their strings for Mandolin, Tenor Banjo and Banjo. All of these will be on display at Frankfurt, as well as some new lines which have only recently been finalised.

Nashville Music Strings, pour la

première fois à Frankfurt cette année, est une compagnie située au Pays de Galles qui se spécialise dans la fabrication de cordes pour guitares et autres instruments. Leurs cordes sont vendues sous le nom Nashville.

Nashville Music Strings stellt dieses Jahr zum ersten Mal in Frankfurt aus. Diese neue Firma, die in Wales ansässig ist, produziert unter dem Namen Nashville Saiten für Gitarren und ähnliche Instrumente.

La Nashville Music Strings esporra per la prima volta, quest'anno, a Francoforte. Questa nuova società gallesse produce corde per chitarre ed altri strumenti posti in commercio sotto la denominazione Nashville.

ナッシュビル・ミュージック・ストリング社 (Nashville Music Strings) は初出品をします。このウェールズの新会社はギター及その類の楽器の弦を「ナッシュビル」という名で出しています。 Continued on page 136.

pop ~ mixer

16 CHANNEL STEREO PA MIXER

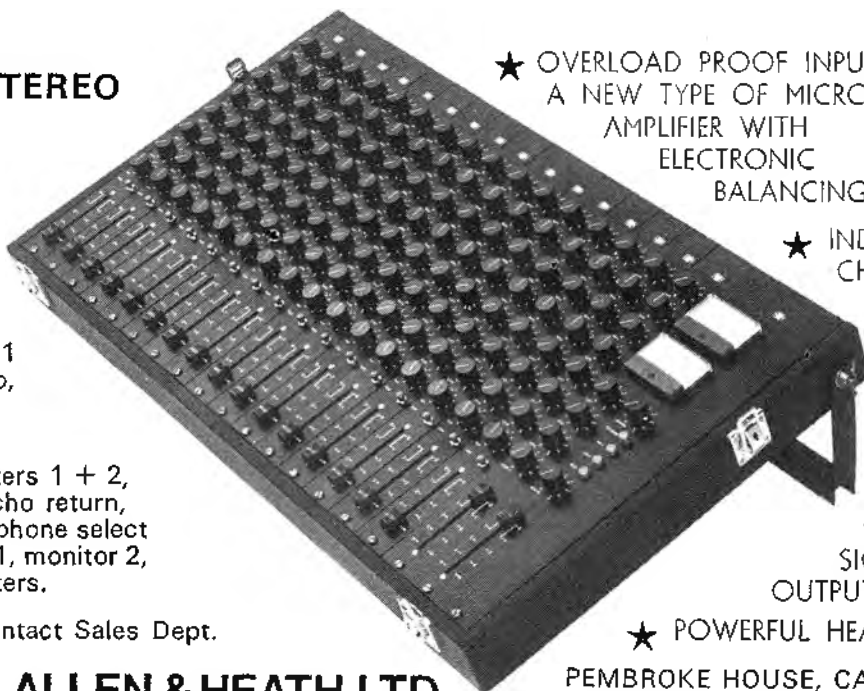
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OUTPUT CHANNEL:
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Sonny Payne

U.S.A. drum star of Harry James' orchestra and one of America's ranking percussionists, about his Sonor drums. Sonny's remarkable rapport with his instruments is shown in this action picture.



Tommy Aldridge

relies on Sonor drums and accessories for consistent performance in the recording studio and on tour. Listen to Tommy and Black Oak Arkansas, and hear the quality of Sonor drums.



Frank Gant

whose performance with Ahmad Jamal ranks him among outstanding contemporary drummers, insists on Sonor drums and accessories to deliver his unique sounds.



Jack De Johnette

is known to his many fans as "The Wizard" because of the exciting music he creates. His choice of drums is Sonor, an instrument versatile enough to respond perfectly to the vibrant, original sounds. "The Wizard" is famous for.



Bernard "Pretty" Purdie

whose featured performance with Aretha Franklin and other stars in person and on records make him one of the most talked-about percussionists of the day, delivers his message on Sonor drums.



Bobby Gien

Ronnie Scott Band



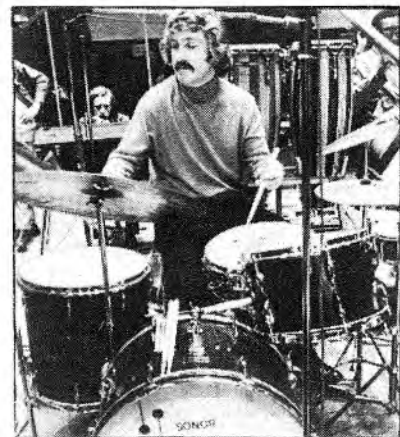
Tony Mann

Humphrey Lytelton Band



Jackie Liebrezeit

"The Can"



Ronnie Stephenson

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Frankfurt '76

Orange Musical Industries, 3/4 New Compton Street, London WC2. Tel: 01-836 7811.



The proven range of Orange valve amplifiers will dominate the Orange stand this year. Of particular interest is the new Twin Reverb amplifier. Boasting two heavy duty speakers and full size Hammond reverb springs, it also offers two channels, straight and a second combining reverb and tremelo.

Also on display will be some new Orange cabinets, in particular the highly interesting reflex model, and a bouncer. The Orange Graphic Amp, the valve amp reviewed in the July, 1975 issue of I.M., should attract a good deal of attention.

Les amplificateurs et équipement électronique Jimmy Bean, Orange seront exposés au stand Orange. Orange est renommée pour la production d'une robuste gamme d'amplificateurs valve et solid state de même que batteries et discos.

Jimmy-Bean- und Orange-Verstärker sowie elektronische Ausstattungen werden von der Firma Orange ausgestellt, die für die Herstellung eines außerordentlich starken Sortiments an Valve- und Solid-State-Verstärkern sowie Disco-Geräten und Trommeln bekannt ist.

Al posteggio Orange verra presentata la serie di amplificatori ed apparecchiature elettroniche Jimmy Bean e Orange. Il nome Orange ha acquistato immensa popolarità per via dell'eccezionale serie di amplificatori valve e solid state, delle unita disco e dei tamburi.

オレンジ社 (Orange) 社は展示会にジミー・Bean (Jimmy Bean) とオレンジ・アンプや電子機器を出します。同社は非常に堅牢なマルグとソリッドステート・アンプや、ディスコ用ユニットとドラムで知られ、今年に新しいデザイン型アンプアフィヤを公開する予定です。

Pearl U.K. Distributed by Henri Selmer & Co., Woolpack Lane, Braintree, Essex. Tel: 0376 2191



1975 was the year that Pearl became a familiar word with British drummers. IM's Bob Henrit helped a little with a fantastic review of the kit in the middle of last year and it seems that this dynamic Japanese corporation is ready to repeat the success story with amps and drums. In 1976, amps and guitars bearing the Pearl name will be finding their way into Britain via a new wholesale company just now being set up to handle these items. Of particular interest to U.K. visitors to the stand will be the Pearl range of "copy" amplifiers that are expected to sell at 40 per cent less than its name counterparts.

Pearl est plus connu en Grande Bretagne pour ses excellentes batteries. Bien que nouveau venu sur le marché britannique, les batteries ont rapidement atteint une vente élevée, et de nombreux batteurs anglais jouent sur des batteries Pearl.

Die Firma Pearl ist in Großbritannien am besten für ihre ausgezeichneten Trommelsätze bekannt. Obgleich sie auf dem britischen Markt noch verhältnismäßig neu sind, haben diese Trommeln schnell hohe Umsatzziffern erreicht, und viele der besten britischen Trommler spielen jetzt auf Pearl-Trommeln.

La Pearl ha acquisito alta reputazione in Gran Bretagna per l'eccellenza della propria serie dei complessi per batteristi. Quantunque la società sia apparsa solo da poco tempo sul mercato britannico, tuttavia i complessi hanno incontrato un encomiabile successo commerciale per cui parecchi tra i principali batteristi britannici usano attualmente i prodotti Pearl.

パール社 (Pearl) は英国で、その優秀なドラム・キットで知られています。会社としては新しい方ですが、短時日のうちに売上げを伸ばし、英国の多くのトップ・ドラマーはパールのドラムを使っています。

Peavey Distributed by Top Gear, Harbour Way, Shoreham By Sea, Sussex BN4 5HS



Since Top Gear has been handling Peavey in the U.K. there has been a tremendous surge of interest in the equipment and bands like Bee Bop Deluxe who seem sure to become the influences of 1976 are already converted to Peavey Power. In some ways, the equipment is delightfully eccentric - the mixer sport huge (but very smooth) rotary controls - which you either love or hate. Undoubtedly, the newish Peavey combos will be of interest to a combo-conscious industry but, no surprise really, all the other Peavey stuff will be shown as well.

Peavey Electronics, de Meridan, Mississippi, U.S.A., sont très connus pour leur gamme variée de mélangeurs, amplificateurs, et amplificateurs de puissance, etc. haut-parleurs et public address systems. Ils sont représentés en Angleterre par Top Gear.

Die Firma Peavey Electronics aus Meridan, Mississippi, USA, ist für ihr großes Sortiment an Mischpulten, Instrumente- und Kraftverstärkern, Monitors und Kombinationsverstärkern sowie für ihre Lautsprecherboxen und öffentlichen Lautsprecheranlagen gut bekannt. Sie wird in Großbritannien von Top Gear vertreten.

La Peavey Electronics di Meridan, Mississippi, U.S.A., è nota per l'estesa gamma di quadri di missaggio, amplificatori per strumenti, amplificatori di potenza, monitori, amplificatori composti, altoparlanti ed impianti di comunicazione interna. La ditta è rappresentata in Gran Bretagna dalla Top Gear.

ピーヴェイ・エレクトロニクス社 (Peavey Electronics) はアメリカのミシシッピのメリダ (Meridan) にあり、ミキサー、乗音、アンプ、パワー・アンプアフィヤ、モニター、コンビネーション・アンプ、ラウドスピーカー、公共放送システムなどを作っています。英国ではトップ・ギヤ社 (Top Gear) で売られています。

Premier Drums, Pullman Road, Wigston, Leicester. Tel: 053 762262.



A completely updated and extended range of drums and accessories will be on display at Premier's stand this year. Among the new products will be the D717 outfit, which boasts seven drums - among them the ten lug 35 snare drum, single-headed tom-toms, and a 24" bass drum and a full range of concert tom-tom stands and single to quadruple-holders.

Also on display will be the 314 boom-arm cymbal stand, the 751 vibraphone with electronic speed control, and completely re-designed chimes.

Premier est un fabricant britannique de batteries très connues. Producteur d'une grande gamme de batteries et percussions, cette firme a récemment gagné un prix pour ses exportations. La compagnie produit des instruments de percussion pour orchestre et éducation, de même que des batteries pour rock music.

Premier ist der bekannteste britische Trommelhersteller. Die Firma, die die verschiedensten Trommelsätze und Schlaginstrumente herstellt, ist vor kurzem für ihre Exportleistungen ausgezeichnet worden. Sie produziert nicht nur normale Trommeln für Rock Music, sondern auch Schlaginstrumente für Orchester und den Unterricht.

La Premier, ossia, la più nota costruttrice britannica di tamburi si specializza in una estesa serie di strumenti a percussione; detta serie, recentemente, è valsa alla società uno speciale premio per le esportazioni. Oltre ai normali tamburi per la rock music, la ditta produce parimenti strumenti a percussioni di vario genere, per orchestre.

プレミア社 (Premier) は著名なドラムメーカーです。その多種のドラム・キットと打楽器を輸出し、英国政府輸出奨励賞を最近受けました。ロックのためのスタンダードなドラム・キット、オーケストラ及び教育用ドラムも作っています。

Continued on page 139.

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