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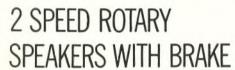
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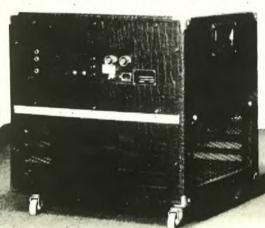
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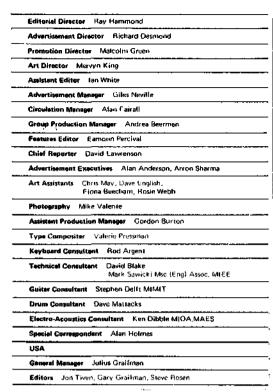
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I (see supplement) Premier Market Report Premier dealers on Premier drums.

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Musical pen friends and talented DJ's are all given space to air their views.

Buzz

Buzzing up and down the country with info on local bands.

ALIYUMS :

Waxings from the Ramones, Roogalator, Karla Bonoff, Gerry Rafferty and Blondie all get their vinyl verbalised

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Playing — Country Blues Guitar Stefan Grossman delves into the repetoire of Country Blues Guitar giant Skip James, who wrote the popular Cream number "I'm So Glad", for two tunes this month.

Playing - Jim Rodford Jim goes funky with the lowdown on the Jazz/Funk players and shows how you too can boogaloo.

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Build A Solid

Nearly time to dance with delight as Stephen Delft gets into completing a fretting jig in this latest instalment.

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Stephen flicks his fingers over a total of 30 strings to bring us reports on two Shergold 12string electrics and a nice Aria acoustic six-string.

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60 Dibble's Speaker Survey Ken Dibble goes through the 15-inch speaker market with a fine tooth comb to find out just what you get for you money.

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A step into the future with a look at the latest developments in remote control for the guitar.

All major cities.

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The man who made rock'n' roll possible is still working and producing new guitars for an eager public. Ray Hammond questions the great man about his life and times, and discovers he has some interesting thoughts on modern instruments which could settle the Old vs New argument forever. An IM exclusive.



Elvín Bishop

IM's Steve Rosen pay homage to the Bishop of the Blues guitar and finds out why Elvin prefers semi-acoustic to solid models — guitars that is!

Fiddler On The Loose
Want to know who plays
the best version of Baba
O' Reilly this side of
Townshend and the boys,
then tune into new highenergy band Bethnal.
Ian White did, and plucked
fiddler George Csapo to
get the low down on this

rising London outfit.

Taking Care of Business
Part Three
Or how Practice and

Or how Practice and Professionalism can make perfect if you take care of business the Alan Holmes way. Alan explains how to avoid a tomato in the 'earhole on your way to becoming a star.

Holmes' Reed Guide
The Egon Ronay of the
Reeds gets his teeth into
more modern mouthpieces
to blow your mind.

Rumbling Man

Twenty years after inspiring a whole generation of rock guitarists with an instrumental called Rumble, Link Wray is still strutting the boards and eager to talk of his career as a rock 'n' roll legend.

Eamonn Percival accompanied the band to Germany and found them Heep big fun, learn about life on the Autobahn with one of Britain's biggest exports.

Sigma Sound Enterprises
Took David Lawrenson on a
guided tour. Read his report
inside

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The London Synthesizer
Centre School

The school is really taking off we discovered.

NAMM Show Review IM visits one of America's top musical instrument shows in the wonderful world of Disneyland, California.

EDITORIAL

Dear Readers.

We recently received a letter from a reader suggesting that IM forms an international "club" for contemporary musicians (see letters page this month). This magazine is so truly "international", circulating in almost every English-speaking territory in the world. Thank you for your support and letters that flow in by the sackload.

Because of the problems associated with shipping a magazine like IM, American readers may notice irregularities in page numbers. To ensure that maximum relevant editorial is maintained in IM, some parochial UK-slanted material is omitted from North American issues. All international editorial and advertising copy will remain unchanged.

UK residents regrettably have to suffer an increase in the cover charge price to 50p this month — one glance at the number of pages will make you feel better! — We promise to hold this price as long as we possibly can.

It is a great thrill for all the staff at IM to hear so much from readers as far apart as California, Wigan, South Queensland, Poland and Sri Lanka.

We thank you all for your interest in your magazine. Keep the thoughts coming.



VOL. 4 NO. 3 MARCH 1978 (UK) APRIL 1978 (INTERNATIONAL)

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O LETTERS O

Give DJ's a break

Dear Sir: I am surprised that your fine magazine should be used as a "shouting match by proxy" by Messrs. McFadyen and Clifford, However, I must admit that I agree with both these gentlemen up to a point. As a musician myself, I must say that DJ's do take work away from musicians TO A CERTAIN EXTENT, but I wouldn't refer to them as "Parasites" and "Talentless Bastards" by a long shot. For example, a disco that lasts about five hours (from 9pm to 2am) must have a DJ. This is because it would be nearly impossible for a band to play anywhere near that long. Even if they could:- (a) I'm sure that the audience would ge tired of them and (b) The Musicians Union would no doubt object to such exploitation.

In today's entertainment there is room for both musicians and DJ. A DJ couldn't possibly generate the excitement of a live band, and a live band couldn't possibly play as much varied music for such a long time, as a DJ can. So why don't you two fellows "Belt-up" and be glad that each other exists. If one didn't, neither would the other. Richard G. Lecar

Wrong Riff

Kent.

Dear Sirs: Firstly allow me to congratulate you on producing a magazine such as "International Musician". The standard of the articles is high and very informative and your publication performs an essential function for today's musicians.

However, one thing I have noticed is the lack of care, which becomes apparent everytime you publish music. This criticism incidentally can also be levelled at your sister magazine "Home Organist". To substantiate this criticism I would draw your attention to Page 89 of February's edition of "International Musician". I refer of course to the "Competition Riff" presumably this is supposed to be Herbie Hancock's "Chameleon".

1) The Bass Clef sign is wrongly positioned which would indicate that F is on the 3rd space and not the 4th line, and the essential two dots are missing.

The key signature should be 4 flats not 2, The accidentals (some of which have become necessary due to the wrong key signature) are all wrongly positioned, they should be placed before the note they are to affect and on the same line or space as that note. Theoretically, in the places you have positioned them they have no effect whatsoever. The top Db should not have a line above it. 5) The "repeat previous two bars" sign should be written with two diagonal lines, not one, and with dots, not tail-less crotchets, The timing leaves a lot to be desired not taking into account the "lead in" notes, and allowing for the fact the quaver lines have not been filled in properly, giving them the appearance of semi-quavers, both remaining bars of music have 41/4 beats in them. This is due to making the first quaver of each bar dotted but forgetting to shorten the following quaver into a semi-quaver.

7) The whole thing is written at twice the speed it should be played at. This last mistake probably being due to the drums playing at "Half-Tempo" on the record.

The idea of this "competition riff" I believe is to encourage young musicians, especially bass players to learn to read music — a great idea. But in practise, if this sort of standard is to be allowed to continue then it will probably have the reverse effect.



Herbie Hancock: Victim of the wrong riff

It seems a great pity to mar such an excellent magazine as yours with such trivia, yet in the one thing that most of your readers are experts in.

Roger N. Read,

Macclesfield, Cheshire.

We assure you nothing is prepared at IM with lack of care. But we appreciate the fact that errors have appeared in IM in music manuscripts and we apologise for any inconvenience this has caused readers. In this case the fault was not Jim Rodford's.

Management wanted

Dear Sir: I am a member of a rock band based in Petersfield, and have decided to write to ask your advice. The problem is progress, we have played at most places here, i.e. Village Halls, Community Centre and Social Club. We are slowly covering a wider area but would like to know how to get in touch with professional agents, magazines etc. We realise that most of these would be based in London but to come to town without knowledge of people, places etc. would not help.

We would also like to know how to get and audition for a record company, we have made a demo-tape but were not satisfied with the quality, and cannot yet afford to make more

We will be grateful for any advice you can offer us. If there is anything about the band you would like to know please let us know. Thank you.

Chris Sims

Petersfield, Hants.

The best way for you to get in touch with managers, agents, etc. is to get a copy of Kemps Music and Recording Industry Year Book (£4.50 from The Kemps Group, 1–5 Bath Street, London EC1). This lists all agents and management companies. From then on it is down to yourselves to convince them that you are worth taking on. You could try sending demos to record companies but don't get your hopes up if you do it this way.

The only way to get an audition, or to get anywhere, is by work, work, and more work. If you're really bent on making the big time you'll have to be prepared to take risks and make sacrifices. There is no formula

method to becoming a success. Maybe, after years of sweat and poverty and dedication you may make it. Sorry to sound pessimistic but it's not as simple as sending off a demo and waiting for the riches to roll in.

DJ Fed votes for peace

Dear Sir: For the first time in several months I have just read a copy of 'International Musician' and I was somewhat perturbed by one or two comments made about disc lockeys which I feel are rather hysterical. First of all, let me say that I have a great deal of respect and sympathy for John McFadyen's situation and I regard him and others of his ilk as being the true professionals in this business. Forget all the posers and egotists. It is the bands who get on with entertaining the public and giving the public what they want that are professionals and workers on the live entertainment scene. True, there must always be a place in the music scene for artistry and genious, but far too many bands play for themselves and this is one of the reasons why discos have become so popular.

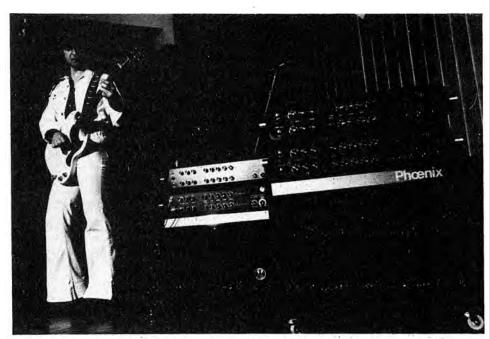
Until the mid-60's dance bands and groups were playing relatively simple straightforward music which the public could understand and enjoy and wanted to hear. During the late '60's and early '70's too many bands began to play long intricated and self-indulgent music which only other musicians and musically educated people could understand. A great deal of it was not danceable. The public like to dance and they demand to dance and when there is a demand it will be filled, one way or another, and this is exactly what the discotheques have done. I think most people would readily agree that a good band has always and will always be far more popular than even the best discos. Provided it is performed well, live music, be it dance band, pop or cabaret will always win. The musicians that have suffered loss of work are the second rate ones and the ones who are convinced that they are Jimi Hendrix reboro.

As far as disc jockeys are concerned, we have no animosity towards musicians. Obviously, we realise that we rely upon them to provide the records for us to play. We also feel that the



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people who record the records and write the music that we play should be remunerated by way of royalty and license fees. What does upset us is when the musicians' union try to artificially create employment for unpopular bands at our expense simply by virtue of antiquated laws. Let's face it, if all bands were as professional as John McFadyen's, far fewer discos would be employed.

There are another two factors on the subject. One is the fact that so many bands nowadays will not play for longer than a one hour set; so, with the economic situation and the tendency for name bands to charge astronomic fees, it is obvious that the promoters are going to fill up the other three or four hours of an evening's entertainment with a relatively inexpensive discotheque.

I personally object strongly to being called, "a talentless bastard with a soupedup gramaphone". I have many friends who are musicians who readily admit that they would not know where to begin at disc jockeying since a great deal of talent is required in order to operate, programme and entertain in the disco medium. The members of this Federation are very concerned with those members of our profession that are "cowboys" and we are taking steps to deal with them. What is the Musicians' Union doing to improve the standard of bands and groups?

In conclusion, I would add that we are endeavouring to meet and have talks with the M.U. (without much success at the moment) so that we can settle our differences and get on together working in the business which Andrew Oldham rightly described as "The industry of human happiness". There is a place in the industry for good musicians and good disc jockeys and the sooner everyone realises that the better

Theo Lovia. Honorary Secretary, Disco Jockeys Federation

Thanks for an interesting letter, It is true that we're all in the business of entertaining and that talent and skill is needed to be both a good musician and DJ.

Making the perfect Strat

Dear Sir: I am writing to you for some advice on a project I'm about to embark on. The project being, the assembly of, as near as perfect Stratocaster as possible. I have been advised to use both Charvets projects for the neck and the body which they have produced in both maple or ash, my preference being for maple.

I'm also considering the use of Mighty-Mite for all the metal accessories e.g. bridge/ neck plate. I have also been advised to use Schecter projects for the pickups and this is the point that causes most confusion, With all of the new pickups about. I don't know what to go for. There are names like Mighty Mite, DiMarzio, Schecter, Velvet Hammer and even a Strat Humbucker by Bill Lawrence, The sound I am after is a not too sharp or too thin top end with a rich mellow deep country type bass sound that will sustain till the cows come home. (I'm not all together sure about the way I have described the tone but it's the best I could do).

The next point is capacitory as I really know very little about electronics, I would like you to go into full detail and tell me what to look for and give me the full names of the capacitors to use. The final point I would like to mention is, when I do eventually obtain

the body, is there any reputable guitar maker who would screen it thoroughly and not charge the earth. So that's it unless you can throw more light where on the subject it may be needed.

Name indecipherable

Wood Green, London.

I appreciate your confusion over pickups, I have no direct experience with necks and bodies made by Charvets Projects but I have heard good reports of them. It is very difficult to advise you on pick-ups. As you correctly say there is a very large variety of pick-ups available at the moment and it is difficult to know the differences, if any, between them,

I hope soon to do a comparative survey of various accessory pick-ups but it will be some months before I can complete this perhaps you could work on the rest of your guitar in the meanwhile. You enquiry about capacitors is answered in previous articles in International Musician under the title "Improve a Copy Guitar" parts 1 and 22 together with the subsequent box of printers corrections which I believe appeared the month afterwards.

In answer to your query about screening, I shall shortly be reviewing some screening paint which is made in England which seems to be entirely suitable for do-it-yourself application.

Stephen Delfr

More international musicians

Dear Sirs: I am writing in connection with, what I feel is an unexplored area in the purpose and concept of your laudable publication. From the scope of the letters printed in each issue it would indeed appear that "International Musician" is truly internationally received and appreciated. Consequently, there exists a potential for extending and strengthening the bonds between musicians throughout the world.

Essentially, I am suggesting that I.M. acts as a clearing house for letters from musicians who are interested in setting up correspondence with fellow musicians from other countries. The system may operate as follows:

(a) Letters are received from NON-UK resident musicians indicating their wish to be put in touch with a British musician.

(ซึ่) Letters from UK resident musicians indicating similar wishes are received accompanied by a stamped addressed envelope.

(c) Each letter should clearly state the preferred country, instruments and interests of any potential correspondent for easy matching. (d) Having matched a UK and a foreign musician, the letter received from the Non-UK musician is sealed in the stamped addressed envelope of the UK musician and posted along with other outgoing mail.

This system would require little time. would not cost I.M. any money, and would promote greater understanding of other musicians environments.

Allan S. Meers,

Edinburgh.

Thank you for your suggestions. The idea is commendable and we agree there is scope for improving relations between muso's from different countries. The idea and system you have proposed would take up more time than you imagine and as we all know, time is money. However if the demand is there we will do our best to put players in touch with each other.

Improved Speaker Specs

Dear Sirs: With reference to your review of Stagesound speakers in the February edition of International Musician, we were very pleased to note that Mr. Dibble found them to substantially meet their specification and with respect to distortion to comfortably exceed the performance of all other units.

The speakers submitted for review were from a first prototype batch manufactured over six months ago. Since then speakers have been fitted with a new improved painted chassis, impedance labels and polystyrene packing. As this would appear to deal with all Mr. Dibble's reservations, we feel that these units can now be said to offer outstanding value for money. A fact which is borne out by dealer's orders reaching us every day from all parts of the country.

M. Ingram Agency Sales Manager, Theatre Projects Services London

Roadie for hire

Dear Sir: I am writing in the hope that you may be able to help me.

I am seeking employment on a road crew, with a band or perhaps a hire company. What 1 require is information as to whom I should contact.

I have been working full time with a professional band in the Sheffield area as third roadie along with a second man and a lightman, but unfortunately due to lack of finance on the part of the band I was made redundant.

My experience has proved invaluable to me.

I learn quickly and can adapt myself to situations easily. Any information you can give me will be gladly received.

Thanks for a great magazine which has been a great help to me as a roadie.

R.N. Stalker

Tel: Doncaster 710772

If you are still looking for work we'd suggest you write directly to the hire companies listed in our Hire Directory in the December issue of IM. Alternatively maybe publication of your letter will evoke a response from a hire company reading your letter. Anyway, good luck.

Lighting noise

Dear Sir: I have a problem that has evaded a solution for over a year and hope that you can

I have constructed a lighting unit for use with our band, the trouble is that the thrysistor dimmers cause a great deal of interference and can be plainly heard over the P.A. and through the onstage equipment in the quieter passages.

There are six channels on the dimmer unit and I was wondering if you could suggest a method of supression or could tell me where I could obtain the information.

P. Leighton

Cannock, Staffs.

We may have the solution to your problem. The method of supression that you need involves a filter and a capacitor. You can get these from two places.

Zero Lighting Ltd., 115 Hatfield Road, St. Albans Herts AL1 4JS.

They will supply you with a "2kw" filter (no. 4350) at £4,82p and a Delta Capacitor at 84p. You can order these from the above address.

You can also obtain a 1kw filter (no. 238-479) and a pack of three Deltas capacitors (no. 238-299) which are made by Radiospares, from your local dealer. You may have to order these as they might not stock them.

Hope this sorts our your interference.

We're gonna do it all over again!

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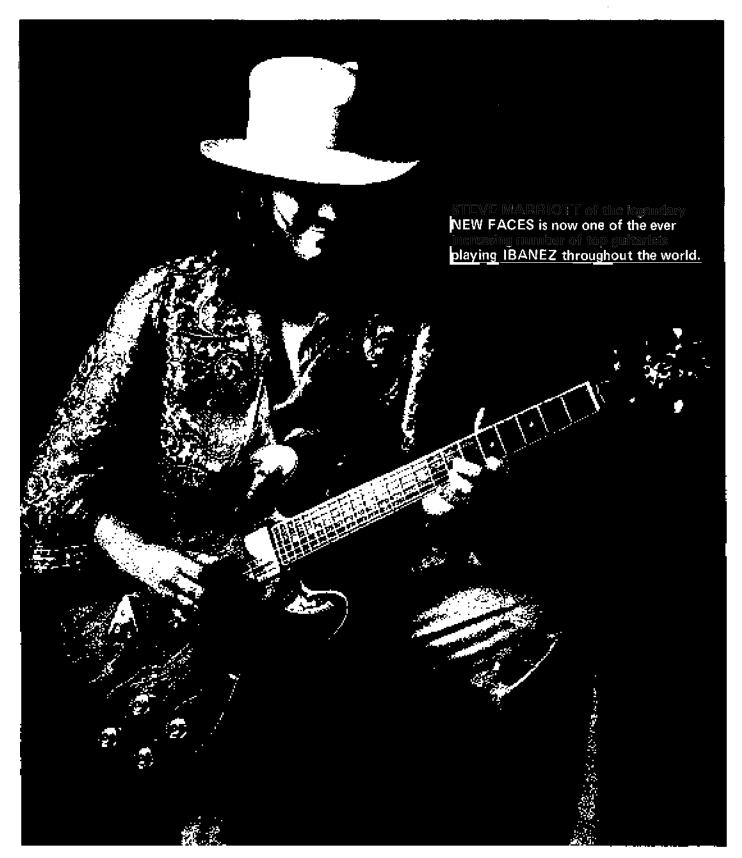
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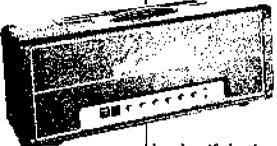
65% of Guitarists Prefer Valves

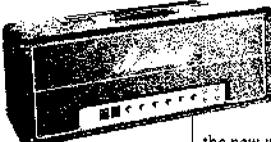
Marshall have known it all along. You don't get to be number one without learning something about rock. If you want to be a rock guitarist you've got to get those valves driving along with you.

You may think that valves are fragile, old fashioned things — wrong. Marshall valves are modern, and reliable. And nothing else gives you that warm raunchy sound that made Marshall famous.

go. Then you'll know why Jimi Hendrix used Marshall faithfully and why most of the world's top bands today from the established stars to

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When a Marshall amp is cranked up the valves start to work as in no other amp. Marshall found the secret way back in the early sixties when heavy rock was being born and they're keeping their knowledge to themselves. There have been, naturally many imitators of Marshall but somehow they can't get it as good.

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Just look around when you go to gigs or concerts — Marshall is everywhere and that can't be coincidence.

There's just no substitute for the Marshall sound as countless top musicians know. If you want the best amp around it's got to be Marshall.

Marshall valve amps have led the field for years, every concert stage has seen, heard and felt Marshall power.

The Marshall 1959 100W model sounds loud and beautiful. It has two channels, one with extra top and each

hard — if that's a bit too loud, try the 1987 50W model. Bass players have their own models, the 1992 100W and the 1986 50W.

Master Volume 50W and 100W models have the Marshall valve sound but with a capacity of low volume usage without losing sustain. Its extra high sensitivity gives a really hot sound and the second input is slightly lower sensitivity for really hot guitars. To get that warm rich Marshall sound use a 1960–1960B stack, it's still the professionals favourite.

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IM 3/78 M.V.



Derby band Strange Days are an enterprising outfit who have sponsored their own single. They have been together for ten years and are equally at home doing workingmens' clubs or the college/rock circuit. Founder member Ken Cook (keyboards/vocals/guitars) is also manager, and the rest of the line up Vernon Keeling comprises (bass/ guitars/vocals) and Paul Boole (drums/ percussion/vocals)...Up in the North West the beat goes on with bands like Anniversary who are a three-piece from Lancaster featuring Johnny Pawlowski (lead guitar), Peter Pawlowski (bass) and lan Maynard (drums)...Over in the Eccles part of Manchester are a five piece called Venom. They have recently returned to the fray after a change of bass player and are seeking gigs in the Manchester area (ring Manchester 789-6218 if you can help). . . Rochdale based commercial rock band Shabby Tiger are experiencing the same problem as a number of British bands in that they are successful abroad but are neglected at home. They have had hits in Denmark, Belgium, Germany, Holland and South Africa, and are hoping that their new deal with GTO Records will do the trick for them here. .. Exotic Whitley Bay is the home of North East group, Silas Marner. They have been together for four years and have supported many top bands on their excursions into Geordie-land...The Leeds music scene is really buzzing with jazz/rock group The Runs, whose average age is only 16, three piece high energy rock outfit APB, who can be contacted for gigs on Leeds 40893, and The Ventz, a Bowie/ Eno influenced band reputedly the hottest thing to come out of Yorkshire since pud...A cathedral may seem an unlikely gig for a rock band, but that is where Chichester based outfit Ptarmigan found themselves playing during the recent Chicester Cathedral 902 celebrations. The band gig regularly along the south coast, but are anxious to break into the London circuit...Roadsters are a five-piece multi-instrumental harmony rock band from Cheltenham who have the distinction of appearing with Tony Blackburn and living to tell the tale. The line up comprises Charles (piano and electric/acoustic guitars), John Eeles (bass), Eddy Mitchell (guitars), Ron Milsom (lead and rhythm) guitars) and Alan Hooper (drums) with everybody involved in the vocals. A tour of Cornwall last year saw them playing 43 nights out or bu and they are available for work anywhere in Britain,... The Totally Outa Hand Band are a fivepiece based in the Forest of Dean, Gloucester who have just released a single on their own Kilgaron label. . Seeking management down in Gosport, Hampshire, are Virginia Doesn't, a six-piece who play early-Sixties influenced original material with Seventies feel. Anyone interested should ring Richard Tuffin at Gosport 83106. . . Hitchin new wave band The Fur Coughs deserve a mention if only for their name. . . In the capital, Tottenham is rocking to the sounds of Burning Ground who play raunchy boogie to heavy rock and are seeking management...Whisperjet are a London

rour-piece into country rock, , write Ramrod are back in action after finding a replacement drummer, ...Still on the Thames beat, The Heroes are a new wave outfit formed by an ex-member of Siouxie and the Banshees, . . The Amazing BOF specialise in audience participation and improvisation and have gigged at London's Music Machine and Rock Garden...Synthesizer specialists have the opportunity to meet the inventor of the popular American synthesizer, the Oberheim this month. Tom Oberheim will be visiting Rod Argent's Keyboard Shop in Denmark Street. London W1 on March 10 and II to talk about his instrument.





Strange Days

SEE WHAT'S NEW, THEN SEE WHAT'S BETTER



You've seen what's new what's louder, slicker, bigger, shinier but have you seen what's better? The MXR Phase 90 makes a small claim on new with its new lower price and new graphics, but even better is that we've added a touch of regeneration for more intensity with-

out sacrificing that classic Phase 90 sound. What this amounts to is that the phaser that set the industry standard is now even more versatile in its performance while maintaining the MXR standard of quality and reliability.

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Sound

Sound is vibration in the air.

Electronic sound is produced by variations in an electric current which vary the strength of a magnet which moves a loudspeaker cone – which causes vibration in the air.

The key to all synthesisers is the machine's ability to produce at will complex vibrations in that electric current.

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Pennywhistles are amongst the oldest of musical instruments in the world.

They have two unusual characteristics.

They are childishly simple to make.

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Synthesisers are rather different.

They're highly sophisticated pieces of electronics.

And most of them go out of tune all too readily.

One of the reasons is that they use electricity.

Electricity produces heat. Which in turn can distort the characteristics of the electronic elements.

At last-intune Synthesisers

Korg are one of the world's leading manufacturers of synthesisers.
Traditionally the company has been an innovator.
One of their most recent is the introduction of a

complete range of synthesisers – that always stay in tune.

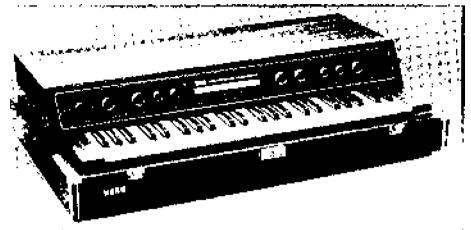
The methodology is complex – and the subject of a number of patents.

However, it is enough to say that almost alone,

a musician playing Korg can give an intune performance from the moment the power is turned on.



fifty words of fact for tired of being flannelled.



THE KORG 800 DV SYNTHESISER is basically two synthesisers in one! Two synthesisers, because it has two completely independent Hi/Lo Traveller filters, twin voltage controlled oscillators, twin envelope generators, and double the versatility throughout. Each function on the "Upper" section can be operated completely independent from the "Lower" section.

THE SYNTHESISER KORG 700S has exceptional note stability. It's easy to operate and any instrumental sound, colours, effect and original sounds can all be produced. Because the traveller can freely control harmonics upon properly setting the two knobs, sound from every audible music range, the human voice, and even "unreal" sounds can be produced by one touch of the finger.

THE SYNTHESISER KORG PRESET has 37 keys, a range of 9 octaves, a choice of 29 tone colours ranging from bassoon to violin. It has effect switches and a comprehensive range of effects slide controls.

The Range

Korg then have got the electronics right.

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Because Korg have one of the most comprehensive ranges of synthesisers available on the market

Monophonic, Polyphonic, Manual or Preset. At prices which are surprisingly low for such reliability and versatility.

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And all at a price that is spectacularly better than almost anything else available on the market.

THE KORG 770 SYNTHESISER has two built in oscillators which means that not only can you get two different tone colours simultaneously, but two sounds with different intervals, three to five parallel tone colours, and scaled noise can also be produced. In addition by use of the ring modulator, non-integral harmonics such as vibrant gongs and chimes can also be obtained. The 770 also has an external input jack to which an electric guitar, electric piano, microphone or another synthesiser can be connected, the tone colours of these various instruments can be changed by using the VCF, Envelope Generator and Ring Modulator circuits and by combining white noise

THE KORG SYNTHE-BASS has the minimum amount of functions needed by a synthesiser. Heavy sine wave bass sounds unavailable with previous bass instruments and the intensity of a wooden bassiare easily obtained by simply playing the keyboard. Compact design and moderate price.

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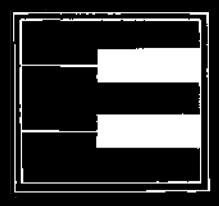
THE KORG POLYPHONIC ENSEMBLE "ORCHESTRA" 2000 has a unique string instrument. It provides two chorus, two pipe organ, two brass, and two string presets. These sounds can be varied even further by bass and treble controls. Attack and sustain are controllable as well and the master phasing control adds to the dynamic nature of this instrument.

For more information fill in the coupon below.

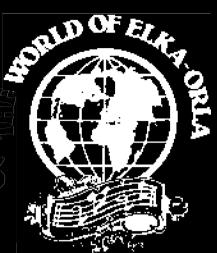
Thanks for the flannel free facts. Please send me a brochure and a dealer list. I could be interested in buying a Korg

and pink noise.

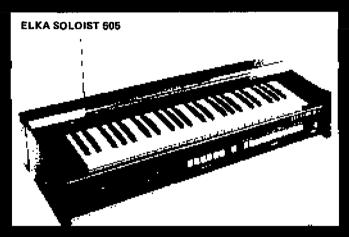
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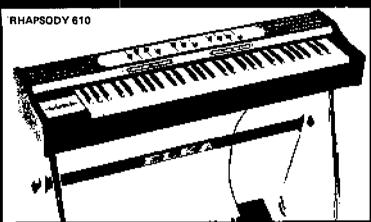


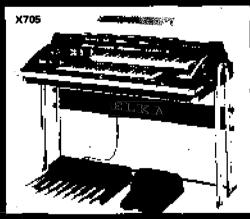
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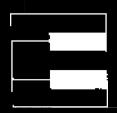












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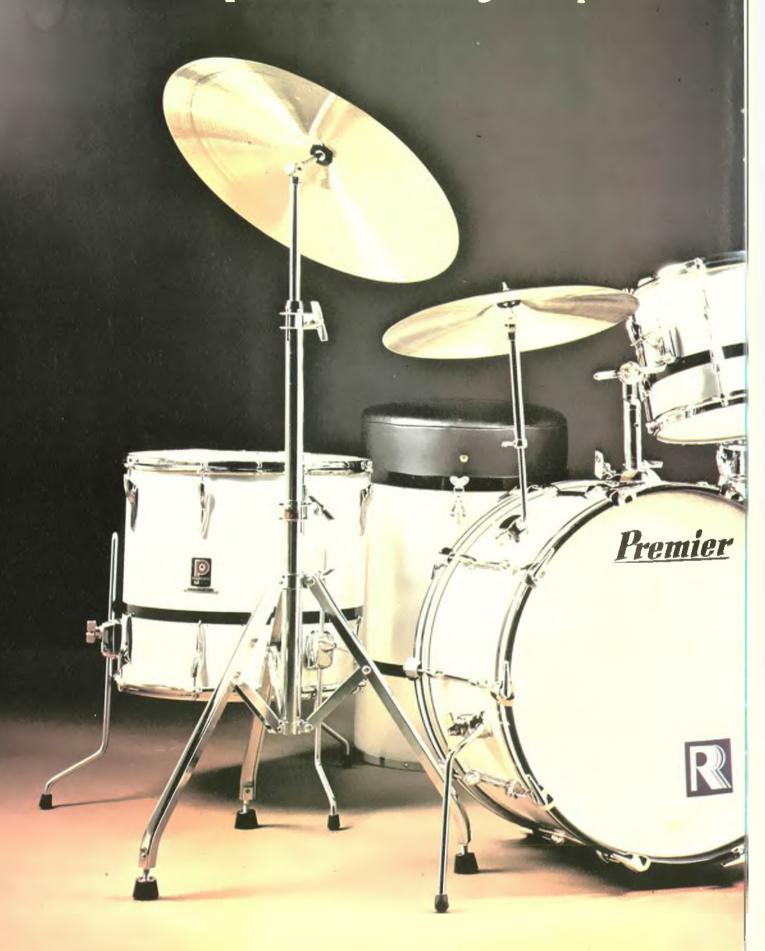
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You can read about the Resonator kit in this month's drumcheck by top drummer Dave Mattacks. The kit that will be won comprises of a 22×14 bass drum, 13×9 and 16×16 tom toms, and the remarkably popular "35" metal shell snare.

The winner of this coveted kit will also be given a set of Avedis Zildjian cymbals. These will include two 14" hi-hats, one 16", and a pair of 18" cymbals. This will all be attached to the new much-lauded Premier Trilok stands. Premier's specially-designed drum stool will be supplied with the kit in a finish to match the rest of the drums.

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Once you have completed the entry form at the back of the magazine enclose with your entry proof of purchase of any Premier product(s) of £3 or more. This proof can be in the form of a receipt from the shop.



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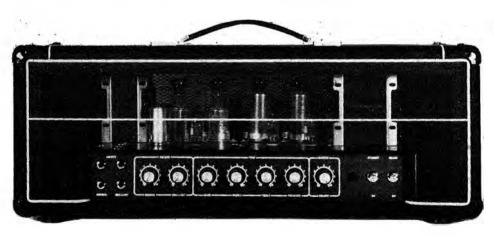


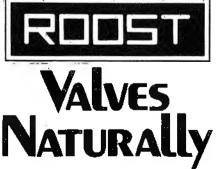


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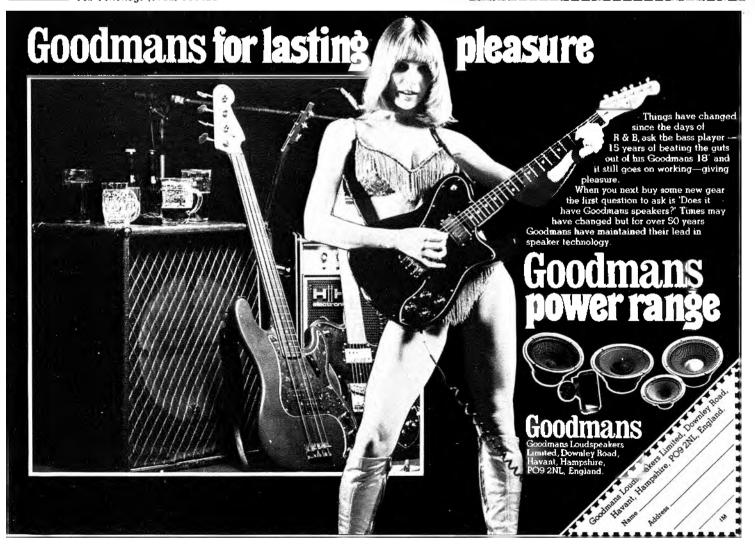


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From London on the A13 Southend Road, Fast Air Freight Service from Southend Airport



Leo Fender is **6**9. He spends six days a week at work in the Music Man plant, the headquarters of which is on a street he owns, Fender Avenue, Fullerton, California.

The sun shines all the year round in Southern California and Leo Fender is very, very laid back. One gets the impression he's as awed by his own success as the outside world is and he keeps things in proportion by wrestling with the small, but important engineering problems of duitar and amplifier designs. The greater concepts of "The Electric Guitar and its impact on Contemporary Music" he leaves to writers and other observers who feel pretentious enough to attempt an analysis.

Leo was a radio and record dealer in Fullerton. His grandparents went Westwards from Illinois and, as far as he knows, he's American from many generations back.

He took biano lessons between 1920 and 1923 and switched to saxophone in 1924. Leo studied accounting until 1929. He worked for four years doing bookeeping with the State Highways Department, but when the depression hit the USA he found himself jobless like millions of others.

"I remember at one time things were very hard. I managed to get a day job

but in order to get by I was also starting to take on radio repairs. At the same time I managed to get myself a portable PA system and I used to hire that out. Eventually I had three complete PA systems which were kept busy at athletic and sports events and rallies etc.

His hard work allowed him to get sufficient capital together to open a radio store

"For the first few weeks I went from house to house looking for work. That lasted three weeks. After that I had so much work I didn't ever have to go looking again".

During the late 1930's and early 1940's he had considerable business repairing electric guitars and designing pickups. This led to his first patent in about 1944.

By the mid-forties the business had grown into a general music store. Much of the business was with the popular western bands of the day.

"We were selling a lot of amplifiers and steel guitars both to pop bands and to Western music groups. It was from the steel that I got the idea of building a solid version of the Spanish style guitar. Guitarists were always asking about methods of getting more volume and I decided I ought to build something for them".

The first Fender solio guitar wabuilt in 1944. That model didn't go into production until 1948 and the first guitarwas called the Fender Broadcaster. When Leo took it up to the annual NAMM Music Show in Chicago some time later he realised that another company had used the name Broadcaster on a set of drums so he promptly changed the name to the Telecaster.

The guitar was an immediate success with country players and a company called Radio-Tel began distributing the line. An electronics man called Tom Walker was then working for Radio-Telle He later became involved with the Fender organisation and, over the years, the two men spent many hours at a work bench discussing the pros and cons of amplifier design. Tom Walker is now at Music Man.

"The guitar was a success originally because there wasn't anything else", says Leo. "You have some difficulty amplifying acoustic guitars. That is why f developed the solid body Spanish guitar".

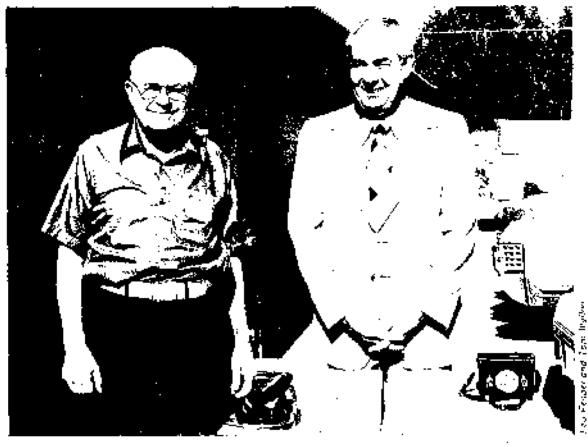
In 1951 he wanted to improve on his original design and built the Stratocaster which went into production in late 1952.

"I wanted to make the instrument more comfortable for players to wear.



Mr Music Man

"... THERE ARE MANY JOBS IN GUITAR BUILDING WHICH JUST CANNOT BE DONE BY MACHINE".



I thought both the balance and the way the guitar fitted the body could be improved. Another very important consideration was the position of the controls. On the Stratocaster we positioned them a lot nearer the guitarist's playing hand and that seemed very popular".

The guitar boom was arriving in America and both models stayed in full production. Work then started on the string bass in 1950. "Early strings were gut and we had to wrap iron wire around them at the pickup position".

"The string bass could never be heard. That was always a problem with the instrument. I thought I'd try and build a version in guitar form but I discovered you needed frets because so many players at that time wanted to double".

"Guitarists used to try and play both guitar and string bass on the same gig just because the tuning was the same. What threw them was that the scale was so different they couldn't become exact on the string bass the moment after they put the guitar down. But if you built a bass with frets they wouldn't have a problem".

For many the Fender Precision bass remains the definitive bass instrument. For years the Fender bass was the generic name for bass guitars 'a la Hoover' for vacuum cleaners. Look at any record sleeve from the fifties or early sixties and you're likely to see "so and so on the Fender Bass"

"Our biggest problem was getting strings for the bass guitar we were building. That wasn't easy at all. Eventually we found somebody to make them for us but I still think that bass strings are a problem. I once saw a set of bass strings from Japan that has an extremely fine steel cable core and they were the best strings I've ever seen".

"Since then, I haven't been able to find any company capable of making strings like that. The other parts of the Precision bass weren't too difficult to put together. The pickups naturally needed some work, but after a few years research we felt we had the right idea".

The fifties were a fantastic time for the Fender company. Rock 'n' Roll arrived and demand exploded. "It was incredible. If I hadn't seen it myself I would never have believed it. My partner in our distribution company, Don Randall, first went to Europe with our guitarist in 1956 and we were continually increasing our production capability after that".

Rock musicians did many things with Fender guitars Leo didn't anticipate when he designed them.

"I prefer Western music myself. I've heard a lot of records by rock players and l actually own a few records by that fellow, what's his name . . . Oh yes Elvis Presley. He sang very well, I didn't really plan for the type of sound that people are getting out of the guitars today. But the guitars actually do make those sounds themselves. Electric guitars do actually have their own sound. If you take an unamplified electric guitar and place your ear against the head when the strings are strummed you are hearing the sound of the instrument itself. It's exactly that sound that should come out of the amplifier".

As the musical world now knows Leo Fender sold his company to CBS in 1965. Leo had added to the range very sparingly and, along with Gibson, the instruments dominated rock music. Why did he self?

"I thought I was going to have to retire. I had been suffering for years with a virus infection of the sinuses and it made my life a misery. I felt that I wasn't going to be in the health to carry on. Two years after I sold I found a doctor who had enough courage to give me one massive dose of antibiotics with a syringe the size of a grease gun and I was cured".

"My contract with CBS called for me to act as a consultant for five years. For a further period of five years after

"I DON'T BELIEVE ANY ELECTRIC GUITAR IMPROVES WITH AGE. I THINK THAT'S A MYTH".



that I was prohibited from re-entering the musical instrument business and I then spent a lot of time pursuing my other love, boat designing. Stephens Boats in Sacramento build my boats and I take a great interest in boating generally".

The obvious question is — why did Leo start all over again aged 67? He had made his pile and it seems a strange move for a man to make at a period when most would look forward to a life of ease especially with good health.

"I suppose there are several reasons. One is that I felt I wanted to help a lot of my friends. After the CBS acquisition of Fender things changed and I saw a lot of my friends, dealers and so on, could still use a little help. I wasn't really able to do much for them until Music Man came along. But I'm pleased to say that I'm working with a lot of old friends, some of whom I was working with 30 years ago".

Leo Fender is highly critical of modern methods of guitar mass production.

"I feel that there are many jobs in guitar building which just cannot be done by machine. Jobs like neck cutting and final assembly have to be done by a highly-skilled craftsman. Fret inserting is a good example. If you take a close look at our frets you'll find that there's a small lip on the bottom of the fret wire set into

the fingerboard. This ensures that the frets don't fall out. Obviously you can't hammer these frets into the board, they have to be slid sideways into their slot. This is just one small example of the type of procedure some manufacturing companies think machines can handle. I know they can't".

Leo is amused by the value placed on old Fender guitars. He's also highly flattered.

"I remember that we got an old Stratocaster neck that belonged to Eric Clapton back for re-fretting. His roadie wanted the neck re-fretted. It was so worn that we did a complete refinish job for him. He was furious. It seems he liked the old worn finish better".

The S64,000 question is: Are old Fenders better than new ones? Since it wouldn't be proper to make a comparison his only printable comment on the subject is: "I don't believe any electric guitar improves with age. I think that's a myth".

In dealing with the problem of antique musical instruments the topic of serial numbers regularly raises its head. Here's the answer from the horse's mouth.

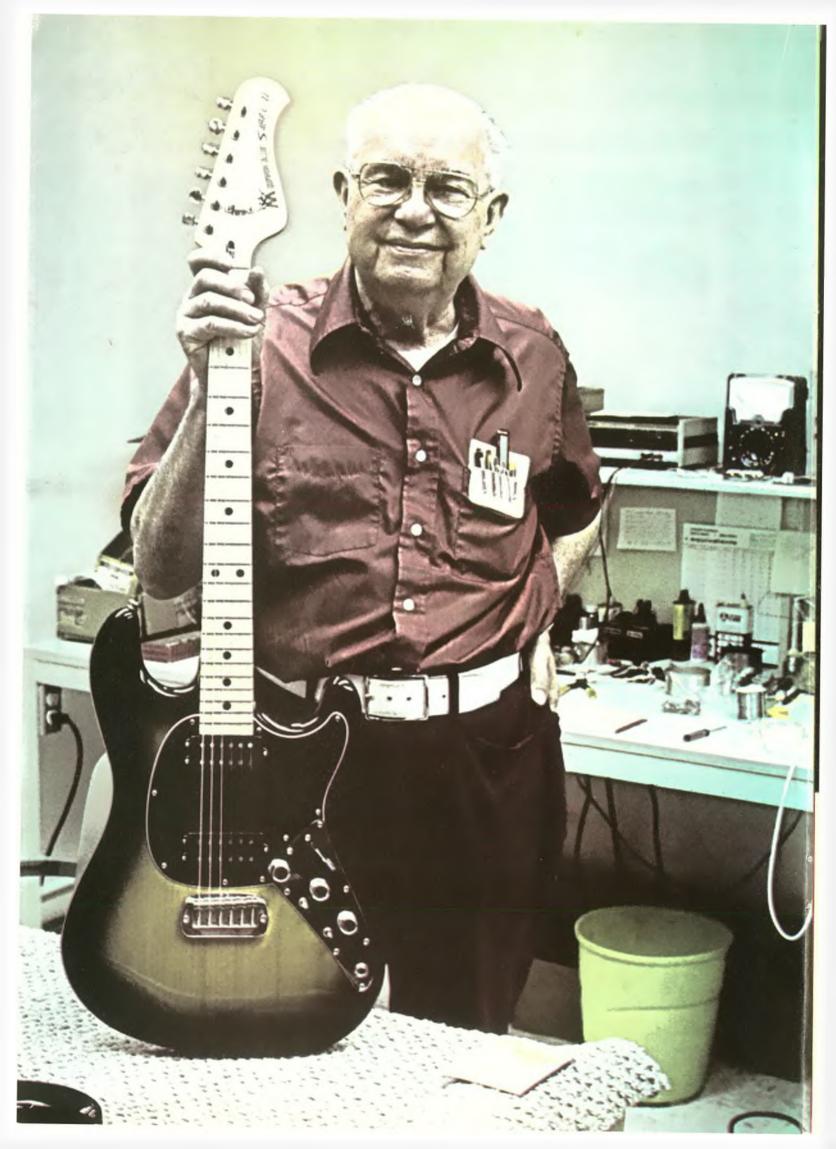
"There shouldn't be any problem in dating a Fender guitar to within a year or so. We kept records of serial numbers from the very beginning and CBS has all that information. We would buy a vast quantity of serial number tags at one time and it might take us a year or so to use them. They wouldn't necessarily be used in order so the best we've ever been able to do is to date an instrument within the period that the entire batch of serial number tags were used".

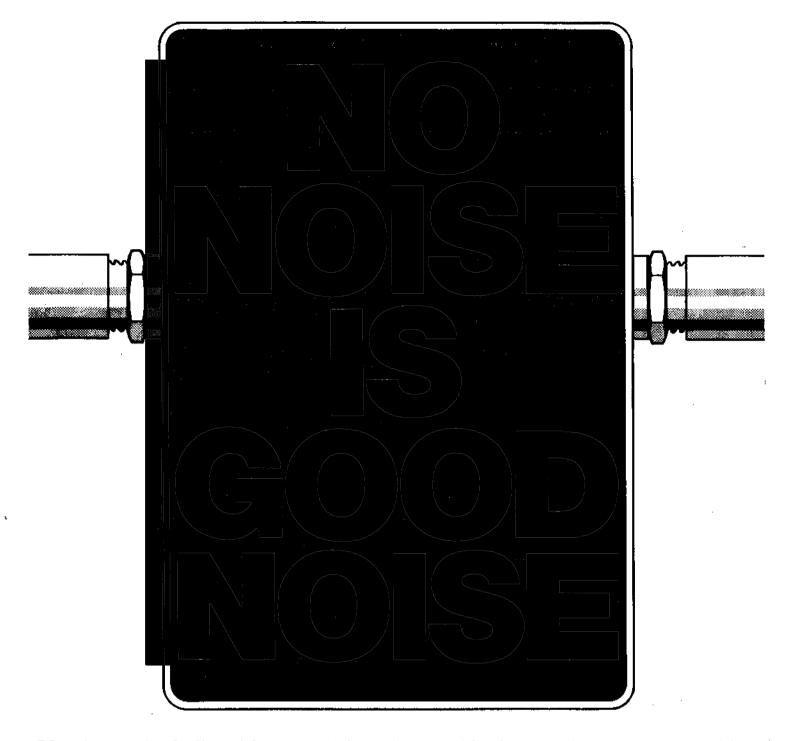
"I used to have a collection of my very earliest guitars but when we sold to CBS everything went to them. Today I don't have any of my early instruments".

When Leo Fender sold up there were over 600 employees in the company. Today Music Man has 150 employees.

Music Man build guitars the same way that Leo Fender always did. He's just finished designing a new instrument that will be reaching the shops in the next couple of months. It looks very much like a Stratocaster.

The difference between the new guitar and the Stratocaster is that the new instrument only has two pickups and there are 22 frets. The instrument uses a preamp which has low impedance output. It makes for a better tone control system and allows plugging directly into some mixers. There are also several other different features but I would prefer not to discuss them in too much detail.





You know the feeling, it's a good gig and everything's sounding great. Everything that is except the effects pedals which are lying on the floor humming and whining loudly, displaying a distinct lack of musical talent. You kick yourself for buying a cheap pedal and decide that next time you'll get something that will last.

If you want no noise effect pedals, then buy MXR. They're the best pedals on the market – ask recording studios and the guys who really made it to the top – the sound quality is excellent and they're reliable. And you only need to buy them once.

	
Dear Rose-Morris, please tell me more about MXR products.	
Name	Rose Morris
Address	MXR
	141/41

SOUNDCHECK

TEST ON: Yamaha G-100 Amplifier Head

DATE: January 1977 PRICE: £212.98 + VAT

Introduction

The Yamaha G100 amplifier head is a single-channel transistorised amp for onstage use. It measures about 28" wide by 12" deep by 8" high including feet, and weights 36 lbs. It comes complete with 2-function footswitch, owner's manual, and a standard one year guarantee (but no waterproof cover), and the current price is £230 including VAT. Its output is specified by Yamaha as 100w rms @ 7% Total Harmonic Distortion into 4 ohms, and as you can see from the test results, it is capable of delivering 110w into 4 ohms before the onset of clipping, with excellent stability, and the signal to noise rato is exceptionally good at 85.35 dB.

The G100 is pretty much what we have come to expect from Yamaha tough construction, attention to detail, control simplicity and good ergonomics all of which are becoming increasingly synonymous with Japanese workmanship. To look at, the G100 is modest it doesn't scream beef and technology as many other amps might - the wooden box is covered in black leather-look vinyl with radiused edges and screwed on pressed-steel corner protectors, big soft. rubber feet, and a single strap handle on the top. Just abaft of the handle is a vent covered by a black steel grill (not plastic, thank the Gods), the front controls are recessed, and the rear connections and mains lead are likewise well protected.

Controls

The front controls are: standard jack inputs, one High and Low sensitivity with 6dB between them, Volume, Bass, Middle, Treble, Bright, Distortion, Reverb, Speed and Intensity for tremolo, Pre-set Volume, mains lamp and rocker switch.

Against a matt black fascia, the for 8 to 16 ohms. Last in line are the

rotary controls are skirted in white 0 to 10 markings and labels, the knobs themselves being black with ally tops and a black index mark which is unusual in that the marks are actually big enough to see.

The tone controls are fairly selfexplanatory with exception of the Bright knob, which pulls in a circuit designed to accentuate treble and the beginning of each note for more attack. Distortion is what it says it is, but more of this later. The reverb is a spring unit which in use was very well isolated to avoid crashings and clangings from movement and vibration. The Pre-set volume is a simple godsend-operated by the rear-connected footswitch, it means you can always cut instantly to a pre-determined playing level - either louder or softer, as you like. A great idea for the gigging guitarist.

The rear connections are straightforward: the mains cable is permanently wired in, is ten and a half feet long (long enough, for once!), and ends in a moulded two-pin round plug (which can be cut off if you want to replace it with a three-pin flat plug, which would really be more handy). The voltage selector is of the screwdriver/coin type — a good guard against accidental voltage changes.

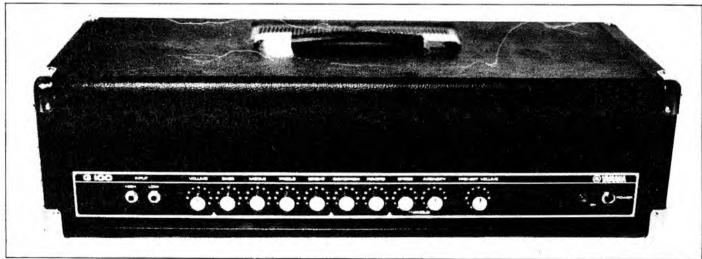
The two fuseholders (primary 2AT and secondary 4AT) must also be opened with a tool, which might not be so convenient during the bustle of a gig. Next is the Record Output at -6dBm for connection to 600 ohm line inputs on recorders or other amps - again, a standard jack. In fact, this output will be a bit high for some domestic machines and an attenuation network might be necessary - check your specs. The pair of speaker jacks are red-collared, the first for 4 to 8 ohms and the second for 8 to 16 ohms. Last in line are the

four standard jack footswitch inputs: Distortion, Reverb, Tremolo, and Preset Volume. The footswitch can cut in or out any two of these facilities, and the footswitch jacks and buttons are coded red and white to help you remember which button controls which facility. Just above the rear panel are plastic winding pins for the mains cable.

But now the problematical part: the usage test. As always, I used both Les Paul and Strat, and the G100 drove enclosures containing a 15" Maclab and a 15" JBL. All the amp facilities worked perfectly. The G100 is a good loud amp with a pleasant lack of hiss, hum, and gurgles. I thought the bass control could be a bit more useful, and the reverb didn't seem deep enough when flat out. One other problem: I didn't like the sound.

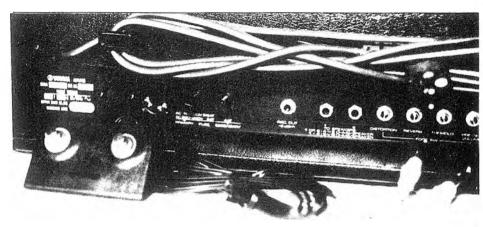
Conclusion

Amps, like everything else, are a matter of subjectivity and personal tastes where the sound is concerned. It is probably that many musicians will try the G100 and disagree with me by their adoration. (Further to this Soundcheck, we tested the amp through a Marshall 4x12 cabinet with a Yamaha SF500. Through this set-up the amp gave an acceptable "valve-sound" with lots of bite. There seemed to be bags of power and "punch". With most of the tone controls set on half and the volume on about 3 or 4, it sounded not unlike Clapton's sound on the Bluesbreakers album. We concluded that, to our ears the G100 was as good as, if not superior to, many similarly priced solid-state amps on the market. The pre-set volume is the best additional feature we've seen on any amp). However, I found the sound dead, characterless, flat, trebly and jangling without real bite, and to me, the distortion circuit offered neither



rasp nor whine, merely roughness.

The only sound I was able to get out of the G100 that I liked was at very low level with no Brightness, Reverb, or Distortion, using the Strat — a sort of muted sweet and full sound something like Clapton's sound during the solo in "Lay Down Sally". As far as I can recall, this particular sample reminded me strongly of the first attempts at solid-state group gear about ten years ago. Unless my ears have gone on work-to-rule, Yamaha might want to re-examine the design of the G100, and any interested customers would be well-advised to give it a good long play in the show-room before parting with any money.



PARAMETER	RESULT	TEST CONDITION	COMMENTS
Specific power output Watts (RMS) Ref. 1.0KHz	110.25 W r.m.s. 63.28 W r.m.s. 42.25 W r.m.s.	Onset of clipping into: 4.0 ohms Onset of clipping into: 8.0 ohms Onset of clipping into 16.0: ohms	Very good, Manufacturer claims – 100 W r.m.s. @ 7% T.H.D. into 4,0 ohms. The G-100 power stage is originally equipped with two "SANKEO" — 2 SC — 158 G silicone power transistors, and the amplifier head will deliver its ful 110 W r.m.s. specific power into any speaker load 4—8 ohms nominal impedance (both ¼" jacks combined load)
Total Harmonic Distortion THD (%) Ref. 1.0KHz	3.05% 2.01% 1.56% 1.23% 1.18% 1.15%	@ 100.0 W r.m.s.) @ 80.0 W r.m.s.) Into @ 60.0 W r.m.s.) 4,0 ohms @ 40.0 W r.m.s.) Ref, @ 20.0 W r.m.s.) 1.0 KHz @ 10.0 W r.m.s.)	Apart from measured T.H.D. figures the 6-100 incorporates a special DISTORTION circuit which introduces "natural distortion, not a fuzztone at virtually any power output level and by experimenting with different DISTORTION and VOLUME settings — variety of effects can be obtained from normal sustain to a Screaming rock sound"— as the manufacturer claims
Input Sensitivity for 100.0 W (RMS) output Signal Ref. 1.0KHz	41.5mv r.m.s. 20,8 mV r.m.s.	Low Input) Ref. 1.0 KHz into 4 ohms Bass/Middle/Bright — at 5 Treble — at 2. High Input Volume — at 9,	Manual states: Low sensitivity — 32 dB (20, mV) — High sensitivity — 38 dB (10, mV) @ 1.0KHz with volume and tone controls at maximum! Our figures refer to the same rated output power however volume and tone controls are set as shown in "test condition"
Tone Controls Range Swing in [dB]	23.8 dB — swing 13.6 dB — swing 32.1 dB — swing 8.6 dB — swing	Bass @ 50 Hz (*) Middle @ 400 Hz (**) Treble @ 5.0 KHz (***) Bright @ 5.0 KHz (****) (*) — Bright (5), Middle (5), Trelbe (0) (**) — Bass (2), Treble (0), Bright (5) (***) — Bass (0), Bright (0), Middle (0) (****) — Bass (0), Treble (0), Middle (8)	Nice and symetrical. Tone controls, provide a wide variety of equalisation curves with "BRIGHT" control which emphasizes the beginning of each note for bright effect, especially where combined with pick attack. Bass control with its 23 dB — swing @ 50Hz could be slightly more effective fo some applications in my opinion.
Signal/Noise Ratio in [dB]	85.35 dB	All tone controls — flat position. Distortion/Reverberation — OF F	Very good.
Input Impedance	Approx, 1,0M ohms Approx, 130.0K ohms	High InputLow Input	Both input sockets (%" jacks) may be used simultaneously, thereby providing equal gain
Tremolo Intensity	0-80%	Ref. "Tremolo Speed" 2–20 Hz	The intensity control varies the depth of the effect from "NO TREMOLO" to 80% (Maximum) of modulation. For remote operations — fast switch socket provided (%" jack) on the rear panel.
Record Output Level	–6.5 dB nominally	600. ohms – unbalanced	For connection to 600 ohms line input of tape recorders, or for additional amplifiers. When using non-professional tape gear — a 10. dB attenuation pad will prevent input overdrive
Capacitive Load Test	OK	2uF — capacitor and 4.0 ohms dummy load	Excellent stability
Short Circuit Test	30 second		No ill effects, however output stage heatsink heats-up quickly!! Worked normally when short was removed.



TEST ON: Aria 9210 Acoustic Guitar

PRICE: £82.92 (ex. VAT) DATE: February 1978

Introduction

I haven't seen any new Arias about for quite a while. I may have missed a few in between, but the last time I saw any large numbers of them, they were being endorsed by John Pearse and imported by Rose Morris. The new range of Arias are quite different from the earlier ones and illustrate the changes which have taken place in Japanese guitar production in the intervening years.

If you examine subtleties of shape and tone, and the exact style and detail of the decorations, the new Arias have come closer to the patttern set by Martin Guitars in the USA. The present Aria range in England includes about 6 Steel-string Acoustics: this 9210 is one of the cheaper models.

Construction

In common with many similar Japanese instruments, most of the body of this guitar is made from laminated woods. This means that thin veneers of various woods are glued together rather like commercial plywood, but usually with an emphasis on different properties. (For example, plywood for guitars needs to have a good-looking outside veneer and controlled vibrational properties, but does not need to be weather-proof). In spite of the fact that plywood is usually made from at least three layers of wood, it wastes far less of scarce instrumentmaking timbers than the thin sheets of solid wood used by traditional instrument

Plywood (or laminated wood) is also much more stable to changes in climate, and needs only a minimum of storage and seasoning before it is fit for use. It is easy to see why, for these and other reasons, laminated woods are very popular with makers of fairly large quantities of guitars. Apart from anything else, if all the major guitar factories used solid wood for their guitars, even in Japan alone, they would soon use up the entire World supply.

If guitars are to be made in such large quantities as they are at present, most of them will have to be made from laminated woods. As with many technological advances, the theory can approach very close to perfection: in practice however, good results from laminated guitars require just as much, and possibly more care, than good results from traditionallymade guitars. This care is not always found in large-scale production, and the others are dull and unresponsive. I presence or absence of such care is one explanation of why some laminatedwood guitars sound surprisingly good and offer very good value for money, while



suspect that many manufacturers do not have all possible variables under tight control and unwittingly make some of each sort of instrument.

Of the six Arias which I tried (at various prices) four sounded good, one was middling and one sounded rather dull. The order of performance was not exactly the same as the order of prices, although (non-laminated) soundboards tended to would agree with them. However, Ebony sound better than those with laminated soundboards. On my rather limited and there is only enough for very special sample, the guitar chosen for review guitars. Dying Rosewood black does not seemed to offer the best value for money give it the properties of Ebony, but amongst the cheaper models.

The back and sides of the 9210 are made from laminated woods with Rose- Rosewood fingerboards: Martin use them, wood on the outside and something similar to African 'Mahogany' on the inside. The soundboard is also laminated, consisting of two thin outer layers of spruce, with a thicker layer of some other pale wood in the middle.

The soundboard struts are spruce, while those on the back appear to be Obeche. This is a little unusual, and may be more fragile than the usual spruce or Mahogany back struts, but it does not appear to affect the guitar's sound. The neck of my sample is finished to a nice Mahogany colour and the wood has a very attractive 'flamed' grain pattern. To be fair, some examples may have this 'flamed' pattern and some may not.

Timber varies from one tree to the next, and while the effect is certainly pleasing to look at, it does not improve the guitar's performance. I think the neck wood is probably not a true Mahogany, but one of the similar, paler woods.

I have occasionally had troubles with similar necks on Japanese guitars, which may break level with the truss-rod adjustment pocket in the head. Obviously the necks don't break themselves - guitars are dropped from time to time, whatever one would like to think, but some of the substitutes for Mahogany are more likely to break across the grain, making good repairs more difficult.

Probably in an effort to make this range look more like Martins, Aria have moved the truss-rod adjustment point to the inside of the body, thus incidentally removing a major source of weakness in necks of this kind. The truss-rod adjustment is accessible through a hole in the internal strut running under the end of the fingerboard, just inside the soundhole. It is fust possible to make adjustments on this sample, but the hole in the strut is not in line with the adjustment point It is difficult to put such things right with wood-working tools because of the proximity of wooden parts, which require razor-sharp cutting edges, and metal parts, which destroy such edges. I keep a Dreme! tool and a few small burrs for this sort of job).

The fingerboard and bridge are the now almost inevitable black-dyed Roscwood. There is nothing wrong with this fingerboard; it is perfectly good Roscwood, and Rosewood is a suitable wood for making guitar fingerboards, but please let us not be under any illusions that it is Ebony. Equally, do not be under illusions that there is anything intrinsically better about guitars with black fingerboards. Some very expensive guitars have black fingerboards because they are made from Ebony and Ebony happens to be more-orless black. It is also very rigid and very hard-wearing and many people believe that good Ebony makes even better

the more expensive models with solid fingerboards than good Rosewood. I is very expensive and in short supply apparently it impresses some people.

There is nothing shameful about Guild use them. Gibson use them. None of these companies feels the necessity to stain their fingerboards black. If buyer and seller wish to play a little game of Charades, so be it. However, once there is black stain on a fingerboard, you may know it is Rosewood, but only an expert can tell whether it is good Rosewood or rubbish. The owner will probably find out, when the guitar needs its first refret, and this is usually well outside any guarantee period. I must emphasise that the fingerboards on all the Aria samples I have seen are of good quality timber, and unlikely to give trouble, and that artificially coloured fingerboards and bridges are found on many Japanese guitars. Aria are only following a recently-developed custom, and are not to be blamed for its origins.

Apart from the colouring, both bridge and fingerboard are made sensibly and neatly, and the frets and bridge fittings on my sample are rather better than usual on guitars in this price range.

Intonation at the 12th fret is as close as is possible with a conventional bridge and saddle, and has only the same limitations which are present in most Guilds, Gibsons and Martins. (The limitations exist, but most guitarists have learned to live with them). At the nut end of the fingerboard, intonation could be a little better. According to my cars, some open strings, particularly the second, are a little flat relative to fretted notes. Setting the nut involves a compromise, but I would prefer a different compromise to the one chosen here. It is quite possible that some people would not notice, and that others would adapt their playing and methods of tuning without being aware of it. I am certain that some players are aware of the problem which is apparent in varying degree on many guitars, and would appreciate any improvement in this direction.

The overall shape of the neck and fingerboard is similar to some early American necks which were close to a triangular cross-section. I find it equally comfortable with thumb behind the neck, or round the side of the fingerboard, so the shape would seem to be a good compromise between various requirements. This 'triangular' neck is distinctly different from the more usual Japanese Jumbo neck, which comes in various shapes between 'pointed end of egg' and 'blunt end of egg'. Although narrower, it is quite similar to the neck on my early 12-fret Martin 000-18. It is nice to see some individuality amongst middle-priced Japanese guitars, particularly when the result is very playable.

It is always difficult to describe the tone of a guitar. I think the closest decription would be somewhere between a

Martin and a Harmony Sovereign, It is probably at its best played fairly gently with light strings, when it is remarkably responsive. Very few laminated-top guitars can be "pushed" really hard without sounding confused, and although this guitar can be played hard, it is neither as loud as a good American Jumbo, nor are the notes of a chord as clearly separated. For this as well, you must be prepared to pay American prices, and even then, to choose carefully. Nevertheless, the tone is outstanding for guitars in this price-range, and the balance between bass and treble holds together reasonably well if you must play loudly on occasions. I would think the most likely applications for this instrument would be as a general purpose instrument for a singer/instrumentalist, and as a second guitar for a musician who already has a better instrument and finds most moderately-priced Jumbo's rather coarse by comparison. Although a little limited in volume, it is well-balanced and, unlike many similar instruments, sounds tolerable with strings which are not completely fresh.

For professional use, even as a second guitar, something must be done about the nut. Some of the strings creak while being tuned, and the second string in particular could provide convincing sound effects for a ghost story. Tuning on this string is difficult, and unstable. For some reason, the bottom three strings do not suffer from this problem. The problem does not lie in the machine heads. Although of fairly simple constriction, all six units work very well. Finish.

The finish on this model, and on all the other .Arias I examined, is very good. The only bit of visual design which I think lets the instrument down, is the joint between the head edging, the fingerboard edging and the nut. The overlap between the two edgings looks unbalanced, and lacks the finesse obviously present in other parts of the guitar. If the head were faced with a thicker veneer or veneers, the two edgings would line up better. This is only a visual feature and is not of great importance. Conclusion

This is a nicely made guitar in the lower-to-middle price range. The nut needs attention, but apart from this, the review sample meets most basic professional requirements as delivered from the importers. If you want a working guitar rather than a decorated one, I don't think you could find better value for money

Measurements on Aria 9210

Scale length	651 mm
String spacing at bridge	54mm
String spacing at nut	36mm
Fingerboard width at nut	42mm
Action as supplied	1.6mm Treble/
• •	2.2mm Bass

This should be quite low enough to satisfy the majority of players. A lower action would be possible, but would require some work on the frets around the body joint.



delfts GUITARCHECK

TEST QN: Shergold Custom Masquerader 12-string electric quitar

DATE: February 1978 PRICE: £166.78 (ex. VAT)

This review is a little unusual in that it concerns two samples of the same model. Although limitations of time and practicality make it impossible to guarantee that a review instrument represents a typical instrument of that model, I am satisfied that most instruments sent to me for review have been selected at random. In a very few cases, where I have felt that the review sample was significantly better or worse than average to the extent that a review of it would be unrepresentative, and not in the interests of our readers, I have asked for a second sample.

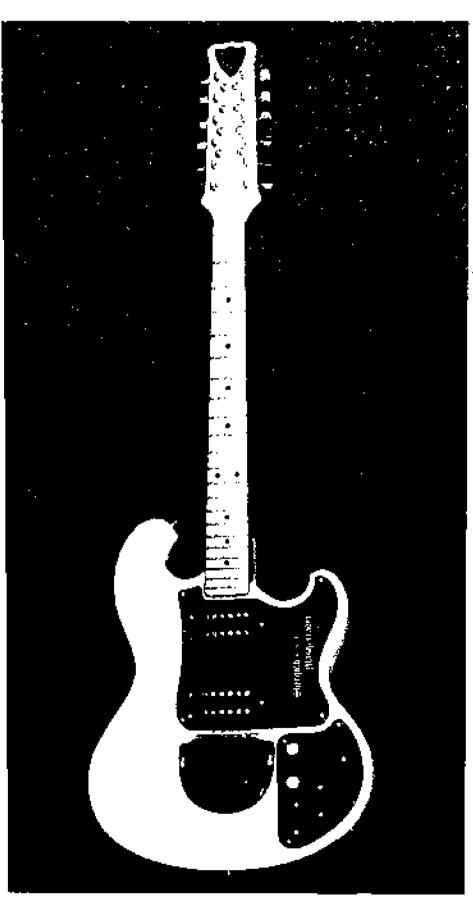
In this particular case, the situation is slightly different. The instrument has been in production and on sale for some time, and the sample which was first sent to me had, in my opinion, certain features which were undesirable, or unnecessarily inconvenient for the player, After I received my sample, I queried these points with the manufacturer, who told me that he was now producing a new and improved model. While I am pleased to be able to inform you that the new version is significantly improved, I cannot ignore the possibility that some of the earlier models may still be on sale in music shops. Under the circumstances, I think the fairest thing for me to do is to review both versions of the Custom Masquerader 12-string, beginning with the earlier version, which was the one originally sent for review.

Shergold Custom Masquerader 12string Ser. 8032

The first thing which struck me about this instrument was its very clean and neat finish. On further thought, it occurred to me that unless one can afford very high prices, it is difficult to find a good electric 12-string. Outside London, it may be difficult to find any sort of electric 12-string, irrespective of price.

The popularity of the electric 12string seems always to have been subject to changes in fashion. It was first made popular by its part in the distinctive sound of the American band, The Byrds, for whom Rickenbacker made what was to be probably the first such instrument in commercial production, Since that time, the electric 12-string has flickered between fame and obscurity, though frequently at different times in different countries. It is just possible, if a sufficient variety of instruments should be available in a reasonable price range that the time is ripe for another 1'2-string revival.

I think it is fair to assume that a large proportion of the people who might



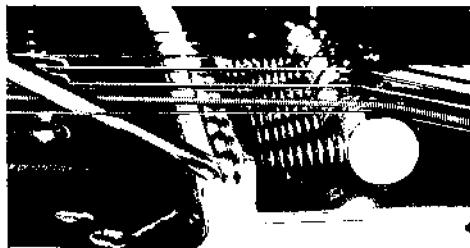
be interested in an electric 12-string have already been playing a standard electric 6-string, and the additional finger-pressure needed for any poorlyadjusted 12-string instrument may come as an unpleasant surprise. The difference in playing technique can be kept to a minimum by using a very good neck, with a comfortable shape at the back, a straight fingerboard, light, well-balanced strings and a low action. A low action will require accurately-finished frets for a reliable performance, and the use of light strings, together with the inevitably greater problems of tuning pairs of strings, will require that the frets are finished to a uniform and low profile above the fingerboard. On a 6-string guitar, it may be possible to compensate for the sharpening of notes when using thin strings and high frets, but if a 12-string is to be as easy to play, the strings must be even thinner.

A further complication is that you are unlikely to be able to press equally hard on each of the two strings in any pair, and any variation in pressure will produce a difference in pitch between the two strings. Reducing the height of the frets is probably the easiest way to minimise the effect of left-hand finger pressure on pitch, but if fret height is reduced to a minimum, it is essential that the frets all have a suitable profile and that the fret work is right first time. There is unlikely to be enough metal left for a second try.

If you add to this the additional problems of fitting twice as many strings into almost standard-sized nuts and bridges, and the fact that very thin strings tend to show up any inadequacies in the making or fitting of the machine heads, you will appreciate that it is a brave man who attempts to make electric 12-strings in any reasonable quantities. Making one faultless electric 12string is considerably more difficult than making one faultless electric 6-string, and the prospect of having to make a hundred of them is the sort of thing which would probably drive me to drink. I suspect that the larger companies have taken a similar view of things, and with the uncertain demand for electric 12-string instruments, have only produced them in very limited quantities, or as 'specials' for important people. Either way, such instruments are absurdly expensive and usually quite out of the reach of the ordinary musician who might consider a 12-string as a second instrument.

What is needed, is a well-made and attractive instrument at the same sort of price as a middle-quality electric 6-string. I have certain reservations about this early model Masquerader (which are mostly answered in the design of the new model), but generally speaking, a wellmade and attractive instrument at a reasonable price is exactly what Shergold are offering, and I wish them well with it.

My sample has the body finished in high-gloss white, with a clear lacquer finish on the maple neck and fingerboard. The neck does not appear to be absolutely straight, but the lacquer on the fingerboard may make appearances



Early type of bridge

deceptive. (I have seen other Shergold guitars which appeared to have perfeetly straight necks and one sample only whose neck and/or fingerboard significantly uneven). On the review sample, the 'filing' and shaping applied to the frets after fitting has made insignificant any error there may be in the neck or fingerboard, and a very low action is possible with no suggestion of fret buzz. This is more important than the apparent shape of the neck.

The tops of the frets are rather squarish. I personally prefer more rounded frets but it requires much more work to finish them properly, and rounded frets usually wear down faster, and require dressing again. As there is a limit to how many times one can dress frets which are already low, it may be more sensible to finish them with 'square' tops. Some people prefer frets finished this way; others have been put off by badly finished 'square-top' frets which have sharp edges and corners. These frets do not have sharp edges or corners, and do not catch your fingers as you slide over them. The edges of the fingerboard are bound with black plastic strips which overlap the fret ends. It is normal for slight fingerboard shrinkage to occur in some climates, and if the fingerboard edge is bound in this way, you will not suffer sharp fret ends projecting from the edges of the fingerboard.

This instrument uses the principle of a "zero" fret at the nut position, preceded by a spacer-nut, which does not support the strings, but only keeps them correctly spaced from each other. It is customary for the zero fret to be a little higher than the other frets to ensure adequate string clearance over the first fret. It is possible that the zero fret on this sample is a little higher than strictly necessary, but I found no difficulty in playing at the first and second frets with the strings supplied. There could be some difficulty with heavier strings, but as the instrument works well enough with light ones, it seems of little significance. I would expect a high zero fret to present some intonation problems in the same way as high string slots in a standard nut. However either the problem does not occur for some reason, or it is masked by the slight variations in pitch of the string

Some of the strings make a relatively

the hold-down bushes on the head. If you pick the (supplied) strings hard, it is possible to see and feel some sideways slip of the strings on this fret, which might under some circumstances spoil the sound of the open strings. As a point of design, I should prefer to see a larger 'string-break' angle here, but in practice this is an electric 12-string and, with light strings, it is neither necessary nor desirable to pick the strings hard. Incurable guitar-threshers may need some modifications to the nut assembly, assuming that the strings are not already buzzing everywhere else under this treatment. While on the subject of strings, the set supplied seems to be similar to Ernie Ball Slinky 12's, and the two G strings are in unison, not in octaves.

The machine heads fitted are the Schaller models with black nylon bodies. Even apart from questions of cost, fitting metal-body Schallers would make the instrument balance neck-heavy, I have found that I have to be a little more selective about machine heads these days. Either quality has gone down, or expectations have gone up - possibly some of each. On this sample, machines 1 and 11 are noticeable rougher than the others and there is some play in the mechanism of No. 8. This is not caused by strings sticking in the nut or on the zero fret: both items support the strings so they can move smoothly for tuning.

A very minor point at the other end of the guitar is that the jack plate, which is strong and well-finished, is not quite the same shape as the edge of the body, and does not fit flush. On this sample, it does fit neatly along the back edge of the guitar, and so is unlikely to catch on clothing. If on other samples, the plate has a gap at the back edge, it could become entangled with a wide sleeve or a hairy sweater. (Those with widesleeved, hairy sweaters, take particular care).

The electrical system on the Masquerader will be familiar to some owners of other Shergold models, but is a little different from the usual American and Japanese practice. The control panel has three selector switches and two rotary control knobs. Each pickup has a 3-way switch which arranges the coils in series, parallel or out of phase with each other, (or some very similar arrangement). This gives a standard humbucking sound, a small angle over the zero fret in spite of brighter sound, and a much brighter



sound with less bass in the central Masquerader:- A rather nicely-made and position. The central position on each versatile guitar but let down by the early pickup appears to provide less output form of bridge assembly. than the other two positions, and also appears to have inferior hum-cancelling properties. The third switch selects either pickup or both in the usual manner. Between the three switches many different combinations are possible, which may be further adjusted by the overall volume and tone controls.

The bridge assembly consists of a base plate with a turned-up lip on the side nearest the pickup and six adjustable grooved string barrels. Through the lip in the base-plate pass six screws with springs over their shafts which are threaded into the string barrels and serve second review sample. With this simple to move them backwards or forwards modification, the bridge is now as easy against the spring tension.

This is the adjustment for the accuracy of the octaves at the 12th fret. It is quite an important adjustment, and as you will see from the photograph, the obvious method of adjusting these screws adjusted at the body end of the neck, via has little chance of success unless a slot through the body next to the one removes the screws and slots the ends plate for the neck-fastening screws. This to take a small screwdriver. (On later is covered by the smaller plate which models of this instrument the problem bears the guitar's serial number. I have has been solved very neatly as I will always felt that a slot through the body explain below).

each string pair, and therefore the 'action' definite evidence to support this and it for that pair is adjusted by two small remains only a personal opinion. However grub screws passing vertically through on the new models, there is no slot under each barrel. At certain bridge settings, it the number plate, and the truss rod is is possible that the 'high' string of the adjusted at the head end with the Allen bottom four pairs could foul the sides key supplied. I would in general suggest of the left-hand screw holes, as the that truss rods are left alone unless it is countersinks around these holes overlap clear that they require adjustment. the string grooves. This did not occur on the review sample at any normal and slight problem of tolerances between the reasonable bridge settings, but the clear- Shergold's jack socket, and one fairly ances involved are very small, and normal typical Japanese jack plug. If this plug production tolerances could make this is pushed fully in, the signal is cut off. a source of unexplained buzzing on other An English-made plug, and a Japanese samples.

Conclusion on the early model perfectly. The non-connecting plug

And now the new, improved, model Masquerader — Ser. No. 8070

This is basically the same instrument, with modifications to truss-rod and bridge assembly. The bridge assembly looks much the same as before, but the 'octave' adjustment screws are a little a shorter, and the more accessible threaded ends have been drilled out and broached to fit a small Allen key. This appears to be the same size and type of key as the one used to adjust Fender bridges. Two keys of this type were supplied with the and straightforward to adjust as any other similar types.

The change in the truss-rod arrangements also appears to be entirely bene- this, but I have the impression that the ficial. On earlier models the truss rod was at this point presents a weakness in the Also on this bridge, the height of design, although I have never seen any

> On this second sample, there is a plug of a different type, both connect

is one which I have been using to test guitars for several months with no prolems. As it also fits the first Shergold sample: I think the second sample may need a slight adjustment to its socket. On this second sample also, the jack mounting plate does not appear to be quite the same shape as the curved edge of the guitar body, and presents a slightly 'unfinished' appearance.

The machine heads on the second guitar are better, but one or two of them could not honestly be called smooth. Considering the use of very light strings on this instrument and the intrinsically greater problems of tuning a 12-string, it is particularly important that the machine heads fitted should be smooth, and uniform in operation.

On this instrument, the strings fitted by the maker have an octave pair for the G course, not a unison pair as on the earlier model. Electric 12-string sets are available with both sorts of third pair and, as there are advantages to each arrangement, I would suggest you try them both.

There is a small point concerning the pickups fitted to Shergold guitars which may be of interest. The polepiece screws are often very stiff from new. If you wish to adjust them, first unscrew them through half a turn with a large and well fitting screwdriver. This will reduce the stiffness and they can then be adjusted with the usual small screwdriver.

Conclusion on the new improved Masquerader:-

This is also a nicely-made guitar at very reasonable price. The bridge assembly is no longer difficult to adjust. and the more conventional truss rod assembly will be more easily understood and therefore less likely to be wrongly adjusted. The re-arranged truss rod no longer needs an adjustment slot in the body and this must surely result in a stronger and more rigid neck joint. The neck on this second sample is rather better than on the earlier sample, but the frets are not as uniform in shape,

I cannot be entirely certain about new, improved model is a more lively and responsive instrument than the earlier one. It may be that the body is made from a different timber, or possibly that removing the adjustment slot near to the neck joint has made this improvement.

Either way it is a pleasing instrument, it is all British-made apart from the Schallers, and it is very good value for money.

Measurements on Shergold custom Masqueraders Ser. No's 8032 and 8070 Scale length

String spacing at bridge (centre of first pair to centre of 6th pair)

52mm String spacing at nut 34mm Fingerboard width at nut 42mm Action as supplied

First sample 1.6mm treble/ 2.0mm bass Second Sample 1.2mm treble/ 1.6mm bass

Dave Simmons is an expert on synthesizers. He understands them both musically and tech. lar to each other being Sawtooth waves. nically and his background has made him uniquely qualified to be I.M's Synthesizer Consultant. The difference in tones is achieved by Dave's a musician and a technician. He studied classical piano and organ as a child later devel-different mixtures of footages and pitch oping into synthesizer and rock. His musical achievements include playing the massive synthesizer modulation (vibrato) and E.Q. In fact, part in David Bedford's "Odyssey" and his technical background included a thorough training in all the '2' sounds i.e. Brass 1 and 2, are practical and theoretical electronics. For two and a half years he was UK Service Manager for the same as the 1 sounds apart from ARP Synthesizers and today he's a partner in a highly specialised company called Music Aid in having less treble content so they sound St. Albans, Hertfordshire where he undertakes all types of synthesizer modification and servicing, mellower,



Korg synthesizers are made in Japan by the Keio Electronic Lab. Corporation in Tokyo and they have earned a reputation for producing reasonable synthesizers at prices that the average musician can afford. Recently, as with most synthesizers manufacturers, they have brought out a range of 'Polyphonic' synthesizers (Polyphonic, means that all the notes on the instrument can sound simultaneously) The Polyphonic Ensemble PE 2000 reviewed here, is one of their new units.

The ensemble is completely preset, apart from superficial controls, so there is no way of altering the basic sounds produced by the ensemble that have been built in by the manufacturers The tones available are labelled REED, WIND, CHORUS 1, CHORUS 2, BRASS 1, BRASS 2, STRING 1, and STRING 2. front panel. Only one sound at a time can be selected.

There are two sets of tone generators a separate 'Tune' control enabling the player to slightly de-tune the two banks of generators which means that the two sounds are constantly moving against each other in and out of phase - this produces a pleasing 'live' sound, rather like the two strings per note on a twelvestring guitar.

There is also an overall 'Tune' control which enables the whole instrument to be tuned to other instruments, although the range of the control is only a quarter tone sharp and flat from concert pitch. If you tried to tune it to many of the pianos in clubs, pubs and church halls up and down the country, which are invariably a semitone or tone flat you would be in trouble!

Attack and Sustain

There are two controls marked Attack and Sustain. Attack being the time from when a note is played until it reaches maximum volume and Sustain being the time it takes for the sound to die away when the note is released. The Attack time is variable from instant to around five seconds, the decay time from .2 seconds to 3 seconds. The attack These are arranged in a series of latching of the instrument is interesting because, push buttons across the centre of the unlike many string ensembles that have an 'overall' attack or crescendo control, the attack time on the Korg is separate for each note, i.e. If you are holding a inside the instrument, each of which has chord and play another note, that note swells up in the time set by the attack control, you don't have to release the whole chord to re-trigger the attack envelope although the opposite is true for the decay - this is fine for single note instrument, if slightly limited in the playing as each sound dies away after the note is released, but if a chord is Japanese instruments excellent value for held, the decay time reverts to mini-

mum, dying away quickly as each note is released — most odd!

Although there are these external controls available for attack and sustain characteristics, the preset sounds have their own envelope shapes i.e. Brass 1 and 2 have a hard attack dying away quickly to a sustained level whereas the String presets have a straight 'on and off' envelope.

The sounds themselves are very simi-

Other Features

At the left hand side of the instrument is a stereo jack socket for headphones which gives ample volume for monitoring and silent practice. Also built in to the instrument is a single control phaser, which has it's own separate output at the rear and when used with the 'straight' sound and fed into a separate amplifier can produce some very interesting 'panning' sounds. The phasing is deep and smooth and the speed is variable from 1 cycle per three seconds, to five times per second, the phasing became less apparent at the faster speeds. There are also Treble and Bass controls built into the unit of the cut and boost variety found on most amplifiers, with a 'flat' position when set half way.

Using The Polyensemble

The instrument has obviously been designed as a 'textural' unit, solo lines, especially fast ones, do not suit it because of the blurring effect of the notes dying away, even with the sustain control at minimum. However, with judicious use of phasing, echo and reverb, church organ sounds, strings, and massed choirs are obtainable. Probably the most useful setting is the Chorus, which when mixed well back with reverb, approached the sounds of the multi-tracked voices on 10cc's 'I'm not in love'.

An expression pedal is supplied which is connected to the rear of the instrument by a five pin Din cable. On all the voices apart from Brass 1 and 2, it acted as a straight volume control. On the Brass settings it had the additional effect of sweeping the resonance frequency of the iternal filter, rather like a mild 'wow' pedal. The pedal itself, I found difficult to use as it is fitted with an ON/OFF switch at the front of the pedal which just switched the unit to maximum volume. I kept accidentally pressing the switch and finding that the pedal was no longer operating. I would have thought that it could have been more usefully employed, switching the phaser or the modulation on and off perhaps the one I tested was faulty but as no manual was supplied I have no way of telling.

Conclusion

In conclusion then, a useful chordal sounds it can produce, but as with most



mattacks'

Dave Mattacks is one of Britain's top session drummers, who has worked extensively with dozens of top artists. Dave is a full time member of the Albion Band. He has been playing drums for 14 years and was with Fairport Convention between 1969 and 1974

DRUMCHECK

TEST ON: Premier B203 Resonator Kit with Trilok Stands

DATE: January '78 PRICE: £555.45 including VAT

Introduction

Approximately six years ago, Allan Gilbey was constantly telling Kenny Clare he had an idea to improve Kenny's drum sound. Although satisfied with his sound, Kenny finally relented and let Allan put his idea into practise on one of his kits.

The basis of the idea was to take a finished drum and insert and fit another shell inside the existing one. This inner shell was/is a piece of three-ply birch sprung open inside the assembled drum and attached to the glue rings at each end. The interior shell "breathes" and vibrates independently of the exterior as there is a small sound cavity between the two and this interior shell effectively covers all the hardware and fittings inside the drum. This enables the sound to travel through a completely bare cylinder.

Kenny Clare road-tested the kit with very positive results and he and Allan Gilbey took the drums to Premier. Premier bought the idea and, in early '73, the first Kenny Clare Resonator kits became commercially available. Their acceptance over the last few years by, in the first place, Kenny, and subsequently many other highly-respected drummers has helped them to make their mark in the drum world. Now simply known as the Resonator kits, the drum sets have been updated with Trilok stands, a new badge and a new range of finishes designed exclusively for them.

Premier decided against making a Resonator 5" snare drum — too small a drum for the difference to be radically noticed — so their "35" metal shell snare is supplied with all kits.

Sound

The sound of the kit strikes me as being well-suited for live work where it's essential to project - being unmiked with a loud band, for example. The toms have an extremely live sound and feel to them, with a tendency to be a little tympani-like at times. The bass drum, like the toms, has a "boom" to it and is very loud. I moved the felt strip on the back of the drum more toward the centre, not to dampen the drum more, just to harden the impact sound a little. Because of the difference between these shells and more conventional ones, I feel their special sound characteristics could be further experimenting enhanced by different weights and types of heads (especially on the bass drum) depending on the circumstances under which the kit is to be used: studio, miked-up live, etc., etc. The snare drum, had a bright, snappy sound with a definite "cut" to it, but whether tensioned high or low, it did seem a little thin-sounding to me lacking a depth, a "fatness" of tone.

Snare Drum

Premier's popular "35" model is standard with Resonator kits. The 51/2" aluminium shell is made in one piece. The flanges are set at a shallow angle, 30 degrees I believe, and the bearing edges are rounded off. Ten doubleended lugs are each fitted to the shell by one self-tapping screw which goes through the centre bead. The shaped lug fits around the bead and a large washer underneath the head of the self tapper keeps the lug in place. Theoretically, this method of attachment has no faults, but I'm personally not keen on it - preferring two screws fitted to the lug, one either side of the bead,

The threaded inserts are kept in place without springs, preventing unwanted resonances from being set up. This is standard on all their lugs. The snare release is the regular side-drop, cam action type with an adjustable tension cast lower section which holds the twenty strand snares in place. The whole thing works smoothly and looks very smart. The 20 tension rods are square-headed; the rest of the kit has slot-headed rods. Premier have yet to fit either one or the other as standard to the whole kit, so unless you specify your preference when ordering it's necessary to carry two different keys an inconvenience. The damper (the same type is fitted to the toms) is the "V"-shaped piece of sprung steel type and is reasonably effective. A slightly larger knob and a larger felt would improve matters. Triple flanged steel hoops are fitted and the batter head is a Premier Plus 75,

Tom-Toms

The two toms are 13" x 9" and 16" x 16". The 13" has six double ended lugs (six per head); the 16" has sixteen single lugs (8 per head). Premier's cast Mazac counter hoops are fitted to both drums as are slot-headed tension rods and internal dampers. The blocks fitted to the floor tom to hold the wide-angle legs are the indirect pressure type with an eyering inside and a substantial wing nut that makes tightening very easy. These blocks are fitted to the hanging tom for the holder and to the bass drum for the spurs.

The air hole on the toms (and on the bass drum as well) only exists on the outer 5mm birch shell and isn't drilled through the inner resonator. As I mentioned earlier, the inner shell vibrates independently of the exterior, so the air build-up between the two surfaces is expelled through the one hole. I'm not too sure of the validity of the principle of the one air hole, as the inner shell is

"interrupted" where it is out (I) on the toms to fit the damper and (2) on the bass drum to fit the stem of the tom-tom holder, i.e. air passes between and through the two shells where these fittings are mounted.

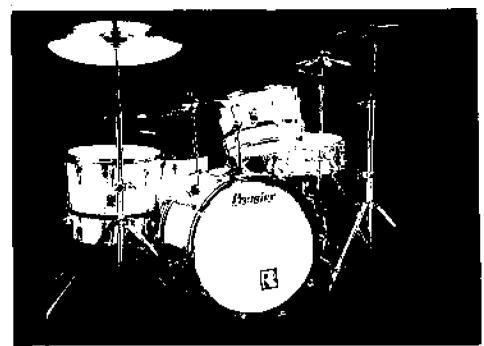
Bass Drum

The 22" x 14" bass drum has ten double ended, self aligning lugs stretching across the shell, twenty tensioners and cast claws. The "L"-shaped tensioners look very smart when they're all parallel to the wooden hoop or pointing "inside" the drum head, but if you want to tighten the head just a little, half of them will end up sticking up in the air. They're also annoying when it comes to removing the head. The spurs are the out-rider type - very efficient. Something I particularly liked was the short cymbal arm on the bass drum which puts the ride cymbal at a most comfortable playing position. The block fitted to the shell that holds the arm has a slot-keyed screw and a wing nut, both of which tighten directly onto the arm. I would have thought Premier's excellent eye-ring and wing nut type block would have done the job equally well if not better. The drum is fitted with Everplay Extra heads.

Accessories

The main aspect of updating the Resonator kits is the inclusion of the new heavy duty Trilok hardware: two cymbal stands; snare drum and hi-hat stand and the "252" bass drum pedal. These stands have been out around five months and are Premier's answer to the heavy duty stands now commonplace on contemporary drum kits. They are all tripod based and have four things in common. First, the legs are all made from "U"-shaped steel which ensures great strength and stability without excessive weight. Secondly, at the bottom of each leg is a self-levelling threaded rod that ends in a sharp spike. A rubber foot fits around this rod and, by turning it, the tip is covered or exposed. This is a great advantage, especially on the front leg of the hi-hat and on the snare drum stand. The third common factor is the height adjustment method. This is a modernized version of the old Walberg type - a split tube with a wrap-around clamp. Each section has two vertical splits in the tube and a clamp through which a substantial wing nut passes and forces the two halves together, squeezing the tube inside it. No direct pressure is applied, therefore the tube cannot be scarred. All height adjustment stages have short plastic inserts to take the wear, and these can be replaced if necessary. Lastly, all the wing nuts employed are very large and efficient.

A point regarding the "U"-shaped



legs — when these stands first came out I found the edges rather sharp when I attempted to open or close the bases, but when I visited the Premier factory for this check I noticed the edges were blunter. I assume the risk of fingers being caught was realised and blunting those edges helps make the opening/closing operation a bit safer.

The snare drum clamping mechanism is similar to the Lokfast; there are two fixed basket arms and a wing nut which screws through a fixed nut and pushes the third arm up to grip the drum. Unlike the Lokfast, the length of the third arm is adjustable, enabling the stand to be used for 12" through 16" diameter drums. The angle adjustment is new. A vertically movable clip is fitted around the top tube. To this clip is fitted a small arm, the other end being fixed to the cradle. As the cradle tilts, the arm pushes the clip up or down the tube. When the clip is squeezed tight around the tube by a small wing nut, the angle of the cradle is secure. A great idea and foolproof.

The cymbal stand is three tier and the top section has a ratchet tilter that's detachable should you wish to replace it. The stand extends to well over 5' and the largest cymbal would be quite safe mounted on it even when the stand is at its maximum height.

The hi-hat stand is a centre pull type with a large cast one piece footplate. The footplate is attached to the bottom of the tube with a plastic strap (unlike the usual metal link) which is adjustable for length. The action utilises two adjustable expansion springs opposite each other outside the tube, each joined to a threaded rod which fits into a plastic/metal assembly at the height adjustment clamp. A threaded washer fits on each rod above the assembly and when turned, pulls or releases the spring for tension adjustment. Another threaded washer acts as a locking nut underneath.

The top tube has a large plastic bottom cymbal cup with an adjustable tilter fitted. I must admit I like the trend by manufacturers toward larger diameter top tubes, but I feel that it's necessary to fit an internal centre rod guide lower down the tube to help prevent lateral movement of the rod. The top cymbal clutch has a decent size wing nut (at last!) for fixing its height to the centre rod and also has locking nuts to prevent the cymbal working loose. The action was very smooth and even with a quick "return" to it, belieing its very bulky appearance. The only negative aspect that occurred to me was that the external springs might become damaged if the stand was packed tightly into a case with a lot of other bulky hardware. Apart from that, a fine pedal.

The 252 model bass drum pedal has a cast one-piece footplate with an adjustable toe stop, similar to the Trilok hi-hat footplate, and its angle to the bass drum is adjustable by a large slotted disc - a feature I like on a pedal. It has a plastic strap and a single post at the top of which are the adjustment knobs for the compression spring and the mechanism which clamps the whole pedal to the bass drum hoop. I personally found the latter just a little too close to the bass drum head for comfort. The beater throw/stroke is adjustable via a splined ratchet and the felt beater rod is tapered - 5/16" diameter where it joins the pedal up to 14" diameter at the head. I'm glad of the move toward thicker beater rods, because if you play with a shaped beater head, the smallest bend in the rod can change the sound of the bass drum. The pedal has a fast, smooth action like the hi-hat and the adjustments available should suit any player.

The tom-tom holder is one of Premier's most popular items. An oval shaped tube fits into a block on the bass drum and the height is secured by two large wing nuts which go through the block at an angle and apply indirect pressure either side of the tube. At the top is a casting with a wing nut locked ratchet tilter and eye-ring device which holds an "L"-shaped rod. The other end of the rod fits vertically into the block mounted on the hanging tom. One advantageous feature is that the unit at the top of the tube is detachable by undoing an Allen screw, enabling you to substitute the top of a double tom-tom unit should

you wish to add another drum at a later date. The whole unit is most efficient and very stable.

Premier supply a very comfortable throne rather than a stool with their Resonator kits and while it does have the rather obvious disadvantage of fixed height, it looks great as its covering is matched to the kit. However, the claim that "you can put your stands in it as well" isn't really true, because even when folded to their minimum height neither the base of the cymbal stand nor the hi-hat fit inside.

Summary/Appearance

A set of Avedis Zildjian — a pair of 14" hi-hats, 2 18" crashes and a 21" ride — are an optional extra at £279.53.

Other sizes available in the Resonator range apart from those with this kit are as follows: bass drum 24" x 14"; tomtoms 12" x 8", 14" x 10" and 18" x 16".

The new range of colours are Polychromatic Silver, Polychromatic Black, Metallic Brass, Metallic Copper, Plain Brown and Plain Cream. The special design exclusive to the range incorporates a strip 13/16" wide inlaid 2/3rds of the way down the tom-tom shell. You can mix any two colours you wish; i.e., a plain cream shell with a metallic copper inlay. The kit I saw was finished in Polychromatic Silver with a black inlay and looked really smart. All the finishes looked very good indeed - metallic Brass the only one I had any doubts about, I hope that Premier get around to putting the inlay on the bass drum and the throne to complete the image. Because of the three different layers employed in covering, each section is glued all the way around the shell, not just at the join as is the case with their regular drums. Apparently, if you're prepared to pay the extra cost, you can have other drum sizes with Resonators and you can also have the exclusive finishes in the style mentioned above on ordinary Premier kits. but it's definitely going to cost you.

I must admit to having mixed feelings about the set. I certainly can't argue about the sound produced by such notables as Kenny Clare and Ritchie Hayward and I think the basic idea of the Resonator shells is excellent. However, as I mentioned about the air hole, the inclusion of internal dampers on the toms and a large tube through the bass drum for the tom-tom holder does seem to partway jar against the principle of the one piece inner shell. However, tomtoms without dampers and a non-disappearing tom-tom holder are less than attractive selling points on today's market, so from a commercial point of view, I appreciate Premier's position on this matter.

In concluding, I must admit this is a smart looking set with its neat RESONATOR badge just underneath the main Premier one. As expected, the chrome work and the hardware are excellent. The growing list of top players using Resonator drums combined with the company's reputation for quality and after-sales service is bound to make this kit another successful addition to the Premier range.



nattacks

TEST ON: Ludwig Snare Drums

DATE: February 1978 PRICE: See end of text



About a year and a half ago I heard were again to make a brass shell snare drum. The last time they were doing this was in the late '50's and early '60's and it was possible to buy a "400" model either chromeplated or with a light copper lacquer. The brass shell snare drum dates back a bit further than this period, however; Ludwig's early brass drums were made in the '20's. With the advent of the beat boom (sic) in the early '60's, a huge demand was created for the "400" and Ludwig realised that to meet this demand they would have to find another material for the shell, Subsequently, the aluminium shell "400" was born and is still with us today,

some rumours in the trade that Ludwig brass shell snare drums, I realised quite a while back from the way players revered the old brass shell "400" that it was a very special drum. Rich, Morello and Clare have all had them at one time or another; Kenny Clare has nothing but praise for the copper-lacquered model in particular.

> In April last year I went to the Ludwig factory, found the "Black get one for you, but – surprise – you'll Beauty" brass drum already in product- have to wait. ion, tried it and was very impressed. On my return to England in May, I found that very few people knew anything version of the popular "400". It's simiof the drum and I thought no more of lar in every way but for the one piece the matter until I was recently invited seamless shell which is made from a

Although other manufacturers make of Ludwig snare drums which included four brass shell models.

All but one of the eleven snare drums I saw are metal - there were no wood shell drums - so, strictly speaking, it wasn't the entire range. Apparently there's little or no demand for a wood shell drum these days, but if there's anyone weird out there like me who likes them and wants one, Rose-Morris will have to wait.

416/Supraphonic "Black Beauty" This is the 14" x 15" brass shell by Rose-Morris to see the current range single sheet of brass. This is given a

attaching the string to the snares. (It's a see-through head with a Silver Dot. a small point, but I didn't like the appearance of the earlier type with its dozen snare actions but I can't deny they're or so superfluous holes drilled in it. very popular with many players and These were only a throwback to the days because of the snare permutations availbefore snares had metal or plastic butts able with this particular drum, it does at each end and were tied to the strainer make it more versatile than the 400 by each individual strand). The action is type. The sound from this and the 61/2" very smooth and felt positive when version is excellent and I can't fault locked in the "up" position. Absolutely them in any way. faultless.

The damper is the "V"-shaped sprung steel type with a decent sized 400/Supraphonic Chrome round felt inside and a sensibly sized Silver Dot batter head.

I listen for in a snarc drum – it was crisp, chromed aluminium shell, the specifit didn't choke up, it "cut", it was loud, cation is the same as the 416. etc., etc. When I tuned it high it didn't 402/Supraphonic Chrome get thin and when I slackened off the batter head :.. In short, it's marvellous. A really magnificent drum.

417/Supraphonic "Black Beauty"

The 14" x 6½" version of the 416. The specifications are the same. The sound is tremendous - all the characteristics of the 5" but with that little extra depth/funkiness to it. It doesn't seem any less sensitive than the 416, aluminium shell with a parallel snare an unusual trait when comparing a 5" action and a regular ruff coated head. and a 6½" deep snare drum. The batter 411/Super Sensitive Chrome head is a ruff coated Ludwig.

418/Super Sensitive "Black Beauty"

This is the parallel snare release 5" 404/Acrolite brass shell model. It has the same shell

as are the other three brass shell models, tried and tested "Super Sensitive" type, flanges and a centre bead with 8 self-It has 45 degree inverse flanges with It's adjustable at both ends with a posi-aligning lugs different in appearance from rounded bearing edges and a centre bead tive on/off cam action and has a large the 400 type. The drum has the P-85 for added strength. The ten double protecting rod/cage at each end of the ended lugs are held in place with two twin sets of triple-swivel mounted selfscrews - not self tappers - and the aligning 12 strand snares. (This makes hoops and 20 strand snares with plastic, inserts are spring loaded. There are two it a 24 strand snare). The bosses of the small pieces of foam between each strainer are cast with nylon bearings and spring and the inside of the casing to the internal fittings are kept to a miniprevent unwanted resonance. The snare mum by utilising a 3/16" diameter rod release is the P-85, a slightly modified which fits from the on/off lever to the version of the familiar cam action side- other side of the mechanism. The snares drop type with adjustable tension. The themselves, which extend right across the modifications are: (1) the lever is slightly snare head, are interchangeable with longer bringing its head only slightly seven other different sets. These include a beneath the top of the counter hoop for set where each strand is individually easier access; and (2) the bottom cast adjustable and a set that combines wire section has only two holes drilled for and gut strands. The drum is fitted with

I'm personally not keen on parallel

419/Super Sensitive "Black Beauty" The 6½" deep version of the 418.

The 400 must be one of the most knurled knob outside. Like the strainer, imitated and popular snare drums in the simple, effective and efficient. The drum world. It's quite simply because it's a has the regular 7/32" whitworth square- great drum and I don't think there can headed tension rods, steel triple flanged be many drummers who haven't had or hoops, 18 strand snares and Ludwig's aspired to one during their playing careers. When I tried this drum out, I Of the eleven drums I tried, this is attempted to tune it as near as I could my favourite. I honestly can't enthuse to the brass shell equivalent. Although enough about the sound. The "400" I prefer the 416, I have to objectively has always sounded good to me (and to admit that there wasn't a lot between thousands of others!), but this drum them; the brass shell model has a drier, really takes the biscuit. It has everything warmer tone to it. Apart from the

The 6½" deep version of the 400. Again, a very popular drum due to the 419 - £224.00/400 - £123.95/402 demand for deeper snare drums. This, too, has a great sound although I noticed the difference between this and the 417 more than between the 400 and the 416. A ruff coated batter head is fitted.

410/Super Sensitive Chrome

The 410 has a 14" x 5" chromed

As the 410 but with a 61/2" deep

beautiful "black chrome" lacquer finish, snare mechanism, which is Ludwig's 5" one piece metal shell has 45 degree snare strainer, 16 square headed tension rods, internal damper, triple flanged not metal, butts. A ruff coated Ludwig CT750 batter head is fitted. The shell has a sort of light, sand-blasted finish to it which is quite unusual and looks good against the chrome plated hoops, lugs and fittings. Although one of the less expensive drums in the range, I think it has a really good sound and I would take it in preference to some more expensive drums from other manufacturers.

405/Piccolo

The 13" x 3" Piccolo is designed primarily for certain orchestral and recording situations where a high-pitched "soprano" snare sound is required. It is extremely lively and sensitive with an excellent response without being too The chrome plated shell is "tinny". made in one piece and is fitted with 6 lugs, triple flanged hoops, a small and efficient snare release, 12 strand snares and a ruff coated head.

407/White Vistalite

The only snare drum in the range I didn't like. I spent a long time tuning it and rarely did I get anywhere near to satisfying my admittedly prejudiced ears. I couldn't seem to rid it of an unpleasant plastic-y "boing" even when damped. The shell is 14" x 5", approximately 4" thick, is fitted with 8 self-aligning lugs, the P-85 snare release and triple flanged hoops. It also has an internal damper that has a small reinforcing plate fitted to the shell on the inside. If opaque plastic drums are your thing (a see-through model with internal flashing lights is an optional alternative), this is the one for you.

Prices and Summary

All prices include V.A.T. 416 £149.50/417 - £154.00/418 -- £220.00 £129.95/410 - £193.00/411 - £199.95 404 - £96.50/405 - £113.95/407 -£84.00.

I saved the prices till last as they are breathtaking to say the least, especially the 419! However, Ludwig snare drums are the Rolls Royce among their peers and you have to be prepared to pay if you want the best. I must single out the 416 and say that in my humble opinion it's the finest snare drum available on the market today. As the brochure says regarding all the brass shell The Acrolite is the "junior" model models, "they're not an expense, they're and fittings as the: 416 except for the in the metal snare drum range. Its 14" x an investment". I couldn't agree more.

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TEST ON: The Pari Model K61N Portable Organ DATE: February 1978

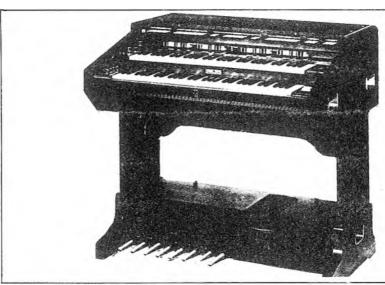
PRICE: £2,375 + VAT (13-note pedal) £2,495 + VAT (25-note pedal)

Your usual reviewer, Rod Argent, being a little tight for time this month, has delegated me to stand in for him to review this Italian-made instrument. The Pari K61N is distributed from Italy by Musinco s.p.a. and will shortly be available in certain British music shops. Since the cessation of manufacture of the legendary Hammond range of organs, the Pari is now the only organ in current production to employ the tone wheel generator system of note production, and thus is in the market to fill the gap in a Hammond-less music world.

Visually, the Pari is very pleasing, the cabinet being made of Canaletto walnut, and quite substantial it is, too. The top (or keyboard part) is detachable from the supporting frame and footpedal section, and this breaking-downafter-use process is very simple and straightforward, as indeed is re-assembly. So, as far as your roadies are concerned, this organ should be popular for onenighters. (Although it's still heavy enough, even in bits, for them to moan at organ-players in general). Still, these are merely cosmetic details; what matters really is what it sounds like, and what facilities it can offer to excite you, the player. Let's start with the bits that trigger eveything off; the keyboards and the foot-pedals. Well, in common with the Hammonds, it possesses two manuals (upper and lower, would you believe!) and a choice of two different pedal boards; either 25 or 13 pedals, whichever you require. The upper and lower keyboards are both of 61 keys, and run from C to C, and each manual has a separate range of drawbars and presets, which consist as follows;

Upper Manual: 16-8-5 1/3-4-2 2/3 - $2-1 \ 3/5-1 \ 1/3-1$ (in feet) in two groups: Lower Manual: The same.

Further, there are presets which control the following functions; Trumpet, Oboe, Full Organ, Strings, Flute, Diapason, Tibia Clausa, Clarinet, and selects for Drawbars I and II. Then the percussion section, which is important to you if you're thinking of an alternative Hammond when you play the Pari; and this has the following controls: On/Off, 2 2/3 or 4, Clicks, Perc., Fast Decay. There are separate tabs for vibrato on the upper and lower manuals, and on the top Pari has what they call Vibrato 2, 3 and 4, whilst the lower manual may have either Vibrato chorus or Vibrato 1 selected. All these tab inserts may be selected and disengaged by pressing the tabs. Two degrees of Reverb are built into the organ, and of a new, rather than a second-hand they sound like a spring reverb unit to organ, and your heart lies musically in me, although the spec sheet supplied the sound areas of the old Hammond parameters, very good indeed.



does not mention this. Nevertheless, the reverb is really quite deep and clean, without the hollow sound you get with some spring or tray units. Traditionally located on the left of the keyboards is the tone cabinet control panel, and the Pari is supposed to be used through Pari tone cabinets, although I don't doubt you could use it through Leslies.

Brought into play by push buttons on the left of the top manual, you can select Piano: which sounds nothing like a piano, either acoustic or electric, but is a sound all on its own (you might like it!); Harpsichord: This resembles a clavinet in a strange sort of way, and could be useful; Piano Organ: I think Harry Corbett might like this.

But where the makers have scored is with a separate tuning knob, which allows these extra effects to be de-tuned away from the organ pitch, so that when they are played along with an organ setting, the equivalent of a studio harmoniser or varispeed sound can be obtained. This sounds really nice, and is unique to this instrument, as far as I know. These extra effects only operate on the top manual.

Now you may realise that the drawbar settings I listed earlier are the same footages as the Hammond, but the percussion settings, effective as they are, still don't have the bite and feel of the Hammond. You can't seem to get the sound to "scream" at the top end in quite the same way. This is not helped by the fact that the 1' drawbar is not operative on the top octave. However, there is a mixer for combining the footage of the drawbars.

If you are considering the purchase

C3, you might do well to try one of these Pari models at your local dealer, although if you are really a Hammond fan, you'd probably decide to buy a used Hammond anyway, regardless of the possible difficulties in getting spares. Because nothing can really compare, when you get right down to it, with the Hammond - it has to be the rock and Rolls Royce of its genre. But I can foresee a very wide and healthy market for the Pari outside of the world of gigging rock bands, even though I am sure that is the market that the makers are trying to reach.

Its elegant cabinet and woodwork makes it very attractive for home use and even for churches, and its price is not over the top for such buyers. I had an enormous amount of fun playing with the unit supplied for review. Its action and touch were both light and firm, and its so pleasant to sit down and blow on an instrument that feels "together" in its design and operation - something which you discover almost as a vibe very carly on when tinkling on it. But in the end, it's the sounds that are produced which matter, and with the Pari, compared to the Hammond, it doesn't quite make it for me. I had a Hammond C3 sitting next to me during my try-out time, and I couldn't help but jump from one to the other to see how various things compared. But, if you look at this instrument in a slightly fairer light, shall we say, and forget any comparisons, which I suppose are odious but necessary, the importers are not going to have any trouble selling this organ at all, especially as the price is well competitive. It's well made, inside and out (although its reliability record must remain a mystery for a while) and sounds not bad at all; and within certain

IN BRIEF

Test On: Hohner Pianet T Price: £213.50 ex VAT

One of my personal favourite keyboard instruments is the original Hohner Pianet. Early Small Faces and Zombies records had that very distinctive piano sound. The Pianet T model was introduced just over a year ago to replace the original Pianet. The main differences are: the T model is housed in a leather-cloth case, has no controls whatsoever and needs no mains power. The original Pianet was built into a wooden case (with legs), had a tremelo on/off switch and was mains-operated,



The Pianet T is, therefore, much more compact — the absence of legs is probably due to the fact that an electric piano nowadays is usually an additional instrument and would probably be sat on top of an organ or similar. Now 60 notes in a case might not sound much but it is still one of the best pianos around for a relatively inexpensive price. The touch of the keys is very light. If you are used to an organ — no problem, but if you have been playing a touch-sensitive piano, it will require a little compensation.

Although it's probably one of the simplest electric pianos on the market, with a little thought and imagination it can be made to produce an amazing range of sounds. If you use it through an amplifier with reverb and tremelo controls, you can get fairly close to a Rhodes sound by setting a slow tremolo speed and adding a little intensity. Increasing the intensity will produce a sound not unlike vibes! With no tremolo but bags of treble, you can get a raucous rock 'n' roll sound and with equal treble and bass you too can sound like Rod Argent because the original Pianet sound is produced. At just over £200, it represents very good value and I can't understand why it's not in wider use today.

Eamonn Percival

A "Small things" special, Beyer mikes

I think it is time I said a small word of thanks to the makers of Beyer microphones for what I consider to be the outstanding performance and reliability of their products. Compared with some of the other companies involved in microphones for the music business, Beyer have a rather understated style of advertising, and I feel it may have caused their products to be overlooked on occasions.

I have been selling Beyer mikes for

about seven years. I am still in touch with most of the people who bought them and to the best of my knowledge, only one has ever needed repair. This was hardly due to normal hazards of use - it was trampled on by a horse, and although the mike campsule was still working, the outer case had to be replaced. I think that represents a pretty good record. I have also owned and used a pair of M201 NC mikes since their introduction into England some years ago and I would be hard put to it to find anything better for picking up good acoustic guitars, and a voice which falls somewhere short of amazing. They cost about £60 each when I bought them and would now cost about £80 each to replace, but I have never regretted the purchase.

I am fortunate in having found what suits me, but mikes come in all types and sizes, and as good ones are usually expensive, it is well worth searching carefully for the type which most closely suits your present (and future) needs. If you are likely to give your mikes a lot of use, try to get the model you prefer fitted with a Cannon or XLR connector.

I have been intending to say all this for some time, but it was finally triggered by the arrival of the Beyer representative on my doorstep, carrying a small brief case, which he handed to me saying "What do you make of this then" or words to that effect. He persuaded me to open the case, revealing a collection of similar, but smaller cases. He said "it's a new microphone" I said "indeed". He said 'ah, but it is a condenser microphone, and we would like you to try it out". At this he opened all the little cases and deftly screwed together several small pieces of black metal to produce something looking remarkably like one of my M201's. He explained that one can buy any of the modules separately, and screw them together in different combinations to produce mikes for different purposes. He also said that if I liked the M201, I would surely be amazed by the performance of their condenser mike. He also showed me a price, which I foolishly assumed was for a complete outfit. I was wrong. A close approach to perfection in any field is usually expensive, and in this case, one microphone body, one cardoid head, a power supply and 121/2% VAT will leave little change from £325 - not much by commercial studio standards, but probably out of the reach of many working musicians, unless of course they are involved in tax-deductable expenses.

However he was right about one thing, I was amazed by its performance. If you are interested in recording or re-

producing sounds so as to give the most realistic result possible, and particularly if you want this performance from a mike which doesn't take up too much space, Beyer's condenser mike should certainly be on your short list. As you can see from the picture, it is not only small, but it is also rather pretty. The XLR version of the one I tried is called MC714 NC. There are not many about yet: if you can't find one in the shops I am sure Beyer Dynamic will be able to help you. Stephen Delft

On Test: "Learning Unlimited" audio visual Rock Guitar course (available from leading record and book shops) Price: £4.50 inc. VAT

This is a very worthwhile method of either/both learning to play guitar and/or reading music. There are various stages or levels available in the series including "Beginning Guitar", "Intermediate Guitar", "Rock Guitar", "Country/Folk/Blues Guitar", "Jazz Guitar" and "Classical/Flamenco Guitar".

Each pack contains a cassette and accompanying booklet with instructions, exercises, diagrams, chord charts and music to (fairly) well-known songs. The cassette explains the exercises in the booklet and musically illustrates them.

The "Rock" course takes you through various stages of guitar music and exercises, from tuning up to improvisation. All is explained carefully and simply and, after every exercise, a tone on the tape instructs you to turn it off until you have got each exercise off. Their method is to explain each technique (staccato, shuffle, slide, hammering off etc.) slowly, follow it up with a demonstration on tape, show you how it's written and finally illustrate it with a popular song.

The term "Rock" in this case seems to mean something slightly different—the cassette opens with a rather weedy version of "Up, Up And Away" being played while a Walt Disney-type narrator announces "Welcome to the exciting world of rock!". However, if you persevere through to the end, it teaches you a lot about reading. If, like me, you need to brush up on music generally, the booklets take you through fundamentals like the circle of fifths and the tonic, sub-dominant and dominant charts.

My only real criticism would be that the musical examples included in the course should be updated. I can imagine a lot of people being put off by excerpts from rock (sic) numbers like "Cherish", "Julie, Do You Love Me" and "Music To Watch Girls By". Eamonn Percival





On Test: Bever M260N Price: £69,63 (Ex VAT)

This is the latest dynamic microphone from the Beyer stable and is so new, Beyer UK at Haywards Heath had only German literature on the model's specs.

To begin: the mike is a low-impedance model with a frequency response of between 50-18,000 Hz which looks very impressive on paper. The mike is equipped with an on/off switch which was only once turned off accidentally during a performance - a feat which threw up howls of laughter from the band and an acute attack of embarrassment from the unlucky singer.

For your money, you get, as well as the M260N, a durable vinyl carrying case, mike-stand holder with adapter screw, and a pop shield. The M260N is finished in no-nonsense black with a spherical mesh head.

The test for a microphone comes when you have to ignore all the printed specs, graphs and other paraphernalia and get down to how the mike performs "in the field".

I gave the M260N to the lead vocalist in a band performing all types of material from fast rock to slow ballads. He was retuctant to use it at first, having had many satisfying years with his beloved mike made by a major American manufacturer.

After four nights and as many gigs with the Beyer mike he was pleading with me not to take it away. Quite simply, he said, it was the best mike he had ever sung through. It took the harsh edges off his top notes and rounded them out to a gentle texture, it boosted his low notes so he could at last hear the baritone end to his voice, and it put strength and body into his big-ballad numbers where he had found the sound a "bit thin" with his other mike.

Even the drummer in the band offered the unsolicited opinion that it was the best mike he had ever heard anyone sing through giving a sound that was

completely natural without any amplified distortion at all.

These at least were the results achieved by using the M260N through the superb Shure Vocalmaster PA system. Obviously no mike, however good, is going to make a cheap underpowered system sound that good.

So from one lead singer at least, the M260N is the answer to his prayers for the perfect sound. At its price and performance the Beyer M260N must surely be at the top of the shopping list of any singer looking to upgrade the business end of his sound system at a reasonable price.

Ian White

On Test: Electro-Harmonix Talking Pedal. Price: £69 (Ex VAT)

The Talking Pedal is subtitled "a speech synthesizer" on the label legend. Whether or not it is a synthesizer is something the experts in that field could perhaps debate as it appears the Talking Pedal is more a refined wah-wah pedal than anything else.

It seems that Electro-Harmonix have taken the basic wah-wah idea and, through adding various filters and other electronic delights, have produced a pedal that can approximate vowel and consonant sounds in tone.

Imagine an "aeyeeoyu" sound as opposed to yer normal "wah-wah" and you'll have a rough idea what Electro-Harmonix have come up with. Whether or not this constitutes a "talking pedal" is up to the guitarist to decide. To this player it sounded like a wah-wah hooked up through a Jew's Harn.

The unit is very large and hefty with a rugged metal base and a big rubberribbed pedal that should defeat the most earnest attempts of a clumsy-footed guitarist to miss it.

Additional features include a sustain control to introduce distortion and an AC socket to take Electro Harmonix's own AC adapter. With the current fashion swinging away from pedals and towards devices like flangers and envelope followers, which introduce an effect automatically, there may not be a great demand for this pedal, especially at the price which in my opinion, is far too high in the galaxy. As the pedal is imported, extra charges probably account for the high price.

If you're tired of your wah-wah you may enjoy having some new sounds under your feet. If so check this pedal

Ian White

On Test: Yamaha SF500 Price: £225 Ex. VAT

It is now true to say that Yamaha are up in the "Big League" with their excellent SG range of solids. Unfortunately, the high standard was only exceeded by the high price tag. Now, Yamaha have introduced the new Super Flighter guitars - the SF500, 700 and 1000 - and the price range is a lot more comfortable. In fact, the SF's represent very high quality and excellent value.

The SF500 feels good, looks good and sounds good. It has two double-coil pickups which give a beautiful, biting



sustain - even at fairly low levels. (On the SF1000, there is also a coil tap switch). The woods used are Taun and Mahogany for the body, rosewood for the fingerboard and mahogany for the neck. There are 24 frets, all of which are easily accessible and in tune. This is not always the case with guitars featuring double-octave necks.

Another indication of Yamaha's concern for the consumer is the fact that this instrument came out of the box perfectly set-up. The octave intonation was perfect and the action more than comfortable. Indeed, there was room for an even lower action setting if required.

The neck on the 500 is detachable, secured by four hefty crosshead screws and again, unlike other bolt-on neck guitars, the neck was stable. Obviously, with this type of neck, bending it will take it up or down a quarter-tone, but it returned to normal pitch and there were no audible "creaks".

The guitar is extremely comfortable - there are back and face cuts, as they are described in the accompanying literature. This means the front and back of the body is contoured rather like a Strat. The guitar is perfectly balanced and feels just right whether you're sitting down without a strap or standing.

The machine heads are very accurate and there was no evidence of any slipping. They have spring-loaded mechanisms which automatically take up wear but it is possible to adjust the amount of pressure required to turn the machines via a small adjustment screw set into the side of the button, Quite useful as it is possible to have either a "loose" or "tight" feel to the machines.

The SF500 also comes complete with a plush-lined hard case and an accessory pack which includes a silicon cloth, hexagonal wrench, Philips screwdriver, lead, strap and plectrum.

All in all, it's a beautiful instrument with a great sound and a very, very competitive price. Yamaha have definitely got a winner on their hands and I'm now saving up my pocket money to get my hands on one.

Eamonn Percival

by Steve Rosen

If Elvin Bishop ever falls out of grace with the guitar he could always become a card hustler. He had just finished fleecing this journalist out of \$17 when I said I'd had enough and suggested we begin the interview before having to pawn my cassette player. But Elvin Bishop does play guitar and that is for keeps.

While Elvin's roots lie in Chicago blues and the South he was born in California.

He was raised in Tulsa, Oklahoma, and at an early age migrated to Chicago where he met up with Paul Butterfield and Michael Bloomfield. It was here that he ingested the music and style that would later be heard in the Elvin Bishop Band.

Bishop really hit with "Fooled Around and Fell In Love" (also propelling singer and composer Mickey Thomas into the lime-light) and since then each album has been received with much huzzah. While the interview was transpiring Bishop was picking on his 345 and the licks (everything from classical to jazz) showed a side of his playing not too many people hear. Blues is his staple thing but he is certainly capable of tackling any style. In a somewhat rare talk (he is basically a shy and retiring type) he traces his growth as a musician.



When did you get your first decent guitar?

Well, I got a Les Paul Jnr when I was 20 and that was pretty good. Then I fooled around with a Fender Telecaster but it was one of those things where you could break strings on it real easily because they have those metal things on the bridge. And I had and still do have a real heavy primitive touch. I remember we were playing this Bo Diddley tune, 'You Can't Judge A Book By the Cover' and I went to hit a chord and I broke three strings in one stroke. How did you develop such a heavy attack?

It just felt better to play hard. I tried to take a couple of lessons but I was just too hard-headed. So I'm pretty well self-taucht.

When did you meet Paul Butterfield? In 1960; I met him the first day I was in Chicago. He was the first musician I met there. I was 17 and he didn't play in clubs until about three or four years after that. He played guitar more than harmonica. When I first met him he could play a little bit of harmonica in a Sonny Terry style. And he played Jimmy Reed type of guitar. He taught me a lot of my first guitar licks, rhythm patterns and stuff. And then he gradually developed where he could play Jimmy Reed harmonica and Little Walter and then on to his own thing.

When did you join with him?

We played in an assortment of little bands before he finally got his together. We used to go down to Pepper's Lounge and Theresa's and places like that and listen to Muddy Waters and Little Walter and Junior Wells and Magic Sam and Otis Rush and people like that and sit in. We played mostly house parties for two or three years; we'd sit there and play and they'd feed us and give us beer. You write your material from the guitar? The guitar or piano or sometimes I'll just be riding in the car and start hummin' something. However it comes I'm damn glad to get it. Sometimes it's a word first, sometimes it's the music.

What type of guitar and amp were you using when you formed your own band? The same thing I've got now; a (Gibson) 345 and a Fender Twin (Reverb). Sometimes I just use a Princeton. Normally the amplifier is miked through the sound system so it can go as foud as you want it to. I like it just because of the tone. We don't play many clubs anymore so it's easy to get a good sound with a small amp.

Had you tried other amps before Fender? Yeah. I had a bunch of off-brand amps because at the time I couldn't afford anything else. I had a little Ampeg that I liked because it had a neat vibrato on it or I guess it was called tremolo. The kind Lonnie Mack uses. And then I had one of those Ampegs where the top turns inside out and you pack it away and it

has buckles like a suitcase. And it stands up on wheels, it looked real good but it didn't sound good.

How did you happen to choose a 345?

It just seemed to suit me. And still I can't play anything else but a 345. It escapes me how palyers get good sounds out of solid bodies. I don't know how to do it.

You don't have problems with feedback? No, I pretty well know it inside out now. The main thing I really like about it is the slide tone I get. On 'Do Nobody Wrong' (Juke Joint Jump) it sounds like a combination of a string and a horn section but it's four guitars in harmony which we overdubbed.

Did you listen to Duane Allman play slide?

Uh huh, he was a good friend of mine. His style was originally based on Elmore James; he used the E tuning. He was a hell of a guitar player.

So you never use an open tuning for slide?

I do occasionally but normally I don't. The tune 'Stealin' Watermelons' for instance is a G tuning. I have another tuning that I think I made up, I don't know. Somebody might want to fool with it. I use it on stage because it doesn't involve a lot of re-tuning. You just tune your G string up one-half step (Ab) and then you just use your top four strings so you get E,B,G and D and you have a natural 7th chord. With the seventh on the bottom and it's a chord that you don't hear and it's good for blues. I use it on that tune 'Sunshine Special' (Let It Flow).

It's just been the last couple of years that Elvin Bishop has really come into prominence.



Ever since I've had a band I've been steadily improving. Our motto is just like General Electric, 'Progress is our most important product'. I have a good organisation behind me; Capricorn treats me like a prince and they really push the records. And I have a real good manager and the band is cooking. We certainly don't do ourselves no harm with live appearances. For years we were knockin' people out live but not selling any records. And the record is really the key to the whole thing.

Have you sat down and consciously tried to write more radio-oriented material?

I've written a lot of songs, I have a backlog of maybe 50 or 60 that haven't been recorded yet. I will when I get ready to make an album, I won't sit down and write a song just to be commercial, but I will choose the ones that seem to me to be what's happening on the radio. Like 'Sure Feels Good' and 'Hold On' (Juke Joint Jump) were those types of songs. Those are the ones that I see as being commercially oriented.

Do you like working with another guitarist?

Yeah, uh huh. It doesn't make any difference. I've had as many as four chick singers in my band (on earlier albums he used the Pointer Sisters), I've had horns, harmonicas. It just depends on how good the guys fit in with the music and how well they play.

What kinds of picks and strings do you use?

I use a Fender medium or stiff (heavy) pick. And Ernie Ball Strings: .010, .013, .017, .032, .042, and .052. And I've got Grovers on the guitar. The things I've been doing lately is playing rhythms on the guitar just beatin' on it for percussion and it knocks it of tune. It's a '59.

Have you ever tried a 335?

A 335 is just like a 345; it has the same identical body and wiring but it doesn't have the varitone.

When did you start playing slide?

I've always been aware of it to know about it but I never really got into it until about two years ago. I mean I played it on records before that. It seems like that everybody that plays sounds like either Robert Johnson or Elmore James with a G or E open tuning so I've tried to evolve my own style. I just play the guitar as it is (normal tuning). It's got to the place now where I just mix it in fairly freely; I use it on just about every song. I've got to the place where I play the quitar with my other three fingers and just keep the slide on. So I've tried to avoid all the regular models so I could get a sound of my own. I use a metal slide; glass doesn't agree with me. I guess because of my heavy touch it makes the strings rattle. The metal is heavier and I guess it absorbs the shock.

Do you use any pedats or devices?



No, Johnny Vernazza, the second guitarist in the group, he's the master of using wah-wahs and volume pedals and stuff. I don't use any of that stuff; I dabble with it a little bit but I never got into it because it just didn't come easy enough for me and I guess I figured I oughta be trying to learn how to play the guitar by itself first. I just didn't take to it.

Are there sound settings you like to use on the guitar and amplifier?

Uh huh; I normally set the treble on about 10 and the bass and middle on about 3. Because the guitar I've got and the hollow body is naturally a pretty rich warm tone so to get highs out of it I crank the treble up to 10 and then I use the rhythm pickup on the guitar. And you get a really fat slide sound that way

Do you think your playing has improved?

Yes, I hadn't practiced for about 2 or 3 years and then a few months ago I started again. It pays off I tell ya. I go through spurts where I'll practice hours a day and sometimes I won't even see the guitar except at a gig. Sometimes it seems like practicing is real futile and if you do too much of it it doesn't do that much good. You reach a point of diminishing returns.

Are there certain runs and scales you work from?

I try as much as possible to make up my own things. I'll work scales, I know where scales are but you don't hear much of that in my music. Sometimes I'll start off playing a scale or an arpeggio or something and I'll mess up and it'll sound good to me and then I'll get off on a train of thought and write a song from it. Mostly I try and make up my own little patterns that aren't exactly scales or arpeggios but they're a combination of things. Maybe something Junior Walker played, a tough sax lick or something and I'll try and imitate that. I've learned a lot of Ray Charles piano arrangements on guitar. And I'll just start foolin' around and let my mind wander where it wants to go.

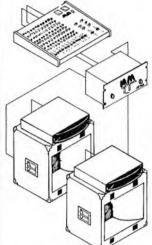
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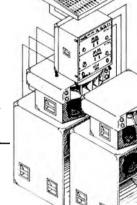
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Fiddler on the Loose

Rock 'n Roll violins with Bethnal



There's a lot of talk these days about how new players to the music scene are incapable of playing their instruments, let alone being able to read music. If you ever saw Bethnal you'd be mistaken in lumping them in that category. Singer and fiddle player extraordinaire George Csapo (pronounced Chappo) once auditioned for the Royal Academy of Music. He failed because he was too young and promptly: went out and joined a rock 'n roll band.

Bethnal was the group and they've had the misfortune to be classified as just another band-wagon-jumping horde of New Wave performers. In fact, Bethnal were doing the M1 and dancehall trek long before the Sex Pistols were even heard of. Even then they were coming on stage in old khaki clothes and executing their highly-active stage style.

George is the front man of the band, playing fiddle and keyboards and writing most of the material as well as singing it. He's about the only rock violinist really playing live currently and it is his fiddle playing which raises Bethnal above the category of "just another energetic band".

"I've been playing for 11 years. I wasn't really interested that much in music but I thought I'd pick up the violin. I learned the basics of the instrument at school and I didn't have any lessons until I was 15, I wanted to be a soloist because you get to a point when you say you either want to be the leader

of an orchestra or a first violinist, But then you have to be so brilliant and you have to spend your life practising. The only time I've practised seriously was for five hours a day a month before my audition with the Academy".

At the time, George must have been the only skinhead who was playing in the Haringay Youth Concert Orchestra performing classical music while listening to reagae in his spare time.

His classical influences show up during a Bethnal gig when George plays a piece by Bartok. With a steaming cauldron of drums, manic bass, and chord-crunching guitar backing, the music is quite exhibitating.

"We do a few jigs, but what you've got to watch is that you don't do too many jigs because that is a cop out. I want to develop the violin for rock. I think my violin playing is simple enough for other kids to pick up on. Most kids have got a chance to learn violin but they don't want to because of the image that you're a bit odd if you play the violin. I used to play football and athletics and still play the violin. I'd like to be an influence on people learning the instrument".

Bethnal itself has been playing for eight years and the line-up today is, apart from George, Everton Williams (Bass) Pete Dowling (Drums), Nicko Michaels (guitar). The band based its early repertoire around Beatles and

of an orchestra or a first violinist. But other pop material and then moved on then you have to be so brilliant and you to Creedence Clearwater songs.

"A lot of people think we've jumped on the Punk bandwagon but we've had reviews in papers years ago. The army gear we wear goes back a long way and we've been doing the Punkish stuff we do now for ages. There's nothing wrong with New Wave. Punk is rock and roll and everyone should be able to get up and do it. We like the competition we're getting".

George amplifies his instrument with a Barcus Berry bridge which has the pickup built into the bridge itself rather than using any additional add-on device. The violin is a normal acoustic instrument which is stuffed with tissue paper to reduce feedback which only occurs when George plays at a very loud volume.

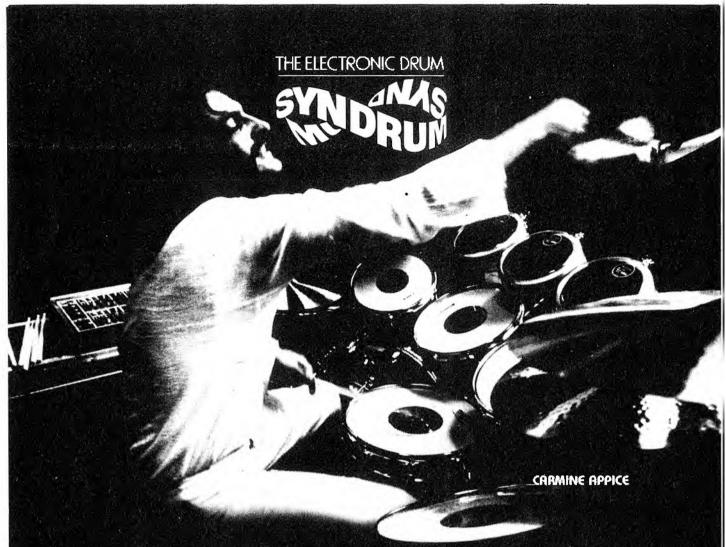
He uses an HH valve-sound amp through a SMF cab containing four unidentified 12" speakers. The band does play at a volume which pushes the amplification of a violin to the limit and George is careful to ensure that he gets a violin sound rather than some anonymous screech.

Bethnal's first album 'Dangerous Times' which will be released by Phonogram this month features some double-tracked violin work and should give a good indication of how it is possible for the violin as well as the guitar to be an instrument of rock music.

by Ian White



Bethnal (L-R) Nicko Michaels, Pete Dowling, George Csapo.



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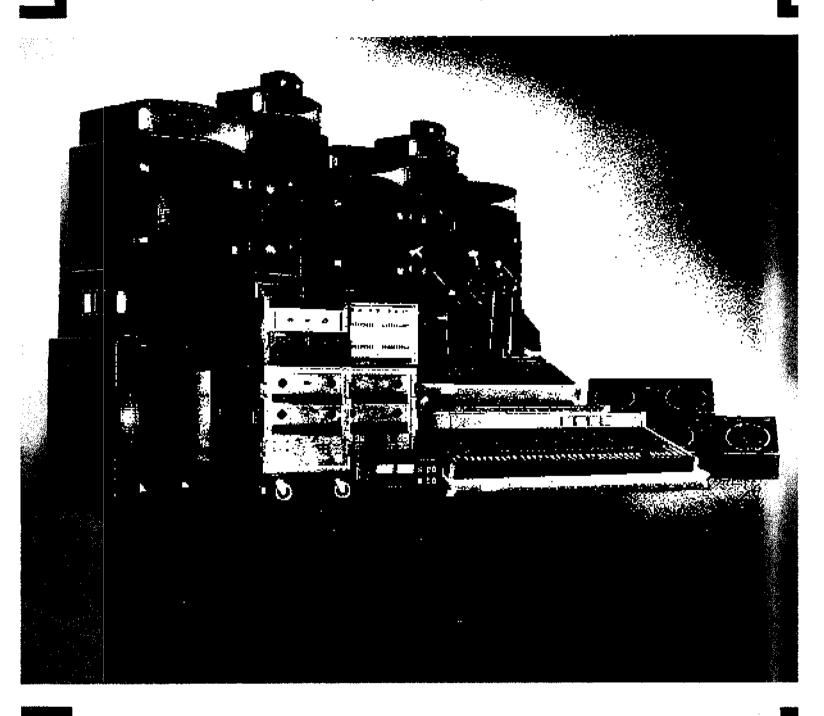
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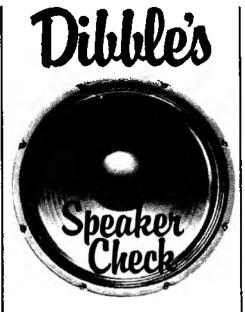


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Introduction

The old adage 'All that glitters is not gold' is certainly showing itself to be applicable in the case of loudspeakers. Although this is only the second test report to be published, in fact, we are now well on in carrying out the actual tests and as more products go into the anechoic chamber in the acoustics laboratory at GEC-Hirst Research at Wembley, the more this is becoming apparent.

In last month's review of 'standard' general purpose twelves, we commented on some pretty crude looking products returning some very good test results and in the category we shall be considering here, we have some very expensive, superbly finished and presented loudspeakers coming out with only mediocre performances.

This does not necessarily apply to all units tested as our reports that follow will show, but it seems to be a noticeable trend from the tests so far carried out. Another emerging factor is that all that is imported from America is not necessarily "gold" either, as the best overall performance from the units tested this month was from an independent British maker, closely followed by an Italian and another British unit! This, I must confess, is a trend I am delighted to find and very much confirms in hard facts, opinions that I have held for some years in this respect.

Test method

In the case of the loudspeaker in this report, it is important to bear in mind that we have not used an elaborate enclosure in the tests, and most of the units tested would well benefit from being housed in a properly-designed reflex enclosure or from some form of horn loading. From a practical aspect, it is not possible to ensure that every unit submitted for testing is housed in its optimum enclosure as this would necessitate the construction of a separate cabinet for every unit, and even this would not give a fair comparison between units.

All tests are carried out with the unit mounted in a 50 ltr., air-sealed infinite baffle enclosure, lagged with 75mm of glass fibre wool on all inside surfaces. The units are mounted from the front onto a cork gasket and retained by a thumb-screw clamping arrangement to permit a quick change-over of units between tests. For this reason, we, have not been able to include in our tests certain loudspeakers that cannot be front mounted in this way, as the time involved in dismantling the test cabinet and bolting units in from the inside would be prohibitive. Last November for example, a total of no less than 24 12" units were thoroughly tested in a single day thanks to the willingness of Roy Brooker, GEC's acoustics engineer, and a lot I

This month Ken Dibble checks out the 12" speaker market and comes up with some startling results which could save you a packet.

of sweat from IM's executive Malcolm Green and myself.

This cabinet restriction will effect the overall frequency response figures, as properly loaded, most of the units tested can be expected to give another octave downwards than our figures show. Also, the resonant frequency figure given would certainly be lower and the actual voice coll impedance would change slightly. The sensitivity figure would not however be changed, as we have taken our sensitivity result from an average of the units mid band output level, and mid band performance is not effected by cabinet design as far as general purpose applications are concerned. The same applies to the second harmonic distortion figure, as here, we have disregarded higher distortion levels reached underneath the resonance 'hump' as again, this would be reduced with properly designed acoustic loading of the unit. Fig. 1 in last month's 'Speakercheck' showed a typical impedance plot for reference purposes and this resonance hump can clearly be identified at around the 100Hz point. Fig. 3 Over page shows a typical second harmonic distortion plot for the same unit and the increase in distortion over this part of the band due to cabinet loading can be seen.

Certain of the units included in this review employ particularly shallow, parabolic cones. The JBL K120 and its various 'copies' are of this type, and these can be expected to exhibit a rather different radiation characteristic or polar response than that shown for a general purpose loudspeaker in Fig. 2 of last months review. Although the included angle of radiation from a unit of this type shown in Fig. 4 represents a considerable improvement over the more conventional cone designs, it is still not as good as for a twin-cone unit with a parasitic centre cone. The improvement is due to several factors, including the shape of the cone and the increased size, reduced thickness and quality of materials and manufacturers of the dural centre domes fitted to the more elaborate loudspeakers of the type we are now consider-

The reader will find two changes in this month's reports. Firstly, we have decided to include a statement of the manufacturers claimed frequency response figures in order that these can be compared with our published response graph. We have also included a statement of the unit's actual frequency response at the -20db points we have selected as being the most generous deviation figure we can reasonably allow as a 'useful' level. This information was in fact included last month as part of the comments on each unit, but upon reflection, we thought that it would be more clear if tabulated along with the other criteria.

The other difference is that, due to the predominance of products from the USA included in this report, we are finding manufacturers giving sensitivity or efficiency figures in unfamiliar units and therefore, a word or two of explanation on this point might not go amiss. The figures in question are marked with an asterisk in the results tables and are the result of a different method of measurement of this parameter known as the EIA Pressure Rating System and is used almost exclusively in the USA. This is a rather more complicated system than that generally adopted in the UK and in Europe in that it takes into account the electrical input expressed

as a db figure relative to 1mW as a zero or reference point,

The mathematics involved take into account any mismatch between the driving amplifier and the loudspeaker and the source impedance of the amplifier output. The resulting decibel figure for the electrical input power is then subtracted from the sound pressure level measured at a distance of 30 feet from the loudspeaker, on its central axis, the resultant being expressed in db.

It follows, therefore, that as the sound pressure level is measured at almost ten times the distance than that accepted as standard in Europe, and as the electrical energy is then subtracted; the resulting figure can be expected to be substantially lower than those obtained from our tests and it is not a practicable proposition for the uninformed reader to derive any meaningful comparison between the two different figures. What Is Important, when assessing loudspeaker performance, is to compare the sensitivity figure resulting from our tests for various units, as these are all measured in exactly the same way and are relative.

In analysing the results of the tests this month, there is one point of particular interest emerging. The JBL K120 certainly lived up to its reputation and was practically the only product from the much revered American big names' to do so. Even more interesting is the fact that three similar loudspeakers from other manufacturers, two of which are almost identical replicas of the K120, are to all intents and purposes equal in performance and priced some £40 to £50 lower.

From these results, and taking into account the all important price tags, the ATC PA/75 std., made in the UK and priced at just under £80 in the shops is the best all round loudspeaker. The Italian-made BCF 112P/11 at a similar price comes a good second with the Goodmans Audiomax 12AX, also from the UK, very close on its tail. It must also be mentioned that the Fane Crescendo 12/A, also made in the UK, at just under £60 in the shops is almost in the same league, with test results almost as good as some of the American units in the £120-£130 price bracket. To be fair, it must be stated that all the units tested in this report, apart from the Celestion Powercel 12 are without doubt excellent loudspeakers, but when prices range from a low of just under £60 to a high of almost £140, any assessment must be critical.

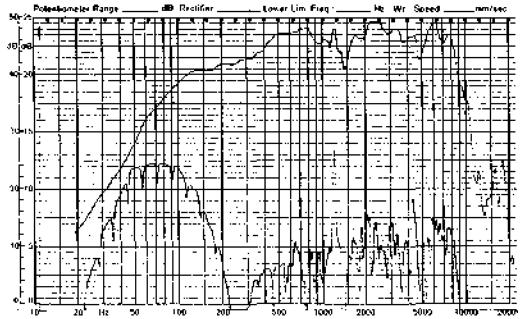
It should also be realised that our tests cannot comment on the long term reliability of the units, or on the individual sound quality likely to be obtained with this amplifier or that. Any of these loudspeakers can be expected to perform well with a lead or rhythm guitar, and in many cases, with bass guitar, keyboard instruments or for the low to mid range drivers in a two or three way PA system,

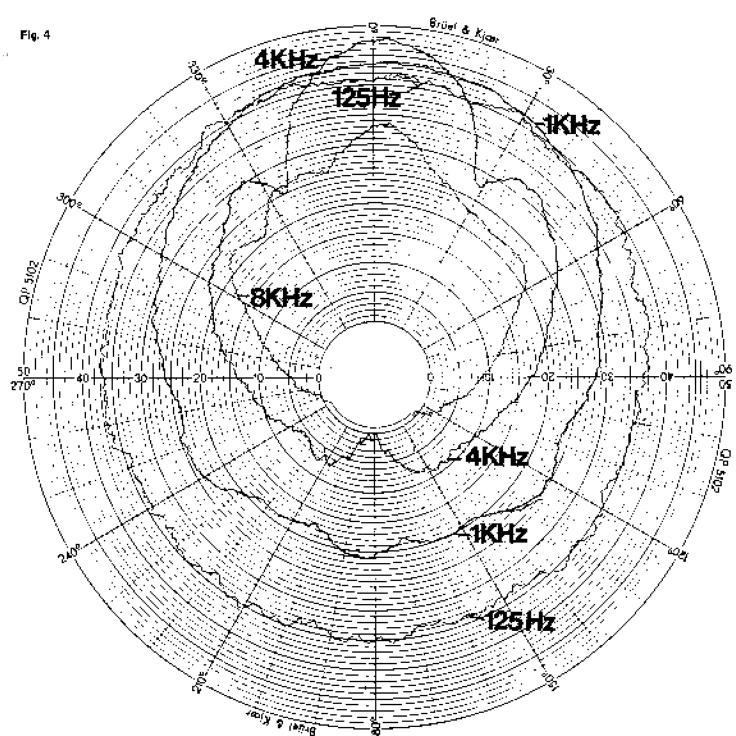
In the latter case, it is important that the crossover point is below the midrange peaks shown on almost all the response plots. These peaks are generally introduced intentionally to add a presence to electric instruments sounds, but if used for PA, this will result in feedback. A good crossover at about 1KHz. would in most cases eliminate the problem and also ensure uniform radiation.

Next month, we shall be appraising a varied collection of 15" units, again for general purpose applications, but this time, in the 'standard' or lower-priced category.

Fig. 3

2nd harmonic distortion plot for a typical 12" GP loudspeaker





ALTEC 417/8H type 2 RRP incl. VAT £129.60 **MANUFACTURER'S RATING** TEST RESULT PARAMETER 'may be used with amplifiers having 100w rating just confirmed up to 100w cont. RMS power rating Not Stated 6% at 100w Distortion 100db@ 1w@3ft* 98db @ 1w @ 1 mtr Sensitivity 80Hz in 501tr, enclosure Rasonanca Not Stated 7.5 - 32 ohms 8 ohms impedance 60Hz-8KHz @ -20db Usaful Frequency 60Hz -- 8KHz unqualified - see graph Response See introduction.

In common with most American toudspeakers of this type, the Aftec 417/8H is of impeccable finish and presentation. What a pity that once it is mounted in its enclosure, no one will be able to see and appreciate this and will only have the sound output by which to judge the unit!

Underneath the glearning white paint, is a good cast alloy chassis of a particularly open design, well braced and with gaskets fitted for both front and rear mounting. The textured cone has a nice feel to it and has a doped linen front suspension, resulting in a lower than usual cone resonance. The unit complied exactly with the manufacturers frequency response figures and showed an average sensitivity for its type,

Distortion was however over the 5 per cent level we had set as a maximum acceptable level at full rated power and therefore we did not test this unit at a higher level. In fact, the rating specified by the manufacturer is itself somewhat confusing and could be interpreted to mean anything between 50 and 100 watts, as a continuous programme level. Despite its superb presentation and obvious quality of manufacture, this loudspeaker has a disappointing performance and at this price, does not commend itself.



ATC	PA/75 std.	RRP incl. VAT £78.30	- (H · 1 1 1 1 1 1 HEALTHIAN CENTRAL (INTERNAL) A NOVE (INTERNAL)
PARAMETER	MANUFACTURER'S RATING	TEST RESULT	
Power	75w Nominal, 125w Max.	75w RMS Sine Wave	
Distortion	Not Stated	2% @ 75w, 4% @ 150w	
Sensitivity	Not Stated	100db @ 1w @ 1 mtr	
Resonance	65Hz	100Hz in 50ltr encl,	
Impedance	8 ohms	6,5–28 ohmş	ATC ATC
Useful Frequency Response	Up to 6KHz_ unqualified	60Hz-10KHz @ -20db - see graph	

A very utilitarian, rough, black-painted cast alloy chassis of immense strength carries a massive magnet structure housed in a tinned cast iron 'pot'. The front rim looks as if it were designed primarily for conventional mounting and only a front gasket is fitted, although front mounting is possible with the use of an additional gasket not supplied. A very light cone is carried by a particularly stiff suspension system of doped paper at the front and the usual corrugated cambric at the rear. This is about the only loudspeaker of UK manufacture on which I have found a decent pair of terminals and these are of the American spring release pattern. The voice coil heat is dissipated by the JBL air flow system. Its performance was beyond reproach in every respect. Its distortion at the makers 'nominal' level of 75-watts was so low at just 2 per cent that we re-tested at double this, at 150-watts RMS sine wave and still, this distortion was below 4 per cent! The sensitivity ligure of 100db is up among the very best we achieved and the frequency response is good – again, better than the manufacturer's figures. This really is a first class loudspeaker at a sensible price from a small, private, British company. In my opinion, the manufacturers do not do justice to their own product, either in the rating figures published or in their marketing of it, and although I do not approve of over fancy cosmetics (as you may have gathered!), this particular unit could benefit from a little tidying up in this respect.



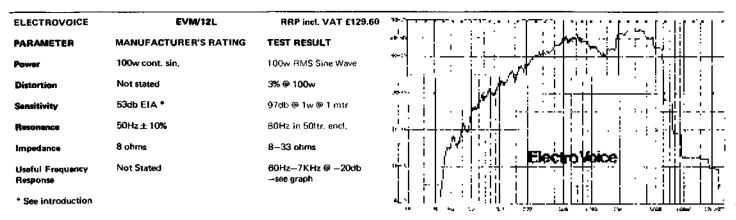
CELESTION	Powercel 12	RRP inc. VAT £60.48	
PARAMETER	MANUFACTURER'S RATING	TEST RESULT	
Power	100w RM\$	Just confirmed	
Distortion	Not Stated	6%	
Sensitivity	Not Stated	930b @ 1w @ 1 mtr	
Resonance	Not Stated	110Hz	
Impedance	8 ohms	8-32 ohms	Celestion Celestion
Useful Frequency Response	45Hz-8KHz. Unqualified	60Hz–5,5KHz @ –20db – see graph	

Substantial cast alloy basket designed for Iront or rear mounting with gasket fitted for both – cork front gasket and rubber rear gasket. Flimsy paxoline terminal board with small awkward screw terminals and brittle feed wires. Unusually heavy cone for a loudspeaker of this type with a heavily doped 'concertina' linen front suspension and this, among other factors, probably accounts for the particularly low sensitivity of this loudspeaker.

The second harmonic distortion figure measured in our tests of 6 per cent is getting high and the rated input power figure of 100 watts only just scrapes through at this level of distortion. The claimed frequency response is felt to be somewhat exaggerated as the table above shows, and even our ligures are at a very generous 20db down reference point.

Although well-made and nicely presented, the performance of this loudspeaker does not do any credit at all to a respected manufacturer and from our tests, should not be in the 'special' loudspeaker category at all, I would even go so far as to suggest that the old favourite G12/H from the same manufacturer, setting at a good deal less than half the price of the Powercel and tested in last month's 'Speakercheck' is probably a better loudspeaker.





The EVM/12L is another beautifully finished and presented American loudspeaker built on an excellent eight-spoked gasket carrying a massive, finned magnet cover which from its weight, actually feels as if the magnet underneath is of similar proportions! Again, I suspect that the finns are more for appearance sake than for any real contribution to cooling the voice coil, as the unit has the usual rear venting system through the back of the magnet structure — but finning certainly gives a beefy powerhouse look to the unit if that is what turns you on.

A pair of nice spring-release terminals are fitted and these are clearly marked for correct phasing. A textured medium weight cone is fitted with a paper dome and low compliance, doped cambric front suspension and the whole assembly feels good. The unit is fitted with a front gasket for conventional mounting but is designed also for front mounting with an additional gasket supplied with the unit. Also included in the delivery, is a set of mounting screws, 'T' nuts and a comprehensive specification/installation sheet, and this is a practice I would very much like to see adopted by UK manufacturers.

The unit generally performed well, but is not outstanding. It confirmed the manufacturers power rating and seemed quite happy at 150w, although distortion rose to just under 5 per cent at this level. Sensitivity is just below average for units in this category but is far from bad even so. Although frequency response figures are not given by the manufacturer, we found that again, it was about average in this respect as well. For my money, at this price, this is another loudspeaker whose performance does not really live up to its impressive appearance, and once the back has been screwed on the cabinet, you have only the performance left.

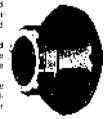


FANE	Crescando 12A	RRP incl, VAT £5",00	- i - 1 1 - i i linit linit
PARAMETER	MANUFACTURER'S RATING	TEST RESULT	48.40
Power	100w RMS Cont,	100w RMS Sine Wave	
Distortion	Not Stated	3% @ 100w	30-13
Sensitivity	'considerably higher than even our very efficient 17000 line models'	98db @ 1w @ 1 mtr	
Resonance	80Hz	140Hz in 50ltr. encl.	
Impedance	8 ohms	8.5-25 ohms	Farie
Useful Frequency Response	60Hz=11KHz unqualified.	90Hz-7KHz @ -20db see graph	200 300 1000 2000 1000 2000 1000 2000 1000 2000 100

This foodspeaker is built on the same chassis as the 'Disco 80' and the 'Guitar 80' models tested last month, and although considered a good chassis for those particular units, it can in no way be considered adequate to carry the vast magnet structure fitted to the Crescendo 12A. It is a castialloy quadruped chassis of light construction without any re-inforcing or bracing and is likely to fracture in the long term, especially after a good throwing about on the road.

Again because of the weight of the magnet, it cannot reasonably be front mounted. Very stiff cone with heavily doped paper front surround and small, vented aluminium centre dome. The unit gave a very creditable performance indeed — especially at its price. It easily complied with the manufacturers 100w power rating and did not reach 5 per cent distortion at 150 waits input. The claimed frequency response was found to be somewhat exaggerated, but this would seem to be a common failing and applies to must of the loudspeakers so far tested,

If the ridiculous claims made by the manufacturer concerning efficiency are disregarded, the actual sensitivity ligures measured compare favourably with its competition and are in fact, about average for this type of foodspeaker. For some reason, the resonant frequency of this loud-speaker rose considerably more than would normally be expected when mounted in our test enclosure and this could either be due to the free air figure being in fact higher than that specified, or to the foodspeaker not liking our enclosure, but something is certainly amiss in this respect.



GAUSS	2841 .	RRP incl. VAT £137.00	
PARAMETER	MANUFACTURER'S RATING	TEST RESULT	
Power	150w Cont, Sine	Not confirmed	
Distortion	Not Stated	15% @ 150w, 8% @ 100w	
Sensitivity	54.5db E1A*	98db @ 1w @ 1 mtr	
Resonance	50Hz	80Hz in 50ltr. encl.	- 판에 (1) : 제 귀바 (1) '판당병명 (1) ((2) (1) (1) (1) (1) (
Impedance	8 ohms	7.5-28 ohms	Gauss
Useful Frequency Response	42Hz5.5KHz @10db	70Hz=10KHz @ ~20db – see graph	
See introduction			(2.41 1.1] [1] [1] [1] [1] [1] [1] [1] [1

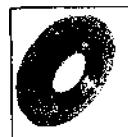
This is the most expensive of all the 12" loudspeakers submitted for test and certainly looks most impressive indeed. It has a really substantial cast chassis carrying a very large magnet assembly. The standard of workmanship and finish can only be described as superb and at 10Kg it is decidedly heavy.

A very stiff, light cone is fitted with a dural centre dome and heavily doped linen front suspension. This loudspeaker is of unique design in that a double rear suspension system is used to maintain cone alignment, the feed wires being brought out between the two so that these are not visible, and are terminated to a pair of spring release terminals. Altogether, a rather nice piece of engineering. The frequency response figures given by the manufacturer are among only three sets of figures to be properly specified of all the loudspeakers submitted for test.

Gauss have chosen to use -10db points (which show how generous our -20db criteria really is) and because of this difference, our tests show a much wider response than that claimed by the manufacturers. The sensitivity figures are however only just hitting the average of the units tested, and the distortion measured at the rated 150 watts input of over 15% is far too high.

As far as we are concerned, this loudspeaker is grossly overrated at 150 waits and even at an input power of 100w, distortion was in the region of 8 per cent. From these results, it would seem that the cone/voice coil assembly had gone into a non-linear condition despite the elaborate cone suspension system employed. Based on these results, I really cannot see how this product enjoys such a prestigious market reputation from a performance point of view.

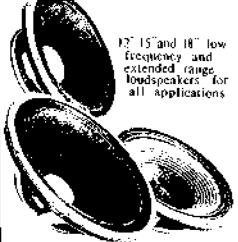




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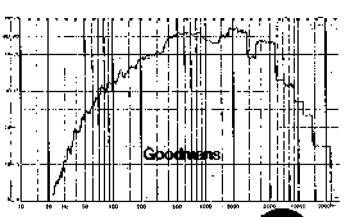
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Audiomex 12AX GOUDMANS KKP (nct. VA I £88. JU MANUFACTURER'S RATING TEST RESULT PARAMETER 100w RMS Sine Wave 100w unspec. Distortion Not Stated 4% @ 100w 96db @ 0.12w Sensitivity 99db @ 1w @ 1 mtr. 100Hz in 50ltr. encl. Resonance 70Hz free air Impedance 8 ohm nominal 6,5-26 ohm Graph Given 60Hz-10KHz @ --20db Useful Frequency Response - see grach



Nicely-finished cast alloy spoked chassis suitable for front or rear of balfle mounting, although gasket only fitted for conventional mountings. Large, cast magnet cover with 'cooling fins', although actual voice coll cooling is provided by the pumping action of the centre dome in much the same way as the JBL system. Slight reservations over the long-term ability of the chassis to support such a heavy magnet assembly without fracture. Shallow, very stiff cone assembly with doped paper front and corrugated linen rear suspensions and large dural centre dome. Simple but adequate solder tag termination and on the sample received for testing, the feed wires were too long and were actually touching!

Even so, this is certainly one of the better loudspeakers actually manufactured in this country and performed very well indeed. Even at an input power of 150-watts, distortion did not excede about 50 per cent and the unit seemed happy at this level. This loudspeaker, is, from both construction and performance, very similar to the JBL K120 and the price difference of some £40 more than compensates for the relatively minor shortcomings.



JBL K120		RRP incl. VAT £123.00	- ・1 - * ・ ・ : : : ・ : ・ : 1 1 1 2 2 2 2 1 1 1
PARAMETER	MANUFACTURER'S RATING	TEST RESULT	
Power	100w cont, RMS 200w cont, prog.	100w RMS Sine Wave	
Distortion	Not Stated	5% @ 100w	
Sensitivity	101db @ 1w	100db@1w@1 mtr	
Resonance	75Hz free air	80Hz in 50ltr encl.	
Impedance	8 ohms	8,5-33 ohms	
Useful Frequency Response	50Hz—6KHz unqualified.	70Hz-12KHz @ -20db - see graph	

For many years, this loudspeaker and its predecessors the 'D' and 'F' series ruled supreme in the UK as the ultimate in professional quality loudspeakers. It has often been copied and in fact, several of the loudspeakers tested in this review owe their origin to JBL engineering and design, It was therefore with considerable interest, and to be honest, some scepticism that I put the K120 through its paces.

From a presentation aspect it is faultless. A superbly cast, eight spoked, alloy chassis with adequate bracing, stiffening supports and a heavy, but not too large magnet assembly. The whole assembly is finished in an unassuming matt black and there is no elaborate magnet cover or pretentious 'cooling' tins. In short, it looks, feels, and as the test results show, is, a fine piece of professional engineering. The chassis is designed for either front or rear baffle mounting, with a cork gasket fitted for conventional mode and a rubber '0' ring provided for front mounting.

or rear baffle mounting, with a cork gasket fitted for conventional mode and a rubber '0' ring provided for front mounting.

Mounting bolts, 'T' nuts and a superb installation and operating are also supplied. A fairly heavy cone is fitted for a unit of this type with a large dural centre dome and an unusually stiff, heavily doped linen or cambric surround. Voice coil termination is by a pair of heavy duty colour coded spring-release terminals. Voice coil cooling is provided by the pumping action of the centre dome taking in air through a vent through the centre of the rnagnet pole place, circulating this around the voice coil and back out through the same vent, which is visible as a grid at the back of the magnet assembly. This is a very effective method of cooling and is now used by a great number of other manufacturers. The loudspeaker certainly lived up to its reputation for performance. It is very efficient, with a sensitivity figure of 100db, and well exceeded the manufacturers frequency response figures — again, probably due to the use of honest ratings and our —20db reference point. The distortion is however—on the high side at 5 per cent but this did not increase at an input power of 150 watts. From our tests, the dual rating of 100w RMS and 200w programme is probably about right, if somewhat confusing to the purchaser. This is a fine loudspeaker, but somewhat expensive.



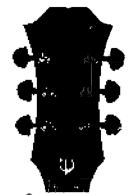
RCF	L12P/11	RRP incl. VAT £77.50	
PARAMETER	MANUFACTURER'S RATING	TEST RESULT	
Power	100w unspec,	100w RMS Sine Wave	
Distortion	Not Stated	5% @ 100w	
Sensitivity	Not Stated	101db @ 1w @ 1 mtr ,	
Resonance	45Hz	75Hz in 50ltr, encl,	**************************************
†mpedance	8 ohms	8-28 ohms	
Useful Frequency Response	45Hz—10KHz unqualified	60Hz−10KHz @ −20db − see graph	2 12 130 150 27 3 1503 1503 2504

This loudspeaker is built on a more shallow version of the excellent chassis used for the L12/10 and L12/31 units reviewed last month, but has evidently been reinforced to carry and hold in alignment, the much heavier magnet structure used in this instance. The whole finish and presentation of this unit is very good indeed and totally functional, with no pretentious magnet cover or so-called cooling fins. It is obviously yet another 'JBL copy' and is almost an exact replica of the legendary K120 from a constructional aspect, while in performance, comparison of the result tables and response graphs will show it to be almost identical in this response to swell.

It is fitted with an exceptionally light, shallow cone and unusually for this type of unit, has a doped corrugated linen front surround and these factors probably account for the high sensitivity figure measured and for its usefully low free air resonance. I must confess to a personal preference for a linen suspension system over the very stiff, heavily doped paper systems commonly employed, as apart from lower fundamental resonance, a linen suspension will be far less prone to fatigue and can be expected to maintain its original performance capabilities for a much longer period of time. The distortion figure at full rated input power is somewhat on the high side however and because of this, we did not test this unit at a higher power level.

The unit came to us bolted to a hardboard panel to ensure its arrival in an undamaged condition and this is far preferable to the elaborate polystyrene packaging so often employed, as not only does this tend to fall apart in transit, but particles of polystyrene invariably stick to the doping compound used on the front suspension. This really is a very nice loudspeaker and highly recommended, especially at its price.





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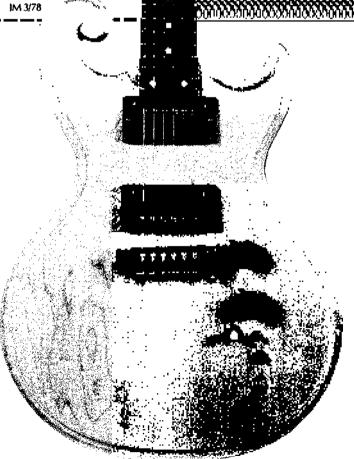
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You sit eating you're breakfast, and, looking round. Nothing seems to have changed since last week except that your instrument or your voice has now become your only means of keeping the wolf from the door and as such the most important item in your life and the very best you can get. Instead of an enjoyable hobby, playing is now paying the bills and has become a very serious matter to do with the pursuit of excellence and being the best in the world at your particular thing.

Like it or not, when you make a record and it goes on the shelf in a record shop, it competes for people's money with the best in the world as it is right next to them in the same rack.

If you fancy yourself as a solo guitarist, your record has to go alongside Jeff Beck, Jimmy Page, Ritchie Blackmore, Robin Trower, Al DiMeola, John McLaughlin, Dennis Coffey, Joe Pass, Eric Clapton, Wes Montgomery, Jimmy Hendrix, Johnny 'Gutar' Watson, Barney Kessell . . . If your band is trying for a No. 1 single then there's Elton John, Paul McCartney, Rod Stewart, Abba, Queen, Beatles, to move over not to mention Donna Summer and all the top session musicians these people employ on their hits. Before you give up in despair, there is still hope because once you accept that it's not enough to be the best in Sidoup or London or even England and think in terms of an international market, you have made a large step forward, and empanded your horizons.

The next step is to try to be the best in the world at what you do because if you don't aim for the very top you

might not make it even half way and if, after a few years you own up and realise that you can't play better than the big names, then at least you gave it your very best shot.

When you step out onto a stage, you set yourself up like a coconut on a shy, you have to prove, with this piece of metal and wood you have in your hand, that you can make it play what you want to come out of it and not what it wants to happen by accident.

Now this is a very heavy battle of wills where failure can mean a rotten tomatoe in the 'earhole, or worse, no work, or the sack. To save on laundry bills, and let's face it, the smell of a rotten egg never goes away, it's vital that you tame this instrument before it breaks your heart and your pocket. How do you make it play the sounds you hear in your head? By linking your brain directly to the sound using:-

Conditioned Reflexes

When a baby learns how to walk it takes it in stages from crawling to learning to stand up, to a few toddling steps hanging on to something and, eventually to walk without falling over. This quite complicated feat of balance and muscular control takes time to learn but, once programmed, the brain relays the signals automatically in rapid set of instructions that bypass the part of the brain that deals with problems.

When you run now, you don't think of each separate move: lift this foot put it two feet in front, now transfer the weight onto the other foot without toppling over and repeat, it all happens in a smooth series of lightning reactions.

This is the same process being applied when you hear John McLaughlin scorching over the fingerboard of his guitar, so fast that the notes blur together. Or Billy Cobham when he hits all the cymbals on his kit faster than the eye can follow, and only the fact that they are all still moving tells you what just happened.

When you want to play a two octave scale of D in two seconds, then there isn't time to consider 16 notes; you just switch to the part of the brain you have programmed to do this. How you programme your brain is by the same way you used to walk:

Practise

This is not a dirty word, it is the only means by which you train your hands and fingers to react directly from thousands of patterns you programme into the conditioned reflex part of the brain.

When you have achieved a large number of patterns, say after two years of learning, you might then decide to try to become a sight reader like some orchestral players who can put a part on one side of their music stand and a newspaper on the other, and read both,

This means reprogramming the fingers to react to signals sent via the eye direct to them, in the same way you learn to read words. First each letter, then short words, long words and eventually whole sentences at a speed far greater than you could move your lips to read aloud. You see a whole mass of dots and by looking at the shape and how it fits onto the lines on the manuscript you instantly play the 16 note scale of D in two seconds because you have programmed the fingers to make sixteen movements when the eye sees a certain shape.

It's amazing how many guys say they have done an hour's practise, when all they did is go through all the things they did the day before. The same licks that they learnt off a record they endlessly repeat every time they practise without slowing right down to learn a new pattern and programme, consequently they can practise seven hours a week without getting any better or making any progress.

When you practise you should always be struggling to do something just beyond your ability.

Start with tunes, go on to solos off of records, then on to very hard virtuoso solos. If you are into reading music, it helps to write them down when you have learnt them.

Play as many hours a day as you can, sit watching TV with your guitar or drum sticks and play silently while watching a programme. This develops the sub-conscious reflex. Silent practise is quite surprising for wind players when they find themselves making mistakes without actually blowing and making a sound. This has been around for a while as a learning aid, particularly with keyboards where they make special silent practise keyboards for piano fingering dating back fifty years.

Assuming that you have mastered the odd solo how do you get up to the world class standard of the players on your favourite records? By being able to play every every note that they can and, providing you have the necessary speed here's how to:-

Play along with the man

You need a record deck, hi-fi amp and speakers and a tape recorder, reel to reel, or one of the posh cassette decks as long as it has a din socket and mike input. Most of you will have these already but if you haven't got them you can claim for them off your tax (see last month). Get a pair of cheap headphones of the type used in studios, (most of the ones in studios have been blown by musicians who have spent too many years in front of a 200-watt stack and gone deaf).

Connect the tape recorder to the amplifier by means of a five-pin din plug lead between the two. Plug a mike or instrument into one mike input of the tape machine and keep everything set to 'stereo'. Plug the headphones into either the tape or the amp whichever is louder then put on a record that you are trying to play like and record yourself on with the player. If you switch the amp to 'mono' on playback you can use the balance control on the tape deck to mix in what you have added. The advantage of this method is you can tell if you really are getting the licks right. Without being able to hear them back you can get a false impression, you think you made it but the tape says you didn't.

As well as getting into recording oriented playing this will make you familiar with working with headphones which are not very loud, as in a real session. Play one side of an album and then listen to it back, being very criticall of your performance, much as the person on the record might be if he could hear your attempts to keep up. Another advantage of this method is that you have to play in keys you would not choose yourself, again useful for session work. You will also find that this method is a lot more interesting than playing on your own and, because you get a rest when you listen to yourself back, are able to play all day without getting

By plugging your mike or instrument directly in to the tape machine you will also learn how to use the tone controls of a guitar properly and how to use a mike most effectively, as there is no tone or equalisation to interfere with the sound of you!

Again, this will come in handy when you are recording for real as magic has to come from the studio floor. After all, on the other side of the glass, for all its complicated look, is only the equivalent of twelve Revoxes joined together and a larger version of the 12 into 2 mixer you use to make demos on. True, there are a few 'toys' to modify tones, clever echo effects and facilities to add another ten of you plus the London Symphony orchestra, the massed bands of the

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Guards with cannons and 200 voices, but, the magic has to be on the basic track first, and that means you.

Recording is the only way you are going to make any real money for your old age, so the hundreds of happy hours you spend at home mastering tricky licks and getting them on tape, will one day, with a large slice of luck, mean that when you get your big chance and the red light is on for you to show the world, the world will like what you do and reward you with a big payday.

Getting on the right track

Sooner or later every musician has to play in a band, and a band has to practise together. Many hours of valuable rehearsal time, and not just the ever-growing cost of rehearsal studios, are lost in silly arguments about who plays what in a number. If you haven't got the whole thing well rehearsed and sorted out before you go in to record, this sort of silly argument could cost you £25 in lost studio time. Try running your rehearsals to an organised system and relate the whole outcome to two main objectives.

- 1. If you are a professional band and you hope to get work, you have to play music that enough people will pay to hear, so you can all eat.
- 2. When you make a record it has to tempt sufficient numbers of people to part with their money and huy it so that you get back the recording costs and make a handsome profit.

Advances

The average individually-receivable percentage for a new band with a standard of artist's recording royality is around one per cent each on 90 per cent of the retail price; £100,000 of records sold means £900 each if the company pays the recording costs or in the case of you paying the cost less £10,000 on average, leaves £800 each.

So, when you are faced with a choice regarding alternative musical ideas, try to choose the one that the majority of the audience or the record buying public would most appreciate. Try to think competitively in terms of outselling other bands and this will in most cases make the choice of direction obvious.

Think in terms of becoming an international act and look at the market. The singles market is a different one to the album market and many big stars have released as many as six album tracks as singles over a two year period, and seen them all make the top ten.

Make a list of the big-selling bands and artists that are in your particular category; pop, progressive rock, revival rock and roll, reggae, soul and disco, middle of the road, punk, country and western, cowboy rock (The Eagles type) etc. Then steer your direction through any slight gap in the market you can see so that you are not trying to beat any superstars at their own game.

It is no use being a carbon copy of Queen, the Eagles or Elvis Presley, even if you *are* slightly better, the fans will never accept it.

Remember these factors when considering whether a bottleneck guitar solo, or synthesizer would be best for your next single, even monster album acts (like 'YES' and 'ELP' need a hit single.

Records

Apply the same recording techniques for your band rehearsals as for your own private practice. A cassette recorder (preferably stereo) with an automatic recording level control will give you an idea of how a number is shaping up if only you can find the right place for the mike.

You can get even nearer to hearing what a record might sound like by using your P.A. mixer and a Revox or other two track tape machine. Direct inject the Guitar, Bass, and Keyboards by making up some split leads: a jack into the instrument wired to two female jack line sockets with enough lead to reach the floor. One lead goes to your amp using a standard jack to jack, the other to the mixer in the same way.

Drums just need a mike in the bass drum and one hung over the top of the kit. Vocals and brass are through the P.A. as usual and benefit from reverbs or echo if you have them It helps to have a hi-fi amp and speakers handy to play back on rather than the P.A., but this is a very basic method and can be elaborated on by getting some cheap limiters using more mikes on the drums etc.

If a number stands up to being recorded by these basic methods and sounds like a hit record, don't be disappointed if you can't get the same sound out of an elaborate studio, because very often it's just impossible to get the same overall sound and feel. A lot of bands can't relax in the studio and sound stiff and jerky compared to their demos. It's then up to the producer to really earn his money and get the band rocking and relaxed.

The 'layered' method of building up a track starting from just the rhythm section than adding the lead vocal, backing vocals, horns, strings, kitchen sink, often results in a sterile sounding track. Sticking it all down together gives it that magic spark with all concerned flashing off each other. It doesn't matter how good your songs are if you play them like you feel tired and bored. Even slow numbers should have a feeling of repressed energy and intensity.

Above all keep your enthusiasm for music and play everything as if you really mean it. If you dislike the music of the band you're in leave, rather than get bitter and start treating playing as a job. It is a job, but one which can only be done with *everything* you've got.



IT IS NO USE BEING
A CARBON COPY OF QUEEN,
THE EAGLES, OR ELVIS PRESLEY,
EVEN IF YOU ARE
\$LIGHTLY BETTER

HOLMES' REED GUIDE

by Alan Holmes

After playing 16 different kinds of reed by the three biggest names in reed making; Nova (who make La Voz, Rico, and Symmetricut), Selmer (with their Omegas) and Vandoren (the world's largest supplier of clarinet reeds). I am suffering from a touch of "reeditis" and reeds before the eyes.

Before I start, I should make it clear that all these makers rely on people sticking on one brand and becoming regular customers so there is no way that any of them can be making anything but the best and most consistent reeds they can and, with the exception of the plastic Ricoplex, all are professional quality products, suitable for all kinds of music. Starting with the best selling saxophone reeds:

Rico Standard

The most popular sax reeds which I have used as the standard for playing strength comparisons. Very consistent bright sound suitable for both metal and ebonite mouthpieces. Used by more professionals than any other. In boxes of twenty five.

Rico Royal

Ouite a bit more expensive than standard but brighter cane so a bit harder. The sides are thinned further back and the tip is not quite so thin but extends slightly further back. Smoother to play on and a different tone to the standard variety. Box of ten.

Rico Plasticover

An important technological breakthrough. These are what seem to be Rico Royals coated with what looks like tef-Ion. It's a black micro-thin skin of plastic anyway, which lets just enough water in to make the reed work but not enough to let it get waterlogged. I used one for a non-stop 10-hour recording session and it didn't change its characteristics a bit. Its other advantage is when you have a number of reed instruments you are doubling on, because the reed doesn't dry out on you and you can just pick up an instrument after a couple of hours and it plays as if the reed is wet. Its main disadvantage is that, because it lasts longer than a standard reed, it suffers from being bent by the pressure of the embrochure on it and slightly narrows the effective size of the mouthpiece. It can't be clipped

because of spoiling the coating so it has the effect of playing half a grade softer once it's broken in. Very easy to play on with a slightly metallic tone. Four in a box, very expensive, but worth it if they suit you.

Rico Ricoplex

A synthetic reed made of plastic which can be clipped and sandpapered to make it harder or softer. So far, no one seems to have made an acceptible cane substitute but when they do it will mean a lot of reed problems will be over. Until then, this doesn't sound like a cane reed at all. It is very unusual in tone and sounds sometimes almost like a synthesizer. Useful for players who are looking for a freaky sound. Boxes of four, very expensive.

La Voz

Marked 'Medium' instead of a number. A popular reed suitable for both metal and ebonite mouthpieces. Leaning more towards the Van Doren it has a reedier, edgier sound than the Rico and is slightly softer in the tenor by almost half a grade. An interesting tone, slightly dearer than the Rico Royal which makes it the most expensive cane reed. Worth its price. Box of twelve.

Symmetricut

I was very surprised to find that this, the cheapest reed of the nine, was virtually identical to a Rico standard and represents a bargain at the price, Box of ten, or in single novapack plastic container for alto only. Cheap but good.



Selmer Omega

A replacement for the old "Soloist" reeds which were deservedly popular. This is French reed which means the cut makes it quite reedy in tone and thus more prone to chips if used with metal mouthpieces or those with thin rails. Bright cane so slightly hard. An interesting tone and popular among "straight" performers. Smoother than Van Doren. A high quality reed at a reasonable price. Box of twelve,

Van Doren

The most popular reed for classical players. Very reedy but very responsive. Useful if you have a very round-sounding mouthpiece and want to brighten it up. Very prone to chirps. Because they are

so responsive they show more inconsistency than other makes. The thin tip makes it slightly softer but it is marked 21/2-3 for tenor and doesn't have the grade stamped on the reed itself like all the others. Box of 10 good value.

Van Doren Jazz

Harder than the standard Van Doren and a sort of cross between the Selmer and a Rico. Worth a try. Box of 10 good value.

I recommend that once you have found the correct grade of reed for you, try experimenting with some of the other types listed here until you find the tone and response that suit your playing and type of music. You might also find that one brand is best for your tenor and another best on alto.

The grades listed under the "buying grades" column are what to get if you want something of the same playing strength as the Rico Standards. These differences are, in some cases, only a quarter of a grade so I have chosen a grade which can be made equal by slight clipping. The grade of a reed depends on the hardness or brightness of the cane so a 2 ½ clipped down to play like a 3 has a slightly different tone than a standard 3. Why not change your make of reed this week? You might find a whole new playing experience.

REED SURVEY										
MAKE	NO. IN	вох	PRICE PER BOX	PRICE FOR ONE	GRADING 2½ Alto/3 tenor	PLAYING GRADE	BUYING GRADE			
Rico	alto	25	£ 9.50	£ 0.38	Standard	2½	2½			
Standard	tenor	25	£12.50	£ 0.50	Standard	3	3			
Rico	alto	10	£ 5.10	£ 0.51	½ grade harder	3	2			
Royal	tenor	10	£ 6.30	£ 0.63	½ grade harder	3%	2½			
Rico Plastic	alto	4	£ 3.16	£ 0.79	Soft	2	21/2			
Ricoplex	tenor	4	£ 3.36	£ 0.84	Soft	2½	3			
Rico	alto	4	£ 3.36	£ 0.84	⅓ grade softer	2	3			
Plasticover	tenor	4	£ 4.76	£ 1.19	½ grade softer	21/2	3½			
La Voz	alto	12	£ 6.24	£ 0.52	Medium — Standard	21/2	Medium 2½			
La 702	tenar	12	£ 8.16	£ 0.68	Medium — ½ grade softer	2% 2%	Medium Hard 3			
C	alto	10	£ 3.40	£ 0.34	Standard	21/3	2½			
Symmetricut	tenor	10	£ 4.30	£ 0.43	-	No Sample	_			
Selmer	alto	12	£ 4.80	€ 0.40	Slightly hard	3	2			
Omega	tenor	12	£ 5.40	£ 0.45	Slightly hard	3½	2½			
Man Danes	alto	10	£ 4.10	£ 0.41	Slightly soft	2	3			
Van Doren	tenor	10	£ 4.90	£ 0.49	Slightly soft	2%	3%			
Van Doren	alto	10	£ 4.10	£ 0.41	Harder than Standard	2½	2½			
'S' Jazz	tenor	10	£ 4.90	£ 0.49		No Sample	-			







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The Ramones: Rocket To Russia (Sire 9103 255)

Anyone who is wondering what will happen to New Wave and Punk in 1978 might just find the answer on this latest album from The Ramones.

This four piece are one of the top American punk bands, but punk American style is slight! different from its snarling, spitting British counterpart. All the same power and aggression is there, but on the other side of the Atlantic they tend to write more catchy, commercial material.

This influence seems likely to permeate through to the British scene and there has already been talk of Power Pop becoming the next big thing. This being the case, any aspiring new band would be well advised to give "Rocket To Russia" a listen.

On first listen, all the tracks seem to blur into each other, and the band sound rather like a speeded-up version of Status Quo. However, a few plays reveals a collection of catchy three-minute songs with clever hook lines.

The stand out track is "Sheena Is A Punk Rocker" which made the singles charts over here. This is a classic pop song, simple but effective which drives along complete with catchy chorus.

"Ramona", "Rockaway Beach" and "Locket Love" all stick to this same formula and soon become singalong numbers. The playing is raucous and heavy, but contains subtleties which put the band above many others in the same field.

Tommy Ramone drums with Ringolike solidarity while guitarist Johnny churns out great slabs of chords which threaten to swamp the rest of the band.

One of the main differences between The Ramones and most British New Wave is their vocals. Instead of spitting out the lyrics is true Johnny Rotten fashion, vocalist Joey Ramone harks back to the American pop bands of the Sixties.

On their version of "Do You Wanna Dance" the band even manage to sound like the Beach Boys, which gives some idea of the wide ranging influences on their music.

As with most of the so called New Wave bands, The Ramones are essentially a live act, so the best way to listen to this album is with the volume turned up full.

Despite being labelled a punk band, The Ramones are really a good energy pop band of the type which will probably be emerging in Britain this year.

David Lawrenson

Produced by Tony Bongiovi and T. Erdelyi. Engineer Ed Stasium, assistant engineer Don Berman. Recorded at Media Sound, New York, Mixed at Power Station, New York and mastered at Sterling Sound by Greg Calbi.

Roogalator: 'Play It By Ear' (DO-IT Records)

Roogalator are a hard-working London band who, over the past year, have taken their music to just about every



Ramones: good energy pop

corner of Britain. Led by American guitarist/songwriter Danny Adler their sound is sandwiched somewhere between Chicago blues and Southern States funk, with a taste of swing and be-bop jazz thrown in for good measure.

This strange mixture is both their strength and their weakness — strong enough to gain them a faithfull following on the pub and club circuit, but too unusual to attract the financial support of a major record company who prefer easily categorised acts with known markets.

Roogalator's last single, "Love And The Single Girl" which is included here, appeared on Virgin, but this debut album is on a new independent label DO-IT Records.

The music is always interesting and in parts very enjoyable. The fast choppy funk numbers, "Get Ready", "Sock It To My Pocket" and "Stop Selling It" work least well, probably because the playing sometimes seems overcomplicated just for the sake of appearing impressive. It is when the band just swings that the album really takes off, as in the Louis Jordan-style "Walking", the attractive "Magicooee" and the racy "Mama Kindalini".

The album also contains re-workings of old Roogalator favourites "All Aboard" and "Cincinnati Fatback" which first appeared on a Stiff EP, and the new versions are an improvement on the original BBC session recordings.

However, other aspects of the album's production are less satisfying. On parts of "Love And The Single Girl", their most commercial number, the cymbals tend to drown out everything else, while throughout the album the vocals are mixed too far back.

The musicianship throughout is of high quality. Adler's guitar sound is a cross between Freddie King and Hank Marvin (with whom he bears quite a resemblance) - lots of feel and bags of tremelo.

Keyboard man Nick Plytas, an obvious jazz devotee, plays immaculately, contributing a very Basie solo on "Single Girl" and, unusually for him Hammond parts which are very reminiscent of early Richard Holmes.

The sound is underpinned by the solid bass playing of Julian Scott and some very positive and fluent drumming from Justin Hildreth.

Since this recording, Nick Plytas has left the band, so this album is a must for those people who have enjoyed some of the many gigs played by this line up over the past year.

The album is available from Virgin stores, specialist shops or direct from DO-IT Records at 48a, Friars Stile Road, Richmond, Surrey.

David Lawrenson

Recorded at Surrey Sound Studios. Mixed at R.G. Jones. Engineer: Gerry Kitchingham, Produced by Robin Scott.



Karla Bonoff: "Karla Bonoff" (CBS 82455)

The word is that this lady is going to be the next big female singer a la Muldaur, Ronstadt, and Emmylou Harris. Unlike these artists, Karla Bonoff writes her own numbers and very good songs they are

On her first album outing she is backed by the West Coast session clique of Russ Kunkel (drums), Andrew Gold (vocals and everything), Glenn Frey, and J.D. Souther and renegades from Ms Ronstadt's band Kenny Edwards (bass) and Waddy Wachtel (guitar). Edwards himself produced the record and does a tasteful job.

The songs themselves are all very strong compositions with the standout track being "I Can't Hold On" which has got to be the single with Andrew Gold duetting with Bonoff.

Karla Bonoff's voice is similar to Linda Ronstadt's but, if anything, is stronger while remaining just as sweet. Naturally with the above-mentioned musicians on the album, the playing is impeccable but not without feeling. You get the impression the "guys" are all Bonoff fans and wanted to do their

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best for the lady's first solo vinyl outing.

If you like Linda, Maria, and Emmylou you'll appreciate this album for what it is, a collection of superb songs graced by the first-class voice of their composer.

Ian White

Produced by Kenny Edwards, Engineered by Greg Ladanti, Recorded at The Sound Factory.

Gerry Rafferty: "City to City" (UAS 30104)

The last I saw of Gerry Rafferty was his excellent album "Can I Have My Money Back" stuck in a bargain bin for £1. Since recording that work, Rafferty has been in hibernation in his native Scotland before re-emerging with a new record deal with United Artists. "City to City" is the first UA release from the ex-Stealer's Wheel man and is as a fine comeback album as anyone has ever produced.

Rafferty seems to be one of the select few who can turn out a good melodic song and still inject it with a gutfeel and rawness without going over the top.

It's good Anglo-Scots Rock and Roll much in the same mould as McGuinness

Flint and Ronnie Lane. The title track "City to City" is an infectious love song with the theme of the night train from London to Glasgow. With the right airplay it could be No. 1.

Granted, Rafferty is helped along by some of the top names in the business, least of all the heavenly guitar playing of Jerry Donahue. Other names that will be familiar on the sleeve credits are: Rab Noakes, Henry Spinetti, Andy Fairweather-Low, B.J. Cole, and Barbara Dickson.

The album is one of those records that improves with repeated listenings and it's not until you've been through it about four times that you appreciate the strength of the songs, the musicianship, and Rafferty's lyrics. "Baker Street" is a song that cuts a bit too close for comfort to anyone who has come to London to seek their fortune. It captures the feeling of loneliness in a big city perfectly without becoming maudlin. The sax of Raphael Ravenscroft adds a feeling of deserted dawn streets and emptiness. Buy "City to City".

Ian White

Recorded at Chipping Norton Studios, Produced by Hugh Murphy and Gerry Rafferty, Mixed at Advision, additional recording at Marquee Studios and Berwick Street Studios.



Gerry Rafferty: back with a vengeance



Blondie: Plastic Letters (Chrysalis CHR 1166)

Along with the Ramones and Talking Heads, Blondie are one of the top American new wave/pop bands who are building up quite a cult following in Britain

"Plastic Letters" is their second album, and the six-piece outfit have already built up a distinctive sound on record thanks to their imaginative playing and charismatic vocalist, Debbie Harry.

As with most new American bands, Blondie's repertoire consists entirely of three minute songs with a fair sprinkling of commercial appeal. Behind Debbie Harry are Chris Stein on lead guitar, Frank Infanti on rhythm, Nigel Harrison on bass, Clement Burke on drums and James Destri on keyboards.

Debbie's voice is not the greatest you will hear on the rock and roll circuit, but it certainly is distinctive. She does not set out to be a raucous blues shouter, a path well worn from Janis Joplin onwards, but prefers to tailor her plaintive vocals to fit in with the overall sound of the band.

This works particularly well on "Denis", one of the best cuts of the album, which has been released as a single and could give them chart success. It starts with Buddy Holly-type drums and guitars before slipping into a catchy

song which is the perfect vehicle for Miss Harry's voice.

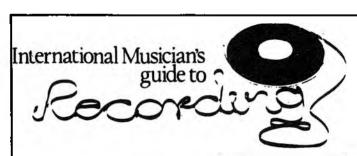
Jimmy Destri contributes some of the best sounds on the album both on organ and synthesizer. His Farfisa organ parts make a welcome change from the stereotyped Hammond sound, and his synthesizer work is restrained but imaginative — what a welcome change to find a musician who doesn't become filled with grandiose ideas at the mere sight of electronic gadgetry. Destri's parts are brief but carefully constructed using the synth as an instrument rather than an excuse to dominate the band.

"Fan Mail" is the best track on the album — good playing, lots of power, all crammed into three minutes for maximum effect. However, the rest of the material does not quite measure up to the couple of numbers mentioned, although "Kidnapper" comes near.

The album is unlikely to bring Blondie the commercial success they are seeking, although they are well worth catching live and their forthcoming British tour could give them the boost they need to break through.

David Lawrenson

Produced by Richard Gottehrer and engineered by Rob Freeman.



The Mysteries of the Cutting Room



by Robin Lumley

No, the title doesn't mean we're going to prowl after weird goings-on in some Hammer-horror surgery, but instead, to take a look at the final stages in the process of making records; cutting the disc and pressing the production runs. The disc-cutting operation is the very last event that the producer or artist have any control over, as after this job, the whole album, and all the hours of careful recording and mixing are consigned to the (sometimes none-too-) tender care of the pressing plants.

Up until now, in our descriptions of the various facets of the recording process, we've been dealing with tape as the medium of sound storage and recall for all the activities involved with recording and mixing. But, obviously, there has to come a point where the sounds stored on tape get transferred to plastic, so that they can be packaged and marketed as record-albums. What's needed now is a master die from which the individual discs can be pressed at the factory, and the first stage in obtaining this is done at a cutting studio, Several studios have their own cutting rooms as part of their studio setups, and there are also cutting studios that specialise in that and nothing else. You've only to scan the sleeves of some of your albums and notice that very often the cutting engineer merits a credit in order to realise that this is a vital process, indeed.

Basically, what goes on is that the final tape, hot from the mixing process, is played to a sort of super-record-player-in-reverse; in other words, as your record player at home has a needle that is carried around the record grooves and, on its way, is sensitive to the shapes and indentations therein and reproduces the stored signal of music via amn and speakers, in the cutting room, the tape is played to the needle, which then cuts its own identations onto a previously blank and grooveless disc. The super record player, as we've called it. is correctly known as a disc cutting lathe, and is an extremely

sophisticated piece of machinery. Let's suppose an imaginary disc cutting session: we walk in the door and see, apart from the lathe itself, a pair of studio monitor speakers, various 1/4" master tape machines, and a control desk, which on first glimpse appears similar to recording and mixing desks. We might also note another vital occupant of the room; the disc cutting engineer who, true to form, will probably be quite boffin-like in his behaviour and conversation, and spend his time mumbling things like "out of phase component"/"the damn swarf's bust"/"groove velocity"/ "why don't they mark spiral times properly on the box" and other mysterious phrases, which I'll try to explain as we come to them.

The first thing that the cutting engineer will do is play through the tapes that are to be cut to disc. A very careful listening session then ensues, as the engineer checks for overall level of signal, whether there are any violent peaks in level, or out-of-phase components, or loud "highs" or "lows", and many other factors, all of which are important to him if he is to transfer what you have on tape, faithfully to disc.

There then follows a discussion with the cutting engineer about certain factors which you. as a producer, have achieved on tape during your final mixing sessions; factors concerning musical and sound ideas which have to be successfully translated into technical approaches as far as a quality disc is concerned, and which may require some modifications using the control desk in the cutting room. For example, it may be decided that a tiny bit more top frequency is required from a certain instrument, and using the highly selective graphic equalisers, this may be made possible on the cut. Or maybe certain things have been mixed out-of-phase; something cutting head on the lathe dislikes intensely, and this will need a little modification from the

equipment also. The spiral times are next decided; if you look carefully at the surface of a record. you will notice how the grooves widen out slightly between each track. This visual banding must be made to occur when cutting. When all has been discussed and decided, an attempt is then made to cut one side of the record. Each cut, once started, must continue, either to a successful conclusion, or fail, because you can't cut so far and then stop. The whole side must be done in one go.

So, the engineer puts onto the lathe a blank disc, which is made of aluminium, and coated with a very thin layer of black cellulose nitrate lacquer. The process then begins; the playback tape machine begins to play Side One of the album to be cut, and the grooves start appearing on the lacquer disc, being cut by a sapphire stylus. The stylus is electrically heated, so that it cuts easily through the cellulose nitrate, and the waste material cut away by the stylus is sucked away down a tiny tube by a miniature vacuum cleaner. This waste is known as the swarf, and comes off the disc in an unbroken thin thread. The cutter head, which is a bit like the stylus holder on your record player, is gradually moved across the disc surface as it cuts by a lead-screw driven by an electric motor. The rate at which this system moves the cutter head is very important, as this determines the groove width being out.

Loud passages tend to cause bigger grooves than soft passages of music, and any music which has a big dynamic range (lots of bass and drums, as well as screaming guitars and vocals, for example) is going to need a bigger groove width on its cut than an album of folk singer guitar and voice. This is the reason, by the way, that many hard rock albums tend to have a shorter running time than, say, a non-electric folk group, because if the grooves are wider, the cutter head will reach the middle of the disc in fewer revolutions of the lathe. But recent developments have considerably helped with this, especially the inception of the varigroove system, which enables the groove width to be constantly changed during the cut: i.e. the groove width automatically widens for loud passages. and closes up again for the quiet moments. This automatic opening and closing doesn't happen by magic, but by having an additional playback head on the tape machine that is playing the album into the cutting machine, By this system, the equipment controlling the groove-width "hears" the album a moment before the signal reaches the cutting stylus; time enough for it to adjust if it knows a loud bit is coming up next.

We may have been lucky first go, and have got our Side One with no snags, or we may find that the stylus has reached the middle of the disc before the tage has finished! In which case we have to start all over again, but cutting a db or two quieter this time, to make sure it all goes on. The cutting engineer will have been examining the grooves as they are being out, by peering trough a small microscope built onto the lathe. Then, onto Side Two, and another album successfully transferred. But I must point out that I have had to simplify this description of the cutting room activity in order to keep it in readable prose, rather than spout on in technohaffle.

But before the final shopbound discs can be pressed, a "negative" of the disc must be made, so that it can be used as a mould. Obviously the discs we have cut (one for each side, and not a two-sided item) are "positives"; i.e. capable of being played (although the master lacquers must never be played, as it would ruin them). So what happens next is that the lacquercoated disc that we have cut is sprayed with a silver solution to make it an electrical conductor. and then by electrolysis (go and look it up in your Physics books) a metal negative is produced, from which the "stamper" derived. The two stampers, one for each side, are then placed in a thermoplastic injection mould at the factory. Heated vinyl is injected between the two stampers, which then squeeze together (and incidentally, put the centre labels on at the same time) and finally eject one album, ready to play all but for trimming up round the edges.

Test pressings are then sent back from the factory to the artists and producer, who make sure that all sounds as it should. If there is an excess of surface noise, for example, new stampers may have to be made, or the album re-cut, until everyone is happy. The musicians and engineer who have worked so hard throughout the creative process of the album are then at the mercy of the pressing plant to keep their high standards and, unfortunately, these days, sometimes these standards are not met. Often the pressing we make here in England are not up to the quality of the technical standards of the recording on tape in the studio, because of re-cycling old plastic from deleted discs, and sometimes bad supervision at the factory. The Germans have really got disc-cutting and pressing together, and operate their plants under almost hospital-like conditions: needless to say, their pressings are second to none. But it saddens us here a little to think that with all the care and trouble we lavish on our tapes in the studio (spending ages sometimes, trying to get of tiny, almost-inaduible, clicks) you sometimes get home and play a record that sounds like it started life as a dinner nlate.

O TRADE NEWS O

Gentle Sounds from Leigh-On-Sea

With the success of bands like Dr. Feelgood and Eddie and the Hot Rods, the Southend area has become one of the most important breeding grounds for talent in the country — which is great news for the local music dealers.

One of the busiest is Tim Gentle, who set up his own store 15 months ago in nearby Leight-On-Sea and has gone from strength to strength ever since.

They deal mainly in guitars, amps and small PA systems including such top names as Gibson, Fender, Peavey, MM and HH. In fact Tim is something of a Gibson specialist, stocking as many as 17 of the instruments at any one time which is enough to satisfy even the most ardent guitar lover.

Kingfisher Music

Kingfisher Music's location was inadvertently given as being in the north of Scotland in last month's Sonor supplement. Apologies to the company who are in fact at 20 Kings Road, Fleet, Hampshire.

Kenny Clare invents new drum

Drummer Kenny Clare has left Premier to go into business with Allan Gilbey to produce a revolutionary new type of drum which will go under the brand name "Lion Drums". Gilbey invented the new Resonator de-

sign which he sold to Premier (see review in this month's issue). The seven-drum kits will have a special metal ring on the shell to prevent the skin coming into contact with the shell. This is said to increase volume greatly.

The drums are being sold direct to dealers and trade inquiries are welcome. Southern dealers should write to: Kenny Clare, The Hollies, Box Hill, Tadworth, Sturrey and Northern enquiries to: Allan Gilbey, Richmond House, Hilderstone Road, Meir Heath, Stoke-on-Trent, The drums are being virtually haindmade by Kenny Clare and will retail at approximately £340 (ex VAT).

Biggles M ove Delayed

Biggles Music of Bristol have had their n ove to new premises put into c old storage. Partners Bob Crane and Phil Thorne had hoped that the change from their West Street address to a new store in Victoria Street would be compileted soon after Christmas.

However, the move has been delayed because a number of minor points on their new lease have still to be sorted out before the deal carrigo through.

The new premises will enable Bob and Phil to expand the business and help give their customers an even better service. They are expecting the deal to be completed at any time but at the momer it patience is the name of the gamile.



Music Man Inc. recently opened the door's of their extensive plant in Anaheim, California. A party of Japanese Music Man dealers toured the plant and IM was lucky enough to get a chance to see the traditional manufacturing facility ourselves. Pictured here is International Musician's advertising director Richard Desmound (left) with the equally leaendary Leo Fender.



Amrik Singh-Luther (left) and Pammi Singh-Luther with their staff and Hohner Executives during their recent visit,

Hohner staff visit Chase Musicians

Top executives from the Hohner company paid a special visit to one of their best customers at the London Synthesiser Centre of Chase Musicians.

They were treated to a tour of the centre, which is a leading synthesizer dealer in London. The visit enabled the Hohner staff to gain first hand knowledge of the work Chase Musicians are doing and to compliment the centre on their success with Hohner products.

They were particularly interested in the new London Synthesiser School, which promises to be a great success. Included in the party were Hohner executive Laurie Westall and Advertisement Manager Sean Leary.

Mammoth Drum Festival

Percussion Sounds of Nottingham, in conjunction with Pearl, Premier, Ludwig and Sonor, will be holding a four-week drum festival at the Commodore International, Nuttall Road, Cinder Hill, Nottingham from March 20th.

The festival will run from 8 p.m. until 11 p.m. on Mondays, Tuesdays, Wednesdays and Thursdays. A name drummer guests every Thursday, although top name drummers are bound to be in attendance throughout the whole festival.

Andy Ferguson of Percussion Sounds said: "The idea is to have a really informal atmosphere where drummers can meet and walk round and actually play the drums and talk to visiting drummers. There will be lots of things going on like com-

petitions, quizzes and demonstrations. We want to get rid of the traditional "clinic" atmosphere where you just have to sit there and watch other drummers. This will be a chance for everybody to participate".

South Eastern Entertainment Expand

South Eastern Entertainments, the Lewisham-based music store chain, has continued its program of expansion with the opening on February 4 of Music House 1, a store which houses a massive selection of amps, mixers, mikes, and quitars.

Music House I, which is situated at 373 Lewisham High Street, London, will also offer musicians a 24-hour repair service for amps and guitars. Some of the names to be found at Music House I include: HH, Peavey, Marshall, WEM, MM Electronics, FAL, Carlsbro, Fender, Gibson, Ibanez, Hagstrom, Custom Sound, and Phoenix.

Last November, South Eastern Entertainments extended their showroom to enable a larger stock of gear to be held. This latest move means there is now a chain of three major music stores in Lewisham High Street run by the Group.

Les Paul

We noticed in last month's Gibson supplement that Les Paul appeared to be left-handed. Subsequent investigations revealed this to be caused by technical gremlins. We'd like to assure readers that Les Paul is still right-handed and that the Gibson Mark, guitar which also appeared back-to-front, is a normal right-hand instrument. We apologise to Les Paul and Gibson for any embarassment we may have caused.

rnby skewes

ECSTASY AT YOUR FINGERTIPS O

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You'll only enjoy yourself after the gig if you've enjoyed yourself on the gig. There's a lot of laughs to be had on the road, but it's not funny if you've got to look forward to the next gig knowing you don't sound as good as you could. Roland musical products sound better than others. Ask Genesis, or Meal Ticket or any of the top professional bands using Roland. They really enjoy themselves on the road; they know they can rely on Roland not to let them down.



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EPUTITIES Kicking //ule guitar workshop

Nehemiah "Skip"
James was a giant of the
Country Blues Guitar. His
guitar playing covered a
wide spectrum of ideas,
styles and techniques. He is
probably best known for his
song I'm So Glad that Cream
popularised. His Devil Got
My Woman has been recorded
by many rock and folk
musicians and, recently,
John Martyn gave the tune
his unique treatment.

Skip played in an open G tuning, cross note tuning (E B E G B E) and normal tuning. For this column I would like to illustrate two of his arrangements. One is in regular tuning while the other is in cross note.

If You Haven't Any Hay is actually a piano tune that Skip also played on guitar. His piano arrangement was quite outstanding and, likewise, his guitar part is fascinating. If you remember our Crow Jane and New Pony Blues you might see several similar elements though this arrangement uses several interesting chords. Right hand-wise, you should have no problem. Study slowly the fingering positions for your left hand and try to hear the recording on the Country Blues Guitar (Snkf 129) which will help you to capture the feel.

Hard Time Killin' Floor is played in the cross note tuning. In this, you will re-tune the A (fifth string) and D (fourth string) to a B and E respectively. Technically, this piece is also simple and the open cross note tuning will do most of the work. The only work we will have is to pick out the melody line.

You should definitely try to hear any of Skip James' old recordings. Biograph Records have re-issued an album completely devoted to Skip's early Paramount recordings.

BY STEFAN GROSSMAN

If you haven't any hay don't go down that road









Hard time killin' floor



Following on from last month, I would like to continue discussing the many and varied techniques employed by bass guitarists, throughout the musical spectrum.

This month I'd like to deal with the Funk/Jazzy Rock category, as I feel it is from this region, that the boundaries of bass guitar technique and thinking are being stretched the most.

When tracing the origins and influences of the modern Jazzy rock feels, and rhythms, there are two distinct development veins to be considered, I feel, and both are heavily influenced by the various bass players involved at the time. My first involvement came when my semi-pro "beat group" would try to execute the more popular jazzy recordings of the time.

Tracks like Gerry Mulligans "Walking Shoes", or the Dave Brubeck hit "Take Five". Here I was trying to emulate the double bass part, as well as its sound, and this is probably a similar "awakening" process, experienced by one of the most underated, but important bassists involved in this general topic, Dave Holland, He started as a rock and roll bass guitarist, taking up double bass in the early sixties, and gigging with many jazz outfits such as the Alex Welch Band, and Ronnie Scott,

It ws at Ronnie's Club, that Miles Davis, arguably the biggest single, band leading, influence In the development of the jazzy rock fusion as we know it today, saw him playing, and asked him to go to the States to join his

Now I feel that Dave's contribution is more to the development of what I call the 'Traditional, modern jazzy rock fusion", introducing rock sounds and rhythms into the then "modern jazzy mainstream", as did Steve Swallow with the amazing and revolutionary Garry Burton band of the mid-Sixties

Also lack Bruce albeit coming the other way from double bass to bass guitar, from a Dixleland Jazzy band, Scotland's "Clyde Valley Stompers" to the Graham Bond Organisation, a huge British, jazzy rock and R'n'B influence, "Cecil McBee" bassist with

the pioneering, avante guard outfit, "The Charles Floyd Quartet" deserves a mention here, as being a tremendously liberating influence on bass playing generally, in my opinion which is not too surprising, when you consider the other members of the group where, Jack de Jonette - drums, Keith Jarætt piano, and Charles Lloyd - saxes. Listen to their "Live in Oslo" album, recorded around 1966, and some amazing music. with stunningly advanced technique concepts.

To discuss this particular vein of jazzy rock bass playing in full is impossible within this column, as it is a huge and fascinating subject. I must also stress that these words are purely my own personal opinion and observations of this general subject, from my own standpoint and involvement as it evolved

around me. The current experiments of the most advanced development of this vein are probably Chick Corea's "Return to Forever", and "Weather Report" with Stanley Clark, and laco Pastorius in the bass chairs respectively. These two outfits, retain the flavour of "Traditional Modern Jazzy", in as much as they still employ advanced melodic themes and chord structures, allowing the bassist to explore the chords fully and not be repetitive if he so desires.

But the modern rhythms employed now, especially the Latin polyrhythms more recently becoming evident, push him to greater heights of creativity than ever before, and of course there is now a cross-over element, in that the other major vein to be considered - Funk has definitely become a permanent infiltration to this, in my opinion the most Important, area of jazzy rock fusion.

You have to look back to the great, early James Brown bands and recordings to trace the enormous influence "Funk" has had on jazzy rhythms and thinking in general, although again in my opinion much of the music produced in the last eight years or so under the banner "Jazz Rock/Funk" has been nothing more than sophisticated disco music, but that's another argument.

Again I feel, most of the influence in the general development. and acceptance of this style of rhythm section work.

were excellent jazzy musicians of dynamics, as well as talent and feel extracting amazingly rhythmic "popping" riffs from the bassist playing in conjunction with two, sometimes three drummers, resulting in incredibly exciting hypnotic interplay, based on extremely high musical standards. This band, its music, and its

must be put down to the bassists

James Brown's act at the beginning of the Sixties, contained a tremendous amount of dance routines with "The Famous Flames". The music basically "Black R'n'B orientated, or "Soul" as it was later tagged, had a tremendous fire and simplicity about it, and the extended incredible dance routines, demanded long reptitive riffing from

The musicians involved were

of the highest calibre and many

involved at the time.

the bass player.

bassist "Bernardo" who appeared on most of the early hits, had a huge influence on me, and my contemporaries, especially when my band The Mike Cotton Sound were asked to support James Brown, who was then the undisputed: King of the current R'n'B and Soul explosion of the mid-Sixties on his first concerts here, around 1966.

This reptitive riffing along with exciting involved, and gradually more advanced and polyrhythmic drumming, allowed the leading bass guitarists of the time to explore new, percussive, technnique ideas, as well as purely musical advancement. We then reach the late Sixties, where groups like "Sly and the Family Stone" have developed what is now called "Funk" to new heights where even leading jazz musicians were starting to sit up and take notice of the possibilities of fusing this rhythmic thinking with their musical concepts.

Miles Davis again gets involved here, and is probably the biggest single polarising factor at that point in time, for all modern developments in Jazz/ Rock/Funk, fusion. Hancock one of his pianists at that time has emerged during the middle. Seventies as probably the leading exponents of Jazz/Funk, relying heavily on Paul Jackson's extremely funky and repetitive bass lines. In the last two years or so, with the sudden emergence of European style discos catching on in the U.S.A., some extremely fine disco funk bands like the T-Connection , are now evident in the states using the best of the jazz/funk developments, especially in the area of bass guitar.

An interesting technique has evolved from all this which is being widely used now, which involves hammering and pulling the strings with the right hand, (if your right handed of course) instead of the conventional methods.

It gives a very percussive edge to your playing especially on funky lines, and is very allied to the percussion playing concept in as much as you hit and attack



Jim Rodford's professional career started in 1964 with one of the pioneer jazz/rock/R&B bands, the Mike Cotton Sound, doing such diverse work as the Beatles' Christmas show to BBC's Jozz Club, where he featured the first bass guitar solo on the programme. Along with Rod, he formed Argent in 1969 until his current band, Phoenix, was born last year.

the strings, rather than pluck them.

Last month I discussed a method using the thumb and fingers of the right hand to execute certain passages that mlght involve rapid octave jumping, and chords, where required.

This newer technique could be described as a follow on from this, but instead of plucking with the thumb, you hammer down on the string with the side of the upper half of your thumb. I find it best to hit the string over the body joint end of the fingerboard, and an extremely percussive and distinctively pleasing sound is produced after much practice.

You are holding down the notes or chords in the normal way with the fingers of the left hand, but the thumb hammering has to be executed with much speed, timing, and just the right force to obtain maximum effect.

It's easy enough to hit the E string, but when you venture down to the A string, your aiming touch requires much practice as it's very easy to hit the E or D. You can hammer notes this way on the D and G strings but it becomes harder on the thinner strings to obtain the volume required, compared to the results on the E and A strings.

That's half the method. The other half involves the use of the fingers of the right hand, to pull, or slap, the chosen notes on any of the strings, but primarily on the D and G, sometimes A strings.

I use the middle finger backed up by the third finger, as it's easiest to touch-locate the string your aiming for, as physically the middle finger is the longest. This area of the technique, will vary considerably though with the size of your hand.

With the inside of the tips of your fingers, you pull the string up, and away from the fingerboard, allowing it to "ping" back down, under its own tension, causing it to "slap" against the fingerboard. In conjunction with the "hammer thumb" method it's easy to jump octaves, or even greater intervals, where, with the thumb extended at about 450 from the first finger, and the plucking fingers partially clenched, if you roll the wrist so the hand rotates back and forth, you can "hammer" say an A at the fifth position on the E string, and quickly "slap" the A an octave above at the seventh position on the D string.

For beginners this may be a difficult spread for the left hand, with the first finger holding down the lower A, and the little finger, the Higher A, but with a little practice you'll be able to hold the two notes down together, and slide this shape up or down at will. In conjunction with the right hand technique described above, you will then be taking your first steps with this recent concept.

Exercise

Here's a simple Funk bass line to try it out on involving a semitone octave jumping run up to the tonic note, followed by a similar run up to the major third interval of the chord, a well used play in funk bass playing.

I've written it out in crotchet form to enable me to illustrate more easily, the fingerboard diagram, and the location and fingering of the notes above. This is designed to help the nonreaders, and I hope it's clear enough, and helpful.

Once you've got the hang of it, you should play it at twice the speed, as if each note was written as a quaver, so the whole phrase would only be two bars in length.

I must apologise for errors in some of the written notation in my articles in the past few months, which is due to circumstances beyond my control, in the copying stage of this magazine. I'm sorry if this has confused some of you.

Competition Riff

This month's competition riff is taken from a major hit song of the Sixties, that was written and recorded, by probably, the most famous musical group the world has ever known.

For the usual prize, of a set of Rotosound bass strings of the six drawn winners choice, name, (a) the song, (b) the composers. Again due to circum-

stances beyond my control, the winners of (December's competition and the answers, were not printed in last months magazine, so here they are:

(1a) Peaches (b) The Stranglers (2a) Green Onions (b) Booker-T and the M.G's.

Only three correct answers this time from:- T. Jackson of Arnold, Notts., D. Short of Burton Pidsea, Near Hull, and O.M. Strachan of Lindley, Huddersfield. Their Rotosound strings should now be with them. The answers to January's competition were (1)" We gotta get out of this place," recorded by "The Animals", (2) "Lucille" – first recorded by "Little Richard".

James. Murphy, 219 St. Marks Road, London W10. Bill Greaves, 61 Buckstone Crescent, Edinburgh EH10 6TR. Neil Brockbank, 113 Denmark Hill, Camberwell, London SE5.





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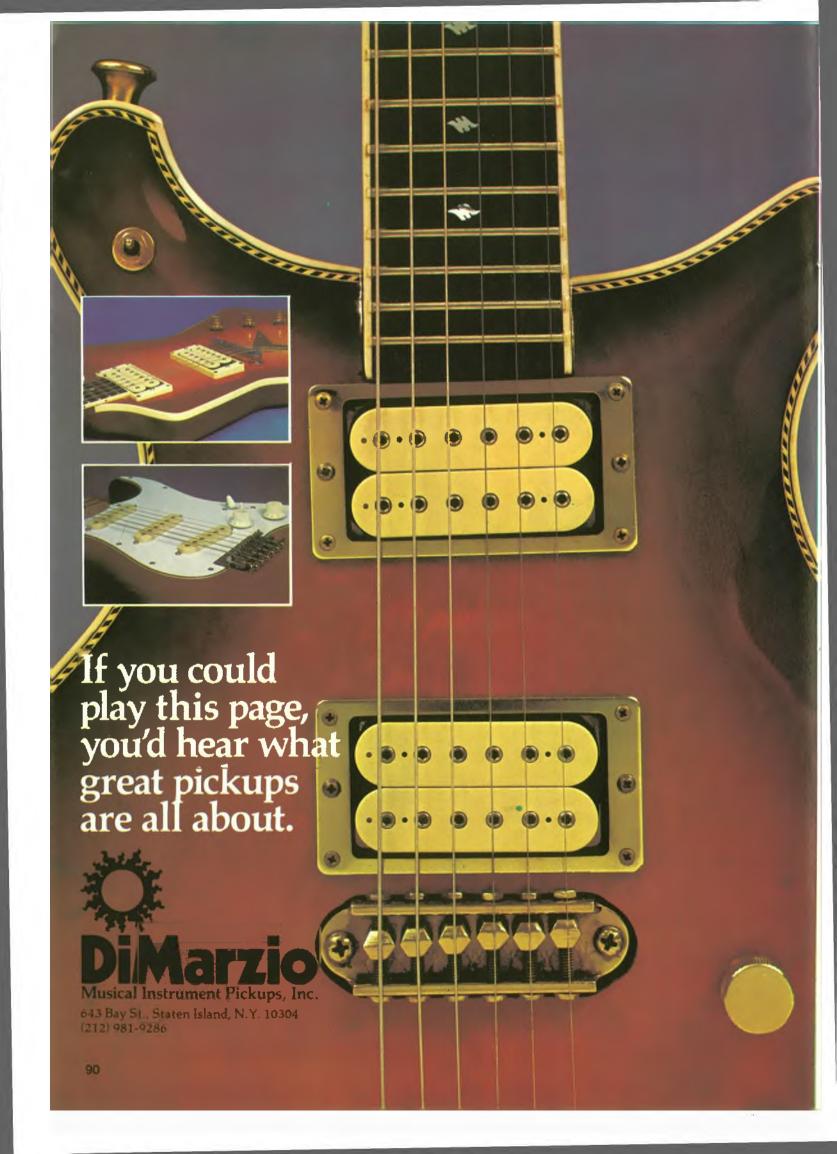
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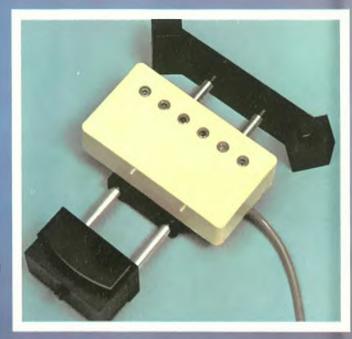
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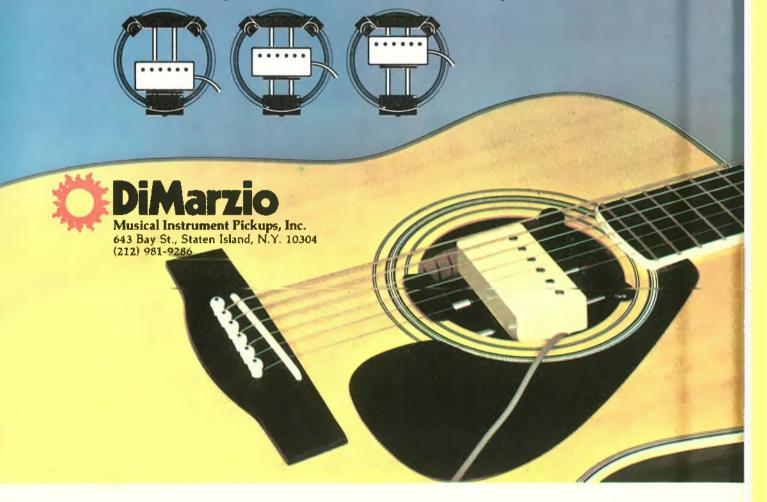
The DiMarzio Acoustic



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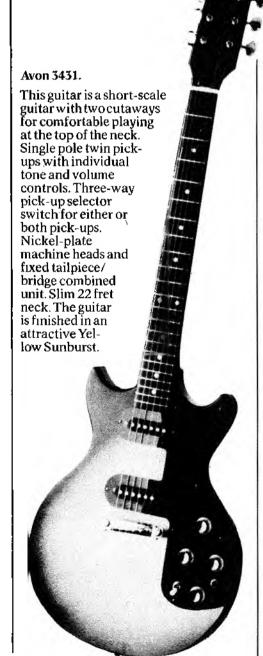
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RUMBLING MAN



One of the most fascinating aspects of the music business is the way in which stars can be made overnight and legends abound. In 1958 an American guitar picker went into a studio and cut an instrumental which elevated him to near legendary status — the record was "Rumble", the guitarist Link Wray.

The sound, built around a heavy riff, was raw and menacing, it sold one and a half million copies and inspired thousands of young guitarists including Pete Townshend and John Lennon.

Now, twenty years on, after a chequered career Link is back on the road and sharing the limelight with American rock and roll singer Robert Gordon

Despite his many years in the business, Link is still keen to talk about his early days when he first picked up a guitar. "I've been playing guitar since I was about eight years old, I was taught by an old black man who showed me how to play bottleneck".

"I progressed from playing blues to jazz, I played jazz with a five-piece jazz band and with a forty piece, that was up until I was about 14 or 15 years old, around North Carolina and Virginia. Then I started playing country and me and my brothers played Wild West shows, clubs, live radio shows before going into the Army to do my service".

"After coming out of the Army I moved to Washington and met a DJ named Milt Grant and started doing record hops with him. These were for four or five thousand kids, and, around

David Lawrenson meets the man who inspired Pete Townshend and John Lennon

this time, Presley was doing his thing. He was very big in the charts along with Little Richard, Chuck Berry and Fats Domino, so I went into the studio and made a record called "Rumble".

Link started out with an old acoustic guitar and first played an amplified instrument when he was a teenager playing in the jazz bands. This was an acoustic guitar with a pick up stuck inside it which he played until 1949 when he bought his first Gibson.

"I've had several different types of guitars, I had the Gibson then I got Gibson to make me a guitar. I drew my hand on a piece of paper and sent it to the Gibson people to make, but someone stole it".

"I played Supro guitars, the very first Danelectro guitar and also had the very first white Firebird, and a Fender Jaguar but that also got stolen. My main guitars now are Gibson, I play a 1959 Les Paul SG Gibson and that is my favourite".

His first influences were the old Negro blues players but when he took up the electric instrument he began listening to Les Paul, Chet Atkins, Tal Farlowe and many of the early jazz giants.

Link was also experimenting with the various types of early amplifiers, Standell and Gibson were popular at this time, although he preferred an old Premier. He explained that these early amps were only 35 to 40 watts maximum, so he used to hook up three or four of them together

to get the kind of sound he wanted, although there were some modifications!

Link said: "The Premier amplifier I had, had two tweeters and a big 15-inch speaker in the bottom, it was also one of the first amps with vibrato. I punched pencil holes in the tweeter and then put a microphone on that one, as well as a microphone on the other speaker. This meant I got a clear sound on one, and a fuzzy sound on the other. The set up had a lot of highs and a lot of lows, so I could get any sound I wanted out of it".

The origin of "Rumble" and its subsequent recording is in itself a piece of rock and roll history. Link said: "During the Korean War I had a lung taken out, which meant I couldn't do any singing".

"I was doing all these record hops for the kids with my brother doing most of the singing. One night in Fredericksburg, Virginia, a few kids got together and decided to do a little fighting".

"I started playing these notes as a sort of joke, but the kids came up to me afterwards and said 'Hey I Like that sound play it again'."

"So I started playing and developing it until it started to sound pretty good. The kids started asking for it because they liked it, so I decided to go into the studio and record it".

"Actually, my brother was recording for Cameo records at the time and so at the end of the one of his sessions I just went in and cut two songs, "The Rumble" and a flip side "The Swag" — it cost just 57 dollars".

"Nowadays in the studios they try to give it the limiters and all that bullshit, but with "Rumble" we just turned up the volume until everything was on red and did it on one track in just three takes".

"Rumble" stayed in the American charts for 14 weeks and Link had considerable success with a number of follow ups in the late Fifties/early Sixties, In fact he has an interesting tale about his last big hit "Jack The Ripper". It came out at the same time as the first release of the Beatles' "She Loves You" which sold a mere 800 copies compared to the near million-selling "Jack The Ripper".

However, the Beatles were still to make their first public appearance in the USA, and when they eventually did all their records, including a re-released "She Loves You", were massive hits.

With the music scene changing, and the British invasion well and truly underway, Link decided to take a break from the business and in 1965 went to work on the family farm in Maryland.

Although no longer touring, Link nevertheless maintained an interest in recording and built himself a small three-track studio at the farm which he and his brothers used frequently.

He had played with his brothers Doug and Vernon from the early days and in fact collaborated with Vernon to produce a hit by Bunker Hill called "Hide And Go Seek" which became a much sought after soul record in the Sixties in Britain.

Link said of their recordings: "We have had our own studios since the days of "Rumble" and "Rawhide" moving all round the Washington area. Then we bought the farm in Maryland and rigged up a studio in the basement".

"The recordings were like a lot of bootlegs you hear now, things like "Good Rockin' Tonight" (an album released in 1973) a lot of that stuff was cut in the basement".

"However, the music was disturbing my brother's wife so we moved all the stuff out of the basement into a shack at the back of the house. It used to be a chicken coop, so we cleaned it all out and made a studio".

"We had three-track Ampex in there and we used to just cut right off the head of the thing, we didn't go through no mixing board, limiters, Dolbies none of that stuff".

"In fact on one of the album tracks we recorded you can hear the frogs right in the middle of the song. While the music is going on you can hear the frogs croaking, the dog howling and everything else, it was hilarious".

On many of these sessions Link was using a home made guitar, "I bought the body of it in Nashville, and this kid in Tuscon put the neck on it, I used the keys off my Firebird and it had homemade pickups on it with a booster, once



again made by this kid,"

Link first teamed up with Robert Gordon a couple of years ago, "His producer/manager called me in San Francisco and asked me if I wanted to get involved with Robert. I came and heard him sing, and I thought he sounded like the early Elvis. I'm from the South and that kind of stuff is my roots and my background, so I thought 'swell'".

"I write a lot of songs and Robert used three of mine on his first album. The kind of songs I write depend on where I am at the time, for my country songs I used to go to Nashville for the DJ's conventions once a year. While I'm down there I'll get a buzz and start writing country songs, but usually I just go out into the wild blue yonder and write

anything"

He has tremendous respect for modern guitarists and tries to keep up to date with what is happening on the music scene. "I listen to them all, Pete Townshend, Jeff Beck, Jimmy Page, they are all great guitarists. I think they all have their own style and I respect each one of them just like back in the old days when I liked Les Paul for his style, and Chet Atkins for his. Each one of them had their own feel and I could really get into it".

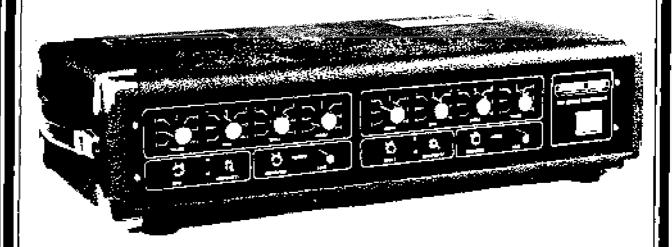
Although Link doesn't use any effects apart from vibrato he says he is aware of what is going on in the music business and is constantly learning.

"f am always learning, I think when you get too old to learn you might as well quit, but I believe you are never too old to learn".

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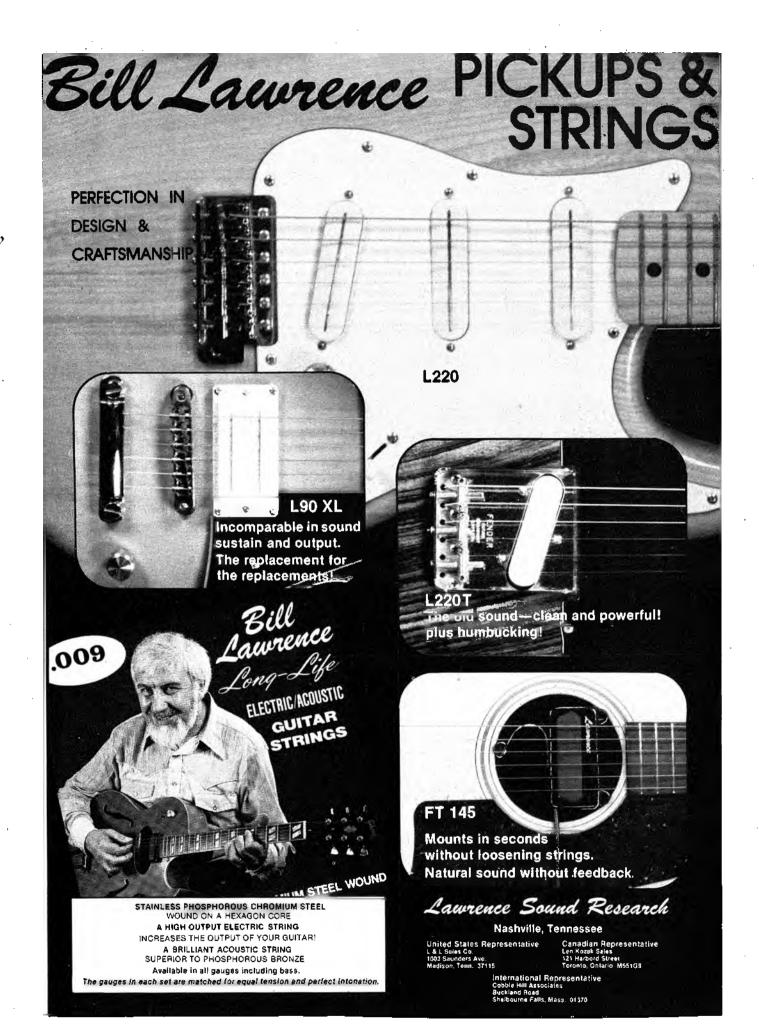
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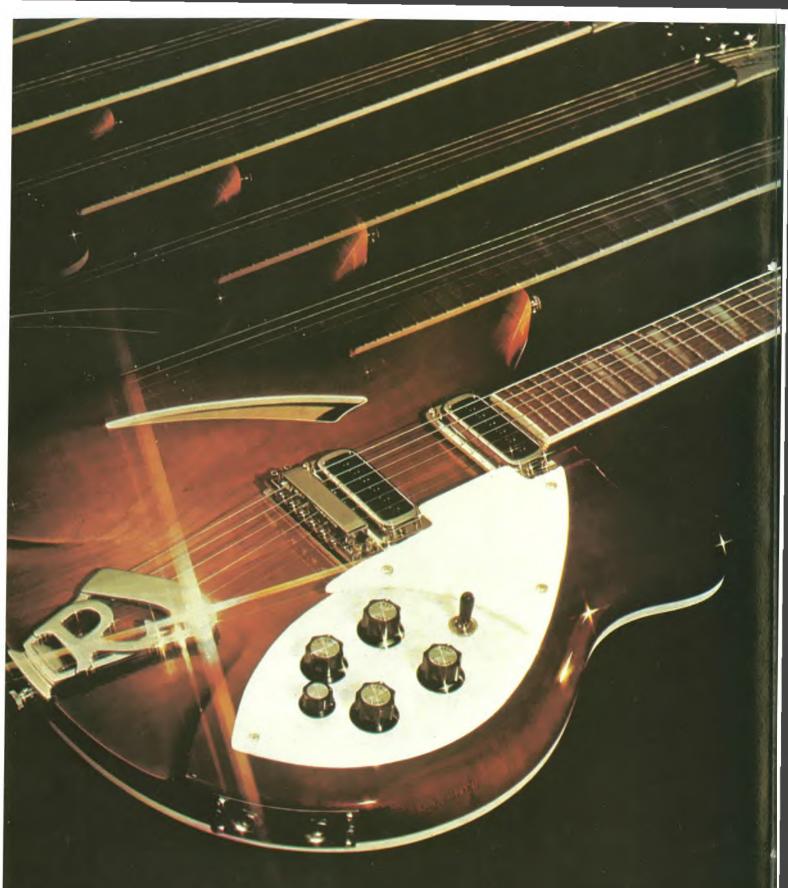
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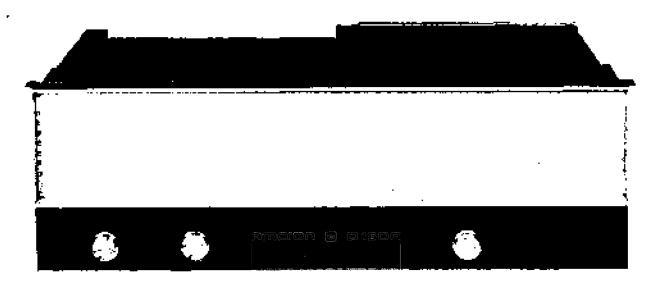




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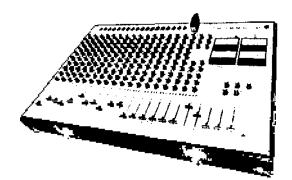
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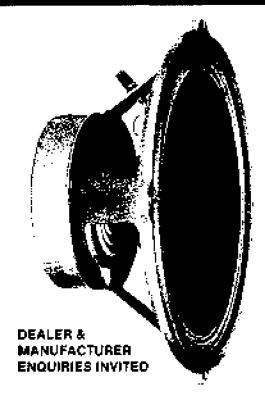
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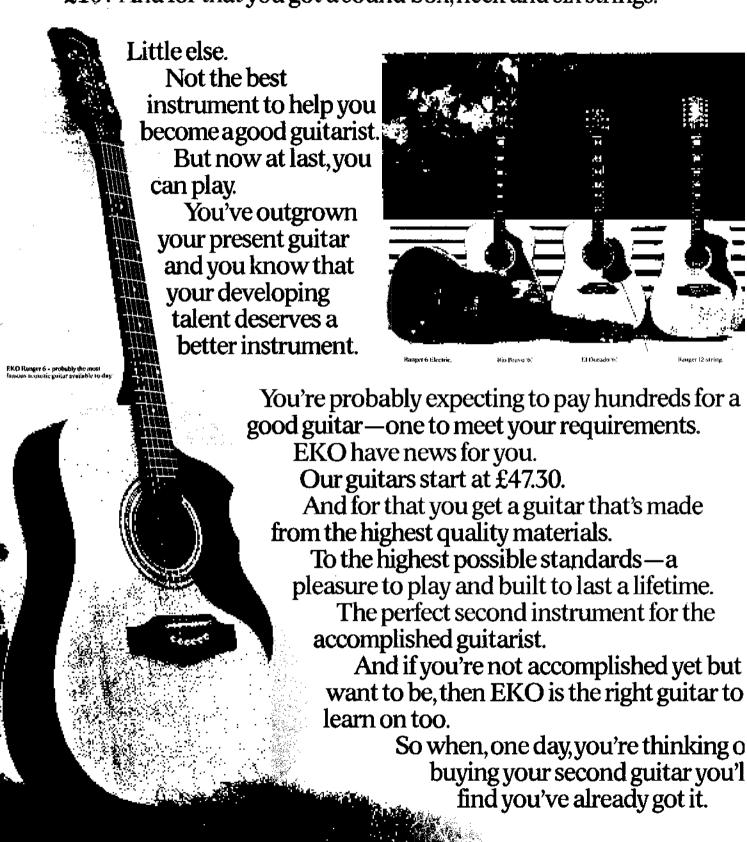
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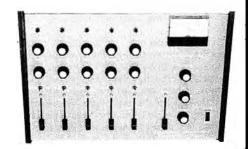
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MAKING

PARTIS GOMPUS FRETUL

by Stephen Delft

Assuming you have completed the wooden. parts of the jig, you will need to buy two pieces of Aluminium Alloy extruded strip, with a right-angle cross-section. It should just cover the top edges of the jig as shown in the photographs. There are both metric and Imperial sizes around the moment so it would be advisable to take the jig with you when you go to buy the alloy.

What I bought was described as 'one-sixteenth wall thickness' with an internal width somewhere between 5/8" and 34". if you plan to make only one instrument, you could manage without the Ali strip, and cut the saw-guide slots directly in the jig. Sand the top edges smooth and give them a thin coat of matt white paint to make marking out easier.

If you intend to make more than one or two instruments in this jig, use the Ali strips. Most of the difficulty is In marking out accurately, and starting off the slots, and if you use the metal strips, your jig will keep its original accuracy for 10 or 20 guitars. The extent of its original accuracy depends on you, but if you later wish to improve on it, you can always fit a new pair of angle strips and re-cut them. You could also add them later if you find you are making more instruments than you expected. If you fit or replace strips at a later date, cut the slots in the wood a little wider first, or they will "drag" the saw and repeat your original inaccuracies.

Cut the strips to the length of the top edges of the jig and screw them to the sides with 7 or 8 small countersunk screws each side. Drill proper clearance and pilot holes for the screws and sink them just below the surface. The photos show top screws also, but these are not necessary. Clamp the neck in place at both ends, so that it is held centrally in the jig. Check the gaps between the sides of the jig and the edges of the fingerboard at the nut. Some types of clamp will cause the neck to creep in the jig leaving a gap at the end of the fingerboard. Check this does not occur, and then put a new piece of 'flour' sandpaper face down between the head and the jig to make quite sure.

Lay a carpenters' or engineers' square across both Ali strips and line it up with the nut-end of the fingerboard. This is easier to do accurately, if you put temporary shims under the neck at both ends, so that the fingerboard is just level with the top of the metal strips. Check that the body end of the fingerboard leaves no gap. Scribe across both strips to mark the nut position. Remove the neck.

You will need an accurate Metre rule for

marking the fret positions. You may be able to borrow or hire one.

Make a pair of small brackets and some clamps which will hold the rule up on edge on top of each aluminium strip. Line up the rule with the scribed 'nut' line and clamp the brackets firmly to the jig so the rule cannot move. It is useless to try to hold the rule still, or to balance it in place and hope you will not move it. It always moves unless you clamp it down.

Mark off the fret positions from last month's third (compensated) column on each edge in turn. Check across with a square, and when satisfied, scribe each fret position across the too of both strips. You will find a 2-inch 3-inch focus jewellers eyeglass almost essential for accurate marking out. You can buy a version which has a wire clip for attachment to a Spectacle frame. This is more convenient than the traditional watchmakers' loupe. If you have no need of spectacles, remove the lenses from a discarded pair of sunglasses, and clip the eyeglass to the empty frame. You will also find it easier to mark out accurately if you have good shadow-free lighting, or alternatively, an adjustable desk lamp which you can move about as you progress down the rule. If you find it is becoming difficult to see the divisions towards the centre of the rule, you probably need to move the light along a little. You may also need a rest. Ask someone else to check your marked lines before you start cutting.

Fretting Saws

The saw-guiding slots in the jig, which can be seen in operation in photo 2, must accept the width of the cutting edge of the saw, with a minimum clearance each side. Normally, the cutting edge of a saw is 'set' considerably wider than the saw plate, and such a jig would be rather unreliable, but my saws for cutting fret slots have had most of the 'set' stoned away and cut a slot which is practically the width of the saw plate. For the same reason, a slot in the jig which accepts the cutting edge of the saw will still be a reasonable fit on the saw plate immediately behind the cutting edge. Although the saw can wobble, and the jig requires a certain amount of skill in using a saw, it represents a considerable improvement on cutting the slots directly from pencil marks on the fingerboard.

If you want the frets to fit without a struggle, you must cut the right width of slots for them. Unfortunately, frets vary in this respect, and suitable slot widths vary between 19 and 25 'thou'. (1 thou is one thousandth part of an inch. As hand saws are still manufactured and maintained according to 'inch' measurements in English speaking countries a Metric measurement would be pointless). You will probably have noticed that frets come in different shapes and sizes, but the critical dimension is the width of the tang which goes into the fret slot.

It is not safe to assume that wide-topped frets have wide tangs, and vice-versa. My widest fretwire happens to have the narrowest tang. If you try to fit it in a 25 thou slot, it springs out at the ends, if you try to force fretwire with a wider tang into a narrow slot, you will make the neck curve backwards, and your guitar will have 'buzzing' strings at any normal action settings. It is advisable, therefore to buy a little more fretwire than you need, and make some trials, if possible in a piece of the same wood which you have used for the fingerboard. In general, a slightly narrower slot is appropriate for softer woods such as Maple and some of the softer Rosewoods. As many readers will not have the experience to judge when a fret 'feels' right, I shall suggest yet another 'rule of thumb',

I have one saw which will cut slots suit-

able for most standard German and American fretwires of the sort which have little empossed 'beads' on the sides of the tang, It is made of thinner steel than most similar saws of other makes, and I do not recommend any alternatives. The saw requires some modification, after which it is only suitable for cutting fret slots - unless of course, you have it sharpened and re-set later. The saw is a Roberts and Lee No. 252 Dovetail Saw, Luse an 8-inch version, but if you are not worried about cost. 10-inch 252 might be a better choice.

You can buy this saw by post from: The Buckingham Tool Co., c/o Statton Engineering, Mill Street, Stone, Staffs. (England). The present cost is £8.76 plus 50p. for the 8-inch, Cat, No. 2521, and £9.69 plus 50p for the 10-inch Cat. 2523. It is well worth sending another 50p for their catalogue. These prices include VAT. (Overseas customers, please do not send money with order. The Company will send you a shipping estimate on receiving your order).

When you receive the saw, lay the blade on a smooth flat surface, such as the corner of a formica-topped table, protected by a sheet of thick paper. Take the unworn face, or wide edge, of a Carburundum or India stone, (the sort used for sharpening your chisels and plane cutters) lay it FLAT on the saw blade with a drop of oil, and gently stroke across the sides of the teeth. Take care to wear down all the teeth equally. Repeat on the other side, and continue to stone down each side of the blade until it measures about 20 thou wide at all points along the cutting edge. Measure across the teeth with a micrometer, not across the blade behind the teeth. You now have a fretting saw.

If you look after it it will last you for life. If you don't want to make any more quitars. you have it re-set and it will be a very good saw for fine work. If you try to use it for general woodwork with the set stoned off, it will jam in the cut and you will probably buckle the blade.

If you know what you are doing, you can test the saw slot width against your fretwire and perhaps stone the saw a little more. If you are not experienced in these things, leave it

I know people who have used junior hacksaws for fret slots, but I have never had much success with them. You could try stoning the blade.

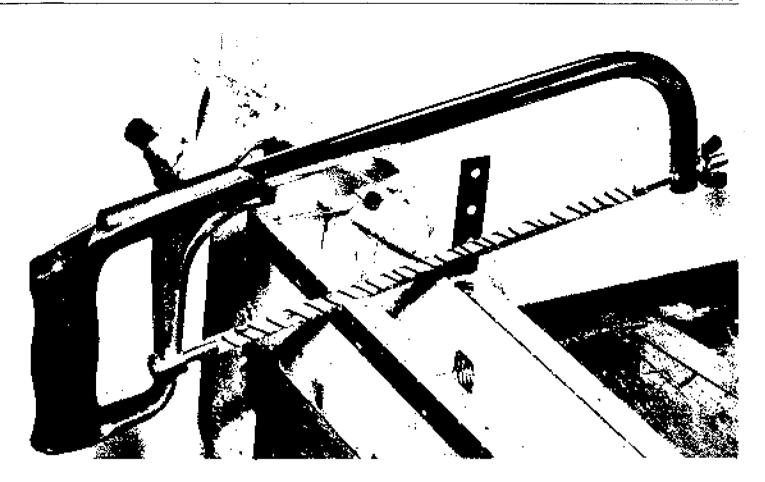
Fretwire

Mine comes originally from Schultz in Numberg. They only supply in very large quantities. I buy mine from Stentor Music, who usually stock two or three of the types which I have found most useful. You can order Schultz fretwire from Stentor through your local music shop. Overseas readers may write directly to Stentor Music. I would suggest Medium - (like Martin or Guild) or Wide -(like the 'fat' Gibson wire). You will need 2 metres.

Saw-guide slots in the jig

The widest part of the fretting saw (across the teeth) is 20 thou, so you will need slots in the jig about 22 thou wide. This is not easy to arrange, but an Eclipse 12-inch, 24-tooth Hacksaw blade of the type called 'All Hard' is 34 thou across the teeth and 23 thou behind the teeth.

If you stone off all the set you can, you will probably be able to cut a 24 thou slot in the metal strips of the jig. I have found this sufficiently accurate for most purposes, Because the saw has practically no set, you will need to keep it smeared with soft soap while cutting the jig. All-hard blades are particularly liable to break if the work moves while you are sawing, so clamp it down well. If you can find 'flexible' or 'carbon steel' blade the same



thickness or less, it will be easier to stone down and less likely to break. A junior Hacksaw blade is the obvious choice but I find it difficult to cut straight with such a small blade.

Starting the cuts in the metal strip is easier if you nick the edges with a triangular file to give a start to the saw. You may have difficulty sawing straight across both sides of the jig. Photo 1 shows a steel bracket used to line up the saw on one side while cutting the other side.

Saw the slots 8 to 9mm down the outside edge of each metal strip. If you have difficulty sawing straight down, mark vertical lines down the edges with a fine fibre-tip marker, level with each fret position, and cut along these lines after the saw has cut through the top part of the metal angle strip.

If the saw sticks, you may need more soap, or you may be leaning the cut towards one side as you push, or the jig may have

slipped round under its clamps a little so you are no longer pushing along the exact line of the cut.

Check the positions of the slots with the metre rule. If the centre of any slot is more than %mm out you should really replace the whole metal strip. If the errors are 0.25mm or less you can probably leave them, I try to work to an accuracy of +- 0.1mm but occasionally have to accept an error of 0.2mm on work which is not critical. Inexperienced fret filling can easily after apparent fret distances by 0.25mm so it is not really sensible to demand greater accuracy than this in a fretting jig.

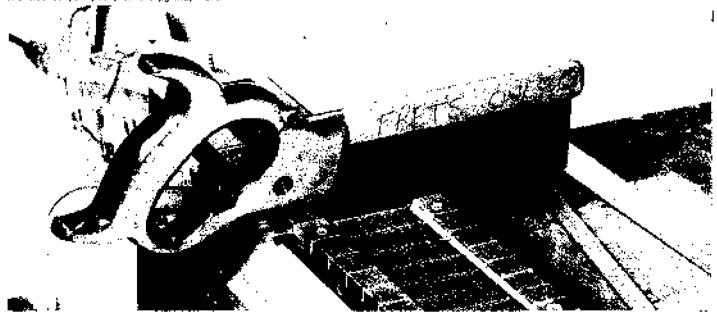
Cutting fret slots in the fingerboard

Replace the neck and fingerboard in the jig and clamp in place, making the same checks for slippage as before. Continue to check that the fingerboard touches the end of the jig immediately before starting each cut. The fingerboard should be just below the top of the

jig as shown in photo 2. Clamp the jig to the bench with the head end overhanging, and lightly cut each fret slot. If the saw sticks, wipe it frequently with soft soap.

Use long even strokes of the saw without excessive down-pressure. If there is any play between the saw and the width of the slot, try to keep the saw upright but against the right-hand side of each slot. Without removing the neck, check the slot positions. If acceptable, cut the slots deeper, again using soap on the saw. They should be between 2 and 3mm deep.

The same jig can be used to hold the neck, white planing the front of the finger-board straight along its length, and curved across its width to suit your taste. Did you know that the shape of the curve across the fingerboard affects the lowest action possible when bending strings? More on this next month.



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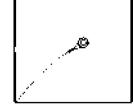
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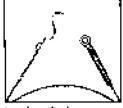
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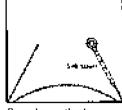
Usual method



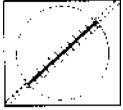
Sounder method



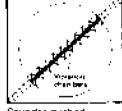
Local method



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Usual memod



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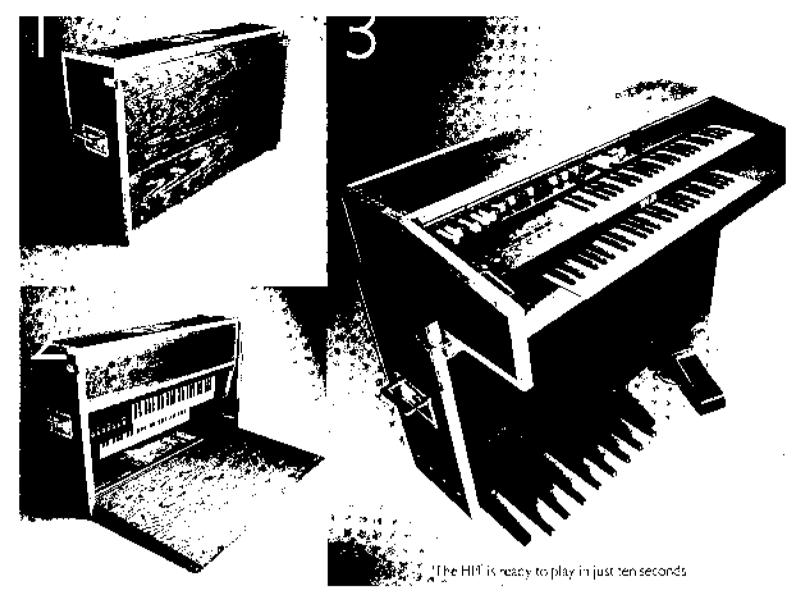
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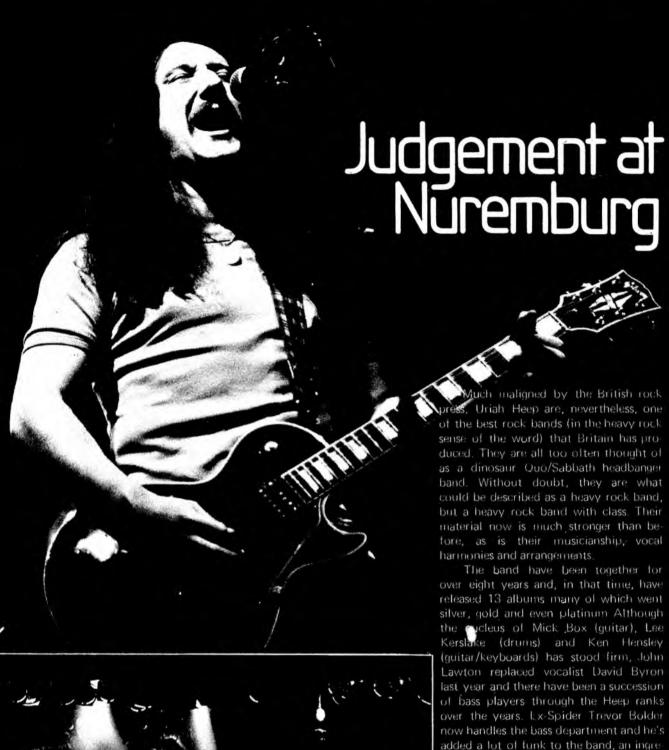
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over the years. Lx-Spider Trevor Bolder now handles the bass department and he's added a lot of funk to the band, an ingredient which wasn't entirely apparent on early Heep outings.

While Heep are big in England and the States, they are absolutely gigantic in Europe. They have just finished a self-out tour of Europe promoting their latest album "Innocent Victim". I caught up with the band halfway through the tour when they were due to play Nuremburg.

I flew to Frankfurt with Smoon Porter from Bronze Records, there we met the band who were waiting for the Nuremburg flight. With the exception of

I flew to Frankfurt with Smon Porter from Bronze Records, where we met the band who were waiting for the Nuremburg Hight. With the exception of Tufty (Trevor Bolder's nickname) who looked shattered, the band looked healthy and happy. The night before, they had had a "night off" which probably took more out of Tufty than a regular gig would.

Two days in Germany with Uriah Heep by Eamonn Percival

On arrival at Nuremburg an hour or so later, Heep's tour managers Chris Healey and Jon Antony set off to hire three Mercedes cars for the entourage. The tour was promoted by Mama Concerts, one of the largest German concert promoters. They usually handle Heep's European jaunts and are very well organised - certainly more so than many British concerns.

With the arrival of the cars, everybody set off for the Hotel Kaiserhof in Erlangen, a small town 17 kilometres from Nuremburg. The hotel was small to say the least, but Heep are not the type of people to complain about such things. The fact is that the hotel was the only one for miles with enough spare rooms to accomodate the entourage you could imagine the problems if the tour managers were miles away in a separate town!

No sooner had we arrived at the hotel, than we had to move on to the gig for a soundcheck. On the way to the venue, Ken Hensley announced that "Free Me" (from 'Innocent Victim') was at number six in the German charts, while "Lady In Black" (from 'Salisbury') was Number Two, Further to this, the "Best Of" and "Innocent Victim" albums were both in the album charts. On arrival in Nuremburg, in fact, the band found that "Lady In Black" had just passed the 350,000 sales figure. With this kind of success, it's not surprising to learn that that night's gig was another

The venue was the Hammerleinhalle in Nuremburg, a 5,000 seater auditorium and when we arrived there for the soundcheck at 3 o'clock there were already some German fans milling about outside waiting for a glimpse of their idols.

Inside, the hall was freezing. The stage was already set out with Heap's equipment and the Entec crew were making final adjustments to the lighting. Ented, in fact, also supplied the sound system, which was one of the loudest and clearest I have heard for a long time.

Uriah Heep also have a somewhat unique stage set in that there are no amplifiers or cabinets visible on stage at all. The back and sides of the stage are enclosed via three large black muslin backdrops. The sides bear the "Return To Fantasy" painting while the snake from the cover of "Innocent Victim" dominates the backdrop. The secret is that all their backline equipment is stacked just behind the backdrop and, while the sound is not obstructed, the

gear is invisible from a few feet away.

A Heep soundcheck usually takes the form of each member tuning up with the keyboards and then getting a balance on the PA system. This can be quite a laborious process when you consider that Ken Hensley uses three keyboards, an Ovation acoustic, a Flying V and a Gibson double neck. Trevor Bolder just uses one Fender Precision while Mick Box remains faithful to his Les Paul Black Beauty, Apart from that, each drum on Lee Kerslake's kit has to be tuned and individually balanced on the PA. All this takes about 45 minutes and then the soundcheck really begins.

After ten minutes or so of jamming, the sound engineers are satisfied with an overall balance and the band go through their opener "Free 'n' Easy". Much credit is due to the Entec crew - the sound is crystal clear, not very easy when a band play as loud as Heep do. Their three-part harmonies slice through a near-deafening wall of sound and the whole thing is perfectly balanced.

After two run-throughs of the number, everyone is satisfied and we return to the hotel. An hour later we all meet in the lobby to depart for the gig. On arrival, the German support band "Wheels On Fire" are already well into their set and, outside there are hundreds queuing although the hall is filled to capacity. There are a handful of kids at every door around the venue but they are very well-behaved and seem content just to have seen the band climb out of the cars.

In the dressing room, the centrepiece is a large table adorned with food and drink, Naturally all activity centres around the table although, like good boys, the band don't drink to excess before a gig. The atmosphere is relaxed -Heep have been on the road too long to suffer from nerves. Every 15 minutes one of the road crew reminds the band how long they have before they take the stage.

Just before they head for the stage, I decide to take a look around the hall but it is impossible to wade through the massed thousands so I took to the safety of the out-of-bounds balcony, probably the best vantage point. The audience are already on their feet crowding towards the stage and thre is an atmosphere of tension and excitement, something I haven't witnessed in England for a long time. Another unusual thing about Heep concerts is that they actually use a curtain at the front of the stage so when the band (and curtains) open up, the remarked Mick Box.

ultimate visual impact is achieved.

As usual, they open with "Free 'n' Easy", a powerhouse number from the "Innocent Victim", album. It also features an effective guitar solo - Hensley plays alternate two-bar breaks with Box answering. Like all aspects of Heep's act, the lighting is superb. A follow spot alternately picks out Ken and Mick as they each "do their bit".

The audience reaction is frightening to say the least. After the third number, the crash barriers are in danger of collapsing completely with 5,000 people slowly getting closer to the stage. An assortment of road crew members and hall attendants rush into the area between the stage and the barriers and iam tables between the edge of the stage and the metal barriers in an attempt to hold back the legion of Heep fans, in between every other number vocalist John Lawton pleads with the audience to calm down and move back "otherwise somebody might get hurt and we don't want that do we?"

The band always pace their act well and tonight was no exception. They thundered through favourites like "Sweet Lorraine", "Look At Yourself", "July Morning", "Easy Living" and newer songs from "Innocent Victim". The two highlights, as expected, came with their two chart successes. On "Free Me", a very melodic pop song, the audience sand along with every word but the climax came when Ken Hensley took up his Ovation acoustic to sing the song that was to reach Number One the following week: "Lady In Black",

Heep came back for a three-song encore and still left the fans wanting more. It took about an hour for the building to clear as nobody seemed to want to believe the show was really over. Back in the dressing room, everyone seemed happy with the show. The remainder of the food and drink was demolished and the band changed out of their stage gear into more sober attire with the exception of Ken Hensley. whose stage clothes sometimes tend to pale into insignificance compared with his travelling clothes which, in this case, included a long fur jacket, skin-tight patched jeans and fur eskimo boots. One of the crew announced that there was no way anyone could leave as the roads were blocked for about three miles with traffic returning from the gig.

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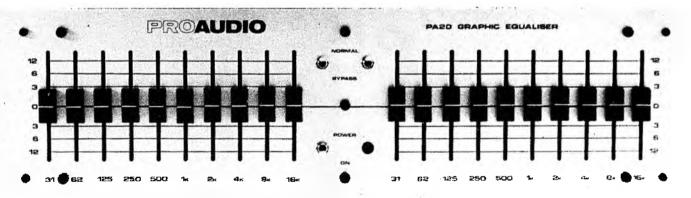
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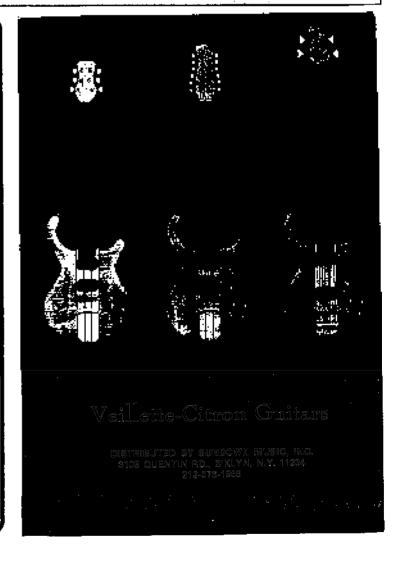
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Isis win record session

Blackpool band Isis were the first band to be recorded under International Musician's "Win a Master Recording Competition". The band cut several numbers at the 8-track London studio of Ivan Berg Associates. Isis are: Sandy Leigh (lead vocals), Chris Whalley (guitar and harmony), Nigel Foster (keyboards), Brian Howarth (bass), and Jon Blacow (drums).

The original plan of the competition was to bring the Teac Tascam Mobile to a live gig. For practical reasons we decided instead to put winning bands in a professional recording studio for a day. You can read about Isis's recording experience in next month's issue of International Musician.





For months, IM reader Kimberley Rew had been writing to us to complain about the quality of

I.M. reader visits Cardiff Musical Strings

guitar strings and how they broke Musical Strings. with regularity whenever he played his quitar.

there was perhaps a case for string manufacturers to answer so last October's issue carried an open challenge to string makers to defend themselves against Kimberley Rew's accusations. The

Through International Musician, Marcuson arranged From his arguments we decided Kimberley Rew to be taken on a day trip to CMS's Cardiff plant where he saw first-hand the method of string making.

Cardiff Musical Strings are known for their Sound City brand of guitar strings and Kimberley challenge was taken up by Alan Rew saw the complete process Marcuson, sales director of Cardiff from winding through to packing.

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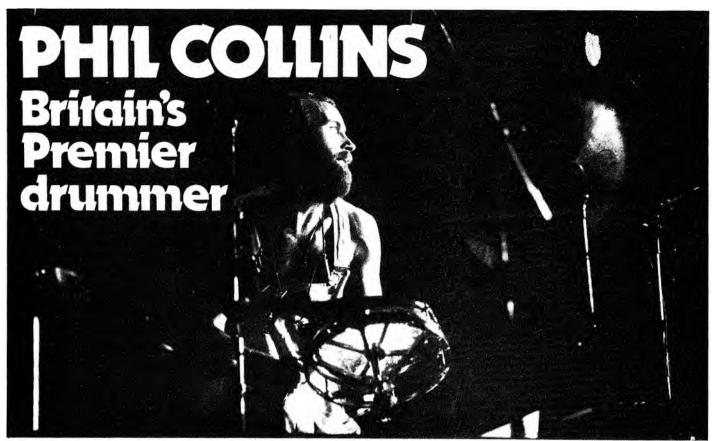
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When Peter Gabriel quit Genesis in 1975 at the height of their hard-earned success, it looked like the end of the road for the band. To many people Gabriel WAS Genesis, and they prepared for the demise of one of Britain's most popular outfits.

Attempts to recruit another vocalist did not meet with much success so the band surprised everybody by closing ranks and nominating drummer Phil Collins

This was a bold move, because Gabriel had created a unique role in Genesis which combined vocals with a blend of visual and theatrical pyrotechnics. The rest, as they say, is history for the new line up not only proved successful, but enhanced the already formidable reputation of the band even further.

While this success was obviously a group achievement, few would argue that it would not have been possible without the incredible talent of Phil Collins

In fact, because of the success of the new line up and the extra drummers that have been recruited to augment the sound (firstly Bill Bruford and now Chester Thompson), it might appear that Phil has foresaken his drum stool.

However, amid rehearsals for a forth-coming American tour, he was quick to point out that this was definitely not the case. "No way", he said: "When someone says 'what do you consider your status in the group' I would say drummer. I sing because we need a singer, I think as a singer, I'm a good drummer, rather than the other way round".

"I am a player and I would never do one without the other. I'm lucky, I've got the chance to sing some nice songs and play on some interesting music, I would never stop".

Phil's life has revolved around drums and drumming since a very early age. He said: "It started when I was about three or four, when most kids are given a drum or drum kit at Christmas".

"Usually it's in the cupboard after a couple of weeks, forgotten, but apparently I wouldn't let go of it. Because of that my uncles made me a drum kit when I was five which fitted into a suitcase".

"I remember playing along to Sunday Night at the London Palladium when it was on the television, and that is when I first started taking an interest in music. I kept that kit until I was about 10 or 11".

"On my 12th birthday I sold my train set and with some money from my parents bought my first proper kit which was a Stratford, they were good little drums, and until recently I still had them".

"My parents were members of the local yacht club and I used to play a lot of dinner and dances with the resident organist, we did a lot of regattas and things like that. He was about 45 and I must have been doing it from the age of about eight, to 12 or 13".

Soon after Phil was presented with possibly the only conflict to his drumming career, when he landed an acting part in the musical Oliver. This meant he had to go to a stage school, but there he met other pupils who were interested in forming a group.

"That went on for ages, we used to have two lady singers, two male singers and do a bit of a soul show, it was good fun. I was still using my Stratford kit, which saw me through until I was 18 or

19 when 1 formed a group called Flaming Youth".

"That was with one of the guys who is now with John Miles, another is playing with the Elvis musical, and we made an album called Ark 2. I had been playing with a lot of semi-pro outfits but this was the first group where I actually went into a studio to record".

Ark 2 was an adventurous concept album which showed the band experimenting with Yes-type arrangements, and although it failed to meet with great success, it paved the way for Phil to join Genesis.

With Flaming Youth he had acquired a Gretsch kit from Bruce Rowlands, the drummer with the Grease Band, for £250 which was the old style of Gretsch kit,

In 1970 Phil answered an ad for a drummer which turned out to be with Genesis. He arranged an audition through Tony Stratton-Smith, whom he knew, and joined the band just before the release of the "Trespass" album.

Phil remained faithful to his Gretsch kit up to and including "The Lamb Lies Down On Broadway" album, but then decided to see what Premier had to offer,

"In the past I had always sort of shunned Premier, they had a bit of a dated image, and thought that they weren't very good drums, however, I went up to the factory in Leicester and found it was completely different".

"Eddie Haynes, who I believe joined the company four or five years ago, is a very good guy and really updated everything there. I'm not saying he was totally responsible but he is one of the main men".

"Consequently, I got a kit from them which was a Kenny Clare double shell



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which I used after Peter left, and that was my first Premier kit".

"Premier are very good in that if I want something done, they do their best to fix me up. I bought some timpani for £20 and Premier reconditioned them for me, then I've got vibes, glockenspiel, tubular bells and stuff, all from Premier".

"I can't think of any other company, especially in England, who would do all that. I've got a black concert tom Premier kit with a 20-inch bass drum which I use on the albums now, and another I have got for the road with a 22-inch bass drum".

One of the biggest influences on Phil's drumming in the early days was the work of Roger Powell, who was the drummer with one of the most popular London bands of the late Sixties, The Action. Phil's favourites at the moment are Tony Williams and Steve Gadd, one of the top American session players.

Phil realises the importance of drum tuition, which he has combined with his own instinct and feelings. "To begin with I taught myself, but when I was about 15 I went to Lloyd Ryan first of all and he started to teach me read and then I went to Frank King, who taught Bobby Elliott, Robert Henrit I think, and Bill Bruford, everybody went to him".

"He taught me all the rudiments and then we started getting on to big band parts and then I left. I think rudiments are essential, because everyone thinks 'What do you want to learn a paradiddle or anything like that for?' but if you listen to Cobham and all those American drummers or a good English drummer, you'll find that in any drumming that is the basis of it".

"It is hard work, but if you get a good teacher it is enjoyable. I know a lot of drummers, especially since the advent of punk, who feel that all they have got to do is just sit down and play a kit".

"There is something to be said for that, but I always felt myself an intuitive player rather than a taught player, as opposed to someone like Carl Palmer who is a taught player. I take strength from the fact that I taught myself and if someone hums a tune I can play it rather than having to have it written down — but it is as good to be able to read it as well".

"The reason I went for lessons is that I thought as I am going to do this for a living, I wanted to be able to play when I was 30 or 35. I didn't know I was going to be in a big pop group, as far as that was concerned I thought if I was in a pit or something doing a show I'm going to have to learn to read".

Phil is one of those rare species in rock music — a singing drummer, a combination which to most people seems like the ultimate in physical

endeavour. However, Phil has been singing from behind his kit since his early days with the school group, but taking the place of Peter Gabriel was an entirely different matter.

He explained: "Our attitude in the group is, if someone leaves then we should do an album first and worry about on stage afterwards. What we did with Peter was look for a singer, but carry on rehearsing and at the same time writing material for 'Trick Of The Tail' ".

"We went into the studio with one singer who we thought might make it, but in the end it didn't actually turn out too good, so we were in the studio with a few good backing tracks down and no singer, so I started singing some of the songs".

"I was going to sing "Ripples" and a few of the quiet songs, but the heavier songs, no one had ever heard me sing loud. It started sounding pretty good, and so we thought OK let us make the album and worry about it after that".

"After the album we had to sort out the tour, and we all decided that there was no way I could sing behind the drum kit so I had to come out front".

"I decided I was going to do it, no one else really thought I could do it I don't think, the actual fact of taking Peter's place as a sort of visual link between the group and the audience. Everyone knows you just stand there, open your mouth and sing, but there is something else you need".

"I thought it would be worth trying, and at that time Bill (Bruford) was playing percussion with Brand X. He said 'I hear you are looking for a drummer, why don't you ask me?'. I didn't think he would be interested, but he was really into it and we had a great time".

Playing with Bill was the first time he had played with another drummer and the outcome was not entirely satisfactory. Phil went on: "I don't think we really got to grips with two drummers, even the monitoring system at that stage was nothing compared to what we are having for this next tour".

"Then, it was just a question of giving us a bass drum and hoping we could hear each other. We had some good nights when things really worked, but because Bill constantly wants to do something new, it was very hard to latch on to something and say, here we are going to do this. Every now and then it would come together and then go apart, it was more luck of the draw with Bill. We both agreed that we should go into it heavier and work it out, but it never really happened".

Bill Bruford then went on to work with John Wetton and Rick Wakeman after the "Wind And Wuthering" album, which left Genesis without a drummer for the subsequent tour, so Phil set about recruiting a replacement.

"I made a shortlist, "he said" and went out and bought a whole load of

records with English drummers, but there was nothing. It was very disappointing, there doesn't seem to be, to my mind, anybody like the Genesis or Yes type bands when we were small groups. I can't think of that many good players that I can go and see and say 'he is great' ".

"I thought I would leave the American drummers until later, because the chances of an American drummer wanting to play with us or fitting in would be negligible. Anyway, there's this killer break on a Zappa album "Live At The Roxy" where they have two drummers Chester (Thompson) and Ralph Humphry. They play this amazing fill that I used to love, and I thought if only he (Chester) would join the group, but I thought 'he's not going to join Genesis is he?" "

"Anyway, I got his number and rang him up. He'd heard the music and heard the band and he said he'd like to do it. I thought 'This is a turn up for the books we must be pretty good'. It was a kind of vote of confidence to have him in the group. He came over and from the first day it just worked".

As Genesis moved into the supergroup category, Phil began to suffer from lack of regular playing. He is a drummer who loves to work, and does a remarkable amount of sessions in between Genesis tours and albums.

It is this need to play regularly that led to his involvement with Brand X. Contrary to popular belief, it was neither formed by him, nor is it "his" band, instead he learned through a friend that the group needed a drummer and went along to see what things were like.

Phil liked the band and played with them when he was not involved with Genesis, however, at the moment, the schedules of the two outfits clash so Phil does not visualise playing with them in the near future.

He is looking forward to the forth-coming tour of America with Genesis and will be using his latest Premier kit which consists of eight, 10, 12, 13, 14, 15, 16 and 18 inch concert toms, 22 inch bass drum, and four snare drums.

The kit accessories include 12, 14 and 16 inch roto toms, timbales, timpani, tubular bells, vibes, glockenspiel and a collection of over 50 cymbals, which range from six to 26 inches and cover every conceivable type. Phil prefers Zildjian cymbals to any others, and these are also distributed by Premier.

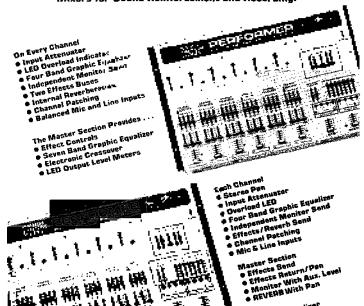
With the departure of guitarist, Steve Hackett, the band have once again had to re-group and have responded to the challenge in typical Genesis fashion with a new album "And Then There Were Three".

This will, no doubt, result in even greater pressure on the members, and in particular Phil. Still, he is a musician who thrives on challenges and loves to work, so the future, for Genesis, as one of the world's top acts seems assured.





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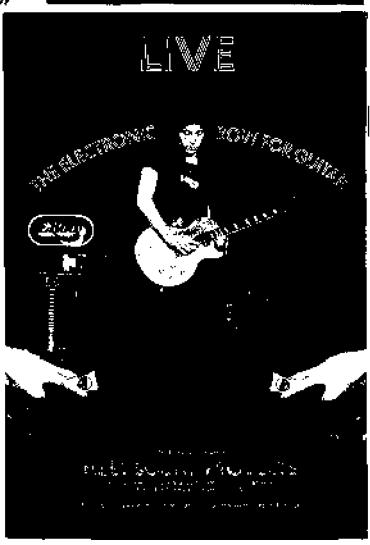
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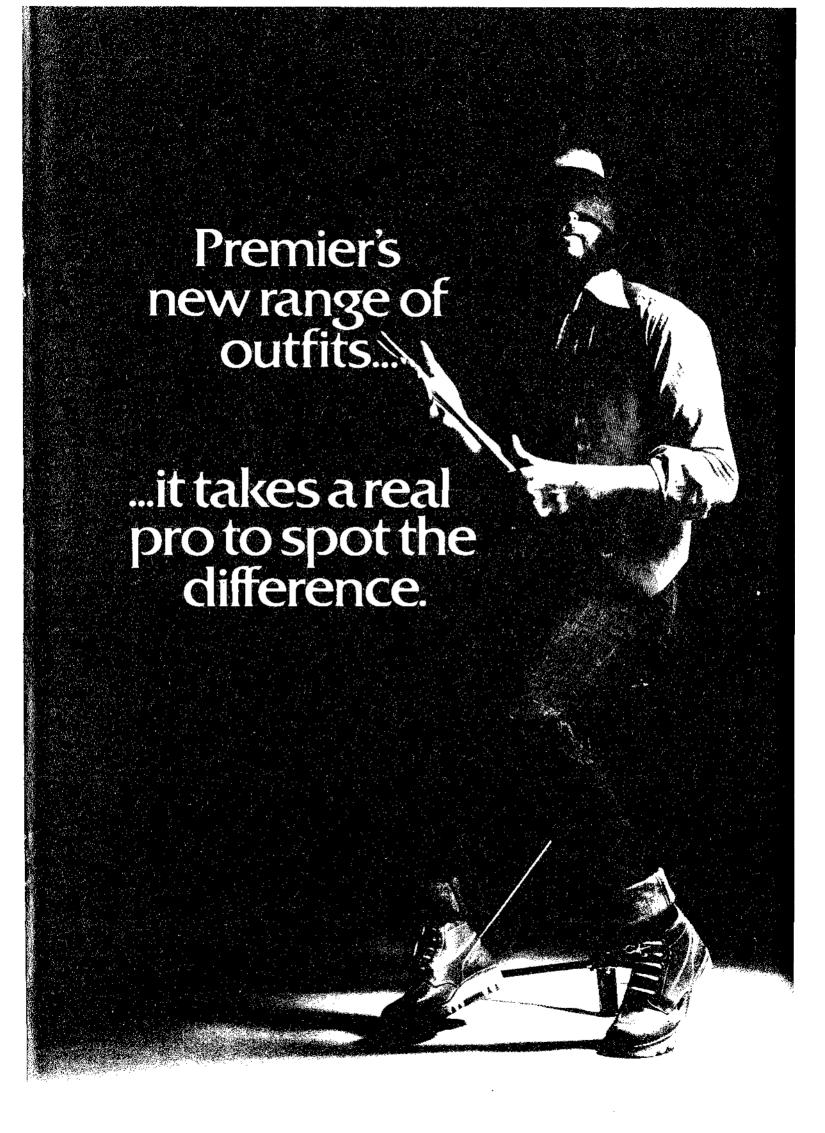


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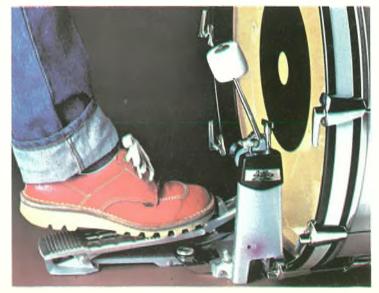
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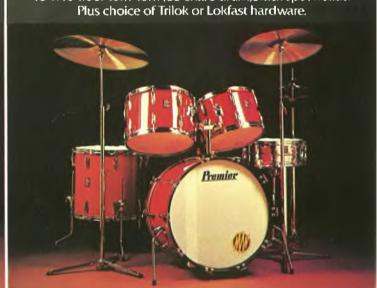
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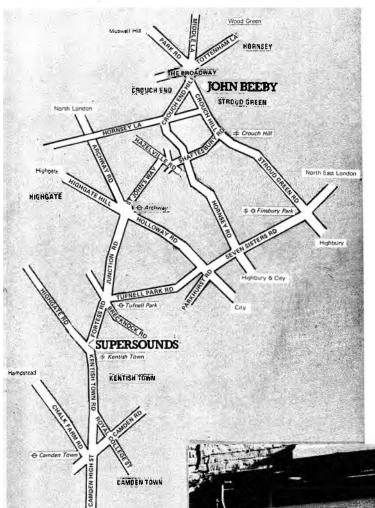
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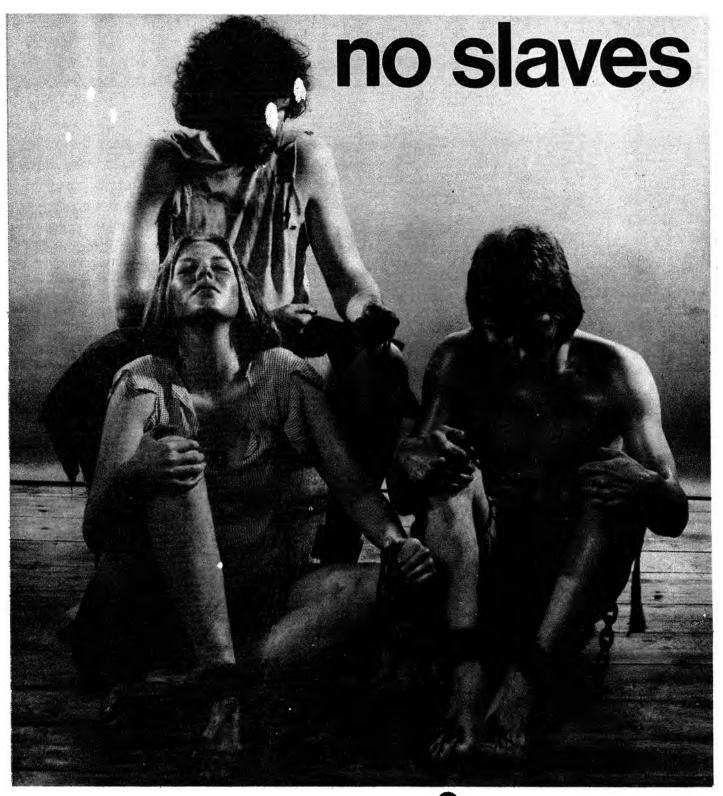
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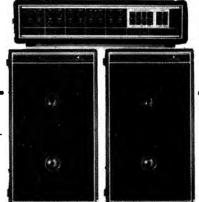


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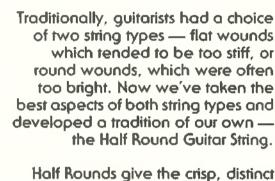
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RUMBELOWS From washing machines

towahwahs...

To most people the name Rumbelows conjures up visions of washing machines and televisions, but in Reading it means something a little different.

Thanks to a couple of enterprising local musicians, Steve Christopher and Martin Lawrie, the store has now become an integral part of the Reading music scene.

Just over a year ago, the music section was hidden away among the vast ranges of household goods selling the odd set of strings or a bit of sheet music, then Steve came on the scene.

He said: "I used to work in one of the other departments selling washing machines and televisions and I asked to go upstairs to the music department. I bought some gear and the whole thing began to take off from there".

"Hardly any reps from the music industry used to come here, so I had to ring all the firms up, we had to get information out of the music papers and magazines".

Being a local musician, Steve realised that there was need for a good music shop in Reading which could cater for the lively group scene. He took the initiative and began to stock up with guitars, amplification and PA gear, changing the image of the music department in the process.

The Reading store is just one of a couple in the vast Rumbelows chain which deals in musical instruments. Steve admits that it has not been easy, and in many ways he went out on a limb in an effort to get the department established within the store and also in the town.

A few months after Steve began revamping the department he was joined by Martin, a keyboard player, who had been playing with local bands for years and jumped at the opportunity to become involved in music full time.

"I used to be a trainee accountant, but it got to the point where if I wanted to qualify as an accountant it meant I would have to give up music".

"There was really no contest, so when the opportunity came to work at Rumbelows in the music department it was ideal. Since we took over, the stock has been increased by 500 per cent and there is no other music store like it in the area".



In developing the department, both Steve and Martin were conscious of the need to build up the right atmosphere in the place. Being working musicians they are aware of what is happening on the local scene and the demands of their customers.

They admit that one of the biggest drawbacks is the fixed idea many people have of Rumbelows i.e. dealing solely in washing machines and televisions, plus the fact that the company themselves had no real experience of running a modern music store.

Steve explained how the rest of the store were more than a little surprised to hear drummers and guitarists trying out the instruments, but the situation is now regarded as guite normal.

The pair were lucky in having a succession of area managers who understood what they were trying to do and allowed them to get on with it. Their faith was justified when the business began to take off and proved a success.

Eventually, they managed to get a display of instruments in the main window of the store which was important because it looks out onto Friar Street, one of the main shopping thoroughfares in Reading.

The store benefits from a lively Reading music scene, although for so many local musicians there are far too few venues for them to play in. Still, Rumbelows plays an important part in the town's music, being a focal point for much that goes on in the area.

Apart from local musicians, the growing reputation of the store has also

brought in several personalities on the music scene and recent customers have included Bad Company's Mick Ralphs, and Sweet guitarist Andy Scott.

In fact the store has been so successful over the past year, that Steve notched up a personal triumph by being nominated "Peavey Salesman Of The Year", a remarkable achievement considering he has only been in the business such a short time.

All the top names are included in Rumbelows' wide range of equipment which includes electric and acoustic guitars, amplifiers, drums, keyboards, synthesizers and PA systems as well as the usual music accessories.

They are reputed to have the largest stock of Peavey gear in the country, and are constantly adding to it and trying out the latest instruments.

Regular customers to the store will certainly never become bored with the set up, because Steve and Martin like to keep changing the layout of the department to make things more interesting.

With the success of the department the pair are slowly but surely changing the image of Rumbelows of Reading and proving to the company that there is a future in dealing with musical instruments.

At present the music department is situated on the first floor of the store, but there is a possibility that it may be transferred to one of the prime ground floor spots. Within the Rumbelows empire this would prove to be a giant step, but no less than Steve and Martin deserve for their efforts in keeping Reading on the musical map.



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Drum Repairs

Peplacing the spring in the This is one of the elite-of the Hi Hat pedals and as the top of the Rogers range it has always been a firm favourite. This is one of the elite-of the Hi Hat pedals and as the top of the Rogers range it has always been a firm favourite.

This is one of the elite of the Hi Hat pedals and as the top of the Rogers range it has always been a firm favourite with the drumming fraternity despite the fact that it is one of the more expensive on the market.

As with all Rogers equipment the design together with materials and workmanship is first class. The removal and replacing of the spring is simple for such a large pedal, but it needs to be tackled in a systematic fashion.

First, using a square key remove the screw holding the spring tension adjuster clamp (Fig. 1A) then using an allen key remove the downstop screw Fig. 1B). The whole internal mechanism will now drop as shown in Fig. 2). Remove the two larger allen screws Fig. 3A) it is then possible to lift the tripod leg assembly away from the Base and the spring will be on view.

We continue by loosening the allen screw holding the lower pull rod assembly to the footplate. (Fig. 3B) At this point it is possible to unscrew the lower pull rod from the footplate.

The complete assembly can be lifted away from the base. As you will see it consists of a large black washer (Fig. 1C) the adjuster Fig. 1D and the spring Fig. 1E) there is also a plastic tube over which the spring and adjuster ride (Fig. 1F). It is a simple matter to replace the spring at the same time give all the various dismantled parts a quick clean and lubricate.

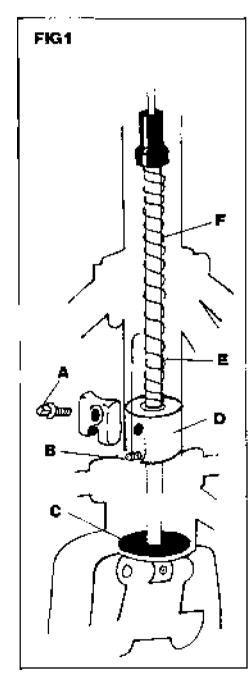
Now re-assemble as follows, screw the complete lower assembly back into the footplate leaving a slight amount of play between the base of the plastic tube and the threaded bush at position A in (Fig. 2). When it is in a suitable position tighten screw (Fig. 3B). The tripod leg unit can now be lowered back into the base with the spring adjuster slot correctly placed as (Fig. 3). The two alien screws (Fig. 3A) can be tightened.

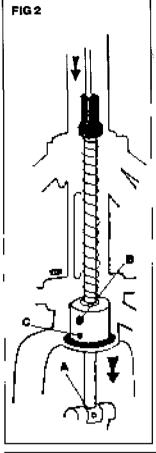
Now turn the whole stand upside down and the adjuster will appear in the slot. The whole (Fig. 2B) should come into view if not it is quite possible that the adjuster has moved round the shaft and a little manouvering may be necessary.

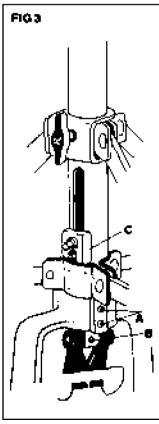
Screw the Adjuster clamp (Fig. 3C) loosely back on and place the stand back on it's legs.

Now slightly compress the spring and the second hole (Fig. 2C) will come into view, the final stop screw (Fig. 1B) can be refitted and tightened. The last remaining operation is to set the adjuster to the required position and tighten with screw (Fig. 1A).

hi hat stand







Build a Mixer Part 6 by Mark Sawicki MSc (Eng), Assoc MIEE, MAES

You may remember from, previous articles, that the mixer is equipped with one more "luxury" gadget — an internally built 1.0KHz sine oscillator which can be used for certain testing and setting applications. Referring back to Fig. 1 (Part 1) you will find a single BC 107 transistor-based design of a modified RC phase-shift oscillator. If you read IM & RW regularly you will remember we analysed this circuit in detail in the September 1976.

For those who did not read that particular article we present this diagram in Fig. 1 in a slightly modified form. The circuit which is simple, consists of only a couple of components and forms the well-known RC phase-shift oscillator, which acts basically as an energy converter, in the sense that the DC supplied power is changed into an AC periodically varying sinusiodal signal that is self-repeating over a given time period.

The Transistor TR1 supplies an appreciable power gain to amplify the applied signal with compensation for the circuit losses and also inverts it at the output. The specific frequency of the oscillations depend largely on the value of the RC product and the oscillator frequency can be adjusted by means of a preset-pot RV1. The pre-set potentiometer of RV2 acts as an output signal set level control. A simple way of adjusting the 1.0 KHz frequency is described in more detail in the above mentioned issue of IM & RW, however another method to set the desired frequency level can be used.

An alternative circuit for those who prefer something more sophisticated is presented in Fig. 2 where we show another slightly more complicated arrangement based on a monolithic inte-

grated circuit being a waveform generator capable of producing sine, square, triangle waveforms at high accuracy. The frequency can be selected by external components in a range of 0.001 HZ to 1MHZ. The required chip is easily obtained from Doram Electronics Ltd. (P.O. Box TR8, Wellington Road Industrial Estate, Wellington Bridge, Leeds LS12 2UF).

The pre-set potentiometer RV6 and RV7 provide convenient sine purity adjustment with RV4 and RV3 — duty cycle and frequency setting respectively, whereas RV5 adjusts the level output. As mentioned before, this particular IC generates sine, square and triangular waveforms simultaneously, but this specific arrangement only allows a sinusiodal mode of operations. Finally pin identification (top view of this IC is presented below Fig. 2).

Both Audio oscillators can be used for our mixer construction and the choice is yours. In both cases the oscillator should produce approximately 1KHz undistorted sinusiodal frequency output and referring to our Fig. 1 (Part III) should also provide a test signal for each channel through the appropriate push button PB1 to PB5. The connection point "A" was marked "Test signal 1.0KHz".

Finally one important point must be mentioned and it concerns the power supply for both Fig. 1 and Fig. 2 (oscillators). The first circuit operates on a single P/S requirement of 0 (v) to +US (v) only, whilst the second one has a dual power supply of + US (v) and 0 (v) requirement. A split dual power supply has the advantage that any generated waveforms are located symetrically about ground level. For

the circuit in Fig. 2 I recommend the use of an appropriate IC holder to prevent overheating during soldering, so as not to damage this delicate component.

LIST OF COMPONENTS

RESISTORS (All resistors 10% carbon 0,25W preferably metal-oxide 5% tolerance)

R1 1.0M ohm

R2 1,0K ohm

R3 2.4K ohms R4 680 ohms

R5 20K ohms

R6 10M ohms

R7 4.7K ohms

R8 4.7K ohms

R9 15K ohms

CAPACITORS

C1 22nF Polystyrene

C2 22nF Polystyrene C3 22nF Polystyrene

C4 10uF/15V electrolytic

C5 47oF ceramic

C6 4700pF ceramic

C7 4700pF ceramic

C8 0.1uF ceramic

C9 4700pF mica

SEMI-CONDUCTORS

TR1 BC107

IC15 Waveform generator (Dram order code: 65–810–0)

POTENTIOMETERS (All pots are pre-set carbon type)

RV1 5K ohms

RV2 50K ohms

RV3 10K ohms

RV4 1K ohm

RV5 50K ohms

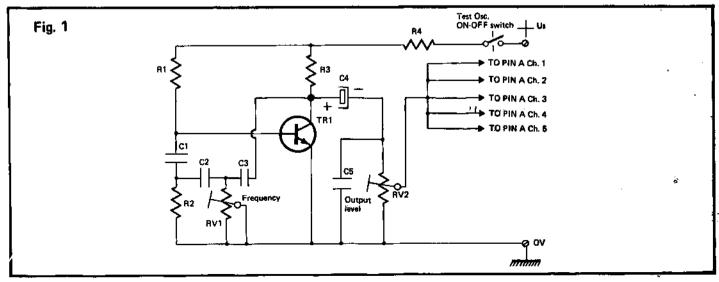
RV6 100K ohms

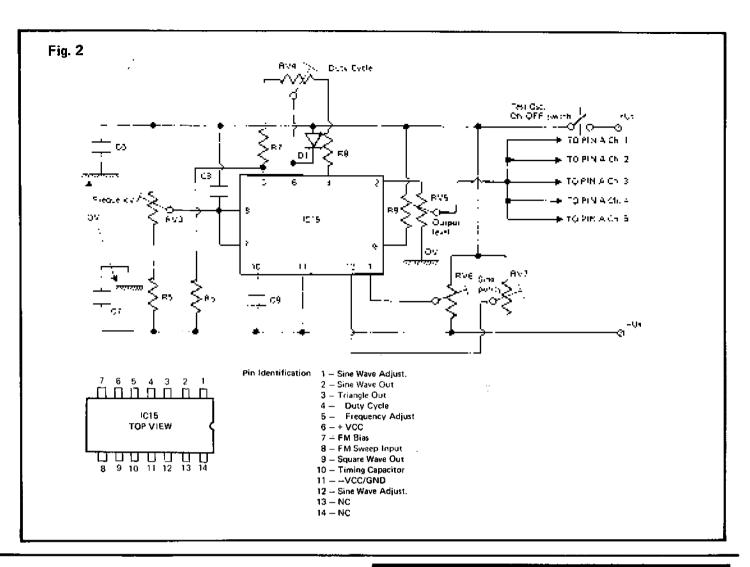
RV7 100K ohms

MISCELLANEOUS

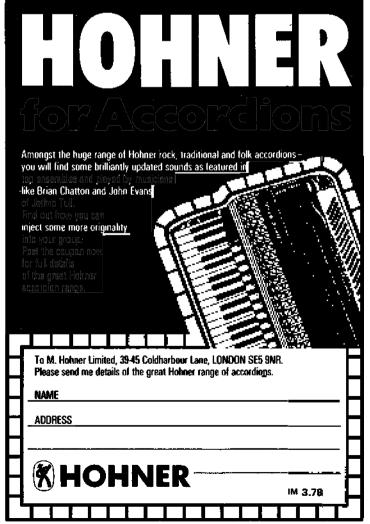
0.1 inch stripboard. Miniature single pole rocker switch (Test osc. ON-OFF)

14 pin D1L IC holder (when using Fig. 2 schematic arrangement) Coloured wires, soldering pins etc.











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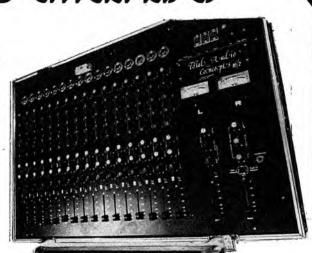
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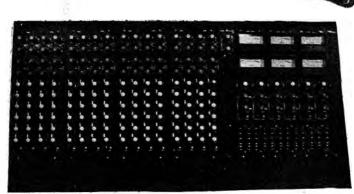
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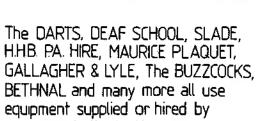




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SSE PA HIRE

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About the same time as Brian Clough began transforming the local Nottingham football team into the best in the land, so John Penn decided to do the same thing with his sound system business.

And if there was a first Division of sound equipment specialists, then John's Nottingham based company would be up there and competing for the honours.

The story of Sigma Sound Enterprises is every bit as remarkable as that of Forest. In around 18 months, Sigma has evolved from a pile of gear in John's garage to a company which has gained an international reputation for building sound equipment of the highest quality.

As with most success stories, the beginnings are intriguing. John remembers the first thing which prompted him to really take an interest in music.

"I was about 14, and went down to see Black Sabbath at the local hall in Margate. Although I knew I had no future as a musician, I realised that I wanted to work in music".

"I started working with bands, and when I came to college in Nottingham this continued and I just had this amazing interest in the whole thing".

"At college everybody used to come to me if they had any problems with equipment, I remember being on Teaching Practice once when Ace were playing at the college and they had problems with their lighting".

John was getting quite a bit of work on rigs with various people, and eventually saved up enough money to buy a 400-watt rig of his own which he began to hire out.

John was still at college, but managed to run a successful hire service and even branched out to making his own units, although he had little experience of woodworking.

After leaving college, it was inevitable that he went into the business full time and last year acquired promises in Hartley Road which enabled him to

From a garage to international markets

transfer the operation from his home.

Along the way, John teamed up with Pete Wright an old friend with the same thoughts on the sound equipment business and both are now partners in Sigma Sound Enterprises.

One of the biggest breaks for the company came when John was a sound man on a Jerry Lee Lewis tour. He explained: "At that time Jerry Lee Lewis was being supported by the Darts".

"Needless to say you have got to go around blagging at every gig, and I told them about our sound system. They eventually used it, thought it was great and use us every time now".

This was a major breakthrough because the Darts, with their complex four-part harmonies, place particular demands on a sound system, in fact the system was so good that it was awarded a special mention in a number of reviews of the band.

The overiding priority at Sigma is one of quality and a concern for the needs of professional musicians. John is critical of the music stores which self-sound equipment just like a supermarket, he feels that the sales staff do not know enough about the requirements of working musicians to be able to advise and solve any problems.

At Sigma they are in close contact—would not be possible,

with what is happening in the music business and specialise in working on the practicalities of using sound equipment.

A typical example is when Deaf School came along, liked the gear but were a bit worried about the monitors because their singer liked to stand on them and they didn't want him falling off. John got to work and redesigned the shape of the monitors which worked perfectly.

In building their speaker cabinets and putting together a system, Sigma only use the best materials available. Speakers used are mainly JBL's ATC — ATC making the best 12-inch speakers on the market according to John.

For amplification they reckon there is nothing to equal RSD equipment although they do also use Turner stuff and AMEK mixing desks are given an overwhelming vote of confidence.

The company are constantly improving their gear and working on developments to make life easier for bands and road crews. They have developed their own paint for finishing the speakers, and even their own multicore and reels which are specially designed for easier use.

Although production of Sigma gear is in full swing, with inquiries coming from all over the world, the company would like to develop the Midlands market. They claim they can cater for every type of band or gig, and feel that there is no other company who can compare with them in the area.

The hire side of the business is still very important with rigs ranging from 1,000 watts to 5,000 watts available and they are only too willing to chat over any problems that customers may have.

John emphasises the importance of a good team of workers, which he believes is essential for the success of the company. Alongside John and Pete are Rob Johnson, Pete Miller and Ian and Jan Walmesley, without whom Sigma Sound would not be possible.



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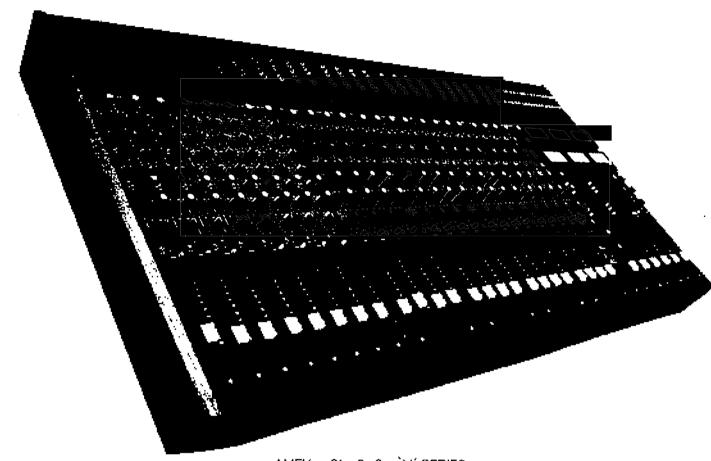




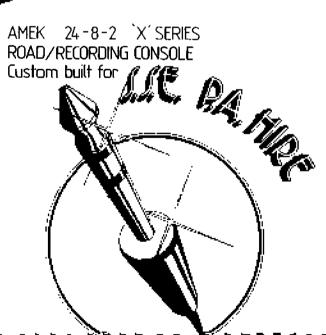
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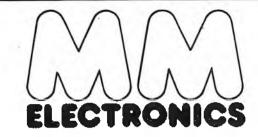
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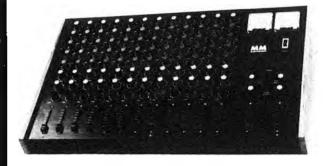
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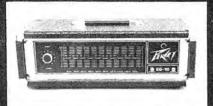
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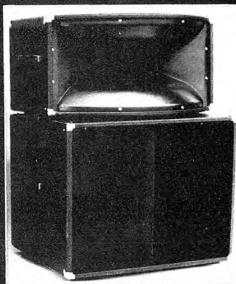


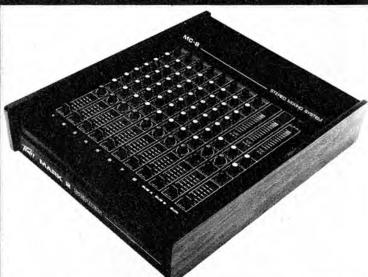












An introduction to cordless guitar systems by Charles Moebus Jnr. (Part 1)

The most innovative creation to touch the music world since Edison's recording cylinder appears to be the advent of cordless guitar systems. Currently, there are only four companies manufacturing cordless devices in the United States, and when dropping the name of any of them, one is certain to spark an argument about which is best, or worst.

While the prices vary widely and the operating principles have certain similarities to them, there are two factors evidently common to each of the cordless (or wireless) systems on the market today. One is that they all give guitarists a freedom of movement that goes beyond not being tied to a cord; that freedom extends to the individual's very approach to his or her music. The other common factor is seen in the way each manufacturer talks about their own system. Eyes aglow, their convincing, persuasive words spew from their mouths and press releases like machine gun rounds. Their lips and typewriters can barely keep up with everything they need to say. Clearly, they firmly believe in all aspects of their way to be cordless.

As a would-be cordless musician, if you met one of these individuals or manufacturers, and tried only the one product, chances are that is the one you would buy. Either that, or you would base your decision entirely on price, which is not always a wise thing to do. Unfortunately, these products are new enough that hardly any music store sales people can provide any guidance about which system is truly best for you. Most stores stock only one system anyway. and there's maybe one salesman who knows about it. This article will provide you with the facts about each system and hopefully assist you in making the choice that will best benefit your musical career.

Prior to 1977, the problems that kept cordless guitar systems off the market were signal loss (dropout), interference possibility and extremely limited signal-to-noise ratio and dynamic range (audio limitations). Let's define these problems one at a time.

DROPOUT: Radio signals react with the environment. This is because RF signals use air as the transmitting medium, and, in a cordless device, the airborne radio waves are being substituted for the cord. A rock and roll stage is a jungle of reflective, obstructive and absorptive surfaces, and a dropout will occur when a reflective signal and a direct signal combine at the receiver in such a way as to cancel each other (see illustration).

While this is a momentary occurence

and lasts no longer than the snap of your fingers, it is totally unacceptable to the professional musician. Let's face it, someone like Steve Miller isn't going to buy a device that will possibly cut out the

sound of his lead guitar work.

INTERFERENCE: The land of radio frequency waves is very densely populated. Cordless devices are possible prey to a number of interference sources, including police, walkie-talkies, stations, FM stations, CB radios and even cab calls.

Interference is a potential problem with any radio system, and many words have been written on how to increase the ultimate selectivity of a receiver. A well-designed FM system will allow only one signal - the strongest - to make its way through to the output. This is the opposite effect of AM radio; all of us have heard several AM signals cohabitating on one frequency, especially at night, the result being unpleasant whistles and beeps. FM, on the other hand, is an all or none situation; if two signals show up on the same frequency, the strongest will normally capture it completely.

AUDIO LIMITATIONS: There is theoretically a physical limit to how much dynamic range/signal-to-noise (S/N) ratio can be transmitted through a given system. Most radio systems, including large FM stations or even those used by NASA, have a S/N ratio of about 60db. Such a dynamic range, while greater than viny! records or tape, and acceptable for listening at perfectly moderate levels, is bad news for a guitarist putting out 130db SPL (measure of volume) from his amplifier. A 60db S/N ratio still leaves 70db of hiss, and there isn't a guitar cord made that is that noisy! And attenuating the signal above 10 or 12Khz to get rid of the hiss will change the presence of a guitar's sound so much that high calibre musicians won't stand for it.

Also, noise gates are of little use because they will affect the sustain of the instrument. Simply put, audio limitations (until now) have prevented cordless devices from being used because they actually changed the sound that a musician puts out - exactly what you don't want a cordless system to do.

All four of the devices discussed in this article would not be on the market unless each company felt their product design had resolved these problems. While it wasn't possible to play each one over a long period of time (2 or 3 band rehearsals with each one would've been ideal). I did get the utmost in cooperation from all four companies. Here they are two then: the Schaffer-Vega Diversity System, and the Edcor Wireles Instrument System. The HME triple diversity antenna system, and the Nasty Cordless.

Schaffer-Vega Diversity System

The Schaffer-Vega Diversity System (SVDS) works on the diversity principle discovered by the U.S. Navy in 1922. Two antennas are placed in separate radio environments (as far apart as possible, minimum 15 feet) so that one of them is likely to receive a useful signal at any given moment, even though the other is momentarily in a radio shadow.

Two fully independent receivers are incorporated into a single box, and an electronic switching system compares the transmitted signal and determines if one is arriving in better shape than the other. If the signal arriving at one of the RF stages is 6db better than the other, the diversity receiver will switch to it, but only if the signal currently selected to feed the audio portion is within a given area of signal weakness. In this manner, the silent switch and comparator is supposed to maintain a precise level of phase and amplitude, as well as to prevent dropouts, actually, with two separate radio environments, its is nearly mathematically impossible for both signals to be cancelled at their respective receivers at the same time.

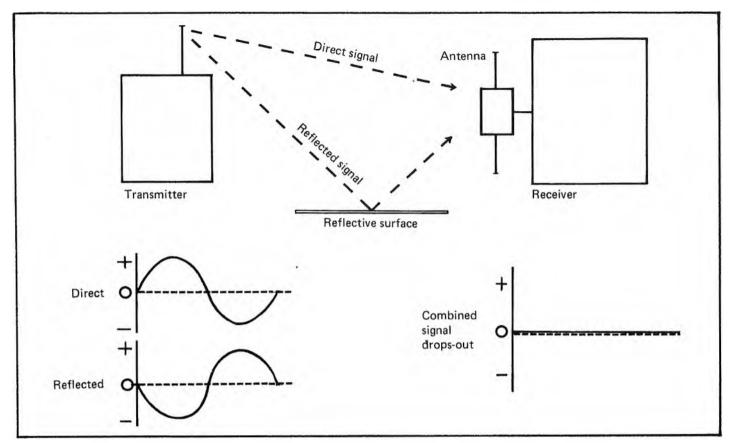
Out of all the systems investigated, the SVDS struck me as having the most professional appearance. All of the gear is very sturdy, and all of the cords and connectors are of aircraft type and quality, and are extremely durable.

The model X-10 transmitter is slightly larger than a pack of cigarettes, and while it can be taped to the back of an instrument or to the strap or put in your pocket, it really should have a clip on the back. The antenna, a 19" flexible wire, is permanently connected to the transmitter, and can be run up the strap, across the back of the instrument or down the performers trouser leg.

There is also a battery indicator on the transmitter, used to tell you how much charge your battery has. The SVDS people recommend a 9 volt Mallory, and removing it from its battery compartment turns the transmitting unit off. An audio gain adjustment knob is also found on the X-10; this is not a volume control, but actually sets the transmitter gain level. The audio input to the transmitter is rated at 50,000 ohms impedance. The RF output is 50 milliwatts @ 50 ohms nominal impedance.

Two dipole antennas are provided with each receiver setup. The SVDS

1



people have very definite recommendations regarding the placement of these antennas, and each one can be mounted to the side or top of a speaker cabinet or amplifier with ease. The antennas are connected to the receiver box with 25 foot coaxial cables (RG-58/U).

The 63Ex receiver is an impressive piece of gear, and epitomizes quality in its appearance and construction. The front side of the receiver has four (two sets) of LED indicators which tell whether or not a usable RF signal is being received and which receiver is currently feeding audio through the output connectors. A diversity switch is used to check each receiver, and to provide the performer with a choice of receivers should one fail totally. Also on the face are a meter function switch, a monitor level and AC power switch, and a phone jack for monitoring the output.

The rear of the receiver box has the two antenna connectors, a 12v DC accessory connector, and an AC line connector into which you plug the AC line cord provided. Also on the back is a mic/line level switch (changes audio output based on impedance) and a three-pin, transformer coupled audio output, used to feed the house PA or monitor board.

This entire receiver box is 3.7" wide x 6.8" high x 12" deep, and weights in at 51bs. The antenna input impedance is 50 ohms nominal.

According to Schaffer-Vega, the entire system has the following performance ratings: a 40-15Khz frequency response (+3db), a S/N ratio of better than 80db (and Ken Schaffer tells me this is conservative), with a total harmonic distortion of less than 1 per cent. The operating range is up to 100 yards

(another conservative estimate) and the units will operate efficiently between -20 and +55 degrees C.

The RF carrier frequency is between 150-216Mhz, and the catch here is that the customer specifies the frequency. While Schaffer-Vega will assist the customer with selecting a frequency, one should have some knowledge of RF theory before jut picking a number.

The SVDS comes with a 28-page instruction manual that is more effective at explaining and easier to understand than many automobile owners manuals I have seen. In fact, the owners manual is a real work of art in itself, and puts it out there quite clearly that Schaffer-Vega is always willing to assist their customers with any problems that might occur.

Two other appealing factors: The SVDS is apparently ideal to record with, due to its quiet operation and many possible applications. Also, everyone in a band can be cordless with no problem (by utilizing different RF carrier frequencies) and any guitarist can use more than one instrument with only one receiver box.

List Price: \$3300.00. For further information: The Ken Schaffer Group, 10 East 49th Street, New York, New York 10017 (212) 371-2335

EDCOR Wireless Instrument System

The EDCOR system is a singleended receiver system, having no diversity option at this time, and will be subject to dropouts and interference. It is worth looking at, however, simply because of EDCOR's reputation as a wireless microphone manufacturer, which is their major business.

The PM1-RG transmitter is $1\frac{1}{4}$ " x $2\frac{1}{4}$ " x 3 7/8", weighs 14 ounces, and

attaches to your belt or strap with a clip on its back. The only control on the transmitter is an on/off switch; there is an instrument input jack, a battery charging jack and a 16" transmitting antenna. While this unit does come with a battery charger as standard equipment, the battery is of EDCOR's own design. A possible drawback here is that if the battery every fails totally, you can't buy something at the corner drugstore to replace it; you have to go to EDCOR.

The MR-IG receiver is a 2" x 6" x 7" aluminium box, and it has a single telescoping antenna. The controls are very simple to operate, and include an on/off switch, a volume control, two indicator lights and a squelch adjust (found on the rear of the unit). The S/N ratio is touted at 50db or better, with a 20-14Mhz frequency response range. The audio output of the receiver is up 5v. peak to peak, and it claims a sensitivity of less than 2 microvolts for 20db quieting.

The operating frequency of this system is between 30-50 Mhz, and it is not tuneable. Here again, the user selects and specifies the frequency to the manufacturer. The range of this system is around 200 feet.

While the operating instructions that came with this unit were, shall we say, less than technical, one can hook the system up adequately from it. Trouble-shooting is impossible, however. The EDCOR has a most attractive feature for someone considering "cordlessness", and that is the units price: Listed at \$439.00, it is very accessible.

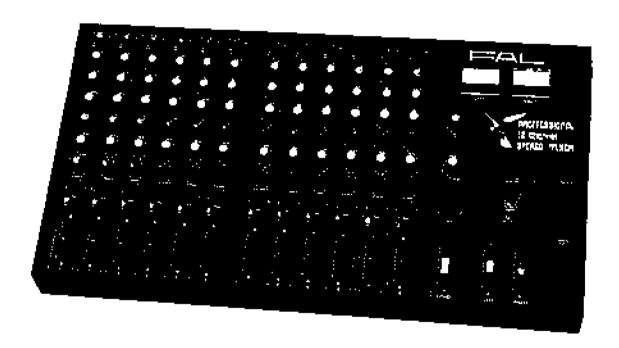
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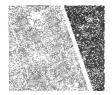


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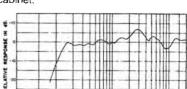
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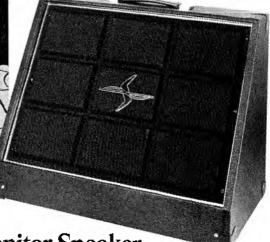
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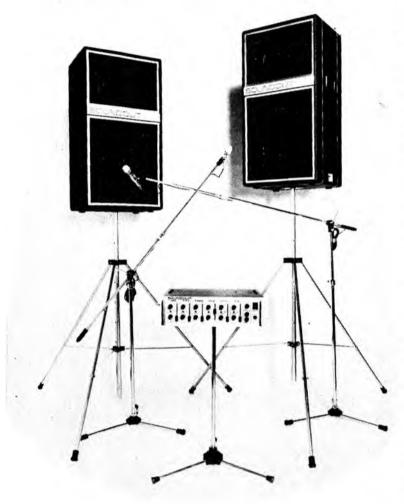


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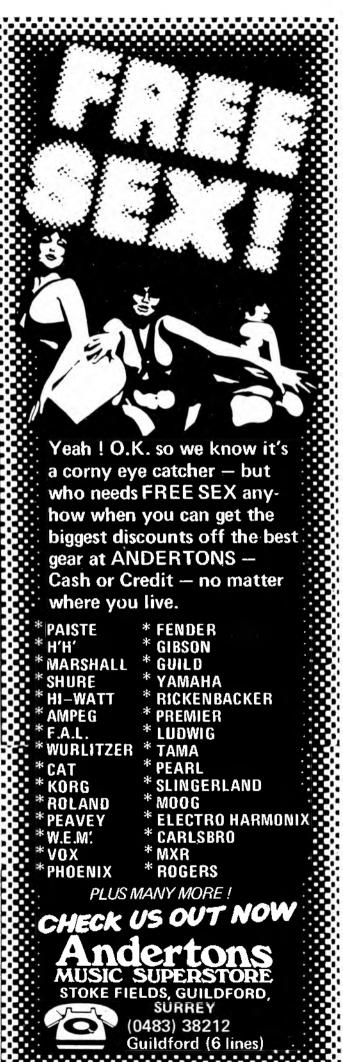


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