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Regular **Leatures**

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Tony Bacon survives seventeen sacks of I.M. fan-mail to bring you the best.

Playing - Electric Guitar Jim Sullivan gets in gear with

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Andrew McCulloch considers such percussive problems as spares, practice and cases.

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The acoustic player's everpresent problem is that of amplification and miking technique. Paul Brett offers some advice.

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Rod Argent says things like . . the better your technique is, the greater will be your facility for executing ideas. How can you help but read on?

Drum Repairs

Following Bob Henrit's review of the Hayman kit last month, Mike Lewis explains how to replace the angle and height adjustment on the Hayman side drum stand.

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Those Amazing Rhythm Aces, John Stevens and Bob Marley, form a Band with Little Feat to wail about Rare Rockabilly.

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In which you can read the story so far, and comments from all kinds of dealers.

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A Randall Commander II RG120-212 is the latest in a seemingly never-ending line of new combos to get the special Sawicki touch. Why not turn to page 36? 38

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GUITARCHECK

Possibly the first and probably the last of Stephen's articles to include the word 'Jubilee'. By the way, the guitar reviewed is the Epiphone 'Scroll' guitar. We suggest a long glance at page 38.

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Our man at the skins, who's wowed you in the 'Playing' series, guests this month with a review of the fascinating North drums.

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Certainly the instrument causing most interest round the I.M. offices at the moment is the Yamaha Electronic Piano. Our Rod adds his two pennyworth.

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International Musician's guide to

With the pressure these days on recording excellence, we felt it was high time to give a guiding hand in this and associated areas. Robin Lumley, producer and keyboard player, begins a series for studio virgins. while, for the experienced, we reproduce a chapter from the book "Sound Recording Practice" in which Strawberry stalwart Pete Tattersall imparts tips, hints and advice.

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To tie in with our Guide to Recording, we're offering bands the chance to win a master recording of themselves. Turn with haste to page 29 for details!

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Choosing a combo but bereft of info? Looking for something to brighten up your back-line? Are grown-ups getting you down? Our combo survey reveals all.

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Master Room

Tony Bacon talks to Porky and Bilbo, alias George Peckham and Denis Blackham, cutting engineers par excellence.



Editorial

This time last year we were busy writing an issue of International Musician all about the state of *Live Music* in Britain. Now we're preparing another issue on the subject (next month's) and we've discovered that the situation has changed dramatically in the past year.

A year ago, we launched a "Keep Music Live" campaign with the Musician's Union and we wrote about the dismal gig scene facing British and Australian musicians (our U.S. readers have a healthier scene). This year we're launching our campaign again — with free stickers in the magazine, tee-shirts etc — but we know that a movement has come from within music that has drastically turned the tables on British mobile discos.

Despite being, in the main, musically appalling, The New Wave (nee Punk) has pushed out the mobile disco. Audiences are demanding "live" bands and London venues are once again making a big publicity point of presenting "live" bands.

In the wake of this turn-around, many really good bands are benefitting directly. The visible money being earned by promoters of New Wave concerts (despite the damage bills) is spurring other promotors to book bands and, in Britain's main cities, it's the pubs with bands which sell the booze.

The Musicians' Union are better organised than ever before. They now have a full time Rock Organiser — Mike Evans — and they're really beginning to eat into the unlicensed disco problem. The number of mobile DJ's with a PPL (Phonographic Performances Ltd) licence has been greatly increased.

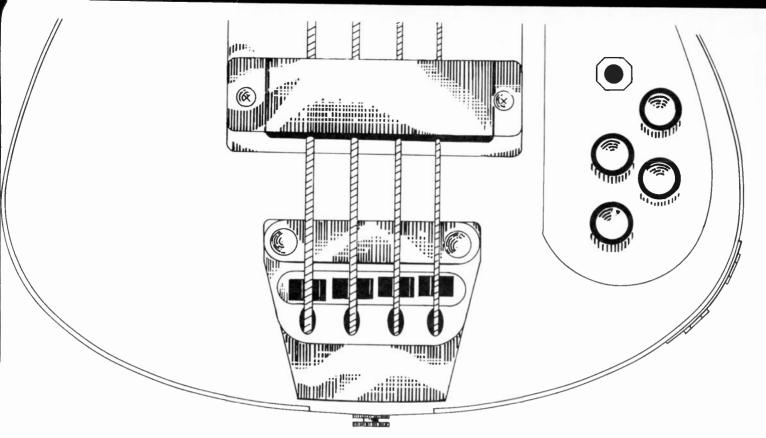
At International Musician, we welcome the change. Even staff members are getting new bands together and finding gigs and, from London, there's a better vibe blowing for musos than has been around for a long time.

Next month we take a close look at the "live music" situation.





Vol 3 No. 7 July 77 (UK) August 77 (International)



The beginning of great bass sound.

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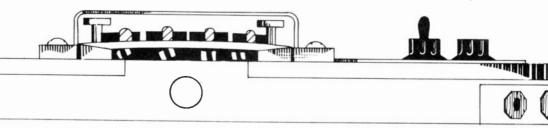


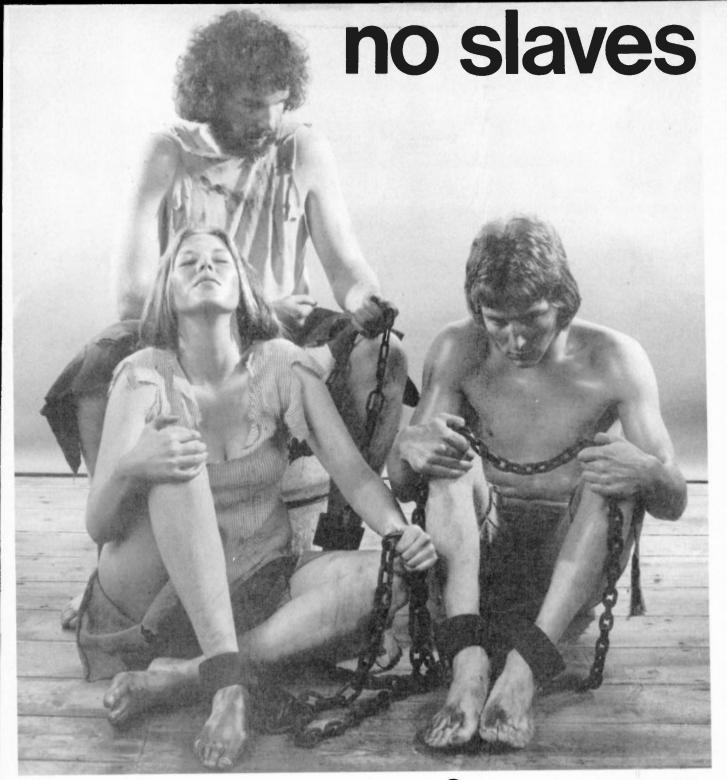


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Sonet SON 2077	Noon/Britico Bocu Music Sunbury Island Bocu Music Mautoglade Mam/Britico Jobete London Carlin Screen Gems	Gus Dudgeo Eddie Hilbert B Andersson/B Ulvaeu Ron Haffkin James William Guerici B. Anderson/B. Ulvaeu Biddi Demis Rousso Bob Gaudie
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CBS 4603 Epic EPC 4036 CBS 3937 Philips DEMIS 001 Warner Brothers K 16688 Bell 1495 Pye 7 N 25709	Island Bocu Music Mautoglade Mam/ Britico Jobete London Carlin Screen Gems	Ron Haffkin James William Gueric B. Anderson/ B. Ulvaeu Bidd Demis Rousso Bob Gaudie Mike Hurs
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EMI 2450	KPM	Bob Barret
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ANEWS☆

FACILITIES LIST FOR COLLEGE BANDS

BANDS DOING the college circuit will benefit from a recently-introduced system whereby tour managers and roadies are supplied with complete lists of all facilities at the gig from the size of the stage to whether or not there are power outlets in the dressing room.

National Union of Students Entertainments Department head Ricky Hopper, says this is part of the NUS move to persuade bands to use college halls with good acoustics rather than local Town Halls with "aeroplane hanger" sound.

The facility lists will be of benefit to everyone involved in a gig as they give a run down of: loading widths, construction of the hall, dressing room facilities, stage dimensions, power outlets and a myriad of other points a band needs to know about

Sad Café for RCA

SAD CAFE, one of the popular Manchester bands and also one of the most hard working, recently secured a long-term contract with RCA. They have already released their first single, "Black Rose", and their debut album entitled "Fanx Tara", is scheduled for September release. band's line-up is Creswell, Ashley Mulford, John Stimpson, Vic Emerson, Ian Wilson and Paul Young.

5TOLEME

THIEVES BROKE into the premises of Trad Sales and Services Ltd, of 149b, St. Albans Road, Watford, in the early hours of Wednesday the 15th of June, and stole various pieces of equipment.

Items stolen were as follows:

1 Teac 80/8 Tascam 8-track ½" machine (new)

1 Revox A700 with two broken knobs (secondhand) 1 Yamaha wedge-shaped cassette recorder

1 Roland DC50 digital chorus unit (new).

The total value of the equipment stolen is £3,000, and the items taken were amongst £60,000 of equipment in the shop at the time of the break-in. It's the first break-in in the company's six months of trading.

If you're offered any of the above items in suspicious circumstances, or if you should be offered the items as a package, please contact Trad on (97) 47988.

The Motors

Sad Cafe

Virgin sign Motors

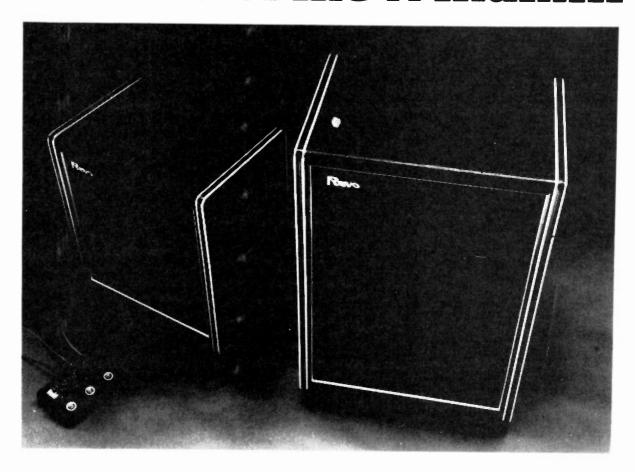
VIRGIN RECORDS recently signed up The Motors, a band formed by ex-Ducks Deluxe members Nick Garvey and Andy McMaster. Ducks Deluxe were one of the more popular British pub rock bands until their break-up 18 months ago The long-term worldwide contract also covers fellow members Bram Tchaikovsky and Richard Wernham. A single is expected in the near future.

PYE Blaze

FIRE BROKE out at the Pye record company's factory at Mitcham on June 16th and all staff had to evacuate the building. The blaze was confined to one block and a certain amount of sleeve stock was destroyed. At the time of going to press, the extent of the damage was not known but Pye do not foresee any production holdup.



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String break

Dear Sir: I am a guitarist in a rock band and breaking strings is the curse of my life. I put on a new set before every gig, which rarely consists of more than one set of one hour, or two of 45 minutes. I break strings at an average rate of one every other gig, plus two or three at every rehearsal immediately following a gig (I don't put on a new set of strings for these rehearsals). This suggests that a string has an even chance of breaking within about two or three hours' playing time, which I regard as ludicrously short. For a year I have used Ernie Ball 'Light top/Heavy bottom' strings, which are the most expensive I can buy in the gauge I prefer - .010, .013, .017, .030, .042, .052. Previously I had used La Bella 'Light top/Heavy bottom' strings with Rotosound or Picato custom gauge strings as single replacements, which had a similar life, if not shorter. I play a 1969 Gibson SG Special now fitted with Schaller machines and a John Birch bridge, but which I have also used with the original Gibson bridge/tailpiece and with a specially filed down version of this bridge, both of which had a similar effect on the life of the strings (they invariably break at the bridge). I'm tempted to attribute the problem to my playing style - I pluck the strings hard and bend them up to a tone with a heavy vibrato. But on the other hand, I'd be surprised if the classic quitarists in this style had such a serious breakage problem; for example, Pete Townsend, violent guitarist par excellence, regularly performed a three-hour set with an identical guitar in his 1969 period. The strings I use are by no means light by current standards - i.e. there's plenty of metal to fracture at the point of contact, and, except for bottom E's, I break them all fairly regularly. My bridge pieces are naturally slightly worn, but the problem was just as bad when they were brand new. A breakage will virtually destroy the performance of a song, and, at the very least, interrupt the

flow of a set, provoking cries of "Get on with it!" etc. It's expensive and time-consuming to be always replacing strings, and a spare guitar is out of the question financially. I conclude that manufacturers make strings of steel which lacks in strength, and I appeal to them to research, produce, and recommend to me a guitar string of tougher stuff with reasonable durability.

Kimberley Rew, Cambridge.

Darburn

Dear Sir: With reference to "In Brief" in June's International Musician. Some points in the article are not quite correct and we would appreciate a few words correcting this in next month's International Musician. (1) When the amplifier is operating on the sustain volume control all the input signal passes through the compressor, no dry signal being present. Thus it is possible to set up normal playing and sustain playing at the same volume. Tonal variation of the sustain is then adjusted by the sustain tone control on the front panel offering a choice of pure sustain to deep fuzz. (2) With regards to the end of the ring being clipped on the long sustain this is a function of the noise gate, which is easily adjusted to operate at a lower level by inserting a screwdriver into the preset control located in the back panel through the hole marked gate. (3) The second input is identical to the first but only becomes operative when the first input is plugged into. This is done to reduce noise. (4) The reverb was thinned out at the request of numerous customers; however, by changing the value of one capacitor we can restore it to full depth on production models. (5) Celesta loudspeakers are fitted to all SRV-50 and SRV-100 amplifiers currently in the shops and will be

fitted as standard in all future combination amplifiers.
Bernard R. Drage,

Director, Darburn Ltd., Wimbledon, London.

Thanks

Dear Sir: I wish to congratulate International Musician for the accurate reporting of the news items which were submitted in recent months. Most manufacturers and dealers are keen to see their name and products in print, but I am particularly proud that you have seen fit to mention some of the local bands who rarely get this sort of mention. I feel that your comments were very much in tune with the feeling here at S.A.I. and will be of great value to local readers and bands.

R.E. Dewhurst, Managing Director, S.A.I., Coppull, Lancs.

"New" Sisme

Dear Sir: Through the columns of I.M., the Sisme S.N.C. Company of Italy, manufacturers of Godwin organs, wishes to thank all its customers and friends who have bought its instruments and wishes to notify that Sisme (Electronic Organs) Limited of Manchester, previous distributor of its products, is now in liquidation. Therefore, the products of Sisme Company, Italy will be supplied to the English market through another distributor whose name will be published shortly. If in the meantime, anyone should need information, they are cordially invited to apply to Sisme S.N.C. - 60028 Osimo Scalo (Ancona) Italy. Sisme S.N.C. Italy.

Godwin - still going



© LETTERS ©

Sonorous Guild

Dear Sir: When Stephen Delft reviews a flat top guitar, it is usually more clinical than musical and in one particular review of a GUILD F.30 R NT he was very critical of points of infinitesimal importance which distracted from its beautiful sonorous sound and ease of playing. Perhaps this is just my reaction as a professional player whose demands are satisfied by an instrument of excellent tone and ease of fingering regardless of tiny blemishes discovered through a magnifying glass.

In order to pass a critical opinion, one must play different types of music on the instrument which by experience one knows produces snags. When the guitar passes this kind of test it is worth having - because it provides the player with utmost confidence. In reviewing a 'cello body guitar, however, Stephen must be much more careful when entering the historic field. The 'cello built 'f' hole guitar, until the late 1950's, was known as a plectrum guitar, 'f' hole guitar or a teel-strung acoustic guitar. This type of guitar, which began its life in the United States, was specifically built to take the place of the tenor banjo in the dance band. It was never known as a jazz guitar in the U.S. or in Great Britain although the Continentals called it a jazz quitar, but its function was mainly to balance the sound of the rhythm section. Eddie Lang was the first guitarist to become a member of a dance band when, in 1928, he played in the famous Roger Woolf Kahn Band. I played in my first professional dance orchestra in 1928 and for 30 years the leading dance hands used one guitarist to make up a four piece rhythm section.

When Stephen Delft writes in the June issue of International Musician that "the Gibson Jazz guitar if played loud enough, could be heard in the rhythm section of a smallish dance band" he really does not have the slightest conception of the guitar's function in the era of the dance bands. The usual line-up of a dance band was 3, 4 or 5 brass, 4 or 5 saxes and a rhythm section of 4, and when one reads "the tone of some models was specifically designed to cut through massed brass and woodwinds and the instrument was quite successful until bands became bigger and louder", this is pure imagination. One has only to see Count Basie's Band which has hardly changed in format since the 30's, and hear Freddie Green play the cello guitar to get a true picture of the guitar's function. As for "the solution was to employ several guitarists playing more or less in unison", may I ask which famous or known dance bands used several guitarists?

Please, Mr. Delft, there are many of us still alive who have lived and worked through this period so, I beg you, don't confuse the young readers. Criticise guitars clinically if you must, but don't pull phoney history in a field of guitar playing with which you haven't the slightest empathy.

Ivor Mairants,

Mill Hill, London.

Stephen Delft replies: I am grateful to Ivor Mairants for his observations on some of my Guitar reviews. I have considerable respect for his opinions, and I should like to answer his points with some care. Firstly, concerning the Guild F.30 R. I too, enjoy the excellent tone and ease of fingering of the better examples of this model, however, I have also encountered a few examples whose ease of

fingering was far from excellent. In fairness to the Guild Company, I could justly make the same criticisms about some examples of most well-known instruments. I am much more concerned about the fact that guitar players frequently bring to me instruments which appeared musically and mechanically satisfactory when new, but which have deteriorated rather more quickly than the owner anticipated. It is often apparent, on inspection of these instruments, that there has been some significant error of design or assembly which would not have been apparent from a casual examination of the instrument at the time of purchase, and which has only started to affect the guitar's tone and/or playability after a period of a few years. There is often little which can be done for such instruments, short of major (and expensive) repairs, and frequently no guarantee that the instrument will remain stable after this.

A top-quality guitar may well be the most expensive item which a young musician has ever purchased. I feel it is my responsibility as a reviewer to assist prospective guitar buyers in selecting an instrument which is suitable, not only for the requirements which they may have considered, but for certain requirements which they may have assumed. (For example, that the instrument should have a long and trouble-free life!) More specifically, I feel it is appropriate in my guitar reviews for International Musician to pay particular attention to those aspects of a guitar's design and construction which I feel may affect its reliability and future tonal development, and which are not easily examined or evaluated by even the most competent musician.

Concerning the 'points of infinitesimal importance' to which Mr. Mairants refers; is there anyone who has not noticed a gradual deterioration in the standards of well-known instruments since pre-war days? Is there anyone who does not wish that this deterioration could have been prevented? It is still taking place, in infinitesimal steps, and I try from time to time to slow its progress. I would agree with Mr. Mairants that a guitar should be assessed primarily according to its abilities as a musical instrument, but I feel this is something which can be left with reasonable security in the hands of the individual musican. I have considered placing more emphasis on this aspect of Guitar Reviews, but I have received many letters from readers concerning my work for I.M., and the majority ask specifically for even more emphasis on 'technical' measurements. At the moment, I prefer to work generally in accordance with the wishes of my readers.

Concerning the review of the Gibson 'Cello-body guitar; my observations were intended as an explanation for the apparent contradiction of a full size acoustic plectrum guitar whose internal construction was modified for optimum performance as an electric instrument. On questions of history, I accept Mr. Mairants' corrections about people, places, music, instruments and dates, without reservations, and bow respectfully to his white hair and greater experience. On questions of guitar construction, I will bow gracefully to very few beyond Juan de la Montagna, Senor Fleta, and the memory of Hermann Hauser.

Ivor Mairants has had many more years experience with music and the music business than I have, and my knowledge of Dance Band history is necessarily limited to conversations with older musicians and memories of assorted films. I have seen at least two separate pre-war

film clips which show two or more guitarists playing in unison, in what certainly appeared to be a dance band, but I must accept the implication of Mr. Mairants' comments, that this was not representative of normal practice at the time. My apologies to anyone whom I may have misled. Perhaps Mr. Mairants could be persuaded to write a small book on the historical aspects of dance band music, musicians and instruments.

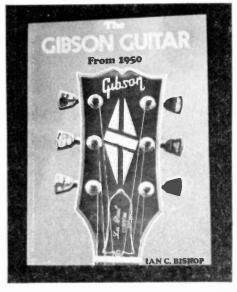
I must respectfully insist that certain 'Cello guitars were designed, either deliberately or as a result of normal commercial competitive pressures, to be compatible with the larger sort of band, employing 4 or 5 brass, and 4 or 5 saxes. I have always preferred listening to smaller musical groups (irrespective of the type of music), and by my tastes this quantity of brass and saxes qualifies as 'massed'. Once again, I apologise to anyone I may have misled. If Mr. Mairants doubts that bands (in the wider sense which I intended) have become louder, could I suggest a brief visit to one of the louder rock concerts.

Gibson book

Dear Sir: I read with interest the review in the May issue of International Musician of the "Gibson Guitar Book" by Ian Bishop. Since that time I've tried lots of local bookshops, even a few music shops, but to no avail. I'd really like to get a copy of this book as it seems very interesting. I wondered, therefore, if you could possibly give me an address where I could get the book from — I notice in the review that it's published by "Musical New Services", perhaps you could give me their address? Thanks for a great mag, I buy it every month.

Paul Critchley, Bromiey, Kent.

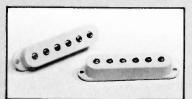
We've had a few letters asking where to get the Gibson book — if you write to Musical New Services Ltd., 20 Denmark Street, London WC2, and also enclose £3.12, which will include the cost of postage, you will soon afterwards find a copy of the said book in your possession. Readers may be interested to note that another book is being published by Musical New Services in the late summer — it's by Ken Achard, of Peavey U.K. fame, and it's a similar venture to the Gibson book, this time dealing with Fenders.



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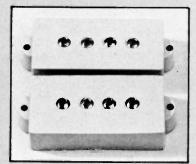


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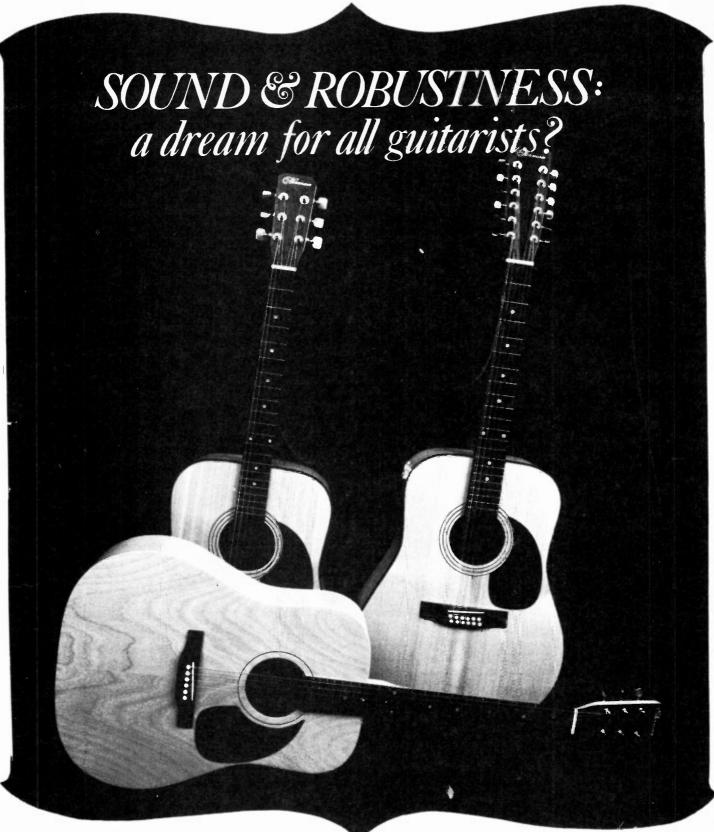
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International Musician's guide to ?

For Studio Virgins

Robin Lumley is a record producer and keyboard player working mainly in London. His first major venture in the business was as keyboard man in Bowie's Spiders and he later formed a partnership with Jack Lancaster. He recorded the "Peter and the Wolf" album which sold over 250,000 and then met and joined Brand X. Currently producing Rod Argent, Bill Bruford, and others, as well as recording with Brand X

I would like to introduce this series with a brief explanation of its overall aims, which are to provide some insight into the way in which a recording studio can be exploited and utilised by musicians as a creative medium in its own right, rather than merely to provide a record of a performance of a piece of music. These articles are not intended to be another series of "tips on studio technique," but a real attempt to study and discuss in depth the many facets of sound recording in a studio, in the hope that real help may be provided, especially to new recording artists and those people who may be approaching their first, all-important session with. perhaps, a little trepidation.

Throughout the series, I am going to assume that the reader possesses a certain amount of technical knowledge to avoid becoming bogged down in lengthy explanations; boring to those who know anyway, and clouding any issue under discussion with unnecessary sidetracks. If you are in doubt, by all means write in, as I hope to encourage an airing of views in this column. Not enough is really being done to assist those just starting out, and I would like to try and dispel some of the "closed shop" secrecy that surrounds sound recording.

So, let us assume that your 24 first session has been booked, and

within the bounds of intelligent guesswork, vou've booked enough studio time to comfortably record and mix the titles you've chosen. I stress enough studio time, because stories concerning groups who book one hour of studio time to record ten three-minute songs (on the premise that ten three minute run-throughs and takes add up to sixty minutes) are far from apocryphal! Try not to record and mix on the same day and don't book too lengthy a session at the outset. You'll probably find that three or four hours is quite enough for your first time in, bearing in mind the nervous energy you may quite unconciously expend in adjusting to an alien environment dominated by large pieces electronic machinery and gadgetry. Besides, mixing your tracks on a different day gives you the benefit of hindsight if you wish to change or alter anything, and adds perspective and the chance of fresh ears on a fresh day. I frequently work 12 to 16 hours a day for several weeks on end in the studio. But one has to train up to that endurance level over the years if any objectivity is to be left at four in the morning, having heard the same song through two hundred times that day already! The

consideration. next before actually walking through the doors and starting, is to thoroughly prepare and rehearse for the studio. This situation requires consideration from several points of view, as you will most probably be required to perform (unless undertaking the most basic of demos) in what you may consider, to be a false and unnatural manner. For a start, you're going to have to play a lot more quietly than you may be used to doing at a rehearsal or a gig and, if you have a drummer, he may well have to play in a drum booth, separated from the rest of you by soundproof screens. This being the case, he will have to wear headphones to hear the rest of you, and you will need cans also in order to hear him. This does

not help the communication between musicians for nodded cues and key changes and, furthermore, you will almost certainly not be able to perform vocals at the same time as you record the backing track.

So, you must rehearse each song or piece exactly as you will be recording it, without the benefit of the overdubbed parts such as solos or vocals and harmonies. I cannot stress too heavily the need to be well rehearsed and prepared, because it saves so much time and nervous energy in a situation where these are precious commodities.

Having prepared yourselves, its time to think about the tools of your trade: your gear. You must find time, well before the day of the session, to carry out thorough and complete equipment check on every item you intend to use for recording. factor is overlooked frequently by professional groups who ought to know better, and much time (and therefore much money) is wasted in the studio repairing a crackling amplifier or tracing a hum: jobs that could have been done easily beforehand. Such hums and crackles, whatever their cause, may never really seem noticeable when you're roaring away at a gig, and can be dismissed as unimportant. But, in the studio, they can be the bane of your recording engineer's life as he tries to commit your sound cleanly to tape.

Early sessions, especially if they're demos, don't always have the benefit of a producer (whose role and importance I'll be discussing in the future), so you may need to enlist the assistance of the sound engineer as an additional "opinion source" during the session. Obviously, he is likely to be better qualified in terms of sheer experience than yourself, and can be of great help to you, but don't be overawed by him: remember that he is working for you. Neither allow yourself to be overawed by the complexity and sophistication of the studio recording equipment which, even in a simple studio, can seem a far cry from your own domestic gear. Obviously, you're going to suffer a little from nerves the first time you record, but take heart from the

fact that many successful and experienced artists who have made dozens of albums still feel a bit nervy when the red light is on. And concerning the "red light syndrome," I have sometimes found that the best takes of songs can occur when the musicians are unaware that they are being recorded, and think that they are just running through the title.

Finally, let's muse briefly on the unique (in a music-making sense) part that the recording studio plays. Before one can fully explore all that a studio can offer, regardless of its sophistication or complexity, one should realise that the tape you walk out with at the end of the sessions is not necessarily a simple reproduction of your live sound encapsulated onto ferric oxide. Bear in mind that a member of your audience in a club, pub, or concert situation is experiencing your performance with all his senses and not just his ears. He is obtaining excitement from the volume, from your stage presence, from the lighting, and certainly from the "vibe" of being present in the live performance context But, sitting at home, your audience has only ears and imagination. Consequently, the recording of your music has to encapsulate and precis many facets of your sound and channel them into a purely audio experience.

It is in this sphere that the studio can be exploited by you with all its peculiar techniques of overdubbing, stereo panning, special effects and editing. This is not to say that everything must be used ad nauseum but, with taste, intelligence, and musical application, these techniques and devices become tools that you will learn to use to extend the range of sound and imagination that you possess. It all becomes tremendously exciting, and a very valid and creative medium in its own right.

Having started out this month in a fairly general sense of overall viewpoints, next month we'll explore the first of the specifics, and look carefully at the way in which the musical instruments themselves are recorded.



For Those With Experience Studio layout It is good practice to group the

By Pete Tattersall. Extracted from his chapter "Popular Music" in the book "Sound Recording Practice" published by the Oxford University Press at £16.00. The extract is reprinted with the kind permission of the Association of Professional Recording Studios who compiled the handbook. Pete Tattersall is one of Britain's best known 'rock' engineers. He's currently in charge of the Studios facility Strawberry established by 10CC in Manchester and has been responsible for engineering many top ten hits.

Setting up the session

It is a good idea to spend some time with the producer before a session to plan the course of action. A good producer will have a fair idea of how he wants the finished product to sound, and will have given some thought to overdubs etc. If it is at all possible, one should plan in advance the track layout for the majority of overdubs. This will save headaches later on and indicate the amount of track jumping which will be needed to accommodate all signals.

It is very important to establish and maintain a congenial atmosphere to bring out the best performance from the musicians. Therefore one should try to be as helpful and friendly as possible to producers and musicians alike.

musicians as close together as possible, as they play with more feeling if they are together, instead of being shut off in separate booths or heavily screened. The drums can be conveniently set up in a corner near the control room window, with the bass guitar amplifier next to the drums, facing the wall, and a screen between the drums and amplifier. The lead guitar amplifier may be near the bass, with a small screen between. Opposite the drums can be the piano and the acoustic guitar will normally be placed in a booth, if available. It is usual to place the vocals somewhere in the middle of the group and lay down a guide vocal on a spare track. This helps the rest of the group to get the feel of the number being recorded and is also very helpful for overdubbing.

Microphones

It is quite impossible to lay down precise rules for the choice and placement of microphones but a typical scheme will indicate the basic approach. Another engineer in different acoustics might choose something quite different.

On the drums, one might use the following: Snare drum Beyer 201, Hi-hat - Beyer M160, Tom-toms - Beyer M88s, Bass drum - AKG D25 or D202, Top cymbals - Neumann U87 (two).

The above microphones are suitable for drums because they

have a good cardioid response and they can take high acoustic levels which is important with close working. For the remainder of the group one might use: Bass guitar - AKG 202, Lead guitar - Neumann KM56 or KM86, Beyer M160, Acoustic guitar -Neumann KM56 or KM86, Piano Neumann KM86 (two), Vocals - Neumann U47.

The KM86 and KM56 microphones are a good choice for the acoustic guitar because they produce a pure sound and enable one to obtain a good full tone from the instrument. The reason for using a U47 on the vocal at this stage is that, even though it is only a guide vocal, it may add a little presence which can be extremely useful on the final mix. Two microphones are commonly used on the piano whether a stereo piano is needed or not. Obviously one is placed at the bass end of the piano and one for the treble, near the hammers, usually an octave above middle C.

Grouping of channels

The balance engineer will adopt a scheme of allocating instruments to channels which makes for the best working conditions, e.g. all drum channels together, then bass, guitar, piano etc. One possible arrangement might be as follows, starting with the drums: Channel 1 - Snare drum.

Channel 2 - Hi-hat.

Channel 3 — Top tom-tom.

Channel 4 - Floor tom-tom.

Channel 5 - Bass drum.

Channel 6 - Top cymbals and kit left. (Stereo)

Channel 7 - Top cymbals and kit right. (Stereo)

Channel 8 - Top over-all.

Channel 9 — Bass guitar.

Channel 10 - Electric guitar.

Channel 11 - Acoustic guitar. Channel 12 - Piano bass end.

Channel 13 - Piano top end.

Channel 14 - Guide vocal.

Routing of channels to tracks

Every engineer has his own preferences in regard to track layouts, but there are one or two points to watch. The edge tracks (1 and 16) are most vulnerable to damage or misalignment and so it is not normal to put rhythm instruments there (bass and drums). The outer tracks are best used for overdubs, say guitar riffs, or piano runs, etc. A fairly standard final track layout for a group might be as follows:

1. Electric guitar riffs. 2. Drums left. (stereo) 3. Drums right. (stereo) 4. Snare drum. 5 Bass drum. 6 Bass guitar. 7. Acoustic guitar 1. 8. Acoustic guitar 2. 9. Piano top. (stereo) 10. Piano

bass. (stereo) 11. Lead guitar solos, 12 Lead vocals, 13, Backing vocals. (stereo) 14. Backing vocals. (stereo) 15. Tambourine. 16. Any extra percussion or synthesizer.

The sequence of stages in laying down the tracks will follow a regular pattern, starting with the rhythm.

Stage One. Tracks 2-5-drums as above. Track 6-bass guitar. Track 7-acoustic guitar 1, and Track 16-guide vocal.

Stage Two. Overdub acoustic guitar 2 on track 8 and perhaps lay down piano at the same time on track 9 and 10.

Stage Three. Lead vocals on to tracks 14 and 15, then rerecord (jump) both together to track 12.

Stage Four, Backing vocals. We will suppose that the members of the group are going to sing a three-part harmony, doubling the first harmony and single tracking the ton and bottom harmonies. Then all the harmonies are to be placed into a stereo perspective on tracks 13 and 14.

First harmonies on to tracks 15 and 16, top harmonies on to track 1, bottom harmony on to track 11.

The track jumps would be as follows: Track 15 to 13, Track 16 to 14, Track 11 to Tracks 13 and 14, in stereo half left and half right, Track 1 to Tracks 13 and 14 equally.

It is important to check phasing at all stages of multitracking vocals and track jumping.

Stage Five. Overdubs. Electric guitar riffs on to track 1, solo guitar on to track 11, tambourine on to track 15 and any further overdubs on to track 16. Notice that, as the tracks are gradually built up, they are placed in the stereo perspective as planned. This is extremely useful for the final mix.

Special facilities

There is no point in using limiting and compression just for the sake of it; they should be used positively but discreetly. An obvious use of compression is to keep a vocal at a constant level without a serious limiting effect. Some units incorporate an expander, limiter, compressor, and these can be used to give really good presence to a voice and almost appear to lift it out of the track.

1. Equalization units are quite often used on drums, especially the snare drum. If the engineer has already obtained a good drum 25



Top view of drum kit



Miking the drum kit

sound in the studio by tuning and padding, then adding just a touch of EQ can give just that little extra which makes the difference between a good snare sound and a brilliant one. The main point to watch is not to over-equalize. When this happens, the only course left is to start again from scratch. Some engineers prefer to record flat, then add all the frequency effects on the final mix. It all comes down to the individual taste of the engineer and producer concerned.

2. Phasing used to need two tape recorders, with tracks running slightly out of sync, but there are now quite sophisticated electronic phasing units on the market. It may be said that phasing is a gimmick, but any gimmick which helps to improve the effectiveness of a recording is worth using. Phasing is most effective on guitars and voices, but it can be used on almost any instrument as long as the signal is fairly constant. It is especially interesting on a hi-hat. Autophasing is a favourite technique as the signal is phased in time with the track. A trace of phasing on a backing vocal can also produce an interesting sound. Again the rule is not to overdo it; a track in which half the sounds were phased would be very boring.

3. Tape echo can be used on

almost anything. On a vocal it can obviously be introduced to obtain an old Rock and Roll effect or, with a tape recorder which runs at 76cm/s (30 ips), a single repeat will give the double tracking effect. Again, tape delaying a signal before sending it to an echo plate makes the reverberation much warmer and natural. If tape echo is being used on a guitar or saxophone, one should try to make the musician play along with it, this nearly always produces a much better sound.

The Cooper Time Cube is an interesting piece of equipment. It gives 14 or 16 milliseconds delay, or it can be cascaded to give 30 milliseconds. On a vocal it is possible to feed the original signal half left in stereo and the delayed signal half right. This produces a definite double-tracked voice. It will also give unusual effects on a bass guitar.

4. Gain expander units or noise gates, such as the Kepex, can be used during recording or mixdown or both. Their main uses are to cut out tape hiss, amplifier noise, or studio background noise. On an acoustic guitat microphone, for example, there may be a fair amount of studio noise or spill from other instruments. So long as the unwanted level is significantly

lower than that of the desired signal, the noise gate can be adjusted to reject it.

If used correctly, the expander can be invaluable and can also be used to great effect in recording electronic music effects. One interesting example is to introduce a fake bass drum by feeding a 60Hz tone through the unit and key it with the bass guitar. This will sound like a bass drum being played in perfect timing with the bass guitar.

Sounds

Now that we have dealt with studio layout, track selection, and special facilities, we will get down to the main functions of console operation, producing the sounds. 1. The drums. The drum kit can cause many problems of microphone balance' and choosing a drum sound is an extremely personal matter. Unfortunately the sound liked by the drummer and the producer may differ considerably. The first thing to do is to listen to the drum kit in the studio and reduce the range of live sounds to manageable proportions before starting to build up the desired sound electronically. Let the drummer play for a while to warm up and ask him to hit the kit as hard as he intends to during the takes.

Drummers in groups tend to prefer a thick sound and this is possible to achieve by reducing the middle and top frequencies. However, this can leave the drums sounding rather dead and it is preferable to work on the kit itself. The snare drum will probably create the biggest problem. No doubt it will ring too much, and an easy way round this is by careful taping and retensioning of the snare without necessarily re-tuning it. A thin duster taped over the top end of the snare, away from where it is played, can make a big difference. It may also be necessary to put some tape over the snare itself. A great deal depends on the condition of the snare drum and, bearing this in mind, it is useful to keep some spare drum keys in the studio. The amount of equalization to use on the snare will depend on individual taste, the microphones being used, and the acoustics of the studio but a good starting point, after the necessary taping etc., is about + 8dB at 10KHz, middle around 2.8KHz and bass at about 200Hz.

The bass drum nearly always presents a problem as most producers prefer a dry thud. The easiest way to achieve this is to remove the front screen and place a blanket inside the drum. Take care to remove all fittings that screw or clip off, or you will have some strange noises occurring during a take. It is not always wise to EQ the bass drum by adding too much bass as this will invariably be lost in the final mix. It is usually better to have a middle to top sound.

The tom-toms do not normally present many problems. If they have been tuned correctly, only a small amount of taping should be necessary. Cymbals can cause quite a few headaches, depending on the type. If the drummer has a good set of cymbals, they will usually produce a good sound on their own and need very little frequency correction. Cheap cymbals will always sound like cheap cymbals, so a little bit of masking tape and EQ may be used to remove the tinny ring.

To recap on drum sounds: make sure that the kit is properly tuned and all loose fittings have been tightened up. Let the drummer play for a while before recording a take, and always check the drum sound between each number because the sound will often change as the session progresses, due to changing

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atmosphere in the studio.

2. Bass guitar. This is another instrument which can involve some time in achieving the correct sound. The guitarist may use a plectrum or his fingers. The plectrum is easier to record since 'picking' a bass guitar gives a slightly percussive sound and is much clearer and cleaner than a bass played with finger or thumb. The bass can be recorded either from the amplifier speaker unit or by direct injection to the mixing console, or a combination of both. The bass amplifier is the one which gives the most problems, as the group will be used to playing at high level on stage and the bass amplifier will probably buzz or rattle. The only way around this is by careful control of the volume of the amplifier and the amount of bass lift the guitarist is using. One can always add bass at the desk if it has been taken off at the amplifier speaker.

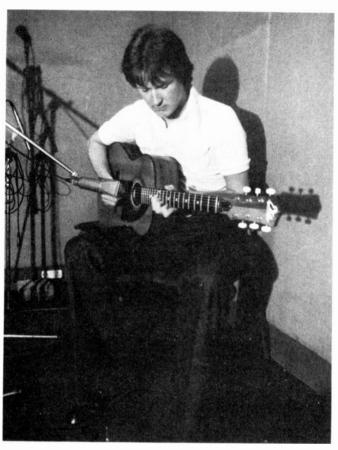
With direct injection you will have none of the above problems but the sound will possibly be too pure and not have enough guts. A mixture of direct injection and straight bass can be very effective. Make the direct injected bass slightly bassy and the normal bass middley (not too clicky) by balancing between both sounds, and adding top to one and bass to another. Remember that the bottom two strings will sound more boomy than the top two, and be prepared to compensate for this with equalization. Using both signals on the bass will also give more flexibility; for instance, it would be possible to limit one and put a small amount of reverberation on the other.

It is a good idea to check the bass sound through small speakers, to make sure it is not being lost, as normal studio monitors can tend to give a much better sound on the bass than the usual domestic record player or

3. Lead guitar. Like the bass guitar, the lead guitar can cause a few problems via an amplifier. It is quite amazing how many sizes of amplifier find their way into a studio. The most popular amplifier is a compact one with a good sound and sturdily built so that it tends to show few defects. The bigger amplifiers do not necessarily produce the best sound. A great deal depends on the guitarist, how he looks after the amplifier, the state of the strings, etc. The accessories used with the guitar sometimes need a fair amount of attention. Some guitarists use a combination of 28 fuzz, wah-wah, and sustain pedals

all linked together and quite often there is a mismatch between them. Also many such accessories are battery powered and very few guitarists seem to have spares; so it is a good idea to keep some

batteries in the studio. The guitar sound used on a track may vary from, a tight rhythm sound to a sustained fuzz solo. Solos are generally overdubbed and the first track laid down will be a rhythm.



The acoustic guitar



Miking the bass drum

This will normally be a fairly thick sound, making use of middle and bass, but of course it depends on the arrangement and on personal taste. Once again, one should use a combination of guitar tone and amplifier settings to achieve the desired sound in the studio, and improve it on the

Guitar solos are usually trickier, depending on how much sustain, fuzz, room echo, etc., is wanted. Sustain is controlled by the guitarist, but it can be helped with a small amount of tape delayed reverberation boosting of mid-frequencies. The solo guitarist usually needs more foldback than normal and one method is to feed the foldback through a speaker at high level, which enables him to turn up his own amplifier and put more feeling into the solo. This helps to create the effect of playing the solo with the group around him.

4. Acoustic guitar. The backbone of the rhythm track is often the acoustic guitar, normally double tracked to obtain maximum effect. The microphones used are mainly capacitor types like Neumann KM86, angled towards the top strings. An acoustic guitar tends to have a slightly bouncy sound which needs taking out, usually around the 60-200Hz range. Also the squeaking sound, made by the fingers of the left hand in changing chords, may need to be eliminated. This usually

happens with new strings. Certain acoustic guitars have pickups, and an interesting sound is to record the guitar with a microphone in the conventional manner and simultaneously direct inject it from the pick-up, splitting each signal on to a separate track. When an acoustic guitar is double tracked, it is obviously sensible to EQ each track differently and add different amounts of echo.

There are numerous ways of balancing an acoustic guitar. For example one microphone in front, angled towards the top strings, can be mixed with one placed behind. Placing a microphone inside the guitar is also possible but it needs to be a very good instrument.

5. Piano. It is normal to use two microphones on a piano. one placed near the bass strings and one near the hammers about an octave above middle C and to split them in stereo (if the tracks can be spared). If the piano is good and well in tune, there should be no problems at all. The top microproblems at all. The top microphone is normally placed near the hammers to obtain a hard

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- To enter this competition your band must have played at least three public gigs with the present-line up.
- The band must not have a current recording contract.
- The entire band must be resident within the U.K.
- 4. You must be able to organise a live gig after notification of a win which is suitable for a live recording being made. Please note that the promotors must be told about the recording and they must be prepared to co-operate. Almost any venue from a pub to a college is suitable provided we have co-operation.

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percussive sound, but this depends on the type of sound needed for the recording. To achieve good separation on the piano, if it is being played at the same time as other instruments, the lid will have to be low and the microphones slung in below. This tends to restrict the sound and it will have to be helped with a fair amount of EQ and echo. Obviously the best sounds are achieved by having the lid up and the microphones further back, making full use of the sound board and reflections from the lid.

6. Electric piano. There are quite a few makes of electric piano and these are of two types: the stage piano, which is just a keyboard and requires an external amplifier, and the complete model which has its own amplifier. The second is best for recording: a good stereo effect can be obtained by placing a microphone on each side and, when vibrato is used, the sound switches from speaker to speaker. Any kind of microphone can be

used for an electric piano, as the principle is similar to picking up a guitar amplifier. The type of EQ depends on whether a hard percussive sound is required or a soft bassy one.

7. Vocals. This is where the type of microphone and EO becomes very important, as the vocal is the one sound which will invariably be heard above all others. Capacitor microphones are normally used and amongst the most popular are the Neumann U87 or the newer U47. Sibilance is one of the problems. It may seem obvious to roll off some top end response but this may affect the overall vocal sound and make it too dull. A way round this is to ask the vocalist not to overpronounce the letter 's' and to sing across the microphone on sibilants. This also applies to the letters 'p' and 'b'. Over emphasizing these is known as 'popping' and can be very annoying but, by careful use of EQ and some thought by the singer, this problem too can be overcome.

Limiters are often used on vocals to level out the signal and keep it constant, but it is important not to overdo limiting. There are all types of vocalists — from quiet ones who sing very close to the microphone to real rockers who can be heard at the other end of the studio, and each requires special treatment. It is necessary to make the vocalist at ease in the studio by giving him the correct amount of foldback and monitor echo.

Reduction

Many engineers prefer to reduce multitrack tapes on the day after the recording. This is a very good idea as it gives one time to settle down after the recording, put ideas into perspective and, after a few hours break, be more constructive about the recording.

Reduction can conveniently start with the rhythm, firstly the drums. As mentioned earlier, the drums will already be in stereo. So channels 2 and 3 can be split hard left and right, with snare and bass drum in the middle. Now is the time to add further EQ on the bass drum, for instance, to make it cut through on small speakers (middle frequencies usually do this) and perhaps some extra bass on the snare to give it depth. The bass guitar is the next to be treated. It has obviously to blend in with the drums (except when there are bass runs) and quite often it is a good idea to balance between the bass drum and bass guitar to give the rhythm a solid feel. The type of EQ to add to the bass guitar depends on the style of playing whether it is picked or played with the fingers, but remember that too bassy a guitar will become lost in the final mix.

Acoustic guitars are next and, as there are two, they would be placed in stereo, possibly panned half left and half right. Once there is a fair balance between drums. bass and acoustic guitars, one can start on the vocals, lead vocal first. The level of vocals depends on the producer. He may want them sunk back in the track or well out in front. He may even split the double tracked vocals slightly left and right in the stereo picture, though this is unusual. There are many effects which can be asked for on vocals, including various types of echo, plate or tape delay, limiting, etc., or it may be that the vocal sounds better very dry. Whatever is needed, it is always worth experimenting with various levels and

The backing vocals have already been placed and recorded in stereo, so it is just a matter of

level between them and the lead vocal. The same goes for the piano and tambourine. The guitar riffs and solos can be placed anywhere in the stereo picture, together with such interesting effects as having the main signal mostly left and the echo from the right.

Once all the channels are connected up and one is placing sounds into their appropriate places, an engineer's expertise really comes into its own. Mixing is just as important as recording and the beauty of multitracking and reduction is that one can try as many mixes as one likes until the final one with that 'something extra' is achieved.

.During all stages of reduction it is wise to check the phasing, play back through small speakers as well as the large studio monitors, especially if the record is a single, and also check mono and stereo compatibility and adjust as necessary.

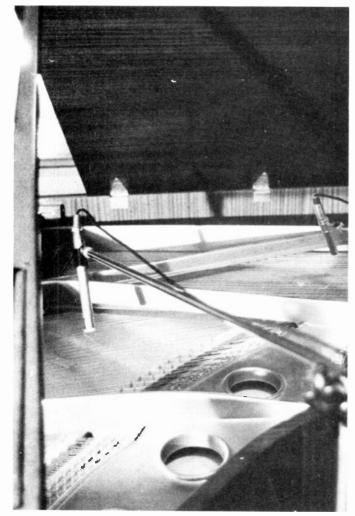
Tape machine operation

Most multitrack machines today are extremely sophisticated and have auto-locate systems. This means that the operator can zero the tape at the start of the number then, at the finish, simply press the locate or reset button and the machine will automatically rewind to zero. Also, some auto-locates allow one to punch out a new locate position in the middle of the take and this is very useful when doing drop-ins.

A tape operator's job is made easier by this type of machine, and this is a good thing as it enables the operator to be of more help to the engineer, as well as watch what he is doing, and therefore learn more about the engineer's problems.

Before each session, the machines should be lined up and the heads cleaned and demagnetized. In fact all the machines and consoles should be kept as clean as possible.

Tapes should be properly looked after and always wound tail-out after the session. It is normal practice to leader each number, which helps to locate the numbers easily when it comes to the reduction stage and also shows a degree of professionalism. Tapes which have been correctly leadered and timed are much appreciated by any client. All information relating to each take should be clearly marked on the tape box or edit sheet and nothing omitted, as a take which did not seem right at the time may nevertheless be used on the final mix.



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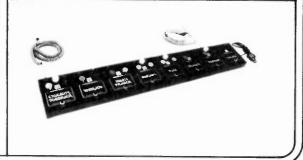


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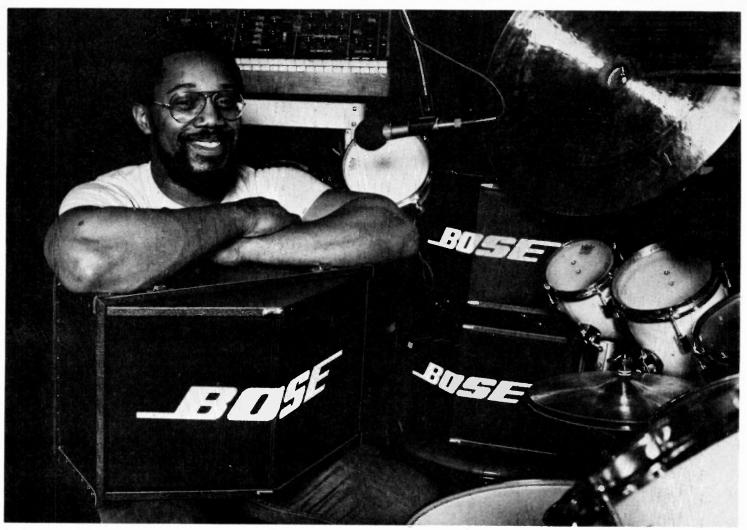


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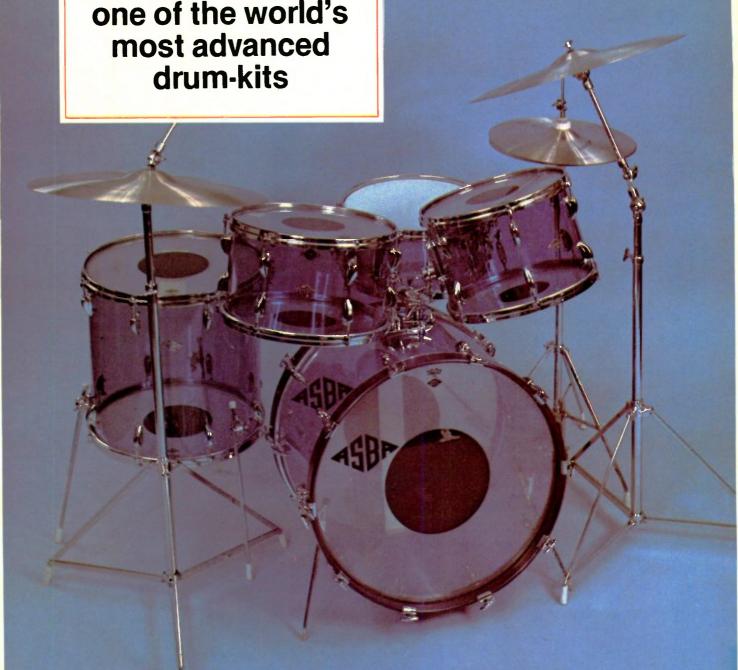
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sawicki's SOUNDCHECK

TEST ON: Randall Commander II Series, RG 120-212 combo

DATE: June 1977 PRICE: £300.92 ex VAT (U.K.)

Introduction

Randall Instruments Inc. of Irvine, California, USA produce a wide range of professional sound reinforcement systems, amongst them, the well-known RG 120, RB 120 and R 300 musical instrument amplifiers.

The RG 120-212, commercially known as the Commander II series is a two-channel, four-input multi-purpose combo amp which is packaged in a very smart, portable and robust cabinet. There is a reverb and tremelo facility on Channel Two and the amplifier is capable of delivering approximately 120 watts r.m.s.

This combination amplifier possesses the standard 2 channel facilities, also incorporating a spring-type reverberation unit and a very efficient tremelo generator, both controlled by a foot pedal, which in this case comes as part of the standard equipment. This is the first time that I have reviewed any of the Randall series, and at first glance, found it to be a reliable amp, but will naturally enlarge on any good or bad points.

Construction

The basic amplifier cabinet is made from chipboard, and is covered in a smart but fairly standard black vinvl material. Its overall measurements are approximately 700 mm in length, 590 mm in height and 265 mm in width. The upper part of the cabinet houses the steel-framed chassis and all the electronic components whilst the lower half contains two 12" Randall professional quality speakers. A 430 mm reverb spring unit is located on the floor of the cabinet, protected by a black vinyl sleeve. loudspeaker (8 ohms) are constructed with powerful ferro-magnets and give a fairly wide frequency response, especially at high frequencies, where the sound produced was really quite effective.

Moving on to the controls — Channel One contains Volume, Treble, Middle and Bass rotary potentiometers. A Master Gain control works both in the rotary fashion as well as pull-in/pull-out fashion for gain boost requirements.

Channel Two possesses the same facilities as Channel One, but also has a Reverb level control, and a Tremelo depth and speed control; the Treble control also possesses the pull-out/pull-in feature for certain applications requiring a high frequency boost. An on/off/on power rocker switch with the standard red neon light (power on) indicator is at the far right end of the control chassis panel. This three-position on/off/on rocker switch acts as a ground polarity switch then it's in the appropriate position, and the Owner's



Manual claims that it should eliminate shocks. In our view it would be wise not to touch the equipment, even to change the polarity, if a shock occurred.

We thought that the input sensitivity figures for both channels were good and suitable for most electric keyboard and stringed instruments, and that the tone controls were most effective. We noticed that the position of the middle control affects the efficiency of the treble boost.

The overall signal/noise ratio and hum level was high on this particular amplifier. We feel that we must point out however that the amplifier tested was taken from a hire company and was not supplied to us directly by Randall Instruments Inc. The high hum level could be the result of a small fault on the unit supplied.

Overall, we thought that the general standard of finish and quality of components and materials used throughout were of a high standard. Although the amplifier comes into a higher price bracket for U.K. users, the product is certainly comparable with other higher priced U.S. brands on our market.



The rear panel has a flexible mains power cord with a 3 amp slow/blow fuse link protection circuit, a ¼" footswitch socket, an external speaker socket and a pre-amp output on a ¼" jack socket. This provides an output signal for driving an extra amp or for driving a taperecorder when recording directly from the amplifier. The output level is of approximately 500 mV r.m.s. signal and has an impedance of at least 10 K.ohms. A warning note; a load impedance of less than 8 ohms is not recommended on the external speaker socket.

The electronic circuitry is extremely compact and all the electronic components (with the exception of the four RCA 2N6254 power transistors) are mounted on one fibreglass P.C.B. The actual pre-amp circuit employs a FET (field effect transistor) 2N5953, and a TIS 98 transistor for both channels. The tone circuits themselves are extremely simple in design as all the controls are linked to each other in a series using only basic RC elements.

Next in line — the buffer/AC coupled amplifier with a 2N5953 and TIS 98 transistors. The power amp has a differential input facility of two TIS 98 transistors and a driver stage employing such devices as RCA 30C and RCA 29C. The tremelo effect circuit (like the tone circuit) was also extremely simple in design, using only two MPS 6922 transistors, whilst the Reverb circuit is a standard Reverb driver/receiver configuration.

The power supply is made up from a magnetically-screened mains transformer, a 25 amp/200 volts silicone bridge rectifier, and a battery of two 6000 uF/50 volts DC electrolytic capacitors.

The unit is well finished off in every respect. Four strong castors are fitted as standard and a solid handle is provided at the top of the cabinet enclosure. The plastic woven grill cloth is smart and durable and the overall impression of the unit with its brightly contrasting Randall nameplate is that this is a professionally-finished product.

Conclusion

The Randall Commander II series RG 120-212 combination amplifier delivered marginally less power at full output than specified, with a general predominance of 2nd harmonic distortion. The overall sound colour was good and, although the total harmonic distortion figures we measured were on the high side for a transistor amplifier, the sounds obtained from the unit, using an electric guitar, were both bright and penetratingly clear.

PARAMETER	RESULT	TEST CONDITION	TEST CONDITION			
Specific Power Output (W. r.m.s.)	120 W r.m.s. 118.81 W r.m.s.	@ onset of clipping into 8 ohms Ref. 1.0KHz @ onset of clipping into 4 ohms Ref. 1.0 KHz		Slightly lower than manufacturer's claims of 120 W.r.m.s. into 4.0 ohms load. An external speaker cabinet of less than 8.0 ohms is not recommended!		
Total Harmonic Distortions (% T.H.D.)	2.11% 2.10% 1.80% 1.66% 1.52% 1.32% 1.35% 1.30%	@ 115.0 W.r.m.s. @ 100.0 W.r.m.s. @ 80.0 W.r.m.s. @ 60.0 W.r.m.s. @ 40.0 W.r.m.s. @ 10.0 W.r.m.s.	Measured at 1.0 KHz into 4.0 ohms dummy load	Mainly 2nd harmonic distortion. To achieve a "distortion sound" — set its channel volume pot at the "full-on" position and adjust the volume level by using the master volume control only. A built-in clipping distortion and system circuit is activated creating distortion even at fairly low volume levels.		
Input Sensitivity for 118 W.r.m.s. o/p signed	Lo: 7.4 mV Ch. 1 Hi: 3.6 mV Lo: 7.2 mV Ch. 2 Hi: 3.2 mV	Ref. 1.0 KHz into 100 K ohms Ref. 1.0 KHz into 1.0 M ohms Ref. 1.0 KHz into 100.K ohms Ref. 1.0 KHz into 1.0 M ohms	For 118 W.r.m.s. into 4.0 ohms (21.72 V.r.m.s.)	Good – very sensitive.		
Tone Controls Range	32.87 dB = Swing 9.43 dB = Swing 34.85 dB = Swing	Treble at 10.0 KHz Middle at 500. Hz Bass at 40. Hz	Middle - at Minimum	The efficiency at treble control depends generally on relative settings of "middle" – control – Bass – very effective boost as well as cut at 40.0 Hz.		
Aux. Level/ pre-amp. o/p. jack	550 mV	Ref. 1.0 KHz into 10.0 K ohms		Oka).		
Signal/Noise Ratio	60.24 dB			This figure consists mainly of Hum Noise and probably comes from the power supply section. It will be extremely interesting to hear the manufacturer's comments about the review sample covering the S/N ratio in this particular amplifier. Serial: 123103		
Capacitive Load Test	ОК	2 uF capacitor and 4.0 ohms de				
Open Circuit Stability Test	ОК	Dummy load — removed Volume Master — maximum Tone controls — flat position	Very good.			
Short Circuit Test	0.5 min.			No ill effects. Worked when short was removed.		

Short Circuit Test 0.5 min.					was removed.				
The I.M. Listening Panel									
	What does the amp sound like?	Is it loud for the watt rating?	Is the sound quality good at both high and low volume?	What do you think of the special effects?	How good are the tone controls?	Does the amp look good?	Do you think the British price (£325) is good value?		
Guitarist I	Very clean and ''middly''	Reasonable.	Not a lot of difference.	Very good reverb — tremelo good but possibly redundant in contemporary music. When reverb is added, tremelo loses depth.	Reasonable — treble "boost" facility not very effective.	Yes.	£100 too much		
Bass- Player	It's alright — plenty of balls.	It's very cutting and certainly makes its presence felt.	It's better when cranked up — definitely a loud guitarist's amp.	Who uses tremelo? Reverb is very good.	Not much bass boost available, treble and middle are adequate.	Pretty insipid orange band on the front — otherwise alright.	With so many combos on th market, it doesn't exactl grab you and say "buy me!		
Studio Engineer	Lots of middle but low definition.	Yes.	n/a	Nice Reverb but not usually used in studio.	Reasonably effective.	Very nice.	Reasonable considering high standard of construction		
Guitarist 2	Punchy and crisp, typically 'solid state'	Very loud but not overtly so	Improves with increase of volume.	Excellent tremelo good reverb.	Bass effective up to '4'. Good	Yes.	Too pricey; £280 would be nearer the mark.		

for 120 watts.

treble Middle is

so-so, very good trem speed.

mark.



delfts GUITARCHECK

TEST ON: Epiphone 'Scroll' guitar (importers Rosetti)

DATE: June 1977 PRICE: £221.33 ex. VAT (U.K.)

This is an unusual guitar, and quite different from other new instruments which have appeared under the Epiphone name in the last few years. It has grace and style, and it has obviously been designed by a guitarist. This may appear far-fetched, but I also believe it has been designed by a guitarist who frequently plays sitting down. It has a minimum of controls and adjustments, all of which operate in the way I would wish. I seem to remember noticing a prototype of this instrument at last year's Trade Show, accompanied by a notice which said the guitar was fitted with Gibson pickups. This may possibly be so, although the pickups and their surrounds seem a little different from the usual Gibson types. However, this doesn't sound like any Gibson I know except perhaps one of the old "Gold Tops"

I remember my first encounter with the (then new) Fender humbucking pickups. As an instrument maker and repairer, often faced with hum problems on otherwise superb old Stratocasters, I was hoping the new pickups would combine the sound of a good old Strat. with a slightly mellower tone and immunity from magnetic hum pickup. Obviously, Fender's designer had something different in mind, because their humbucking pickups do not exactly fit these requirements. This Epiphone comes closer to what I was expecting. If you can imagine a cross between a good Les Paul and a good old Strat, you have something close to the tone of this instrument.

That, however, covers only half its tonal possibilities. There is a small secondary switch, next to the pickup selector which operates on both pickups, earthing the centre connection between each pair of coils. This disables one coil in each pickup and produces a brighter tone, with greater harmonic content. It also removes the hum-cancelling properties of the pickups, but they are very well shielded, and the increased sensitivity to interference in the 'bright' setting would be tolerable in most circumstances.

Various settings of this switch, and the pickup selector switch give six different and useful tones, which can be further modified by the guitar's tone control. I don't wish to suggest that it will be all things to all men, or that it supercedes either of the aforementioned instruments, but it does seem to be one of the more successful "new" instruments. The other controls are one volume control, conveniently close the the 38



bridge for "violining", and one tone control, which works smoothly over a useful range.

This guitar uses a Japanese version of the new popular "Badass" type bridge, which combines the tonal advantages of the Les Paul Junior type of one-piece bridge/tailpiece, with the facility for individual octave adjustment on each string. These bridges do seem to give a different sort of sound to a guitar; the Dan Armstrong guitars which were made here also have it. The most obvious effect is a tendency for unplayed strings to sound in sympathy with intentionally played notes, but there are other, more subtle effects.

This bridge system, combined with the unusually dense Maple body of the instrument, gives it good natural sustaining properties. It's dynamics are probably closer to a good Tele than to anything else.

The finishing of this instrument is generally good. The body and neck are made from Maple, and have been stained to a pleasing warm, dark brown. The colouring process seems to be similar to that used on the Gibson Artisan reviewed last month, but the colour on this Epiphone is more even and has fewer dark patches. This sample is pleasing and entirely acceptable, but I still feel that this method of colouring instruments is a potential source of trouble. The lacquer finish is smooth and shiny, and looks like the usual finish found on recent Epiphones. Seen in isolation, it looks quite impressive, but it will not bear direct comparison with a really good traditional lacquer finish: very few modern finishing materials can survive this comparison. There are two spots on the edge of the body where mechanical buffing has removed the lacquer film. One of these spots has been "made good" with some clear, glossy material and the other remains correctly coloured, but bare of lacquer. Neither of these is very noticeable, and neither is significant, compared with the dents and chips which even well cared-for instruments collect in normal professional use.

The fingerboard is made from good quality Rosewood, and is inlaid with small (real) pearl dots. There are traces of lacquer overspray on the fingerboard in two places: it will probably wear off fairly soon, but a little more care is needed when masking off the front of the fingerboard before spraying.

The frets are similar to the "wide Gibson" type, reasonably well finished at the ends and nicely polished on top to permit easy and scratch-free string-

bending. The neck and fingerboard on this sample are not absolutely straight and this is the reason for the fairly high minimum action measurements. I think it is likely that the frets have only been polished, and not lapped level: the error on the fingerboard is fairly small and would normally be taken out by careful fret-levelling procedures.

I must apologise for the absence of a truss-rod cover plate on the head of the instrument in the photograph, but that is how it arrived! I also found the truss-rod adjustment key floating around in the packing materials. The first shipment of these instruments arrived only days before the writing of this review, and it is understandable that this sample may have been checked by the importer in something of a rush particularly as I needed the guitar to be checked and delivered to me on the last day before the Jubilee Holiday. In my experience of dealing with Rosetti (distributors for Epiphone) over several years, they do usually check instruments before delivery, and they do not usually lose the cover-plates.

As supplied to me, the truss rod was little over-tight and the guitar had a tendency to buzz on the lower frets. Slackening the rod slightly, and lowering the bridge to restore the action measurements at the 12th fret, produced a more playable guitar and removed most of the buzzes. The remaining buzzes seem to have been caused by the strings, because these buzzes disappeared when I fitted different strings of similar gauges. These strings, which are of standard type, and similar to "Super Slinkys", also made the guitar sound much better, and my comments above on tone and playability, refer to use of the instrument with these or similar strings. The strings supplied with my review sample did not do it justice.

The neck shape on this sample is slim, and typical of the better necks now being produced in Japan. Incidentally, I think this is the first Epiphone to be fitted with a 24-fret neck.

The machine heads are Japanese imitation Grovers (which makes a change from Japanese imitation Schallers). One of them is a bit rough, but the others are good. However, tuning is made difficult by the tendency for strings to stick in the grooves in the nut. On this sample, this is not a minor problem: it is almost impossible to obtain a stable tuning. Lubricating the nut slots with graphite almost cures the problem, and the importers may wish to apply this remedy. Rosetti are taking this matter up with the manufacturers.

This sample has a poor nut, one rough machine head, and a neck which is not quite perfect. It also is probably the most original and most versatile electric guitar which Epiphone have made since they were taken over by C.M.I. (Gibson) many years ago. Its faults are annoying, easily remedied, and well worth the effort of putting right. It is regrettable, but nonetheless true that the reputation of the Epiphone name was diminished in the eyes of some musicians and guitar fanciers, when it was transferred from American-made instruments to instruments made in Japan.

In particular, there were some aspects of the continued use of familiar and respected names, on totally different instruments, about which I was personally less than happy. This "Scroll" guitar shows that the new Japanese Epiphone factory is capable of producing which can compete instruments with Gibson's favourably American products.

For their next move, could I suggest a non-laminated Epiphone Texan made precisely from the old jigs and materials and by the old methods. Since the disappearance of this model, there has been no adequate replacement, and there is a limit to how long I can keep the old

ones going.

Measurements on 'Scroll' guitar

Scale length 650 mm String spacing at bridge 49 mm (slightly narrower than usual) String spacing at nut 35.5 mm Fingerboard width at nut 42 mm Action as supplied 1.8 mm treble/ 1.4 mm bass

Lowest action under standard

conditions 1.6 mm treble/1.8 bass There are two factors limiting the minimum action. The first is the slight irregularity in the neck and/or fingerboard on this sample. If the frets were filed to correct this problem, the action could probably come down to 1.8 mm on the bass side, and to 1.6 mm on the treble side, where the bridge support pillar, on

that side, hits its bottom limit.

A small message to Epiphone: I notice that the serial number of this guitar is printed on a sticky label on the back of the head. This is very easily removed by anyone who wishes to steal the guitar, or to handle it dishonestly after it has been stolen. Such a guitar can not be distinguished from one which has lost its label legitimately during normal use. This makes your new guitar a number one target for thieves. Unless that was your intention, please mark its serial number in such a way that any attempt to remove it will deface the guitar or make a big hole in the lacquer. I am sure you will appreciate how important this is to guitar owners, and possible future customers for your new guitar.

Stephen Delft



IN BRIEF IN BRIEF

ON TEST: Ibanez Artist bass PRICE: £257 ex VAT.

Bass players are a conservative bunch. A lot of them don't seem to think beyond the standard Precision or Jazz bass, whereas, in fact, there are a wealth of other basses available, some of which offer facilities and sounds that would surprise many a bassman. In some ways this Ibanez bass is a case in point. If you look at the photo of the bass you'll see it's part of the Ibanez policy of developing "new" shapes, rather than churning out said Precision and Jazz bass replicas.

It's not only the shape that's different from the norm. The way the pick-ups are wired and interact varies to the usual fairly straightforward bass set-up (with the exception of more adventurous arrangements such as on the Gibson Ripper.) There's a threeposition toggle switch and three rotary controls governing two Ibanez 'brack' pick-ups, set in the customary bridge and neck position. The way in which the sound can be made to vary from normal is when the toggle switch is in the middle position, giving both pick-ups in what sounds like an out-of-phase configuration, the characteristic 'hollowed' sound that you get from this. The other pick-up combinations selectable are the traditional and logical neck pick-up only, by switching the toggle switch to the 'up' position, and bridge pick-up only, by switching to the 'down' position.

The rotary controls, too, are fairly logical in their operation - as you look down on them in a playing position the top two control volume of their respectively positioned pick-ups, i.e. the one to your left controls the neck pick-up and that to the right the bridge pick-up. The control below this is an ordinary tone control, with quite an effective amount of range available from it. An unusual combination again arises when you have the toggle switch in the centre position for the "out-of-phase" sound. With this arrangement of pick-ups, neither of the volume controls will work on their own; you have to have both 'on' to some extent, and in this way you can mix the two to achieve some very interesting sounds.

There was one contradiction that I couldn't quite sort out, however. The action of the sample we had for review was very high, particularly at the top end of the neck due, as much as anything else, to a somewhat less than straight neck. Whether this is acceptable



or not is really down to how often this occurs in other examples of the guitar but, for me, the height of the action was uncomfortable and was a hindrance to playing the guitar well the sheer physical effort involved was a problem. There was no adjustment tool supplied for the truss rod. With this in mind, however, the thing which puzzled me was the tendency of the strings to 'slap' against the pick-ups while playing, causing a nasty buzz or crackle through the amp, not a problem you'd have thought would be too prevalent with such a relatively high action. And the solution isn't just to take the pick-ups down, because the neck pick-up on the sample was already set to its lowest level, and the problem was just as acute with only the neck

Apart from this criticism, I found the bass an interesting bass to play, particularly good for a sort of wooden, almost fretless-like sound — as well as for a more toppy, funky sound. For the latter type of playing, the supplied flatwound strings have something of an advantage over the more fashionable roundwound types, in that you can achieve greater attack and "cut" with the Larry Graham/Stanley Clarke thumb-flick type sound. And the guitar looks very nice indeed.

Tony Bacon

pick-up in operation.

ON TEST: Ibanez Bug (Model 2000) PRICE: £24.50 ex VAT

The Ibanez "Bug" is a flat response piezo-ceramic contact pick-up designed for use with acoustic-stringed instruments. It goes some way to solving the acoustic guitarist's age-old problem of being able to amplify his instrument without losing its tonal properties.

A big advantage of the device is that its high gain does away with the need for costly pre-amps, batteries and other accruments that are necessary on low gain pickups.

The device comes complete with patch cord, plug attachment, lead holder, and a special adhesive designed not to harm a guitar's finish. Attaching the "Bug" to an instrument is simplicity itself. You just stick a tiny piece of the double-sided adhesive on to the pick-up and lead-holder and then transfer the device to the guitar.

This is where the tricky part begins. A great deal of experimentation is needed to obtain the desired sound as the amplified tone changes depending

where on the instrument you attach the "Bug."

After some pushing and pulling "Bug" around on my J40, I found the "Bug' the best place was directly on to the guitar top adjacent to the bridge. However this position was arrived at through personal taste and you may require a completely different position depending on your instrument and the tone you want.

Generally though, attaching the pick-up direct on to the top increases the brightness of the tone, while fastening it on the bridge or over the pick-guard produces a less toppy sound.

Once set up, the "Bug" did give a faithful reproduction of my guitar's acoustic tone. But a lot of fiddling with amplifier controls was needed first.



One big problem of using the "Bug" is that any movement of the trailing cord against the guitar is itself amplified: The small rubber lead holder goes some way to keeping the cord out of harm's way. But you have to keep fairly still the instructions would be helpful. while playing with the "Bug" if loud snaps and other unwanted noise is to be avoided. Even drumming your fingers on the guitar top will come through the speakers.

And now the biggest bug bear of all (no pun intended) - feedback. Because of the "boomy" resonance of acoustic guitars' feedback sensitivity is frightening. Unless you can stand some distance from your amp you will have feedback problems. The slightest movement from one side to another will give a howling screech guaranteed to stop any song in its tracks. However this feedback is due to the dynamic behaviour of sound and electronics generally and should not detract from what is essentially a very good device.

Ian White ON TEST: Shure Unidyne III

microphone (Model 545) PRICE: £51 ex VAT

The Shure Unidyne III is a unidirectional dynamic microphone designed for professional use with quality PA systems. It has a cardioid pickup pattern and can be connected to obtain either high or low impedance.

microphone is The for close vocals, narration, the cable. effective or harmony work where there is a danger of sound leakage from other sources. The Unidyne's pickup pattern eleminates and stainless steel screen. The mike is all sound from the rear and so cancels out audience noise and any stage music.

Soft-voiced singers need to work in close to the Unidyne, practically touching the screen. The undirectional qualities of the mike are so pronounced that a push-lock fitting, which I feel is singing instrumentalist cannot look down at his instrument without losing some signal. This characteristic comes into its own on small stages where close why a different fitting is applied to the Even under cramped conditions, the sources.

sides as 6dB with cancellation at the make all the difference. rear of between 15 to 20dB. The Unidyne's low impedance output is impedance is selected.

High or low impedance is chosen by the leads used for connection at the respect a clearer wiring diagram in

with connector assembly. Such a drawing proper protection for the mike.

Unidyne III with swivel adapter Ian White

especially is supplied for the microphone end of

The Unidyne has a chrome-plated die cast case with black Armo-Dur grille supplied with a 15 ft three-conductor cable with an Amphenol MC4M connector on the microphone end.

Earlier Unidyne's have been fitted with the Cannon or Switchcraft XLR-11C preferable to the screw-in Amphenol. Most of Shure's other mikes are equipped with the XLR and I cannot understand placement of amplification equipment Unidyne. The cable length of 15 ft is would almost certainly cause feedback on the short side and tends to be raised and howling with a conventional mike. off the floor when working on even a small stage. The obvious answer is to Unidyne rarely gives rise to either feed- operate the mike near the amp. But this back or sound leakage from other sound is not always possible, especially when there are three or more mikes involved Shure gives the cancellation at the in a setup. Another 2 yds of cable would

The mike is supplied with a swivel adaptor for stand use which has a five-57dB with a -55dB output if high eighths screw thread and is adjustable through 90 degrees from vertical to horizontal.

One criticism I do have of the mike equipment end of the cable. In this is with the packaging rather than the equipment itself. The Unidyne comes in a cardboard box which crumples The information sheet does give and buckles after three nights of road a clear guide on what colour leads are to use. A far more satisfactory arrangement be used for the desired impedance. But would be if Shure was to supply the schematic drawing of a standard Unidyne in a custom hard case. Even Cannon socket with the lead connections if this was to add to the price, it would would be helpful to those unfamiliar be well worth the extra cost to have



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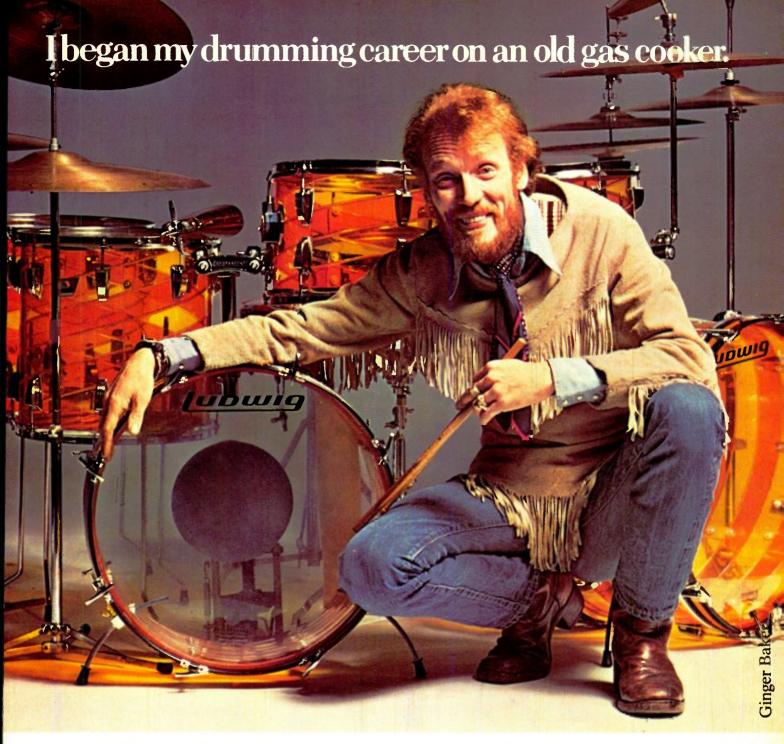


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"Sixteen years ago I literally hand made a drum kit.

I knocked it up using a piece of perspex heated over our old gas cooker. And I successfully burnt myself in the process.

Now my drums are just a little different. I've had three new drum kits since I turned professional. They've all been Ludwig.

The one I use at the moment is a Vistalite kit. Why do I use them? Habit I suppose. And the fact that they're the best in the world.

What makes them that good? My ears say Vistalite drums sound better. They're also a fair bit lighter than the regular kind and they're a hell of a lot more rugged. Better looking too. Ludwig make nice drums.

I also use Zildjian cymbals. The ones I play now I got eight years ago. After spending a day pounding just about every darned cymbal they had in the factory. I think it nearly sent them spare.

What happened to my hand made drum kit? My kid's got it. But I got rid of the gas cooker. I couldn't have anyone discovering my secret."

Ginger Baker needs no introduction to anyone weaned on Blues Incorporated, Cream, The Graham Bond Organisation, and Blind Faith. And he has just completed a new album with friends. He is pictured here with his Vistalite Ludwig kit. The cymbals are Avedis Zildjian.

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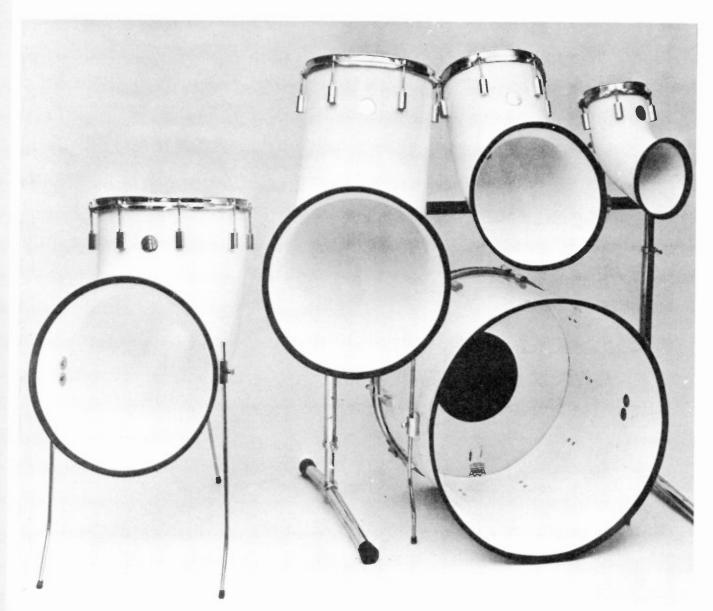
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ncculloch's

North Drums June 1977

£1012 U.K. Excl. VAT PRICE:



North drums are unlike any other drums. They are all fibreglass and are single-headed. The most unusual feature, however, is the shell. These are flared horns based on the exponential-horn principal as seen in the very best speaker cabinets. The drums are produced in America by Music Technology Inc. and they have so far developed a single skinned six drum set-up comprising of: a 6" tom-tom, 8" tom-tom, 10" tom-tom, 12" tom-tom, a 14" floor tom-tom, and a 22" bass drum.

First of all let me say that you shouldn't be put off by the small skin dimensions given, as the shells extend out in a cone shape (like an inverted airvent on a ship) so that you'll find the 6" tom opens to 10", the 8" tom opens to 13", the 10" tom opens to 14", the 12" tom opens to 16", the 44

14" floor tom opens to almost 20", are of a very simple design and are also and the 22" bass drum opens to 24", included on the bass drum in place of

pedals and stands and it's very unusual to come up with a winner on more than two out of the six items. The discriminating drummer would buy from each company the drums he feels they make best rather than buying the whole kit from one manufacturer.

also the bass drum is 21" in depth, the traditional T-screws. All the drums There is no snare drum as yet, are fitted out with Remo Weather Master though word has it that Music Technology skins, which is a good choice as they seem Inc. have been working on one. Except to complement the tone of the shell. for the tom-tom stand, which I'll go into There are no damping facilities - apart a bit later, there are no stands or from a felt strip on the inside of the additional fittings provided. I don't see bass drum skin - though none were this as a problem as the technology really needed and, in any case, I find needed to make up a drumkit must strips of gaffer tape applied to the involve totally different specialists in outer edge of the skin much more tom-toms, bass drums, snares, skins, effective than the traditional screw-up type.

The drums come in four colours; yellow, black, burgundy, and white. There is also a special feature with two-tone colours, one on the outer shell and one on the inner. Their shape is the first thing that strikes you, then The nut box and square head screw the solid colours with a smooth silk finished at the base of the rim with a neat black plastic edging for protection. Having taken off the skins, I found the drums beautifully finished internally, as was the outer case. The shells are '4" thick, tapering slightly at the mouth of the drums.

The bass drum spurs are the same as the ones used on the Fibes kit very efficient with the screw-down spikes for small adjustments but difficult to replace if you lose one, which is likely to happen as they are detached when in transit. The 14" floor tom-tom sits well and doesn't creep and I like the rubber mounting under the leg clamp boxes.

The mounting brackets on the tomtom shells were like an elongated version of the Ludwig type with one great improvement - instead of using a flimsy wing nut to hold the tom in place, a 1/4" bolt is used which has got to be the strongest and most efficient method yet; provided you have a ratchet and some spare bolts you can't go wrong. I also like the way the mountings are attached to the shells, with two well-placed screws. My theory is that the less intrusion into the shell the better the sound.

Two problems with these acoustic shapes - packing and positioning. Firstly, there are no cases with the kit and the traditional fibre case won't be much good because of the shapes, so you'll need to rethink your packing. The second problem has got a rather more dramatic answer. North have come up with a huge chrome frame whose shape is too complicated to explain but curves its way over the bass drum allowing you to position the four toms to almost any angle. This, I presume, is necessary as the weight of the four drums must be considerable. As with most new ideas, looked strange but nonetheless it effective.

Enough of the physical attributes. I had two questions in mind when asked to try these drums. Firstly, what effect does the fibreglass have on the sound? Secondly, does the shape of the drums direct the sound out away from the drummer to the point where the audience is treated to a wonderful sound while the drummer is left to use his imagination? Firstly, I found the resonance of the drums to be dramatically stronger than any I've used and the note has tremendous presence and clarity -unusual from a kit straight out of the crate. This I put down to the 1/4" fibreglass plus the fact that there is no outer coating to the shell or joins, both of which tend to dampen the resonance of a drum. The drum is

finish. This particular kit was in white, sense, is a perfect shell. The tom-toms become more impressive as they increase in size and I found the 12" and 14" floor tom impressed me the most. I moved around the kit as I played them and I can certainly verify that the shape of the shells does project the sound. Though the 14" floor tom-toms open out to almost 20", I still felt I would like to have tried a 16" floor tom but, as yet, they don't make one. They are definitely the solution for the drummer who is constantly fighting to get his tom-toms to speak louder. Having seen the design I realised that it's very logical to turn the sound away from the floor and project it forward - I'm surprised the idea hasn't been used before.

I've been playing fibreglass bass

drums for some time now and am naturally biased in their favour but the 22" bass drum has a lot of body and a kick like a mule. I did however have difficulty in fitting my Speed King pedal to the narrow wooden hoop.

I tried playing the bass drum with a very loose damper and then very well damped to get that tight funky bass drum sound, and found that the bass drum worked equally as well under both conditions.

Although the kit may be a bit expensive, the drums won't be available until around August so you'll have plenty of time to save up. If you find the whole set-up beyond your reach why not consider selecting certain tom-toms and adding them to your present kit?



moulded in one solid piece, and, in that Billy Cobham with North drums.





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£828.70 ex. VAT (U.K.) PRICE: June 1977 DATE:

With the introduction of its electronic piano, the CP 30, Yamaha has placed itself in a unique position among piano manufacturers, being, as far as I know, the only leading maker of acoustic instruments to yet venture into this field. That it is a leading maker there can be no doubt - many people talk reverently of the Yamaha concert grand with the same hushed tones that they reserve for the big three - Steinway, Bechstein and Bosendorfer. And of course there is no doubt about the pedigree of the company in the field of electronic instruments. The or right of the stereo, and rotary knobs used most effectively in conjunction with

The action of the piano is simplicity piano length, and the pivot is placed far enough back to provide a "weighty" but obviously is "the less moving parts, the better." In fact, the keys and the leaf

instrument and many of its best and most different tonal settings that are available. Just one example of this I found particularly pleasing, was a combination synthesizers, where obviously left hand channel of the stereo opposed to piano only in the right.

The controls for the instrument are placed towards the left of the keyboard in order to leave the right hand free for continuous playing. They come in two forms: rocker switches to select the chosen sound and route it to either left



Yamaha range covers everything from to modify that sound in terms of pitch, the stereo in the time honoured fashion guitar amps to synthesizers and the tone, decay, balance and volume. I'll deal of the Fender Rhodes. The speed is summit of their range, the GX 10, is with the rocker switches and thus the continuously variable from very slow to arguably the most sophiscated keyboard basic sounds first. There are three banks very fast and the intensity may be currently available. Against this back- of switches. Bank 1, marked channels 1 adjusted from a very deep effect to a very ground then, the production of an and 2, controls the stereo routing. shallow modulation. Three other knobs electronic piano would seem to be a Banks 2 and 3 control channels 1 and 2 complete the picture on the front of the logical, not to say almost inevitable, respectively and therefore contain the CP 30; one controlling the balance same choices of sound setting: pianos 1, between right and left channels and two 2 and 3 and harpsichord. The difference further, marked bass and treble, to take itself. Each one of the 76 keys is pivoted between the piano sounds lies in a sort care of the tone. The traditional sustain to activate a leaf switch when the key is of grading from full and "plummy" to pedal plugs in to a socket on the side of struck. The keys themselves are of grand much thinner and harder. The basic the instrument, where there is also piano sound is good, but good on its provision for a tremelo foot switch. own terms and not as a substitute for not stiff feel for the keyboard. The an acoustic piano. Yamaha imply in simple instrument with many points to simplicity is certainly a plus from the their literature that the instrument its credit. It is sturdily and pleasingly point of view of reliability and main- can be made to sound almost identical constructed and tremendously quick tenance on the road, where the maxim to its acoustic brother - a claim I don't to set up. In fact all you have to do is agree with. Not that it's important remove the lid; it splits into two parts anyway - the sound stands up as an and becomes the legs! Add two braces switches are the only mechanical parts electronic sound, and that's what really and you're done. The sustain pedal, the of the action. As you would expect matters. The harpsichord setting is braces, and the patch cables can all be keyboard dynamics are built in - the extremely effective - and, when blended stored in the lid. The lid itself, unlike volume of the note is directly related with the various piano controls, is those of some of its rivals, is reassuringly to the way in which it's physically struck. capable of producing a wide variety of wide and flat; a joy to place beneath Any electric piano in this price range clavinet tones. Two knobs marked ancilliary keyboards. The sound is must obviously stand comparison to the "Decay" - one for each channel - aid full and capable of ranging the gamut Fender. It is possible to get very close to all these modifications immeasurably, of clavinet and electric piano tones, the Fender sound on the Yamaha For general playing purposes and using The facility for placing different sounds (strangely enough by taking out all the the instrument in a purely solo capacity independently through the opposing bass and top) but it doesn't sound quite (for obvious reasons) I found full decay stereo channels is particularly effective the same and neither should it. In fact to be by far the most practical setting, provided the speakers are placed widely the piano is not a single toned instrument I should imagine, however, that many enough apart. One point though I feel at all, but offers a wide range of different effects utilising a shorter decay would I must comment on: the model I tested

with stereo, but not one I believe I've a different matter. of before outside across come and more the instrument's own.

The Yamaha CP 30 is a deceptively sounds and combinations. It's a stereo come into their own in a group situation. had an inordinate and annoying amount To the extreme left of the keyboard of "breakthrough" on it. That is the characteristic sounds result from the use lie not one but two pitch controls - a sort of thing that you can often get of this facility in combination with the logical enough idea if you are dealing away with on stage - the studio is

However, having said that, I must the say that I enjoyed playing it immensely. of harpsichord and piano through the oscillators may be tuned independently. If you are playing an electric piano on The possibilities thus opened up by a your own, as I was, you need the sound pitch variation between channels are to be as full and as satisfying as possible. very interesting indeed. By using the The combination of sustain, long decay, instrument in mono, you can obtain a stereo spread and the simultaneously very good "honky-tonk" sound. In stereo different textures that are available the effect is a little more, a bit weirder certainly provided me with enough floating and fascination of sound to Tremelo is also provided, and can be keep me happily tinkling away for hours.

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handmade instruments. Look, hear. A Yamaha is a superb guitar.





JIM SULLIVAN: Electric Guitar

This set of exercises is going to be based just on scales, and scale chord relationships. In the first exercise we have a scale of C. Each of the notes in the scale of C has a chord. Each one of these chords has a scale that goes along with this chord. So, the C major scale (which has 7 notes in it before you reach the octave), has within its structure seven different chords and also seven different scales.

Exercise 1 is based on chords, and the first note of C. There are four notes in a chord. This exercise is based on using the 5th, 4th, 3rd, and 2nd strings. It helps to stretch the fingers a little bit. What you do is just hold the chord down and just pick the notes out. Arpeggiate them and move up the fingerboard as you go, arpeggiating the notes, just holding the notes all the time. This will strengthen the left hand.

Exercise 2 is just basic scales just going up the scale, and not going up the scale because jumping back down the scale is quite hard to do and I think it's good exercise for the hand. This is only based on the 5th, 4th and 3rd string because you have to stretch your fingers out to play these scales and, also, it takes you right up the fingerboard to the octave C on the 5th string. This enables you to learn the fingerboard a little bit better.

Opposing to this is **Exercise 3.** Basically it's all the same scale but these exercises go across the fingerboard so you're starting from C on the 6th string going right the way across the fingerboard without moving your position at all and coming back down again. I've left the coming back down again to the

player who can work it out in his own way.

Exercise 4 is based on arpeggios going up the fingerboard. Again, I haven't come down on these arpeggios. I've left that to the player himself. to work out the downwards run of the arpeggio. The upward run is good because you have to jump from the 1st string to the 5th string each time. Each of these scales you practice with a metronome so that you can keep time, because time is really of the essence. It's OK playing the notes and messing about up and down the fingerboard. But if you're not really concentrating on time, when you come to play with other musicians who can play in time you'll find you'll be screwed up.

Exercise 5 is based on the same C major scale again, but this time incorporating two different chords within one arpeggio, e.g. the first bar of exercise 5 you put a C major 7th, go into a D minor 7th chord, and back down again and so on. The 2nd bar gives a D minor 7th to E minor 7th back down again, 3rd bar is E minor 7th to F major 7th back down again, 4th bar is an F major 7th to a G 7th and back down again, and so on.

Exercise 6 is another exercise that I use for keeping my hand in position and strengthening my fingers. For a change I put it into 7/8ths which consists of four beats and three beats. I repeat these and put a repeat sign around the bars.

Once I've repeated one bar three or four times, I go onto the next bar and repeat that, but still keeping the continuous time.

This leads into **Exercise 7** on a number Jeff Beck

does on the album "Blow by Blow," called "Scatterbrain."

This is in 9/8th and it's very fast. This scale that I'm using here is just a major scale. But the scale on the Beck album is the 7th part of the scale or the 7th scale which starts on a B, which is basically a lochrian mode.

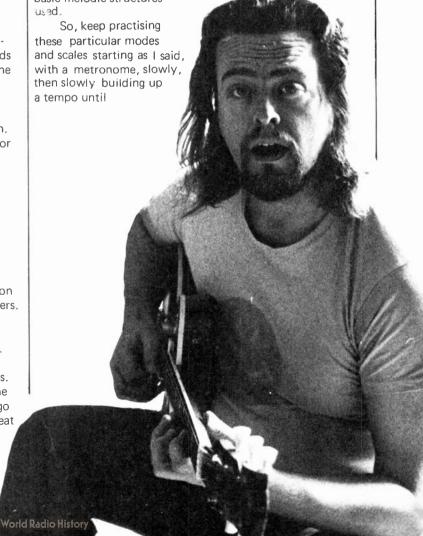
I've marked it on the music so you can see it. The first part of the melodic structure and the 2nd part of the melodic structure, scale wise, is the aeolian mode which is the 6th part of the scale.

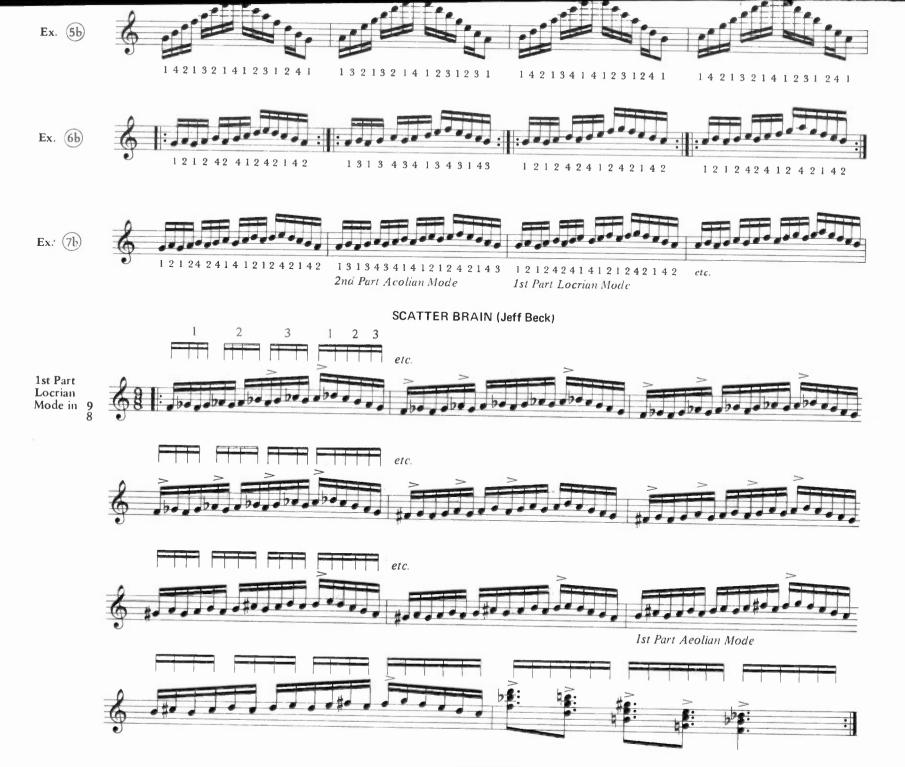
If you listen to the album you'll be able to pick it up quite easily just going from these scales. Of course there are other chords and things in the piece, but these are the two basic melodic structures used.

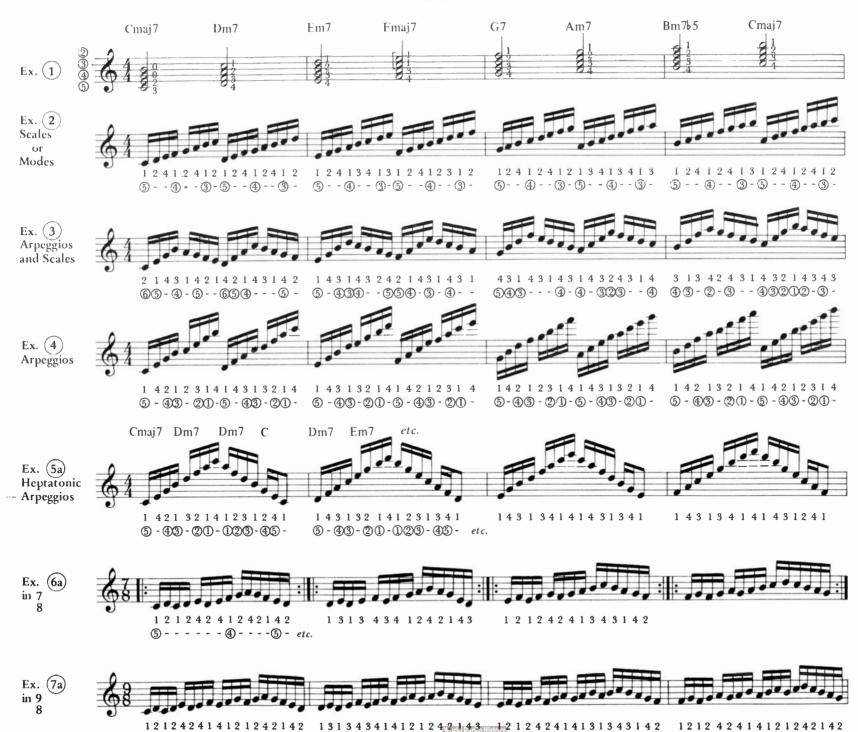
your picking is precise and the notes are clear.

All of these scales are

based on up and down picking. There is no slurring or anything. This is purely hand strengthening and co-ordination between pick, hand, and brain. As everybody knows, this is really the most essential part for any musician. Coordination between the brain and the instrument allows the musician to be able to play whatever comes into his mind whenever he wants to. Also, scales are something to fall back on as well because if you start. running out of ideas you can always use a scale. And I still practice all of these exercises now.







PGYNG

ANDREW McCULLOCH: Drums

Andrew McCulloch started playing drums when he was 16 years old. During his 12 year career so far he has played with bands such as King Crimson and, more notably, Greenslade who he was with for three years until the band broke up last year due to management problems.

Cases

A few words about taking your drums on the road. Firstly, make sure they are suitably cased. depending on how much control you have over them. If you have them in your sight all the time you will probably get away with a lighter type of case, i.e. the traditional fibre 'hat boxes'. However, if your drums are being taken all over the country by roadies. British Rail, or, worst of all, airlines, then get the best cases you can afford.

Spares

You'll know from experience the weakest points on your kit — whether it's your hi-hat pedal or your cymbal stands and it makes sense to carry a good set of spares to cover the most likely problems. A good set of skins is essential and don't just take one of each size, experience should tell you which skins are most likely to get damaged. So stock accordingly.

Most drummers cannot afford to have two very expensive snare drums. But it is worth having a cheap second-hand spare just to see you to the end of a set if the snare skin goes.

Rostrum

When playing gigs, the two biggest factors that contribute to the sound that you'll be playing with, apart from your drumkit, is the shape of the hall and the material the stage is made of.

Deep-piled carpet and concrete are just two of the killers. There's not too much you can do about the shape of the hall but there's quite a bit you can do about the flooring you play on. If you can afford it, and have the facilities, then your own rostrum is the best answer. But at worst, a $\frac{3}{4}$ " - 1" block board sheet will give your kit a lot more life and projection. You can shape the sheet of wood to your own exact requirements and have it hinged to fit aimost any transport. Chisel out small slots to take all the extrusions that sit on the wood. This can solve two problems: firstly, the creeping bass drum and the acrobatic routine to retrieve it - secondly, the slots allow you to set-up to the exact position every time, so your kit is held steady throughout the set and your setting-up time is considerably shortened. Another timesaver is to colour-code your cymbal stands with tape to get them in the right order and the right height. I even have a longer box made for my stands so I don't have to break them down which saves time and gives the screws a longer life.

Exercise

Strengthening your hands and wrists is a controversial subject. I have tried loads of theories. Some work, and some half-cripple you. However, because of the restriction of not being able to play in most hotel rooms I started to loosen up on soft materials, like cushions, that had no bounce at all in them so that I couldn't wait for the stick to bounce back up but had to pick it up myself. After a few sessions of this system I began to feel the benefit. My rolls were much stronger and quicker. I have now taken this a step further

and use heavier sticks on the cushions which makes my wrists work even harder.

Practice

A lot of drummers find they get plenty of individual practice but don't get much chance to play along with anyone, except records. Playing along with another drummer on an album is not very satisfying. You either imitate him or clash with him every four bars. Playing with other musicians is vital, your mind has to be kept open, feeding off others and giving back with your own imagination through sounds and rhythms. Take whatever opportunity you can to play with others. Even if it's really duff you'll learn something.

When I wanted to play along to a record and try out some of my new ideas I found the most rewarding was Bach's "Toccatta and Fugue in D minor" and also some of the electronic versions. You are not inhibited by another drummer and you have an endless supply of rhythmic variations running through his work.

Practicing is on two levels; mental and physical. It is pointless exhausting yourself physically when you haven't yet sorted out the exercise in your own mind. An exercise can look totally daunting at first. But take it slowly, mentally speaking the part, sorting out the lengths of each beat and, most important, the sticking (which hand follows after which).

This is the most troublesome. Because I was
impatient to hear the sound
of the rudiment I would skim
over the sticking and find
myself in all kinds of trouble.
The second point is; don't
expect to be able to launch
into a drum solo when you've

have master
one of the k
bass drum,
and then rep
hand. For tl
play a doub
the whole e
to bottom v
bass drums.

only just grasped the rudiment itself.

Your wrists will ache and you will probably feel rather clumsy. Muscles take time to adapt to a new sequence of movements. If you have mentally mastered the rudiment, relax your mind and concentrate on your hands and feet. You can watch TV or read a book while you develop speed on the rudiment.

It is important to use the left hand as well as just a follower, as the right hand usually does all the positive leading, otherwise you may find that the left hand becomes too dependent and lacks its own independence. l like to use this exercise to stop that happening. Start with the right hand, playing one beat, repeat this with the left. Now play two beats with the right hand, repeat with the left. Now build this up to six beats per hand without any stops or fluctuations in sticking. When you have reached the six beats work your way back down to one beat and then continue the cycle back up again.

For the second part of the exercise, lead with the left hand and go through the exact same procedure, remembering to keep it flowing. For the third part of the exercise, repeat everything, but accent the first beat of each hand. For the fourth part, repeat everything in the first two parts but accent the last beat of each hand.

When you think you have mastered that, replace one of the hands with the bass drum, work the exercise and then replace the other hand. For those of you who play a double kit, you can do the whole exercise from top to bottom with just the bass drums.



PAUL BRETT Acoustic Guitar

Recording Techniques and Stage Amplification

This month, I would like: to deal with two subjects that go hand in hand for the professional and, to a large extent, the semi-professional and amateur acoustic guitarist. Firstly, over the years, I've had a great deal of difficulty in recording the actual sound that emanates from acoustic guitars. What I mean by this is that many studio sound engineers have a good deal of trouble, in my opinion, differentiating between what sound actually comes from the guitar and what sound they think comes from it. In my own experience, I usually end up having a standing argument with the person concerned, resulting in a number of different results.

common The most that of occurrence was which, briefly "straining" interpreted, means that the sound on playback seemed as though it had been put through a strainer and had the guts taken out of it. As an aftermath to various recordings like this, I decided experiment myself. I booked into a small studio and with the help of Francisco Sancha, a young South American, who has a great sympathy for acoustic guitar music as well as a vast amount of technical knowledge, proceeded to experiment in the hope of finding a solution.

After many different microphone positions and many different microphones, I suggested trying a Reslo ribbon microphone with the

two Calrec microphones we had already agreed gave us a very close likeness to the actual guitar sound.

the Αt that point, engineer started resident ranting and raving about poor quality, cheap microphones, saying we should use the ones he had just bought on a mortgage. After pointing out what he could do with them, we linked the Reslo in with the other two, using the Calrecs distance microphones. That is to say about eight feet away and seven feet apart, with fully extended stands, so that the microphones were pointing down at the guitar. One directed at the neck of the guitar and the other at the bridge, giving us a right and left stereo balance, as we were straight onto recording two-track.

The Reslo we then put about two feet away from the guitar, with the height of the stand around three feet. The microphone was then angled slightly towards the neck of the guitar.

Balanced in the centre of the stereo pattern, this microphone, being of the ribbon type, gave a good, solid, meaty sound. Together with the other two microphones (which had a slight touch of EQ and echo on them) this old relic proved to be the missing link.

For twelve-string guitar, we used the same arrangement, only substituting the Reslo with a further Calrec.

A useful tip to minimize string noise whilst recording is to cover your strings and hands with talcum powder.

It can dry your fingerboard so wipe it all off afterwards and polish the fingerboard. I use Gibson guitar polish, which does the job nicely.

Secondly, let's look at the problem of making an acoustic guitar loud enough live performances. for Obviously there are a number of ways of achieving this, depending on the requirements and circumstances of the occasion. The best way is totally acoustic, but size of venue and, more important, the fast disappearing silent audience, are the prime factors which govern such performances. Next, and to me the most appealing, is the use of microphones through a PA system. I carry an H/H system with Peavey microphones. For the soloist, this is easily transportable and sufficient to cover all venues in the UK except for the very large halls and open air concerts. For these I usually use the PA system provided for the band. This usually arrives about 10 am and is ready by 6 pm. You then take providence by the hand and hope the sound mixer isn't visiting some other planet on the night.

The only other way I personally know of, is the use of an acoustic guitar pick-up or transducer. There are several makes and only trial and error, coupled with personal preference, form the solution here. You can use pick-ups directly through a PA or through a suitable amplifier. I found a useful combination was to use a small amplifier and a PA/ microphone set-up. The amplifier I place on a chair,

inwards facing speakers towards me. Into this I plug my acoustic guitar, which has pick-up Barcus-Berry attached just behind the bridge, in line with the treble strings. This makes it much easier, in College venues for instance, to change my tunings without too much delay between numbers. Out front, I rely on the PA/microphone set-up which gives me a reasonable reproduction of the true acoustic guitar sound.

One tip here: if there is an excess of audience noise, don't make the mistake of turning up the volume on the sound system to overcome it. It's OK for a band but, for an acoustic act, you have to rely on getting through on a different level. I have found, given the same situation, that actually playing quieter has much more effect. You stand more of a chance going quieter because, if you increase the volume, in most cases the noise from the audiences increases and you can't win. If you play quieter, you can actually make an audience feel self-conscious and generally win through. If you don't, it's better to die with some dignity rather than have a running battle with ignorance. On the odd occasion like this, you will also observe that the noise is caused by a small minority, usually the worse for alcohol, wanting to attract attention to themselves. It's best to soldier on and not get involved in a verbal tennis match. In most cases, the majority of the audience will shut them up for you.

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ROD ARGENT: Keyboards

IMPROVISATION... or how a rugby game can improve your playing

Last month's Playing piece by Rod Argent contained several errors in the music tablature. This was due to our inexperience in preparing music for print and was in no way due to any slip-up on Rod's part.

When I talk of improvisation, I don't mean just soloing; I'm talking about the need to react (in a musical way) spontaneously to the demands of the moment — the opposite to relying on well tried cliches and previously well worked arrangements.

If you think of improvisation, in these terms, as ideally being true to the moment and a reflection of what is right for you to play at that time only, I think it can help the way you approach a solo. It is (don't I know!) all too easy to find the fingers falling back into well-worked patterns, things you know sound O.K.

However, I'm a great believer in freshness, that a phrase always sounds best the first time it's played. I've been in the studio so many times when, at the end of a take, someone's said to me -"we'll do another one, but keep that bit in - it sounds great." Of course the relevant phrase never sounds quite as good again, because you're consciously thinking about putting it in instead of letting it happen naturally, in response to the moment.

To preserve the freshness on stage, if you are playing the same numbers night after night, with solos in the same places, it's absolutely imperative not to fall into a rut. I find that the start of the solo is very important. If you consciously set out to play a totally new phrase in the opening bars, even if it means working out just those few notes previously, the solo stands a much better chance of taking off in a new direction. Not only will it then be more rewarding to play in itself, but you will find that the other members of the band will play with correspondingly more enthusiasm - it will be fresh to them too, don't forget!

Inspiration

Inspiration for a solo can come from many sources like Charlie Parker, who was astonishingly inventive. Just compare succeeding takes of the same tunes which are often available on record. With just a minute separating takes, he would come up with totally different conceptions. Parker used to advocate any "experience" at all immediately before playing in order to startle the mind out of its rut. He said "go and roll around in the dustbins if you can't think of anything else!" While never having tried that particular diversion, I can testify to the way that extra-musical experiences can affect one's playing. I remember one afternoon a few years back watching the extraordinary grace and agility of the Fiji rugby team which certainly helped lift my playing a bit that night.

Another thing Parker said, was that, any man who believed that drugs or alcohol improved the ability to play was a fool. Although he died from an overdose of just about everything, he said records proved he played best when he was straight, even though he thought he was playing better when intoxicated.

Influences

When you are improvising, I think it's permissable to draw from any musical source. If it's in your mind, let it come out — with two reservations. Firstly, any solo should have form: you shouldn't just blow mindlessly for two or twenty-two minutes as if you were turning a tap on and off.

Try starting broadly, or economically: try to relax and let the thing build unhurriedly. Having said this, let vour subconscious decide the individual notes to a large extent; not that you can do anything else if the piece is at all fast! That's the second reservation; never consciously think, "I'll play a classical sounding phrase here." If a phrase comes out naturally sounding classical - fine! If you make a conscious decision, the chances are it will sound contrived. Trust in your subconscious; it can think much faster and truer, given the chance. And remember - the better you prepare away from a gig, the more material your subconscious will have to select

One point is very important, Don't cut yourself off from the other musicians. This may sound obvious, but it's really incredible to see the number of musicians who isolate themselves and play in their own little world, oblivious to everybody else's contributions. The best bands listen to each other all the time. It's a joy to see the warmth that's created when people are really feeding off each other

How else can you improve your improvising? It is a fact that the better your technique is, the greater will be your facility for executing your ideas. A lack of technique impedes fluency. Technique doesn't mean just playing fast. It means being able to snape phrases expressively. It also means being at home with musical materials, harmonic, melodic and rhythmic. This, of course, is a lifelong process! Another lifelong process is that of keeping your ears open. Listen to everything; all kinds of music. Remember that the forms we are talking about started life as a fusion; an unlikely marriage of Black and White. European gave to African just as African gave to European. Music all the time is evolving and being changed by the contribution of individuals; it's an ongoing process and there's no reason why you shouldn't be part of

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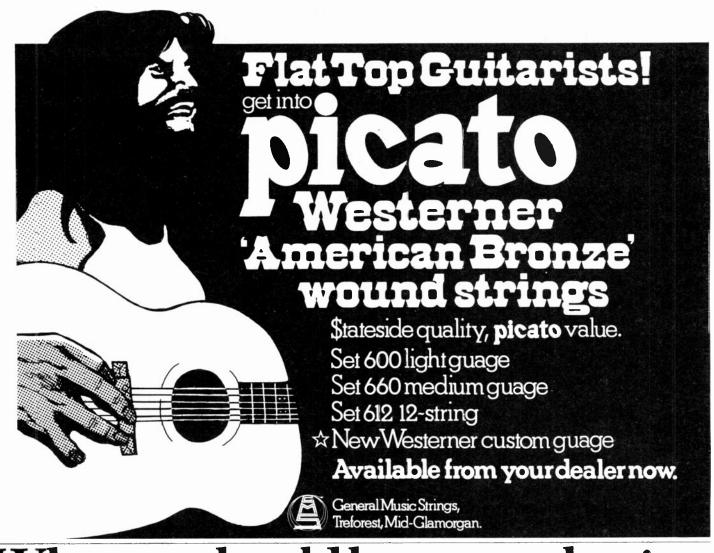
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Vhy you should buy a synthesiser from an accountant.

Amrik Singh-Luther is an accountant. Until a short while ago, keyboards were just a hobby to him. But then he noticed something.

Music shops were OK for pianos, guitars, brass, sheet music and so on. But when it came to synthesisers, none of them seemed to have a wide

range in stock.

His accountant's mind told him that being an expert in a field of amateurs is good business. So he got clued up. He found out all about synthesisers.

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a 24 hour delivery service.

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Dear Chase Musicians, I'd like to know more about Korg. Tell me.

Name

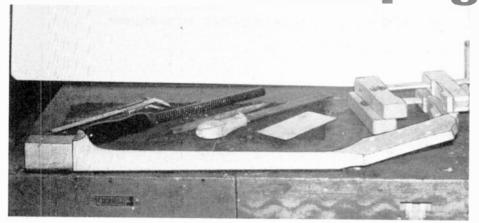
Chase Musicians, 22 Chalton Street, London NW1. 01-387 7449.

IMK2





Making a Solid Guitar Part 7. by Stephen Delft Shaping the Neck



This month's section is about shaping the guitar neck. It is mainly pictures, because I think you will find them more useful than words for this part of the work. The shape and accuracy of the neck is going to make more difference to the feel of your guitar than anything else, and it is worthwhile working slowly and carefully, towards the end of the shaping, until the neck feels comfortable to your own hands.

If you are going to follow the plans at all, certain dimensions should be considered as fixed: the owerall depth of the neck and the width of the fingerboard. Both these vary from one end to the other. But, fortunately, the tapering edges of the fingerboard are two straight lines, and the tapering depth of the neck represents a straight line for *most* of the back of the neck.

Within these fixed dimensions, various shapes are possible for the cross-section of the neck at various points. (Usually, the general shape of the neck remains about the same throughout its length but if you have strong feelings about this there is no reason why it must remain constant.) I would suggest that beginners try to copy the stages shown in the photographs as closely as possible. I have pencilled-in all significant sharp corners and edges so that you can more easily see what is happening.

To encourage you, the heading picture shows the neck, almost finished, a full size plan, which helps to avoid mistakes, and the very few tools which are needed. Almost essential are a bench, (or some suitable substitute) and two clamps, a completely-round Surform file, a half-round fine rasp, and a cheap Vernier gauge, for checking the depth of the neck. Other very useful tools which will help you and save time are: An Oberg 'Woodworker's file' which is really a coarse, flat rasp on one side and a medium file on the other, Stanley round and flat spokeshaves, a cabinet scraper, and a 'half-round' Surform file.

In fact, this is really only about 'one-third round' and the same applies to the half-round rasp. The best fine rasps, and probably the only ones which all cut fast and accurately, are made by hand and imported from Germany by Stentor. To a working instrument-maker, they are worth their weight in gold — and that's about what they cost. They are intended for cutting natural wood, and one will probably last you for life. On metal or chipboard, they last about ten minutes, and even contact with hard metal will spoil them. These tools should be kept individually wrapped in leather or thick cloth.

You will see that most of the operations are carried out separately on each end of the neck and then linked together in the middle. There is less chance of over-enthusiastic mistakes this way, and part of the neck is always free to be clamped to the bench. You will need two clamps to stop the neck pivoting round. While working, be careful with the projecting corners of fingerboard at the body-

What you have to work on, is a rough-sawn neck blank with a slab of Ebony glued to the front and projecting a little all round. If you make any serious attempt to clamp the sides of the neck, you will probably loosen the fingerboard, so the first job is to file the fingerboard edges down level with the sides of the neck blank. Always file from the Ebony, into the maple neck, to prevent the fingerboard splitting. Part of the fingerboard continues over the area of the neck joint: take care not to cut the fingerboard too narrow where it is unsupported at the edges. Trim the rest of the fingerboard edges first, and then file the body-end of the fingerboard level with the rest, using a straightedge. This is not particularly critical, as the sides of the neck blank are only roughly cut and are outside the lines marked earlier on, from your template. You may as well trim both ends of the fingerboard as well: the body end is filed level with the end of the neck tenon and the head end is pared with a sharp chisel to the position of the datum line on the plan. For these trimming operations, the neck and fingerboard should be clamped down securely; otherwise, your filing will be inaccurate and your paring dangerous. If you have lost the datum line markings, under the end of the fingerboard, simply measure back along each edge of the fingerboard, from the shoulder where the heel stops and the neck joint tenon begins.

Now, with the help of a long tapered packing-piece and a bit of ingenuity, it should be possible to clamp the neck and fingerboard by its edges without distorting or twisting the neck in any way. I usually clamp the centre part of the neck with the packing-piece, in a standard bench vise, with the wider part of the head just projecting beyond the end of the bench.

When the neck is held firmly, you can plane the fingerboard down to a smooth surface and a thickness of about 5 mm. The idea of using a plane is to trim the surface flat. This will only happen when the plane cutter is sharp and correctly set, and it will only remain sharp, cutting Ebony, for three to six strokes. That means re-sharpening the cutter, and cleaning oil, from it and from your

hands, every three to six strokes of the plane. This is boring, and fortunately only necessary in a very few hard woods. If the surface of the fingerboard tears, find out how to adjust the cap-iron on your plane to minimise this problem. Also, try planing it in the opposite direction. Don't try to make the front of the fingerboard rounded at this stage.

Shaping the back of the neck

First of all, using a coarse, flat rasp and a round Surform, take down the back of the neck until it is about 1 mm deeper than shown on the plan. Remember to allow for the thickness of Ebony, glued on the front. Use the round Surform to trim the heel to size and a fine, half-round rasp (or a flat and half-round coarse sanding stick) to trim the back of the head where it joins the neck. Leave the cross-section of the neck rectangular for the present. Don't try to round over the back of the neck yet: leave it rectangular.

Look at Photographs 1, 2 and 3. Bear in mind that most of these pictures show the two sides of the neck at different stages of shaping.

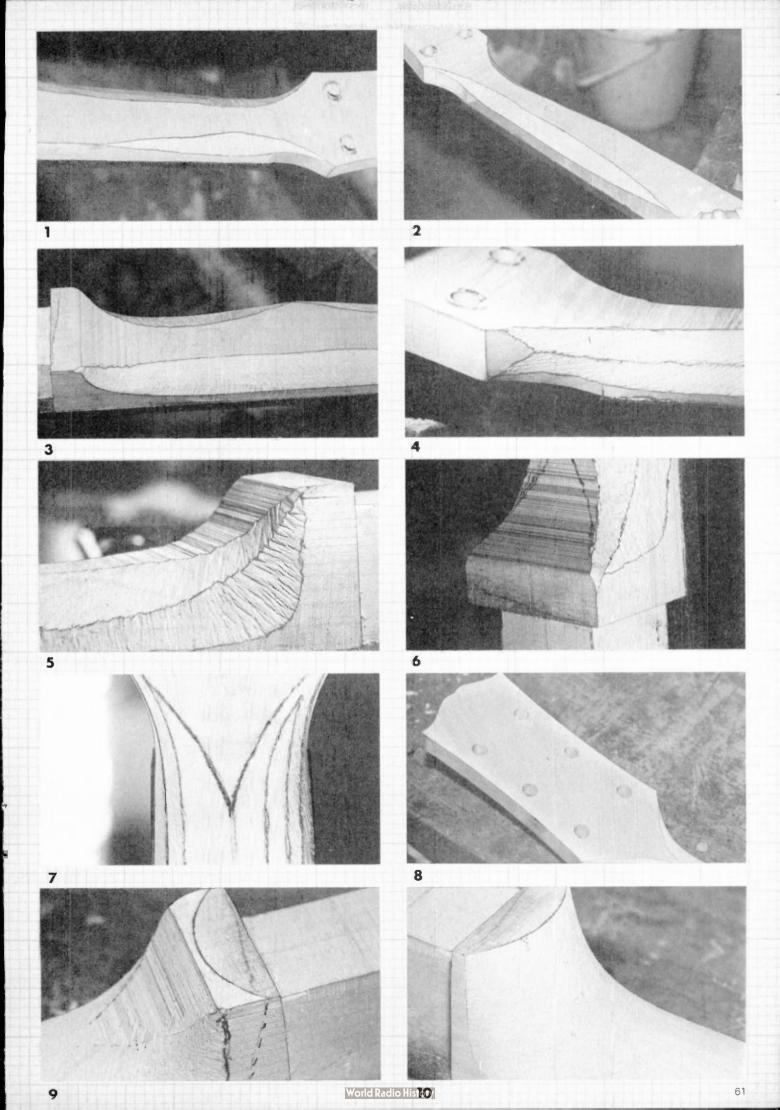
Cut away the sharp corner at the back of the neck on each side starting from the widest part of the head, and extending about 150 mm down the neck. When this looks (on both sides of the neck) like the lower side in Photo 1, extend the bevel about two thirds of the way down the neck on both sides as shown on the upper edge of Photo 1 and in Photo 2. Do the same at the heel end of the neck. Photo 3 shows the first stage on the upper edge, and the second stage on the lower edge, joining up with the bevel from the head end.

Now look at Photos 4 and 5. These show a second bevel, cut at an angle between the first bevel and the edge of the neck. Note particularly how, and where, the second bevel tapers away at the head, and widens out at the heel. The tool-marks visible on the heel will show you which way to cut if you are using a rasp or round Surform tool. This bevel is started at each end and then joined up as with the first one.

Now look at Photo 6. The bevels have set out the rough shape of the neck. Now you should start rounding — over all the sharp corners left between the bevels. Sketch a Vee on the back of the heel similar to the one shown in Photo 6, and blend the surface of the back of the neck-outside this Vee, into the now rounded shape of the neck.

The same process is applied to the head, but in two stages. In Photo 7, you can see the Vee, pencilled in, and the left-hand side shows the back surface of the neck rounded a little and blended round to meet the back of the head smoothly along the line of the Vee. If the rest of the angles between the bevels are just rounded over, the shoulders of the head tend to look clumsy, so a third bevel is cut, very lightly as shown on the right-hand side. This third bevel is faded out roughly half-way up the shoulders of the head. and I have outlined it in pencil for you. The end result should look like Photo 8. (Please ignore the holes in the head for the tuning machines; they should not be cut until later.)

Photo 9 shows the neck rounded at the heel end and blended into the heel Vee. It also shows the additional marking-out and the wood which must be removed, if you want a round, rather than a 'square' heel. If you want to reach the top frets easily, it is worth making the round style of heel, which is shown, almost finished in Photo 10.





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Repairing and Maintaining Your Drums:4

by Mike Lewis.

Replacing the angle and height adjustment on the Hayman side drum stand

This month's article has a slightly different angle to it from the first two in as much as, for the first time, I am going to explain two repairs on the snare drum stand that can be easily undertaken if the correct spare parts are not readily available.

The problem of spare parts is a real one. I am afraid a lot of drum manufacturers do not give as much priority to it as they should. But there are some manufacturers who have the spares problem well in hand. I will be reporting on all the companies with regard to the availability of spares and a possible delivery date if the parts are not to hand.

Many Hayman parts are available, but it is possible to keep the snare stand in good working order with materials that can be purchased from your local shopping centre. The initial problem to arise on this stand is with the height adjuster. This consists of a large threaded unit similar to a tap top (fig. 1a), a small plastic insert (fig. 2a) that grips the serrated shaft (fig. 2b) when the adjuster is tightened.

The problem that usually arises with the little plastic insert is not that it breaks or wears, but that it suddenly disappears. This only happens when the top section of the stand is removed from the base. For packing reasons it is more likely to affect a travelling drummer than a drummer who doesn't have to disassemble his stands.

The insert invariably vanishes when the two parts of the stand are re-united and the serrated rod of the top section comes into contact with the rim of the same and forces it down the tube of the base assembly, instead of passing through the insert. So it is worth checking this

first and poking it out with something like a long screw driver or knitting needle. This shouldn't prove too difficult a task.

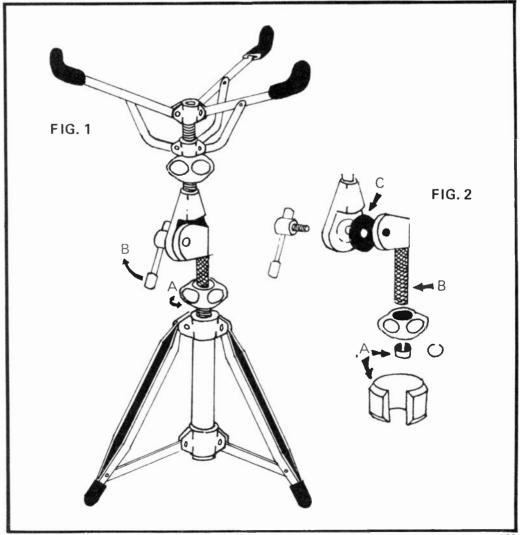
There is a small tip I can offer you at this point. When dismantling the stand, the height and adjuster should be completely Toosened and removed with the top section and not left on the base. This will considerably reduce the possibility of losing the insert and will also enable you to assemble your stand a bit easier. If you come to the conclusion that the completely has vanished, it is possible to replacement very make a

First, purchase a small

length of 34" diameter plastic piping, from any good plumber or similar establishment. Cut off approximately ½" and cut out a section of the pipe so that it resembles the insert (fig. 2a). Now, chamfer the rims of the new insert. This is vital to the clamping operation against the serrated tube.

We now move to the angle adjustment which is operated by a long toggle lever (fig. 1b) and consists of a disc of rubber compressed between two large flat areas on the top section of the stand (fig. 2c). In time, this rubber disc can wear and distort, causing the angle of the snare drum to alter while playing. This disc can

easily be removed by completely unscrewing the toggle unit. A replacement can be made from a rubber patch such as those used in the repair of cycle or motor cycle tyres. These patches are usually large rectangular affairs, so you need to cut out the disc with a 3/8" hole in the centre, replace the toggle unit and your stand should be as good as new. A final tip before ending: if the original rubber disc appears in reasonable condition yet the angle still alters, you will find cleaning the disc and the two flat areas with methylated spirit will increase the friction between the surfaces and prevent excessive slip.



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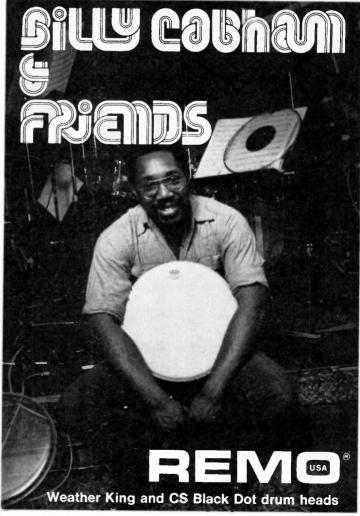
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byrd brain flies again



Roger McGuinn is one of the key figures in the history of contemporary Rock. As a founder member of the seminal Byrds he was instrumental in bridging the gap, with Dylan, between Rock and Folk back in the early Sixties. He was recently in London for a successful string of gigs along with ex-Byrds Gene Clark and Chris Hillman. IM took time out to speak to McGuinn about the past and present. Ian White asked the questions and Chris May worked the camera.

How did the new band evolve?

Well, we got together in LA. It was basically thrown together by our manager. He's been trying to get it together with Rick Vito for about four years, for some reason or another it just never happened, because I've always had somebody else or something like that. I've known Greg Thomas, the drummer, from Leon Russell, I've known him for about six years and Charlie Harrison came down and auditioned for us. We auditioned a number of bass players and he was the most oustanding one, Had you recorded with any of them before? No I'd never recorded with any of them before, but I was really happy when I got together with them because they were all good solid musicians.

Is this just a touring band?

No this is a permanent band.

The new album seems to be more rockorientated than the last two solo albums. Yeah like Cardiff Rose which is sort of a folky album. Well this is a rock and roll band and I think its mainly due to the drummer and also Rick, although he was in a blues band. Rick used to work with John Mayall, Charlie Harrison used to work for Leo Sayer and, as I said, Greg Thomas used to work for Leon Russell. So it's a rock and roll band although we could do anything. We could play jazz. I prefer playing rock and roll. I really enjoy it, it's my favorite kind of music. Has the band been touring the States much? Yes we have about three or four months' work, anyway we toured the colleges and clubs.

Do you find a four-piece restricting at all? No I find it tremendously free, free of all the hassles of getting the balances right. You don't have to have piano tuners or synthesizers or saxophones or fiddles or anything like that. It's just simple two guitars bass and drums. It's a full sound as well.

What guitars do you use?

I use a Rickenbacker twelve-string primarily and I've got a Fender twelve-string which I tune down to three-and-a-half steps below normal pitch, it's a standard Spanish guitar tuning. It's just a C sharp Spanish guitar tuning. Rick Vito uses a Telecaster and a Stratocaster. And as far as I'm concerned I use a Fender amp in the States. I've got a Music Man and I think Rick uses Fenders over there.

How do you find Music Man compared to Fender?

I don't know I'm not terribly pleased with

it. It's O.K.

You're not pleased with the Music Man?

No I think the Fender is better. I think I might go back to the Super Reverb, or Twin Reverb. I like that sound. The bass player uses an Acoustic bass amp — two of them and he seems to be happy with them.

Were you happy with the sound you were getting on the UK tour?

Yeah, the bass player is using a Fender bass. I like the sound we are getting here very much.

Let's talk about Rickenbacker. You must have sold more of those guitars than anyone?

I wish I had a commission on it. It's sort of a trademark by now.

Why Rickenbacker?

I used it for the sound. I've played all of them; Gretsch, Martin, Gibson and Fender. But it's a particular sound you get with the hollow body the way it is. It's an inch-and-a-half hollow body and the pick-ups being the kind they are. Then the neck is very good. It's a very fast neck as far as twelve strings are concerned. I like that for doing leads like on "Eight Miles High" and "Rock and Roll Star".

Has it got a low tension and action?

It's got a good, low action and it's fast. It's a thin neck, thinner than most. The Fender has a thicker neck, so has a Gibson. How many Rickenbackers have you got? Three or four.

Are these guitars you've had for some years? Yeah well the one I use on stage I've had for about ten years. The first few got stolen for souvenirs. We didn't have very good security back then and we didn't realise that anybody would do that. People would come in with empty guitar cases to the dressing room and sit around and then walk out with the case again and the guitar would be in it. That would not happen now. I put a lot of love into my first Rickenbacker guitar. I sold a couple of other instruments to get it. And we didn't have much money at the time.

Was that guitar on the first Byrds' album? Yes that's right. I was really heartbroken to lose that one. That was a good-sounding one as well. I had it custom made by Rickenbacker.

There's not much of a twelve-string sound on the new album I can detect.

Well, no but it's in there, I've not been trying to get away from it. I'm taking a break.

Is it frustrating to have to play the old Byrds numbers night after night? Presumably you want to get on with the new stuff?

I really enjoy playing "Mr. Spaceman" and "Rock and Roll Star", "Tambourine Man" and "Turn, Turn, Turn". I think they are great songs. I mean I wrote "Mr. Spaceman". Chris (Hillman) and I wrote "Rock and Roll Star", and "Tambourine Man" is a Dylan song that I've always loved, and "Turn, Turn, Turn", is a Pete Seeger song I've always loved. Aside from that we don't do any other Byrds songs. "Eight Miles High" I wrote with Gene (Clark) and David (Crosby) but it's all stuff that I wrote. It's not like doing somebody else's material.

A lot of your albums have got an unrecorded Dylan song on them. Are they songs that he wrote specifically for you? No he doesn't do that. There are songs he writes for himself, and then for one reason or another doesn't get to use them, so I get them. But they are not out takes. They are just songs that he gives me. Where did "Golden Loom" come from? It was to be on the "Desire" album. But he didn't get it together in time and he had enough material for the album.

Tell me about the mysterious Jaques Levy? Is he so mysterious? I don't know. He's not mysterious to me.

No, not mysterious to you but he is to the average McGuinn/Dylan fan.

Well I think what's mysterious about him is that he's emerged at all and that he is a co-writer with both me and Bob. He's a



retired psychologist. He was a practising psychologist in New York and he decided to get into the Arts and became an off-Broadway director and used some Byrds' material in one of his plays and just on a recording. He had a tape loop with some of the sound effects that we used on one of the songs, I can't remember, I think it was "Artificial Energy." I'm not sure which, it was a thing we just looped and it went on for about 15 minutes at a high decible rate and then it was shut-off and the lights went off on-stage and the stage opened up and it was a dramatic effect. After that he approached me to do a musical with him in 1968 and we wrote it together. We got a bunch of songs out of it and I've been writing with him ever since. And I told Dylan about it and Dylan bumped into him and they got together.

Do you enjoy being back on the road again? I love the road, I'm always on the road. If I'm not on the road I go crazy.

Out of your five solo albums which one is your favourite?

I like the last two and the first one. The middle two I don't like too much.

The "Roger McGuinn Band" album didn't go down too well here.

I didn't like the album at all.

How did it get out then?

Well I did like it at the time, it was just a mistake. It was a slump in my artistic judgement. I like the "Roger McGuinn", album. I like "Dragging Across the U.S.A." and "My New Woman" and "Hanoi Hannah", the blues thing.

What was the guitar on Hanoi Hannah? Ah that was a Fender Telecaster, I played that myself.

How would you amplify an acoustic quitar?

Well we'd probably use Barcus Berrys

and mikes too, at the same time.

Are you using Martin guitars?

I have a Martin that I use. I have several of them.

Could you give us a rundown of your guitar collection?

Well it's not extensive. I've got a Martin 0021 that I got when I was 15. I bought it for \$185 and, it's probably worth over a thousand now. It's in excellent shape, it's a beautiful guitar. Then I've got a D12 — 35 12-string then I've got some other guitars that are just throwaway guitars, fike a Gretsch 6 and a Fender 12-string acoustic. Then I've got a double-neck 6 and 12 Rickenbacker that's pretty interesting, but it's awfully heavy and I don't play enough 6-string. Is that a production model?

No it's a custom, I had two made up, one for a back-up. There are only two in the world. Then I've got one that's got lights on it, that uses a 24-volt power supply.

That was made by Rickenbacker, it was a custom-job and I had the frets slanted on a 7—degree slant to fit the human hand so it's faster.

So what's your relationship with the Rickenbacker people?

They like me.

Do you think they would bring these custom models into production?

Well I don't think they are very production orientated at Rickenbacker. I think they are a relatively backward company. They just sell guitars as they come, they're not into pushing it.

What was the reason for a Rickenbacker on an album cover?

I just figured it was a trade mark, I was associated with that guitar, it's the eagle landing on the moon, I just thought that was funny. I know it wasn't a terribly popular concept, but I happened to like it

How do you choose songs for your albums?
I throw darts at the wall

If you like a song you do it? Yes.

There's a Peter Frampton song on your "Thunderbyrd" album. How did that come about?

It was sent to us by a publishing company and I liked it so we did it.

Why did you call the band Thunderbyrd? It's a cross between Rolling Thunder and the Byrds.

I would have thought you would have wanted to lose the Byrds name.
Why?

Well obviously you don't.

No, why should 1? It's not the Byrds anyway. I get that question all the time and I don't really understand it. I don't understand why people think I should lose my roots. I can't shake it off, so why should I try? It's kind of like Elvis Presley changing his name or something.





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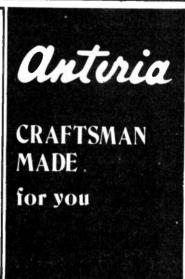
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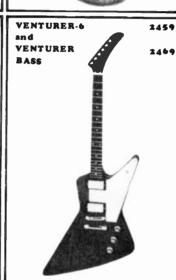




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It did seem, that with the solo albums you were trying to get away from the group set-up.

Well it didn't work did it. People are always comparing my solo albums to the Byrds, they say this sounds like that and so on. Every review I've seen has always compared me to the Byrds. I couldn't possibly be as good as the Byrds because I was only 1/5th of them.

What's your favorite Byrd line up?

Ah, Clarence White and Gram Parsons, and Skip Batten, aside from the original band which as a recording band was excellent and as a performing band was terrible.

The reunion album had tremendously bad reviews.

Yeah it wasn't very good was it?

Well, no it wasn't.

Yeah, well we're sorry.

It was surprising that you let something like that be released.

Well that's tough you know.

When you finish doing England, will you go back to the States?

No this is only the beginning.

How long will you be away for?

Oh just another three weeks or so, but we're going to Holland and France and Germany. I've never played in Yugoslavia before or France or Holland. We've had a few problems with equipment and promoters etc.

Are you a musician who is neurotic about his equipment? Can you plug into, and play, anything?

I wouldn't say anything, but I'm happy with the Fenders that they gave me. I would have changed them if I didn't like them. I'm not neurotic about it.

There was a whole pile of Twin Reverbs on the Rolling Thunder TV show.

Yeah well that's a good amp.

You weren't playing anything on the TV show.

Well they didn't cut me in, I did four songs on that show. It was mainly Dylan. Were you playing much electric guitar on the Rolling Thunder tour?

Yeah I played a Rickenbacker I2 the whole time except for that "Knocking on Heaven's Door" thing that was on the end.

Was that an adlib?

Yes it was, I made it up right on the spot. Were you happy with Rolling Thunder from a musical point of view?

Yes very. It was just a great cultural phenomenon, I loved it.

There was a great song that came out of that, "Take me Away" (Cardiff Rose). Thank you. You should have been there, really it was wonderful. It was a great time I can only equate it with the time I had back in the early 60's with the Beatles, hanging out with them. It was that kind of energy. It was fun.

Was it something that was spontaneous? It was totally spontaneous. Basically, Dylan just looked around and saw that there was nothing happening that he liked so he threw that together. He told me a couple of years ago that he wanted to get a circus together and that's pretty close to

He hasn't been on any of the other albums since the first solo album.

Yes that's right.

it

Does Dylan play you a tape for a song? Yeah, or he just sings it. I was hanging out with him a couple of weeks ago and he said "Roger 1've got a song for you" and he played a new one for me that he hasn't even finished yet. Then he showed me another song that he said I couldn't handle so he kept it for himself.

Have you been on any of his albums? No I haven't. We were going to do a Byrds/ Dylan album but that fell through. It's possible that we could work together. Which British bands do you like?

I like 10 cc and I like Manfred Mann's thing "Blinded by the Light" and "The Things we do for Love" by 10 cc. It's too bad that Fleetwood Mac aren't a British band 'cosl liked them.

What kind of music do you like listening to?

Jazz. I listen to everything classical and country, I like Rod Stewart, though.

"Tonight's the Night," I like that.

Have you any opinions on this New Wave music that's happening, Punk Rock?

I think it's fun.

Do you think it's being taken too seriously?

I'm not taking it too seriously, we have "punk" bands in the States. I find the Runaways fascinating. Tom Petty I guess is in to that.

He seems to be into the kind of stuff you do and you've recorded one of his songs, which must be the ultimate compliment to him.

Yeah I suppose. I just remember hearing the "American Girl" demo sent to me by his people. They were anxious for me to record it.

Your voice seems to be getting a lot better. Thank you. I think my voice has got a lot stronger.





Your voice is getting a lot more "Rocky". Would you agree with that?

I don't know. I think my voice is getting stronger. I'm getting to be a better singer over the years. I am not consciously striving to do anything except just stay

You must have musical standards.

No not really. I have no musical standards whatsoever.

How would you rate yourself as a guitarist? I'm OK. I'm certainly not like John McLaughlin or those guys. I'm alright. I'm not terrible. I don't really think of myself as a guitarist. I think of myself as an entertainer who plays the guitar. I'm a personality, you know what I mean? I'm not a Rocker either. I just do what I feel like. I'm actually more of a personality than a musician too. I'm in music and I love music but I'm a Character.

You are in a fortunate position because whatever you do is accepted you as a person.

I'm more of a personality than a musician.

Is there any tension in the band?

Oh no we love each other.

There's no danger that it's going to be just the Roger McGuinn band?

No there's no danger of that. This is the first real band I've had since the Byrds. I'm real happy with it.

So you're getting away from being a solo entertainer and getting back into the group format?

Yes it's a group format now. I'm not losing anything. I'm gaining all the time.

But isn't there some doubt in your mind that when people go to see the band that they go to see just Roger McGuinn or are they going to see a good rock and roll band? I hope they're going to see both.

How many albums do you have to do to fill your contract?

I think I have to do one more album and then it finishes next year. This band isn't under contract but I'm under contract with CBS. It's up to CBS, whether they sign that's politics. I don't interfere with that. You don't like the business side of it? No not really. I was my own manager for a while. \Box

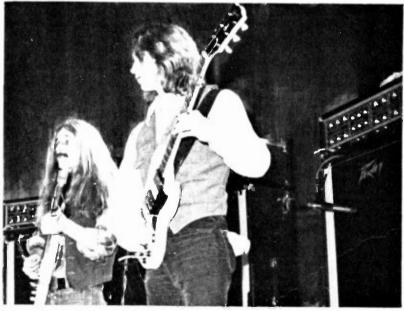


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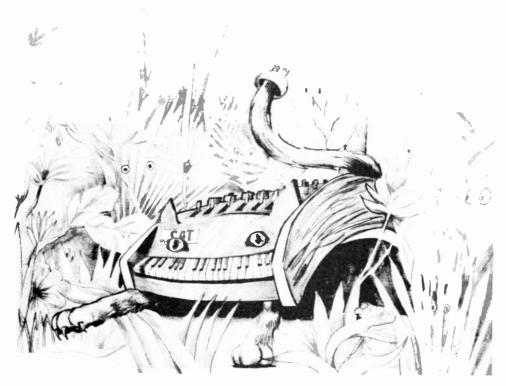
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World Radio History

JANSCH - a charismatic conundrum?

by Tony Bacon Photograph: Chris May

People seem to have an affection for pigeonholing; if you can label something, then it's safe. This is as true in music as in any sphere, and its evidence can be seen everywhere, from the "File under Popular: Male Vocal" on record sleeves through to the preponderance, especially in the weekly music papers, of terms like "jazz-rock," "fusion music" and the like.

And so to Bert Jansch. "Oh, yeah, the old folkie. . . is the expected reaction, and yet if you've listened to any of his more recent releases you're likely to be a little more aware than a reply like that would imply. There's a distinct American flavour to some of the records -"Santa Barbara Honeymoon" for example - even country flavourings on the Michael Nesmith collaboration "L.A. Turnaround." Bert himself seems to suffer under this trend towards filing people away in a card index - "I had an interview the other day and every question was about 1960," he told me, leaning back in a modern excuse for an armchair. "Well, I know I'm old but. " Exasperation got the better of him.

But on to more important matters, we decided. Bert's acoustic style has been the basis of more than a few budding instrumentalists' technique and, at the moment, he's chosen a Yamaha FG1500 as his tool. "It's the only FG1500 I've ever come across in this country," he commented, "and I've had it about four years. But I'm getting bored with it, I change every couple of years usually. Trouble is I haven't seen a guitar that I really like yet. I saw a Grimshaw the other day, a nice handbuilt job, I think it had a pickup on it - like a big jumbo really.

I'd always thought of Bert as being the sort of player who would go for a Martin-type guitar, but then maybe I'm pigeonholing. "Well, that's generally the type of guitar I like, but I'm not really



that keen on the new Martins because they're a bit stiff. The last guitar I had, before this Yamaha, was a Martin, before that a John Bailey. He used to make good guitars but I'm not sure if he's in business anymore." Quite a few would-be salesmen have tried to get Bert interested in various handbuilt jobs, but

he's not so keen. "I find it's a very touch and go thing. If you could say to them "Oh I want it like this ," and could be sure of actually getting it like that, well "he shrugs. "But it's when you get the finished product in your hand, that tends to be a different matter. So I prefer to go to the shop and buy one."

At least when you buy a guitar from a shop you're reasonably certain about what you're actually getting, but often there's the problem of adjustments afterwards. "I don't really make major changes," said Bert, "only little things like taking the action down. For example, on the John Bailey, I had the neck thinned down - the Yamaha's a bit thick too. What I'd like is one that's got almost classical width - this Grimshaw that I saw was a bit like that, and you could always add a bridge to that to space the strings out."

Bert's been working just lately with a couple of people, one of whom he's had a long association with, going right back to Pentangle; that's bassist Danny Thompson. The other musician is Martin Jenkins, who was with Hedgehog Pie, and he plays mandolin, cello mandolin and fiddle, and, according to Bert, is "well into phasers and wah-wah pedals." I wondered if Bert had ever considered going electric? "In a way I have, yes, because it saves a lot of time if you're working with bass and drums. It's all the gadgets that confuse me. The phaser's airight, just push a button and there it is. But I think a lot of electric performers get carried away with all that — it gets almost like a synthesizer!"

Nonetheless, Bert uses an amp on stage by way of a transducer on the Yamaha. "I use a Peavey combo, it's a very bassy sound which I like. I mean, the Fender amps are trebly, but with this Peavey you get a lot of bass. That can cause problems, but I don't really like a tinny sound anway, you get a lot of bass response out of the guitar itself, so it balances up eventually. The amp's just a monitor on stage basically, so that we can hear what's going on. Also, if you end up in a noisy place you can always turn up the amp!"

As for strings, Bert uses bronze extra light, and moans about the expense — because they

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don't last very long. "I think they're the biggest con in the world, strings, I'm sure they're made so they only last so long. In the old days you bought a string, and it'd last for months often because you couldn't afford new ones - but they seemed to have much more life in them then than they do now." It could be argued that a similar kind of trend has taken place in instruments generally - even guitars. "That's the Japanese," suggested Bert. "You buy a guitar with a plywood top and the sound you get when you buy it will never change, it won't get better. there's no maturing involved. But then that's good if you're putting a pickup on it, say, because you get a dead top."

It's always interesting and informative to find out what sort of music other musicians listen to: what did Bert think of the things John Martyn was doing, for example? "Well, I've done one or two odd things with John," he remarked cryptically. "but he gets a bit too electric for me after a while. He's a fantastic acoustic player, just straight, without all the gadgets, but he does get carried away after a while! I don't know, I'll listen to anything really. I still like the old blues, that's the sort of thing I play at home - from that to Julian Bream. And just sort of general folk, traditional folk. I'm well into Dick Gochan, he's just brought out an album of

traditional jigs and reels on the guitar - the playing is absolutely amazing although, for me, it gets a bit too much. After about three-quarters of the way through I want to hear something else. But he plays some pretty good blues, on the quiet! With people like Dave Evans, I tend to be put off his technique, he's such a fast player, Gordon Giltrap's like that too; I don't think you have to play that fast to impress anyone. It's a very classical technique that Dave Evans has, too. Sammy Mitchell's good, he's got an album out on Kicking Mule, good album."

Bert's own new album, "A Rare Conundrum," is a mixed bag, and features most of the guises that his music is likely to adopt. In that respect, it's probably a good bet for someone new to his music, though Bert is, as ever, ready to move on. "Yeah, I really like the album but, as usual, I've already sort of lost interest in it, I'm much more interested in what I'm doing now." Which includes a choice handful of gigs supporting J.J. Cale in London, and possibly some recording with Danny Thompson and Martin Jenkins.

"We've been working out quite a few little instrumental things, things that aren't on the album, and eventually they'll get down on tape, I suppose. I managed to acquire a Revox so I can sit there for hours putting parts on top of parts. The trouble

is that you don't always know what the record company will want. I might spend months and months working on some instrumental thing and they'll say. "Er, how about a few songs?". But I've always been fairly lucky that they let me sort of ramble on — no restrictions. I suppose Charisma's a strange company for me to be with, I'm the only 'folk' artist on the whole label, unless you call Monty Python folk!"

In a bid for something completely different, I asked Bert about the teaming up with Michael Nesmith for the "L.A. Turnaround" album, "Well, we met through Tony Stratton-Smith, who doesn't do much with Charisma now, but he used to. It was just one of those strange things that happen, but it was good - pity it didn't sell the album! I don't think my public actually liked the idea of me messing around with all these people. I suppose it was an interesting combination, what with Red Rhodes on steel and everything, although looking back I think there may have been a little too much steel. He's a great player but I think we could have cut some of it out in the mixing. It got a bit . not one-sided, but a bit too much. It's the tuning of the pedal-steel that intrigues me. something like E flat seventh, and a knee-lever will take it all down - very strange. I don't

really use any obscure tunings myself, just that DADGAD tuning, or sometimes I'll just take the bass down to D, leave the rest normally tuned. DADGAD's a very common tuning, though."

Over the years that Bert has been playing, musical fashions have changed, as have audiences. Was he aware of a change in audiences' demands? "It's hard to say really, in a college you obviously get a definite college audience, and, depending on the college, they don't usually advertise outside, so you don't get a cross-section of the general public. Then you get somewhere like the Marquee where it's really strange, because half the audience are tourists! Another thing I don't like about the Marquee is its amenities they haven't got any! It must be the worst dressing room in the world, it's so cold that your instruments go out of tune the minute you step on stage! But it's difficult for musicians to find gigs these days anyway - it's stupid. Places like the Greyhound in London will put on rock bands and pay them about £20 - that doesn't even cover the cost of getting there sometimes! When I do the Marquee, I still don't get any money out of it - I get paid, I mean there's a lot of money there, but it's all laid out

on various musicians, P.A., it all

adds up. But I still like to do it -

it's something to do!"



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O ALBUMS O

Bob Marley & The Wailers: Exodus (ILPS 9498)

Now I have to admit, straight off, that I've never really been that much into Marley's music. All this Rasta business with talk of "Jah" and "Babylon" goes a bit over my head. However, I do know what I like and it is the music contained on this album.

"Exodus" has an amazing fluidity from start to finish. The songs just flow naturally into one another although each one is different. And that driving bass/ rim-shot rhythm never falters.

The title track, "Exodus," talks about the basic idea of the Rastafarian movement, i.e. everyone going back to Africa or Ethiopia as I understand it.

Going from my limited experience with Marley's catalogue, I'd say this album represents one of his best. It's more "produced" than others I have heard and I suppose die-hard reggae freaks may accuse it of being middle-of-the-road because of its touches of Western musical devices here and there.

The fact that Marley was almost blown away some time back during the election campaigning in Jamaica points to his power as a political figure as well as a superb musician. He's got a lot of credit due for pulling something like this album together so soon after the attempted "assassination."

Sure he's using the studio as pulpit. But when the result sounds as good as the music on "Exodus" that's just fine by me. Ian White

Produced by Bob Marley & The Wailers; Engineer, Karl Pitterson; Assistant Engineers, Guy Bidmead and Terry Barham; Mixed by Aston Barrett, Chris Blackwell and Karl Pitterson.

The Band: Islands (EMI-Capitol E-ST 11602)

I had doubts about this album, the first since The Band decided last year to quit live performances and confine itself to the studio. Fears of overproduction and 24-track overkill were immediately dispelled by the first playing of "Islands." It's a beauty and well worth the wait.

All The Band's musical hallmarks are here; Robbie Robertson's superlative harmonics ring out as true as ever and Garth Hudson's swirling organ is magnificent.

There are ten songs in all, ranging from great Band Rock and Roll on "Ain't That a Lot of Love" to soft acoustic ballads like "Christmas Must Be Tonight." The songwriting is up to Band standards and filled with the rustic Americana lyricism that personifies The Band's compositions.

But the highlight, for me, is not a Band composition at all but rather the blues classic "Georgia On My Mind" where Rick Manuel comes as near as dammit to Ray Charles and gives an emotive reading of the song with just the right amount of pain and melody in his voice.

For Band lovers, "Islands" is a must. For all you other listeners of dubious taste out there in record land do yourself a big favour and GET this album.

Ian White

Produced by The Band, Recording Engineers: Ed Anderson, Rob Fraboni, Nat Jeffreys, Neil Brody and Jeremy Zatkin. Recorded and mixed and Shangri-La Studio and Village Recorders. Mastered by Bernie Grundman.

John Stevens Away: "Mazin Ennit" (Vertigo 6360 141).

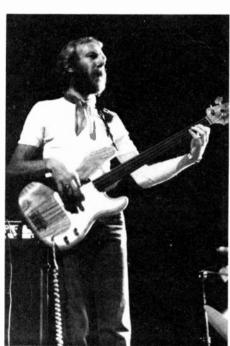
Away employ a line-up of drums, guitar, sax, electric bass and upright bass to play jazz of a very accessible nature, and prove it on this the second album featuring this particular, and now seemingly settled, personnel. It sounds as though the tunes are mostly taken from part-written and part-improvised sessions, and are almost certainly the result of single takes, with little or no overdubbing involved. The result is a very rewarding spontaneous mix, virtually a live sound, and everyone gets plenty of room to move around in.

Namesake "Away" is the first track, with a drum intro, followed by electric bass to the left and upright to the right exchanging a three-note riff, over which enters a sax tune, matched by guitar picking. Robert Calvert's sax wheels away to solo, and sets the feel for the music that is to follow. High points include "Touch Of The Old," opens with ringing basses, and lower register voicings on the sax and guitar, leading eventually to a duet between the two basses - Ron Herman on upright stretches down the neck and stresses the almost percussive properties of his instrument, whilst Nick Stephens on fretless electric demonstrates what at once amounts to the similarity and differences between the acoustic and electric basses - his more apparent use of vibrato is well to the fore here, for example.

"God Bless" on the second side is a longer track, with David Cole's virtually funky chording sneaking in on the right channel, soprano marking out a deceptively simple tune, all gradually moving to experiment with the available







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structure and space. The guitar takes over for soloing, and Cole plays some excellent lines, teasing sounds from the guitar, stepping from idea to idea with the ease of the player who knows his instrument inside out, and beyond. There's even a short drum break towards the close, proving Stevens' undoubted deftness and skill at the skins.

There are plenty of other tracks, all offering something varied, something new. If you're bored with all the trash that many rock bands are churning out, try Away for size.

Tony Bacon.

Recorded at Phonogram Studios, London. Engineered by Steve Lillywhite. Produced by John Stevens and coordinated by Terry Yason.

Little Feat: Time Loves A Hero (Warner Brothers K56349)

Ted Templeman, who produced the magical "Sailin' Shoes" album, is again back at the helm to steer the Feat on a course of further exploration, coupled with saunters through familiar territory.

Little Feat's music is such that it forms a mass of sound — and, although you can be aware of various instruments within the framework, it's the whole that becomes apparent, true group music. For that reason they're very careful with the sound of their records, and whatever your ideas might be about whether records should sound better, worse or the same than the music does in its natural state, i.e. live, Little Feat sound quality matches the high level of the music involved.

Stylistic nods to the past strengthen the continuity of the band's develop-

TLE FEAT

ment - the title track "Time Loves A Hero" has the kind of ensemble singing that graced "Day or Night" from "The Last Record Album;" the slide that threatens to slice through the left channel on "New Delhi Freight Train" recalls similar stuff on "Two Trains" from "Dixie Chicken" or "Down The Road" from "Feats Don't Fail Me Now" - the examples are almost endless. As for new musical directions, perhaps the most obvious example is the instrumental track "Day At The Dog Races." A casual listener could probably dismiss it as "blowing in 6," but it's certainly not as simple as that would imply, in fact there's quite a complex set of changes involved, with the pulse set by bass-drum and bass equalised almost as one, and guitars and keyboards soloing and creating lines in a structure that becomes more and more logical on each listening. Bill Payne's acoustic piano solo towards the end of the piece is particularly fine, and offers an interesting alternative to the largely electric keyboard sound that permeates the record.

Lyrically, the songs cover familiar ground as well as ever. "Time Loves A Hero" tells of one who "spends his days in the sun and his nights in the casino," "Old Folks Boogie" is a Paul Barrere gem with the old folks who "know that you're over the hill when your mind makes a promise your body can't fill," and "Keeping Up With The Joneses" is killing the poor victim, who's "gonna hang the man who says the best things in life are free...."

Great stuff, then, from a band that continue to be great and set standards for rock in the Seventies that it would be hard to draw comparisons to.

Tony Bacon.

Produced by Ted Templeman. No other recording details available on sleeve.

Rare Rockabilly: MCA Records (MCFM 2789 Mono) Volume II

Throw away your tutor books and teaching records. This album is the way to learn real Rock 'n' Roll guitar picking and enjoy the songs in the process. This album is Volume II of a set and MCA are to be blessed for uncovering a treasure chest of Rock history which has been preserved in remarkable fidelity.

The album contains 20 obscure Rockabilly tracks recorded circa 1956—1959 (Volume I contains an equal assortment of material recorded round about 1953—1954).

These compilations are going to come as a shock to anyone who still believes that Bill Haley and Presley were the Founding Fathers of Rock. Ever heard of Jackie Lee Cochran, Johnny Carroll, Justin Tubb, or Eddie Fontaine? They were all rocking

long before Elvis stepped into Sun's studios.

The music is beautiful in its raw "live" state and you can almost taste those shiny new Fender guitars in the hands of the acoustic pickers who had discovered this new electric music.

The riffs and runs that grace these albums are the foundations of all that has followed and, if you need a real challenge to your playing, sit down with these records and see if you can match what was going down in the technically primitive studios that were being used.

The songs are too many to list here. But, if you want to sparkle up your band's repertoire with some good obscure Rockabilly, or learn some tasty picking, "Rare Rockabilly" is for you. It makes damn fine listening too.

Ian White

Compiled by: Bill Millar with help from Ray Topping, Brian Taylor, and Dave Luxton.

Amazing Rhythm Aces: Toucan Do It Too: ABC Records (AB 1005)

The plight of the Amazing Rhythm Aces epitomises the problem of those few bands who produce a fantastic debut album, ie how do you top it? "Stacked Deck," the Ace's first record, was a gem and was graced with the standout track "Third Rate Romance." The subsequent album "Too Stuffed to Jump" was a good one by any standard from a band which is as musically accomplished as, say, Little Feat. But the album failed to do anything and, the last I saw, it was gracing the bargain bins at Virgin.

With this latest offering "Toucan Do It Too" (awful pun) the Aces just about get into the magic groove of "Stacked Deck" — but not quite. It's hard to say what is wrong with this album. The playing is superb with accomplished guitar playing by Barry "Byrd" Burton who is to the Aces what Lowell George is to the Feat.

Burton also produced and engineered the album and shows he is as good on a mixer as he is on a fretboard.

"Toucan Do It Too" is a good album but the band doesn't seem to be pulling out all the stops and using all its potential. It's terrific music to put on and sip Southern Comfort to after a hard day, but when the Amazing Rhythm Aces put down music you can do something more exhaustive to, then they'll be a band that will be well nigh untouchable.

Ian White

Recorded at Sam Phillips Recording, Memphis 10-0-C (sic), Produced and engineered by Barry Burton. Mastered by Larry Nix at Arden Mastering, Memphis.



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The master section of the Musician contains controls for master gain and reverb. The master gain is used for obtaining overdrive and sustain at low volume levels and for controlling response and noise in a recording studio. The master reverb control acts on both "normal" and "effects" channels and is also activated through the automixer footswitch.

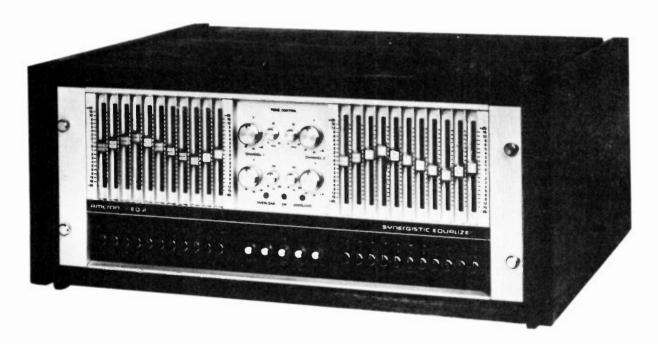
The tremendous power and versatility of the Musician are complimented by the many speaker options offered with this unique series. To accomodate all preferences, we have provided several distintly different systems, each with its particular characteristics of response, power handling, and portability. The 412 enclosure employs four twelve inch eight ohm drivers mounted in two entirely separate sub-enclosures with ducted port tuning to provide optimum damping and efficiency at the low end as well as maintaining extremely wide frequency response at extreme power levels. The 612H utilizes six twelve inch sixteen ohm drivers in three separate air suspension sub-enclosures for maximum power.

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EFFECTS: FIZ

At least ten years has elapsed since fuzz emerged on the music scene. Obviously we are all well acquainted with the general use of fuzz distortion, and perhaps we have become blase about fuzz when confronted by a plethora of fuzz boxes. Familiarity may breed contempt, yet today's sound effects owe an enormous debt to the now-humbled fuzz box

Consider its evolution, originating no doubt in some unfortunate, overheating, highly perspiring valve amp to the dismay or delight of the now aged guitar player. Now the incredulous technician is baffled by our venerable guitarist's request, "to actually reproduce the distortion of a faulty amplifier at the flick of a footswitch" There is no doubt that the fuzz box started many brains churning with the possibilities because all the previous sound effects (tremolo, vibrato and reverb) did not affect the musicians and audiences to nearly the same degree. How can fuzz 'sine' WAVEFORM distortion be actually produced and electronically crafted to provoke an emotive response?

The answer is not as simple as it appears, but is decidedly less complex than the other sound effects we shall

be looking at in future articles. To input so that, as the guitar note decays, explain the basic working principles of the fuzz box in simple terms, we shall consider its evolution beginning with the design which was the original fuzz box.

Fuzz distortion produces a guitar output which is richer in harmonics than the guitar's original sound. One method employed to produce fuzz evolved from a standard electronics text design, called a 'Schmitt Trigger'. It certainly was not designed to produce distortion in musical applications but to convert a sine waveform (diag. 1) into a square waveform as displayed on an oscilloscope. The resulting guitar waveform, when

DIAG. 1 SCHMITT TRIGGER

SQUARE WAVEFORM

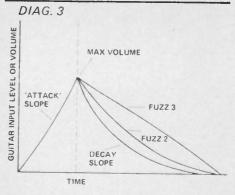
applied to a Schmitt trigger, will be severely 'squared'. Basically, the peaks of the guitar waveform have been removed (diagram 2). Unfortunately,

DIAG. 2 NORMAL GUITAR WAVEFORM (SIMPLIFIED) INPUT LEVEL OR VOLUM GUITAR SCHMITT TRIGGER ACTION TIME

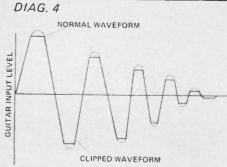
when the guitar input falls below the voltage level of the Schmitt trigger, the circuit cuts out abruptly. Even with a stage of pre-amplification before the trigger, a guitar note will decay naturally until the trigger cuts out. Also to obtain a tone variation that is useful, another stage would have to be added. So we would have a fuzz with a nice 'edge' to the sound, but little sustain and no tone variation, with an abrupt cut-out before the note had completely decayed.

Now we move on to the 'overdriven' transistor. Any transistor has a limited gain. Above this limit, the transistor distorts and becomes non-linear in response. This means that the transistor no longer amplifies in proportion to its

the fuzzed guitar note we hear tends to stay constant until the note dies away completely (diag. 3). Thus we have achieved a degree of sustain and fuzz distortion i.e. we have altered the attack



and decay characteristics of a note and enriched its harmonic content. A fuzz control on some units quite simply varies the amount of feedback between two transistors, overdriving them to obtain the distortion and sustain qualities. Feedback in this context has nothing to do with unwanted feedback between speakers and microphones etc. but is concerned with utilising the output of an electronic circuit to stablise its own input (in this case to overdrive the transistors to infinity!). Our guitar waveform would now appear (diag. 4) with the peaks



'clipped' as opposed to the 'squaring'. Also, it is considerably easier to modify our circuit to include a tone control.

The next method of obtaining fuzz is probably the most widely used. This consists of a stage of amplification which is applied to a back-to-back diode configuration. For our purposes, the diodes are in the fuzz box circuit to obtain a non-linear response and to distort. So, instead of our last example with our hapless transistors, we have a controllable high gain stage applied to the diodes. Therefore, with careful

EFFECTS: FUZZ



One of the widely-used effects pedals by Coloursound.

design, the high gain stage is filtered to produce a pleasing tone response, because much treble can be lost. The diodes will then conduct to produce fuzz distortion when the voltage level is around 0.6 of a volt. The guitar should therefore be kept near or at maximum volume for best results. The sustain characteristics improve with this method (diag. 3) of obtaining fuzz.

However, integrated circuits are rapidly replacing transistors in electronics generally. One IC which is appearing in fuzz boxes is called an operational amplifier. An op amp consists of several transistors inside one IC. It is capable of higher gains and can also be utilised to produce distortion as in the last two methods; it may be overdriven or can utilise a diode configuration.

Let's consider our ideal fuzz box. It can use any of the methods we've looked at, bearing in mind their limitations and attempt to compensate in the design. We want our fuzz box to have incredible sustain, adequate volume and considerable tone range from a sweet, bassy sound to a razor sharp treble sound. Also, a control for the amount of fuzz must be incorporated. Other advantages would be the absence of any crackles at the end of notes, no extraneous hiss, and an overall smoothness. Such fuzz boxes are probably few and far between! Our designer has been set a difficult task.

However, by choosing carefully from the very basic methods of fuzzing sound which we have examined and simplified, our designer can build our fuzz circuit in sections. First, a high gain stage, followed by two diode configurations with filtering to improve response and smoothness on the way through. Finally, a tone control stage, or a high gain stage followed by a Schmitt trigger for really heavy fuzz. Then perhaps three diode configurations with feedback volume compression for sustain (remember – feedback utilizes the output of an electronic circuit to control its own input – in this case a considerably

simplified version of studio type volume compression could be incorporated in

DIAG. 5

GUITAR WAVEFORM BEFORE FUZZ



GUITAR WAVEFORM

WITH TREBLE MAX.



GUITAR WAVEFORM AFTER FUZZ

WITH BASS MAX.



our fuzz box). But where is our fuzz amount control? Well our designer could add a mixing stage and remix the fuzz

circuits output with the original guitar sound

So, although, to some people, fuzz is just fuzz, there are many variations and many new possibilities, each of which can create different sounds. Together with the trend towards high output guitars with good sustain qualities our humble fuzz box may make a comeback!

To emphasize this point consider Diagram 5 - the guitar waveform before being processed by a certain tuzz box. So we suddenly realize just how much we have simplified the subject of fuzz distortion. Still the finer details are the technician's burden, we have our ears to judge the quality of his design. But we must remember that since its origin fuzz has changed dramatically, and the musicians' demands for various types of dirty, raunchy, screaming sounds have inspired the host of fuzz boxes with which we are surrounded. It's my belief that fuzz distortion can be refined still further with the leaps and bounds which technology makes in electronics every year.

So although fuzz may be decidedly 'old hat', it should be worth a reappraisal from time to time because there are fuzz sounds that no-one has yet heard!



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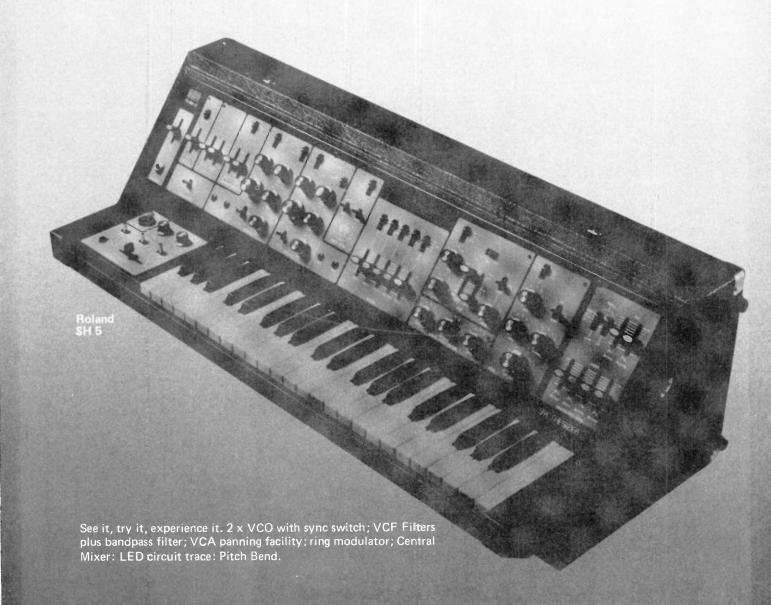
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O STUDIO DIVIRY O

Berwick Street Studios

Producer Geoff Haslam has been busy with Peter Skellern on his new album, with engineer Trevor Vallis in on the job... Geoff has also been producing a single called "Lady Mine" by Neil Innes, sometime Bonzo Dog, Grimms and Rutland Weekend TV member. Arista Records will be releasing the single, and the engineers on the session were Gwyn Matthias and Trevor Vallis... Joanna Carlin's first album, "Fancy That," was recorded with producer Hugh Murphy and engineers John Middleton and Gwyn Matthias... Jingles recorded recently at Berwick Street include some by Richard Myhill and Mike D'Abo...

Pathway

For the first time in five years, Pathway have regretably had to increase their charges. The present £8 an hour rate will still apply on weekdays until midnight; after that time, and at weekends, the charge will now be £10 an hour. Tape charges are also up, a reel of ½" 206 is now £7.50, ½" 250 is now £9, and 1" charges are still £20 for 206, whilst 250 is now £35, "which is a lot," said Pathway person Barry Farmer, "but it's excellent for mastering." . . . Meanwhile, recent visitors to Pathway have included Elvis

Costello, who fans of the sadly defunct Flip City will recognise instantly. Elvis laid down tracks for a new Stiff album, and tracks include "Sneaky Feelings," "Pay It Back" and "My Red Shoes" and was produced by Nick Lowe — should be a real goodie . . . Charlotte Cornwell from Rock Follies has been in recording a version of "Needles and Pins" and was produced by Guy Humphries of the Winkies . . . Squeeze were recording for Legal Records, and were produced by none other than John Cale . . . Other visitors to Pathway have included The Razorblades and Chris White . . .

Advision

The Grateful Dead, rare visitors to the U.K., were at Advision mixing tracks for a new album to be called "Terrapin Station," and for release on Arista Records later this month . . . In direct contrast, Shirley Bassey was in to record an album affectionately titled "You've Taken My Heart Away" for release on UA Records . . . The Animals have been back in recording and mixing a new album, with the inevitable Chas Chandler producing and Paul Hardiman engineering . . . Eric Burdon was also recording a solo album . . . A new band walled Trixter, discovered and produced by Martin Rushent, were recording a single and finishing off an

album for summer release . . . Frenchman Michel Polnareff was busy recording for Atlantic . . . The Movies, Joan Armatrading's old backing band, were recording a new album with the provisional title "School Of Love" for release soon . . .

Marquee

Outrageous accents aside, Marquee Studios engineer Steve Holroyd has been working on several French sessions recently, including two with Michel Jonase and Barry St. John. Michel was produced by Claude Right and Barry by Frederic Liebowitz . . . Changes to the studio recently have meant that visitors can now recline in air-conditioned control room surroundings, whilst gazing at a completely refitted acoustic finish to the room . . . Work continued meanwhile in the remix suite. Pip Williams producing Graham Bonnet's, Bardot's and Misty's albums, helped by engineer John Eden . . . The famed and renowned Biddu whiled away some precious time working on the new Tina Charles album which he is "very pleased about." . . . Montana Red's album was decidedly ongoing with producer Kaplan Kaye and engineer Geoff Calver slaving over a hot mixing desk . . . Phillip Goodhand-Tait was recording a single with the Love Affair, entitled "Private Lives" . . .

ODEALER NEWS O

Andertons Guildford

The biggest news at Andertons just lately is the opening of a new shop in Guildford, taking the piano and organ side of things with it. This is planned to open in mid-August, and will leave the Stoke Fields shop as a purely group gear store - good news for all musos in the area ... A very successful Yamaha demonstration was staged at Andertons recently, with particular interest shown in the newer solid guitars, and, in keyboards, the polyphonic synthesizer and the new electronic piano ... A good deal with Gibson involving a large import of these guitars should result in some attractive prices at Andertons . . . The mail-order side of the trade is increasing rapidly, with the lower-priced guitars proving especially popular with mail customers . . . Also, Anderton's hire service is becoming very popular, with a full range of guitars, amps and PA's always available . . .

Stage Edinburgh

Stage have been having quite a few problems in getting stock from various manufacturers ... The Roland range of keyboards had been selling well ... The Roland range are doing a synthesizer demonstration road show with the band Thunder ...

Sound Pad Leicester

Fender and Gibson guitars have been selling well, along with Antoria and Ibanez ... The Who's demonic drummer purchased some Rogers drums ... Leicesterbased band Showaddywaddy popped in to buy a Martin acoustic . . . Big John's Rock & Roll Circus (Big John was formerly with the Brotherhood of Man) have been kitted out at Sound Pad recently ... Tony lommi of Black Sabbath bought a DiMarzio pickup to boost his volume ... Comedian Bill Maynard got a Gibson J40 "just for a ... Elton John had some drum spares ... Mud purchased a new Carlsbro amp ... Dry Ice, a local Leicester band, bought some HH equipment . . .



Drum demon visits Sound Pad

Kitchens Leeds

Business has been particularly brisk lately, and equipment over a wide range has been moving ... In combos, Maine and Marshall have been selling well, and WEM copicat units have taken an upsurge in sales ... Fender guitars have been enjoying a good run and Kitchens have the whole range on show at their shop ... Antorias, CSL and Ibanez replicas and originals are proving as popular as ever amongst local guitarists, who have also been choosing Electro Harmonix effects pedals in large numbers, particularly the Electric Mistress and Four Stone Phaser ... Small mixer units are attracting a lot of interest, with the Peavey 1200 and 800 series enjoying a couple of sales to local bands ... Recent visitors to Kitchens have included Chris Hitlman and Joe Brown . . .

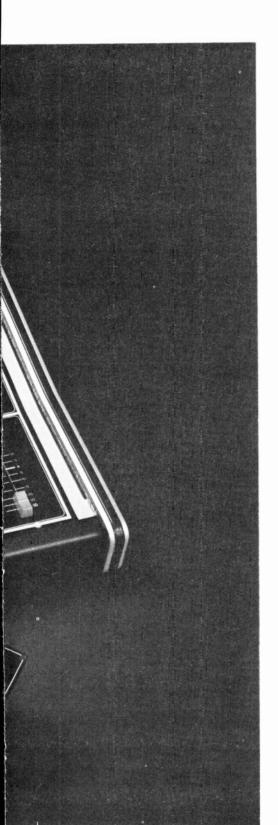
Carlsbro Sound Centre Mansfield

At Carlsbro Sound Centre, Fender and Music Man have been selling well ... They have just got in the new Carlsbro flared P.A. cabinets and the new Carlsbro bass amps both of which seem to be selling very well ... A local band called Burgundy have just bought a Music Man bass from them and Paper Lace were in to purchase a couple of Gibson Firebirds and a Marshall amp ...

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• TRADE NEWS •

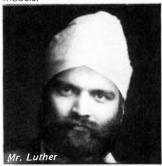
New London Synthesizer Centre

A new shop, specialising in synthesizers, has been opened in North-West London, by a man who is the British Oil Corporation's financial adviser.

He is Mr. A.S. Luther who intends Chase Musicians to become London's synthesizer specialists and wants to introduce electronic music to the Indian community.

Mr. Luther, who is a partner in a firm of accountants, has been playing keyboards for pleasure for two years. Chase Musicians was established on the profits of the financial consultancy business he runs.

The shop is very close to both Euston and King's Cross stations at Chalton Road and promises a 24-hour delivery service from its extensive range of synthesizers which include the top ARP, Korg, and Roland models.



Shure PA Systems

In our enthusiastic survey of PA cabinets recently, we did Shure the injustice of ignoring them. We wouldn't like our readers to feel that they've missed out in any way so here are a few details of the range that we should have highlighted.

Readers the world over will familiar with the famous Shure Vocal Master system, but they may not be quite so familiar with the fairly new SR108 Speaker System. This is a two-way speaker system designed for work at high soundpressure levels with either an active or a passive crossover unit. Six eight-inch low - frequency drivers are incorporated in each column in a linear array in a front-ported, horn-loaded design. Four high-frequency drivers are also coupled to a radial horn. This type of unit is obviously of great interest to readers concerned about choosing the right PA speakers.

£¼m extension for HH

HH Electronics is adding a £250,000 extension to its new factory at Bar Hill which will make the complex more than twice its existing size. The new space will be given over entirely to production and will enable the Cambridge company to step up production of a wider range of products such as the new mixer and power amps which are now being produced by HH. The new extension is due for completion at the end of next month.



The HH Management

New Shure Microphone

Shure Electronics Ltd. recently announced the introduction of a new microphone which features a smooth, flat frequency response and is designed for speech, vocal and instrumental pickup.

Called the SM59, the new mike is a dynamic type with a wide 50 - 15,000Hz frequency response providing a clean reproduction without a presence peak in the higher frequency range. It also features an antifeedback, cardioid pickup and a patented mechanopneumatic shock mount system which reduces mechanical noise and pickup of floor vibrations. The SM59 previewed at the APRS '77 exhibition last month.

Butch Miles Pearl Clinic

Butch Miles, drummer with the Count Basie Band, performed solo for over two hours at a recent, and very successful, drum clinic which was staged at London's Ivanhoe Hotel by Norlin in association with Henrit's Drum Store and the Contemporary Drummers Society.

Butch's basic theme was to illustrate the advances in drumming techniques over the past forty years. On a Pearl five-drum outfit, he went through jazz, swing, be-bop and rock styles, winning over a capacity audience.

The evening encled with an autograph signing session while the visitors had a chance to see the latest in the Pearl Percussion line including the new Pearl vibes, timpani and acrylic kits. Bob Henrit's newly-opened store is at 112-114 Wardour Street, London.

Praise for CBS Arbiter

Praise indeed for CBS Arbiter when it was revealed in the CBS Financial Report for 1976 that "CBS/Arbiter in England consolidated warehousing, shipping and light manufacturing operations into a single facility from which it will serve both the German and British markets. The CBS/Arbiter units distribute Fender quitars. Rhodes pianos, and Rogers drums in West Germany and Great Britain, and Gulbranson products Great Britain. They contributed signficantly to the more than 40% of CBS Musical Instrument sales which are made in foreign markets."

Lowrey Disney Campaign

Norlin proved they are determined to make Lowrey Britain's biggest-selling organ last month when they invited over 250 people to their annual Lowrey Dealer Conference. It was held at the Heathrow Hotel, London, and the two-day Lowrey festivities included such delights as a Harrods trip for the ladies and a personal message from Donald Duck for the men.

The major story from Lowrey concerned the promotion tie-up between Disney and the organ company. In an exclusive deal, the company have produced teaching aids using the famous cartoon characters of Jiminy Cricket, Goofy, Mickey Mouse etc. and every Lowrey dealer is expected to mount a Disney campaign.

Two new console organs were launched at the top end of the organ range and demonstrations by Jerry Allen and Harry Stoneham drew rapturous applause from the "professional" audience.

Yamaha at Chappells

Yamaha recently held a public demonstration of its new CP-30 electronic piano at Chappells music shop in New Bond Street London. The piano is said to give the feel and sounds of an acoustic piano with the advantages of an electronic instrument.

The piano was demonstrated through the A4115H self-powered speaker system. As well as the CP-30, Yamaha had set up its CS-50 polyphonic synthesizer and YC45D portable organ. The CS-50 is the smallest of Yamaha's new generation of synthesizers.

The larger CS-80 comes with four memory banks enabling retention of any original sounds and the storing of six other original sounds which can be restored at the flick of a switch.

Meanwhile Yamaha have established a chain of "Yamaha Pro Centres" in dealers around the British Isles. The Pro Centres are specifically set up to deal with Yamaha guitars and amps and their function is to serve the serious musician with the best possible service.

Dennis Holloway of Yamaha told I.M.: "Eventually there will be about 60 Yamaha Pro Centres in Britain and every dealer we select to

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• TRYADE NEWS •

run a Pro Centre has to give us undertakings on quality of service."

10cc Tour with Music Man

Top band 10cc have taken an entire Music Man backline on tour with them. The band is using 24 pieces of equipment including HCD 130 amps and a selection of 4 x 12, 2 x 12, and 1 x 15 cabs.

New Phoenix amp

A new British amplifier was shown to the music trade last month. Known simply as Phoenix, the amp is different in many ways to other units on the market. It is made by British Music Strings, the Cardiff-based company that produce Sound City strings and

it is expected that the new amplifier will reach British shops by August.

The amp is a hybrid. It has a valve pre-amp and a solid-state power amplifier. The first unit produced is a 100-watt head with a matching speaker cabinet

'Thunder' Road Show

Mr. Jimmy Gibbs, President elect of the Music Trades Association, and Mr. Brian Nunney, General Manager of Brodr Jorgensen (UK) Ltd., wish to point out that the announcement by Frank Deer of Stage Music in last months 'Trade with reference to the News' English tour and attendance at APRS of the 'Thunder' road and premature show was The group is inaccurate. currently restricting its synthesizer road show to Scotland.

Ibanez Prototype for Isaacs

Summerfield Brothers have presented a new prototype Ibanez guitar to jazz guitarist Ike Isaacs which should be in production early next year and carry

a price tag of about £350.

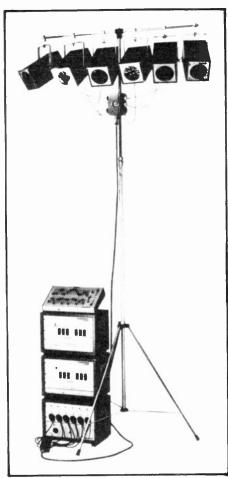
The guitar differs from conventional arch-top guitars in that it has a round sound hole to give a bigger and fuller sound. The interior bracing was designed to give Isaacs the sound he wanted.

Increased Quality Control at Custom Sound

Custom Sound has now completed its programme of quality control innovations which has ensured that less than one per cent of products leaving the factory return for any reason whatsoever.

Although Custom Sound has always been aimed at the professional, the latest improvements have tightened up quality control to the stage where every material, from incoming components, circuit boards, and sub-assemblies is tested until the completed chassis is subjected to eight hours running

These innovations have led to Custom Sound appointing Peter Keeling as quality control manager. He was previously Custom Sound's service manager.



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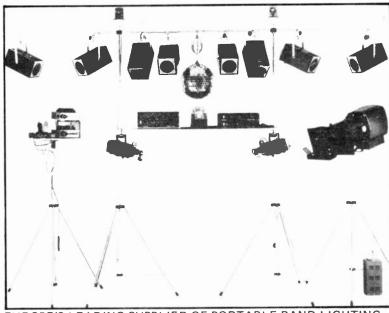


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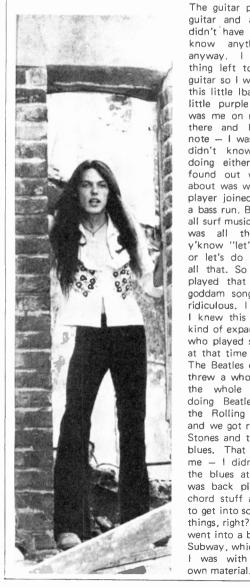
Thin Lizzy's American guitarist tells how he passed his audition with a Les Paul copy and gives forth on his career so far.

> How did you start to play guitar? Well, when I started, I was in Junior High School, I was about 12 or 13 years old, and some friends and myself went to the Civic Auditorium in Glendale and The Beatles and all that weren't really into the whole thing yet — it was all surf music or "Louie Louie" or something, I saw my first live band there called the Continentals and I couldn't believe these guys. I thought they were fuckin' great, y'know? We all sat there and we got really excited about seeing this live band. There was so much energy there and everyone was really diggin' these guys. Virtually the next day at school, we decided to start a band. We used the school drummer 'cos he had a snare drum and a cymbal! The guitar player had a Melody guitar and a Fender Champ, I didn't have anything - I didn't know anything about music anyway. I decided the only thing left to play was the bass guitar so I went out and I rented this little Ibanez bass and a tiny little purple amplifier and that was me on my way. I'd get out there and I'd hit any fuckin' note - I was havin' a ball! They didn't know what they were doing either. The first time ! found out what music was all about was when this other quitar player joined and he taught me a bass run. Basically, then, it was all surf music and most surf music was all three-chord stuff y'know "let's try this one in G, or let's do this one in G" and all that. So we did that and I played that bass run on every goddam song we did - it was ridiculous. I was so proud that I knew this bass run. The band kind of expanded - we got a guy who played sax 'cos sax was big at that time in surf music. Then The Beatles came along and that threw a whole different light on the whole thing. We started doing Beatles' songs and then the Rolling Stones came along and we got right into the Rolling Stones and then I went into the blues. That kinda disappointed me - I didn't really get off on the blues at all because here I was back playing all the threechord stuff again. I just wanted to get into some bigger and better things, right? I quit that band and went into a band called the Ilford Subway, which was the first band I was with who played their

Were you writing songs yourself? No, I was letting everyone else do the writing, I was just happy to be playing somebody else's music knowing that it wasn't stuff from the radio. That's the band that Bobby was in he's now the drummer with Supertramp and also brother-in-law. That went for two years and we had three managers, which was ridiculous. and they all took us to hair stylists and told us we had to have our hair cut the right way and all this shit. They had this big mansion in Beverley Hills where we rehearsed every single day but we only played two gigs. After the end of two years, I'd had it, so I quit - I was about 15 or 16 years old by then. From there, I just floated around from band to band, Before that, I'd always had an alliance with every band I was with. I had this kinda loyalty thing - I couldn't quit the band I was with but I eventually quit this band and got over this hump. I found it wasn't so hard quitting bands and getting into different things. That's when I started getting into the bar gigs. I started playing bars all over L.A. and Hollywood.

Were you still playing bass? Yeah. I was still on bass but I noticed that every band I was in, the guitar player never really played the way I wanted a guitarist to play. I'd been practicing guitar but I'd never really gone out and played with anyone on guitar. Then I started thinking about it pretty seriously. I'd play bass on gigs, but I'd be practicing the guitar at home. I did that for about three years and finally got up the nerve to say "OK, I'm a guitar player." That was my biggest hump because it seemed like everyone else in the world was better than I was. I knew it, I mean, I was crap then, but still, to get out there and do it, you have to fall on your face millions of times to find out. I eventually got into another band with Bobby called Redeve and we rehearsed in this house for about six months and we did one college gig and the band split up. From there, Bobby and myself became a team - I'd always work Bobby into the band or he would get me in. We'd sort of edge our way into each other's band. The last time I played with Bobby was in a band where we' used to play in some big famous hotel in Hollywood. It was famous in the Forties but, since then, had ceased to be anything so this guy took over and he tried to build it up by getting this band in. It was a great gig because the guy would give you free room and board and you got your drinks for half price plus fifty dollars a week. But it was six

nights a week, four 45 minuté sets a night. It was pretty gruelling stuff. Eventually, the guy lost money on the whole thing and he had to sell the hotel and we found ourselves out of a job. Bobby went over to England and joined a band called Supertramp and he came back and told me there was a spot open for a quitar player and would I come over. I'd been to England a year before, to do an album with a group called Hands Across and I'd lost a load of money on it. I lost a lot of money on that venture. - I had sold my car and my stereo and a lot of my clothes and the album never came to anything so I just came back home. Bobby was telling me to come over again and I was telling him I'd lost a lot of money and it had taken me a year to get myself together again. He stayed in L.A. for two weeks just continuously blagging me to come over because I wasn't doing anything in L.A. and I finally thought I should get out of L.A. The trouble was that I never got over to England until four months later and, of course, by this time, they were halfway through their album and Roger, their guitar player, had decided he was going to stick with the band so I found myself in London with no gig, no money and I virtually didn't know anyone apart from Bobby, Anyway, Bobby introduced me to a guy called Eddie Leech who was a roadie with the Stones and he played drums, so I contacted him. That was the formation of a hand I started over here called Fast There were personnel changes in the band and the band lasted for about six months. I'd been meeting people through playing the pubs and that, and I met some people from Thin Lizzy's management and heard they were looking for a guitar player and holding auditions so someone put my name forward and I hadn't even heard the band. I'd seen the name in the music papers but I'd never heard what they were doing so I walked in not knowing any of their music, not knowing anything about them and it was the first real audition I'd ever been to in my life. I had a cheap Les Paul copy at that time and I just didn't know what you were supposed to do. So they taught me a couple of songs and we played them and they taped them and then they taped some more. I didn't think I did a very good job because there were no smiles or anything and nobody was really talking to anybody about anything. So, it didn't look good to me so I just put my guitar back in my case and said "Thanks for





having me." I started to walk out and Phil asked me for my 'phone number so I just thought he was being nice - the old "don't call us, we'll call you" story. So he pulls out this tiny piece of paper, and halves it and writes my name down really small and writes my 'phone number down really small and I thought "Oh, Jesus! That's that! I can see that get lost really fast!" As I was walking out, Phil said "Listen, what do you think about coming back tomorrow?" and I said "Sure." I went home feeling a little bit better and he called me up that night and told me they'd listened to the tapes and everybody was agreed and would I join the band? So I thought "Fuckin' right, pal! You got me!" So I had to go back and tell the other boys in my band I was leaving and I got this big barrage of statements saying these guys were one-hit wonders and they'd had one hit about three years ago and that's the furthest they're gonna go. I said it's something I gotta try - I gotta take this step. So. obviously. they were pissed off because they were going to be out of a gig for a while anyway. I played about four more gigs with them and then started off with Lizzy on a little mini-tour.

What guitar did you have by that time?

I still had the Les Paul copy, but that was remedied real fast. I have to admit it had a pretty good little sound but, when you get into a pigger bracket, they wanted me to look a little better than I actually was and I agreed with them. So, they went right out and bough; me a Les Paul Deluxe — the one I still have. Did you find it difficult to adjust

to a better guitar? How different was it?

Oh, better, much better. I tried about five or six guitars until I tried that one and it seemed to fit pretty well and it was real comfortable. It was no problem. I'm still in love with that one but the trouble is it's got the small pickups and I have a lot of problems olaying with a second quitar player trying to get over the top of him as I tend to get more of a bassy sound. So, the last time in America, I bought a Les Paul Custom - not in the condition it's in now, but I saw great potential in it. The neck had the really small frets on very flat on the neck - so you can't really get any skin underneath there when you want to stretch notes. I like to stretch notes a lot and I found I couldn't get any skin underneath and I was just slipping right off. So, I had my boys take it into a shop and had the big Gibson trets put on and it's beautiful now.

That's the only thing you've done to it?

Yeah, that's the only thing. It's a beautiful guitar, man. I love that sucker to death! It's hard for me to go back to my Deluxe now because the Custom has got such a sweet sound to it. It really sings and there's no problem getting over the top of anybody. Do you use the Custom all the time now?

No, I trade off now. I guess it's about 50-50. I'll be using the Custom a lot on the next album,

What amplifiers are you using now?

Well, I've had a lot of different equipment. I started out with the 100-wart. Hi-watt stacks but I

found them too piercing. It was cutting everybody's heads right off. I got rid of that and got myself a Fender Showman bottom with a Marshall top and I found that wasn't really giving me enough of what I wanted. It wasn't giving me enough sustain and punch. So I thought "Well, screw it! I'm going to go for a 100watt Marshall stack" and I was happy with that for about a year. On the last American tour, I was always fighting with the sound so, during these last rehearsals here, I've just been using a 50-watt Marshall combo. Every time I plug the sucker in, I get a beautiful sound out of it! So when we were touring with Queen, I saw that Brian May was using six Vox AC30's and, every night, he was getting a nice sound. I thought that it looked like a good idea so I called up Marshall and said "Listen, can you get me four of the 50 watt combos and make me up a splitter box to link them all together and control all of them from one box or control each or all of them or whatever?" I went down there and plugged the guitar in and it sounded beautiful - loads of power there and a great sound at the same time. I got five of them - four for me and the fifth one will be for the other guitar player on the other side of the stage. I'll have that for his guitar on my side of the stage so I can control him too, which was how we did it on the last American tour - one of the stacks was for him. He had the same on his side and that worked out great, you could hear all the harmonies going on. Lizzy feature harmony guitar How parts quite prominently. do you work them out? Who does what?

Well, normally I play the melody most of the time. I'll come up with the line and the other guitarist will sit and work the harmony line out. Then we'll both work it out until we're both happy. Obviously, there are songs where he'll come up with the melody. But, 90% of the time. I'll come up with the line we'll actually be playing to. I'm more into the harmony angle than Brian is. He's more into being a lead quitar player, I am too, but I like both aspects - I love harmony guitars. I like to keep open-minded about it.

You admit you weren't exactly an accomplished gultarist when you joined Lizzy. Have you learnt a lot since then?

Well, I'd only been playing guitar then for about three years. I'd be playing by ear a lot of times, instead of what you should be playing — what is actually right so I'd be going more for playing by ear. I'd get a note and stretch it up to where I thought it should be right instead of being exactly correct. I still do that a lot but now I know exactly where I am. In the past three years I've learnt a lot. I still like to just play by ear a lot. I like to stretch a note completely out of context and then come back to it.

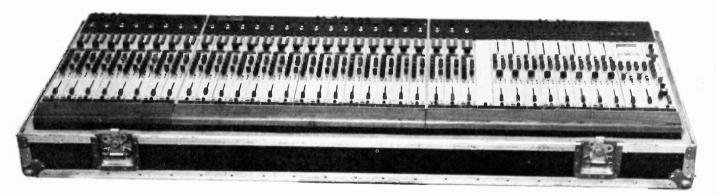
Does that cause problems keeping the strings you bend In tune? Oh yeah. We play pretty hard and you've got temperature changes and things like that so that's gonna affect your strings a lot. If I had one wish, it would be a guitar that would stay in tune all the time. Boy, that would he my dream guitar, v'know? For me, if I go out there and my guitar is out of tune, then the song is no good - 1 can't enjoy it any more if I'm out of tune. I've gotta creep back to my amp and try to make it as unobvious as possible and try to get that sucker back in tune! I know all guitar players hate that.

What strings are you using? Well, I used to use the Ernie Ball blue ones but they've gotten way too light so I'm on to the pink ones now and I'll probably use an even heavier gauge later. I prefer lighter ones but you get a lot more sustain out of a heavier string. The light gauge strings seems to fizzle out a little bit more than the heavier ones. I really like the action of the lighter gauge. You can get a lot more bend out of them. I jammed with Clover at Dingwalls one night and the quitar player uses ultra heavy strings. I was pretty pissed and got up for a jam and put the guitar on and did one chord and wished I'd never gotten up there. Too late now! I've gotta suffer through this. Oh man, they were real cheese slicers! If you become accustomed to light gauge strings and you use somebody else's guitar with heavy strings and you try and do what you would normally do you get people thinking "Hey, that guy's shit, man!" (laughs).

What effects do Well, I've got a power booster -I think it's a Colorsound, I also have an MXR phaser. I had a 90 that I used for a long time and I was sure it was better than a 100 but I tried the 100 and I found you can get a lot more variation from it so I threw the 90 away and I've been using the 100 ever since. On the last American tour, I was using an Echoplex unit and it was good. I quite enjoyed it but one of our guys brought down an MXR Analog delay unit and I have to admit I didn't like it at first but I decided to work at it for a while and it's really nice now.



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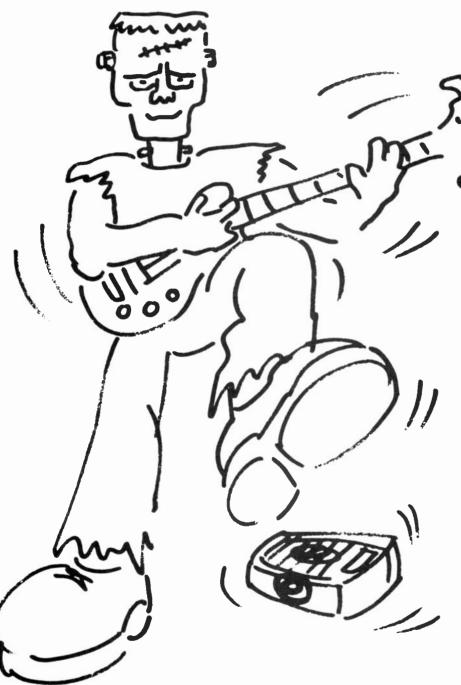
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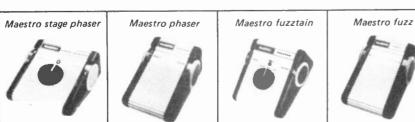
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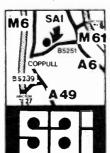
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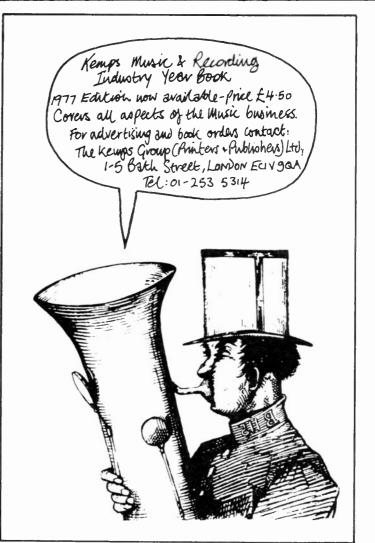
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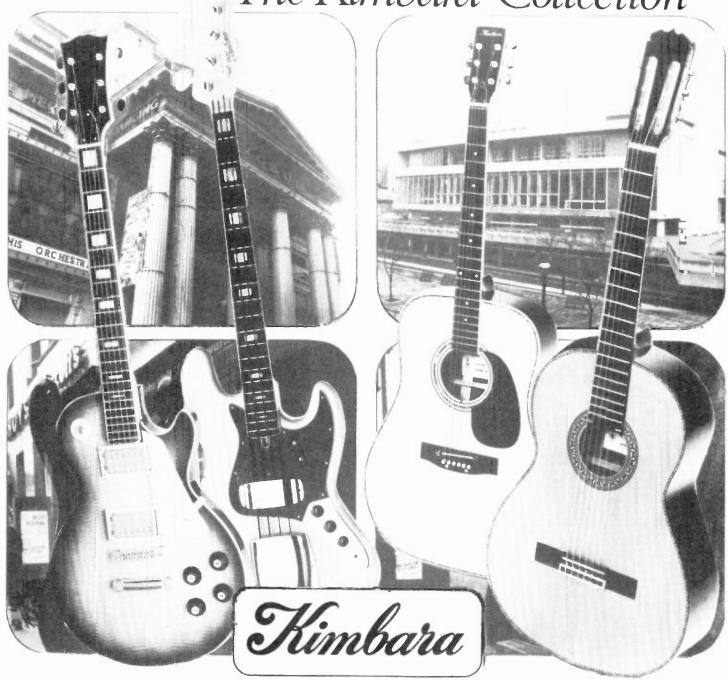


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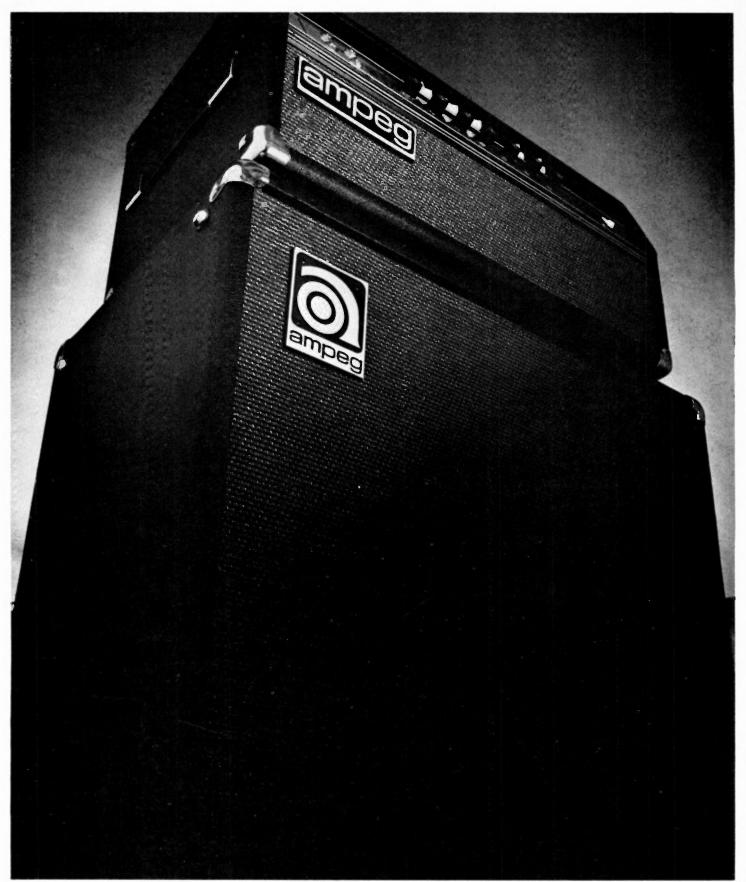
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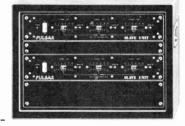


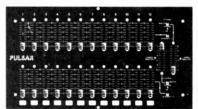
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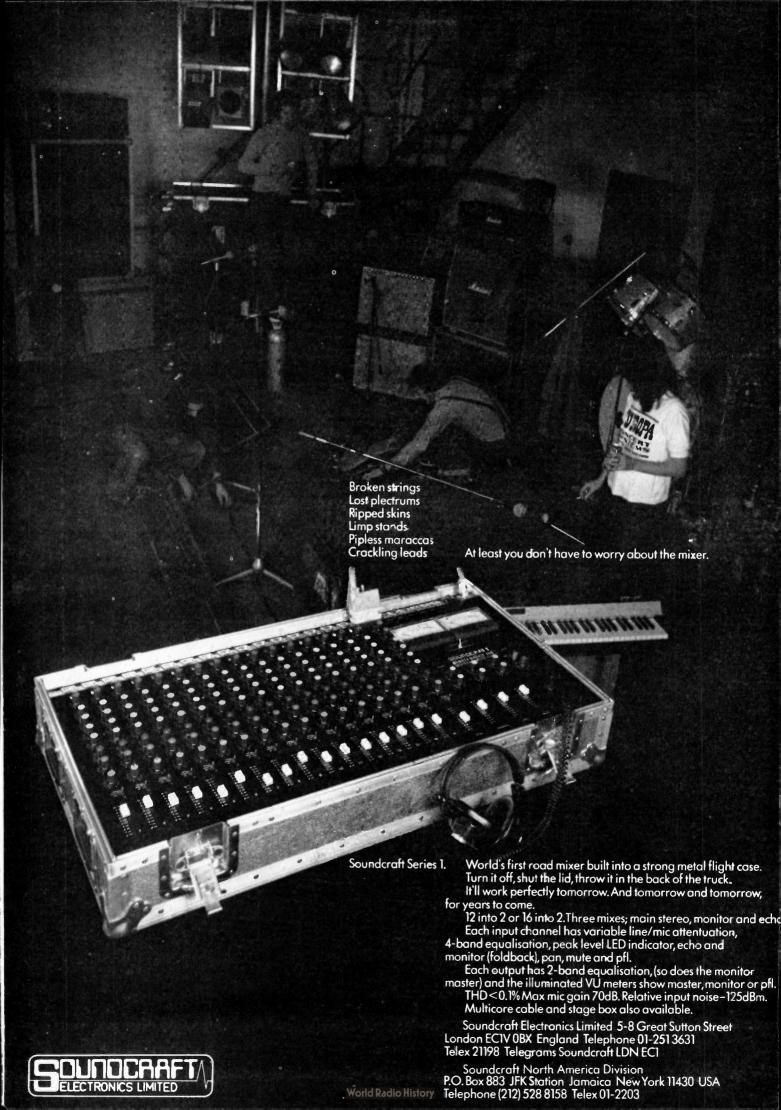
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So you want to get a new keyboard - a new piano or synthesizer perhaps? You drop by your local music store and in one corner there are a few keyboards you try. That's the usual way you get to see what's around. But now, City Electronics have decided that keyboards are such an important part of the instrumental scene that they've opened a "Keyboards Only" shop in Wembley. London, where players can play and compare as many different keyboards as there

Where else can you try a Rhodes piano, a Yamaha piano, a Wurlitzer piano, a Hohner piano, a Roland etc. all under one roof? In fact you can do better than that at City. You can try them all out side by side, using comparative amplification and acoustics.

Perhaps, most important of all, you can try a keyboard out in the sort of playing set-up you would use on stage. You can try a bank of piano, synthesizer and string machine connected to almost any type of amp you choose. Obviously this means that the job of choosing just the right keyboard is made a lot easier.

The Professional Keyboard Centre has only been open since August, 1976. It's in the middle of a shopping precinct in this busy London suburb. A major advantage is that band trucks can pull in right behind the store to load instruments. The shop is part of a chain of organ stores called City Electronics Ltd. and it is the professional end of an operation that deals mainly with domestic organs.

Because of this, the Centre has access to a full service centre situated in Bushey, Hertfordshire, and from here, manager Andy Gordon can call in professional help when any of his customers need it.

In overall charge of the day-to-day operations of City Electronics is Nick Kilby. He explained the philosophy behind the Professional Keyboard Centre.

"We felt there was a need for a place where musicians could try out every type of keyboard there was on the market. Somehow nobody was doing a proper job for the professional and semi-professional keyboard player and that was why we opened the Centre. We now learn that we were right. Customers tell us we're the only place where they can really get into keyboards

properly and we're proud to offer them the chance to spend all day, if they wish, trying out whatever it is they want."

Like most of the City Electronics staff, manager Andy is a keyboard player. He's still gigging regularly — his particular thing is based on funk/rock, Herbie Hancock etc. — and he understands exactly what his customers need.

"When a musician comes in on a Saturday morning with something broken down and says he's got a gig that evening can we fix it?, we can usually get him out of trouble," explains Andy. "We take a pride in offering that kind of service and it's only in the rarest of circumstances that we're unable to help. Nearly always we can fix the keyboard or let him have one to use. That's what we're here for."

Because they care about their professional customers, the Centre has mounted quite a few in-store clinics with well-known keyboard players working out on the vast range of equipment on display. These "Parties" are a great chance for musicians to discover how certain sounds are made and Andy says these get togethers really do bring musicians together.

The keyboard player will find everything at the Pro Centre: Hammond, Farfisa Moog, Arp, Korg, Elka, Carlsbro (amps), Keynote, Vortex, (in addition to the names we mentioned earlier) are always on show. There are organs, pianos, synthesizers, string machines etc. and Andy is constantly looking for new and interesting items to stock.

Already the Centre is a success. The reason is they specialise in something they really know about.



Andy "two keyboards" Gordon

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Roland Strings: RS 202

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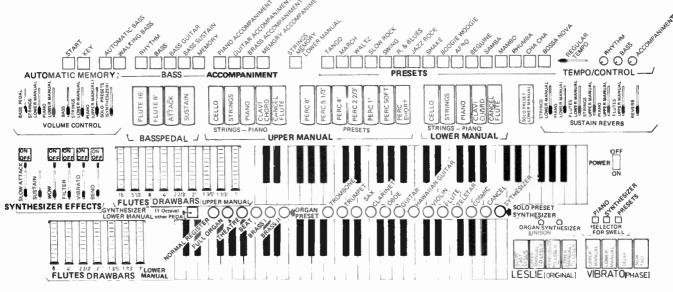


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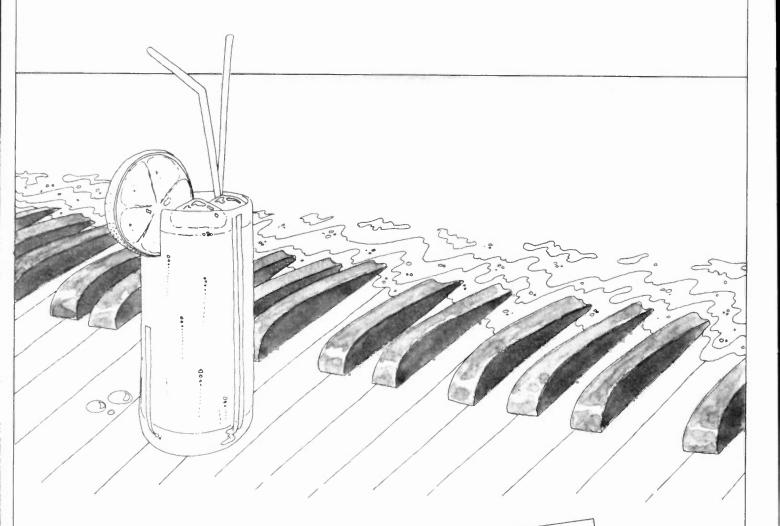


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860 and 760



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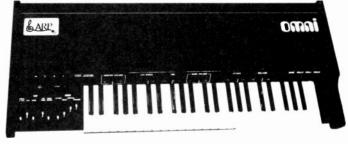
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ARP OMNI

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See the full range of ARP synthesizers at City Electronics Limited

HH is now in its ninth year of production of quality electronic equipment. And with its 100 per cent expansion of the Bar Hill factory, HH is now poised to make an even greater impact on the music industry. Launches are underway for a range of new equipment to include; power amps, effects modules and the new Studio 50 combo.

HH's new power amp is the S500-D which delivers up to 500 watts of output power per channel. One feature of this amp is the facility to remove a complete channel quickly and easily by way of the modular construction. This modular design is again featured on HH's new Stereo-12 mixer which has the revolutionary HH CCD Echo/Effects module. This

module is capable of effects ranging from echo, reverb and flanging, to phasing, and vibrato.

flanging, to phasing, and vibrato.

HH say that earlier attempts by manufacturers to produce solid state echo units often used "bucket brigade" devices which results in such shortcomings as poor bandwidth, and high noise levels. The HH Echo/Effects module uses Charge Coupled Devices which HH claims achieves performance which is superior to earlier attempts and meets the standards of discerning sound engineers at economic cost.

With its expanded headquarters at Bar Hill, HH will become a greater force in the sound reinforcement equipment business and no doubt, as time goes by, that familiar red double "H" logo will become even more ubiquitous.

HIIH electronic

THE STORY SO FAR...



Dealer List

How does HH equipment compare with its competition?

- 1. Mrs. Mellor, A1 Music, 88 Oxford Street, Manchester 1.
- 2. Pete Anderton, Andertons, Stokefields, Guildford.
- 3. Fran Quigley, Band Centre, 9 Harcourt Road, Dublin 2.
- Ray Broome, Albert Balaan, 103 Risbygate Street, Bury St. Edmunds.
- J.P. Beckett, Becketts, 2-3 Gibbs Road, Southampton.
- Rod Watts, Bennetts Musical Instruments, 58 Fratton Road,
- Mr. Osman, Nat Berry, 48 Grand Parade, Harringey.
- Jeff Frost, Cass Music, 29 South Street, Eastbourne, Sussex.
- Don Clayton, 2 Hose Street, Hanley, Stoke-on-Trent. Mick Gorham, Clements Pianos, 17—23 Derby Road, Nottingham.
- Mr. Holden, Cookes Band Instruments, 34 St. Benedict Street, 11. Norwich.
- Mr. Blancflard, J.P. Cornell, 31 Springbank, Hove.
- 13. Ian Cruickshank, Coventry Music Centre, 3/4 Whitefriars Street,
- 14. Mr. Crowley, T. Crowley, 29 MacCurlain Street, Cork.
- Mr. Hoff Dandelion, 97 King Street, Huddersfield, Yorks.
- 16. Mr. Patchett, Dawsons, 65 Sander Street, Warrington.
- Barrie Dean, Bernard Dean Ltd., 10/12 St. Thomas Street, Scarborough.
- 18. Mr. Dias, J.P. Dias, 149-153 Botchergate, Carlisle, Cumbria.
- Jon Gold, F D & H, 138-140 Charing Cross Road, London WC2.
- Gordon Bradbury, Charles Field Audio Visual, 41 Newbold Road, 20.
- Mr. Blarton, Chas. Foulds, 40 Irongate, Derby.
- Denis Fouler, Free & Easy, 57 High Street, Hemel Hempstead, 22. Harts.
- Barrie Hilton, Freedmans, 629-631 High Road, Leytonstone, London E11.
- Andy Greenhalgh, Bill Greenhalgh, 125-127 Fore Street, Exeter.
- John Ham, John Ham Sound Studio, 75-76 Mansel Street, Swansaa.
- Mr. Cook, Hodges & Johnson, 37 St. Botolph's Street, Colchester, Essex.
- Peter Newhouse, Hamiltons, 26 Newport Road, Middlesbrough. 27.
- John Fisher, Hastings Sound, 37-38 King's Road, St. Leonards-on-Sea, East Sussex.
- Peter Hepworth, Hessy, 62 Stanley Street, Liverpool.
- Tony Pegler, John Holmes (Swindon Music Centre), 21-23 Farringdon Road, Swindon.
- Graham Jones, Hudson of Chesterfield, 40 Burlington Street, Chesterfield.
- Phil Jackson, Johnson Soundaround, 227 London Road, Sheffield 4NF.
- 33. Mr. Long, Luton Music Centre, 114 Leagrave Road, Luton, Beds.
- Spokesperson, Marcus Musical Instruments, 113 North Street, Belfast.
- Clive Sayer, Matthews Music, 20 The Broadway, Maidstone, Kent.
- Mr. Duffy, B. Miller, 22 Lough Street, Aberdeen
- Mr. Mckenzie, Modern Music, 30 Castle Hill, Dudley, West Midlands.
- Colin Meiklem, The Music Box, 7/9 Whitburn Road, Bathgate, 38. West Lothian.
- Mr. Page, B. Page & Son Ltd., 10 Wood Street, Doncaster, Yorks.
- Mr. Eley, H. Payne, 14 Fairfax Street, Coventry.
- Mr. Kern, REW, 126 Charing Cross Road, London WC2. 41.
- Mr. Rose, Ray Electrical, 287 High Street, Cheltenham. 42.
- 43. Mr. Gallagher, Rea Sound, The Square, Stewartstown.
- Mr. Grooby, Reedy's Home of Music, 9-13 Penny Street, 44. Blackburn, Lancs.
- Mr. Rose, E.S. Rose, 43 Tenter Croft Street, Lincoln. 45.
- Brian Morris, Rumbelows, Wallasey Road, Merseyside.
- Mr. Savage, John Savage, 71-72 Norfolk Street, Kings Lynn. 47.
- Mr. Swain, Scheerers, 8 Merrion Centre, Leeds. 48.
- Mr. Thomas, Sound Centre Cardiff, 9 St. Johns Square, Cardiff. 49.
- 50. Denis Stansall, Sound Pad, 64 London Road, Leicester.
- 51. Fred Freedline, Sound Wave, 60 High Street, Brentwood, Essex.
- Alex Sinclair, Sounds, 124 Shaftesbury Avenue, London W1.
- Michael Willis, South Eastern Entertainments, 375 Lewisham High Street, London SE13.
- 54. Raymond Shannon, Sports & Music Centre, 1-3 Strand Road, Coleraine.
- 55. Mr. Stanley, Chris Stevens, 33 Norfolk Street, Romford, Essex.
- 56. Dave Carrell, Swans of Manchester 69 Mardol, Shrewsbury, Salop.
- Mr. Baker, Teagues, 69 Union Street, Ryde, Isle of Wight.
- 58. Geoff Baker, Tempo, 160 Broadway, West Ealing.
- 59. Harry Hopkins, Wisher of Derby, 103 Normanton Road, Derby.
- Mr. Collins, Yardleys, 87-89 Old Snow Hill, Birmingham.
- Steve Bramhall, Keyboard Harmony, 82 High Street, Redhill, 61. Surrey.

- 1. It excells.
- What competition?
- There's no competition as far as we're concerned.
- More than favourably. I'd say they're leaders in the field.
- HH has had its heyday. I think other competitors have the edge.
- Very well indeed.
- 8. Very competitive.
- Hasn't got any competition as far as we're concerned.
- Very well I think it's better actually 10.
- Just about knocks it flying the MA100 has nothing near it really. 11.
- 12. Favourably.
- There are a lot of people coming up behind it but it holds its own. 13.
- No competition.
- Very favourably. The MA100 needs to be updated, but the sound is good - their design leads the field. HH care.
- Hasn't got any.
- It offers superior design features both electronically and
- cosmetically.
- 18. Fantastic - first class. Very favourably - good value for money. 19
- Very favourably.
- The PA side stands as the most reliable and cleanest amps 21. around - the instrument amp side is not so good.
- It's better than virtually anything manufactured in the country. 22
- Generally higher quality and wider tone range available from HH. Also a more "expandable" range of equipment with more facilities.
- Exceptionally well it's well designed, sounds good and they come up with good innovations.
- Easily our best seller, it outsells the rest. Quality-wise it's not as good as it used to be.
- We don't have much competition for HH -- all the Groups want HH.
- Very well.
- Very well in most lines. A lot of people copy them so they must 28. be good.
- 29. Streets ahead.
- Very favourably.
- We rate it up here as one of the best on the market. S500D is 31. absolutely/fantastic.
- Very favourably indeed.
- We've had a lot of comeback lately, but it's selling well. 33.
- I think it compares very favourably, in all probability it's a better product than other items in the price range.
- Best product on the market, it's one of our best sellers.
- Our best selling line as regards sales. We're most happy with it.
- Head and shoulders above the rest. I can't think of anything in the range that isn't a best seller.
- Best value for money going.
- 39. Far superior within same price range.
- 40. Good.
- 41. It compares well at its price.
- 42. The best.
- 43.
- Extremely well indeed. The sound's good and the price is good. 44
- Finest equipment we've ever had. Excellent stuff. 45.
- Very favourably with anything else on the market. 46.
- 47 Very favourably.
- I think it's one of the best I'm sure it is.
- 49. No competition.
- Extremely well, it's at the top. 50.
- I consider it as superior to its competition in the same price
- 52. It knocks spots off it.
- Better than any other in that price bracket, and higher. 53
- Fabulously, no complaints at all. The best guarantee on the market.
- 55. Very favourably.
- It's about the best there is for the price. 56.
- Very favourably.
- Price for price its technology is by far the leader. It's a winner 58. and a pure success story.
- Some of the best equipment on the market. 59.
- What competition? It's so good that all its competitors are in the shade - there isn't anything to compare.
- 61. Definitely one of the best buys on the market.

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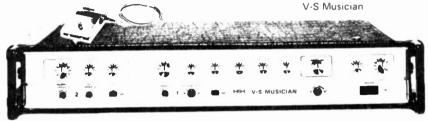






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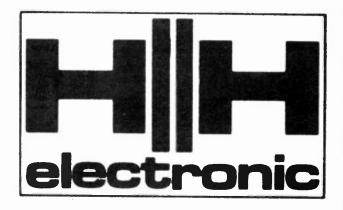
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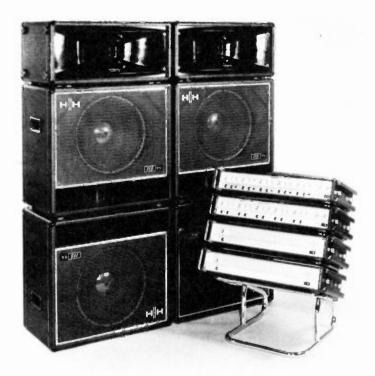
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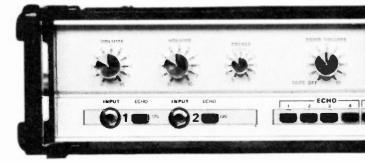
How would you rate HH equipment's reliability?

- 1. Very very good.
- Average.
- 3. I'd say it was very good, more dependable than any other amp.
- 4. We sell a lot of HH and have very few problems.
- 5 Good.
- 6. Not too happy it varies. The new stuff isn't as reliable as the old.
- 7. One of the best. Rate of failure is practically nil.
- 8. Average
- 9. Excellent.
- 10. It's good, very good.
- That is good obviously we get some back, but then we sell a hell of a lot.
- 12. Very reliable.
- 13. Still very good.
- 14. Very reliable.
- 15. They've proved to be the most reliable.
- 16. First class.
- After initial faults have been corrected and the equipment's used properly, we have a virtual nil failure rate.
- 18. Very, very good. We've had no problems that we couldn't sort out.
- 19. We very rarely get stuff back so that must be a good indication.
- 20. Very good.
- 21. Very good.
- They've had a rough patch, but it seems they could be back to what they were two years ago.
- 23. Above average
- Very good. We've had a few problems but they've sorted themselves out.
- They appear to be good quality components, but we are having some problems with recent stocks.
- It's not too bad. We find small faults such as the spring in the reverb switch going, and a couple of problems with IC's. Generally, though, it's not too bad.
- Excellent, very reliable. We pre-check before they go out, so we get very few back.
- 28. Excellent. We don't have much trouble.
- 29. It's very good.
- 30. OK, it's no better or worse than anybody else.
- 31. Excellent very few breakdowns.
- In general very good, but certain items are problematic. But the MA100, for example, is excellent.
- 33. Not so good now.
- Very good compared to its competitors. Maybe not as reliable as it used to be, but still good.
- 35. Very good now. It was a bit dodgey when they first put the valve-sound range out, but they've cleared it up now.
- Very reliable.
- Very high. We've had the usual odds and ends of speaker troubles. but nothing out of the ordinary.
- Very good. There were some speaker troubles earlier, but that's cleared up now.
- 39. We find it reliable.
- 40. Very good indeed.
- 41. Reasonable.
- 42. Very good.
- 43. Good, it's better than most.
- We've only just started selling them so it's difficult to answer that question.
- 45. In five years of service always very reliable.
- 46. Good.
- 47. Very very good.
- 48. Very good.
- 49. 99% reliable.
- 50. 90% OK. A bit of trouble with the echo, but it wasn't their fault.
- We've only had minor problems, and have found reliability generally good.
- 52. We've never had one back yet.
- 53. As good, if not better, than anyone else.
- 54. Our experience it is very good, totally reliable. 55. Good.
- 56. Generally very good.
- 57. Excellent.
- 58. Very reliable.
- 59. We've found it to be very reliable indeed.
- 60. Very very good.
- 61. It is very reliable. Only one unit in 40 needs any attention within the guarantee period.

What do you think of HH's back-up on spares?

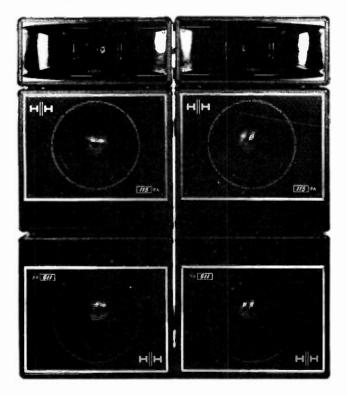
- Back-up service is 100%.
- 2. Superb.
- 3. The best couldn't be equalled.
- 4. Excellent, they're super on things like that.
- 5. Good, but a little bit expensive if you have to send repairs to them.
- 6. Moderately good.
- Superb.
- 8. Good.
- 9. Has been very good until lately.
- 10. Could be a lot better it just leaves a little to be desired.
- 1. If we send off for anything it's usually here in three days.
- 12 Good
- 13. That's very good also.
- 14. First class.
- It's remarkable, delays are very rare. Quite amazing seeing it's such a large company.
- 16. Marvellous.
- We hold in stock a large range of spares, and receive a good back-up from HH.
- 18. Very good, no problems.
- 19. Anything that goes wrong we send back, and it's a fairly prompt
- 20. Very good, in three months they've never let us down.
- 21. Quick and reliable. We do our own problems, we get no problems.
- 22. They've always looked after us.
- Overall very good. One or two minor problems regarding speakers during the recent change-over. Certainly the best service available.
- 24. Best firm that we deal with for spares.
- 25. Excellent, no problems at all. We find them very helpful.
- 26. Very good. They're very quick, by return of post.
- We carry all the spares in stock, so we can service them straight away.
- 28. Very good, we get spares by return of post, and we do our own repairs





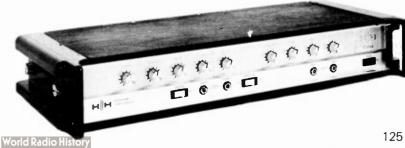
Does HH equipment offer value for money?

- 29. Excellent.
- 30 Very good.
- 31. Not heard of any problems. I think it's good.
- I would say excellent.
- We can always get spares. No problem at all.
- 34. Excellent, no problems at all.
- 35. Excellent, they're here in two days.
- 36. Slow on certain lines.
- Excellent.
- 38. Very good.
- 39 Excellent - we get a return service.
- 40. Very good indeed.
- 41. Quite good. 42.
- 43. Very good, we've had a good time with them.
- 44 We've had no cause to go back to them so far.
- 45. Never had any trouble with them at all.
- 46.
- 47 Excellent.
- 48. Very good. I've got shares in HH.
- 49 Excellent.
- 50. Very good.
- Excellent really first class. They've been helpful and quick. 51.
- 52 Very good.
- 53. Excellent, they come the next day,
- Very good indeed. We do stock some spares. Their service is 54 excellent.
- Very good
- 56. Very good, no problems there at all.
- 57. Very good, top class.
- 58. Second to none.
- It's always been very good. The service is first class.
- 60. What else can I say apart from excellent.
- Very good indeed. One phone call and the spares are in the post. The engineers are very helpful.



- Oh yes, full value for money. No problems at all.
- 2
- 3 I do indeed. You couldn't spend your money on a better amp.
- 4. Yes I think it does, particularly things like the studio 50 combo.
- Value for money, yes, particularly the combos.
- 6.
- 7 Very good value for money.
- 8. Yes.
- Yes, very good.
- Yes, especially the MA100. 10.
- Yes, very much so, especially the new bass combo. 11
- 12.
- Yes, definitely, they've held the prices well. 13.
- Definitely.
- 15. Excellent value for money, HH are working for the musician.
- Yes, very good. 16.
- 17. Their advantage of being market leader enables them to maintain the most competitive price structure.
- 19 Yes definitely. There's nothing they do that's overpriced.
- 20 Yes, presentation very good.
- Yes, compared to imported amps they probably do the cheapest
- 22. Definitely.
- Considering the extremely high standard of manufacture, and innovative development HH must represent the finest value for money available.
- 24 Yes, easily.
- As far as the customer's concerned, yes. As far as we're concerned we have had quite a few that have been faulty.
- 26. Definitely, stuff like the MA100 compared to others is very good value for money.
- 27 Yes definitely.
- It's about average, not cheap nor expensive.
- Yes definitely, terrific stuff.
- Nice looking and does the job it's not overpriced.
- 31. Definitely.
- 32 It's excellent value for money.
- 33. Yes, they're no higher than any of the British makes.
- 34. Yes, I think it does.
- Yes, plus they hold their price for resale second-hand HH are scarce and therefore the resale value is high.
- 36. Very good value for money.
- I think they're terrific value for money. 37.
- As an HH dealer I'm very happy with all their equipment.
- It's unbeatable value for money. 39.
- 40 Definitely
- 41. I would think so, or people wouldn't buy it.
- 42. Yes.
- 43. Yes, we sell a lot of HH.
- 44 It seems very good value for money - and they look good!
- 45. Very much so compared with other companies.
- 46.
- 47 Excellent value for money.
- 48 Yes I do
- 49 Yes.
- 50 Yes it does.
- 51. Yes, I think it's excellent value for money.
- Yes. 52
- 53 Definitely.
- Without fear of exageration I'd say it was the best equipment on
- 55. Very good value for money
- 56. Definitely.
- 57.
- 58. Good value for money, taken the market by storm.
- Oh yes, certainly
- Very much so HH is the best, it's been the best for five years.
- 61. It sells itself, people just want it.







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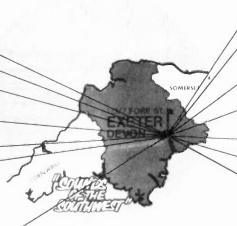
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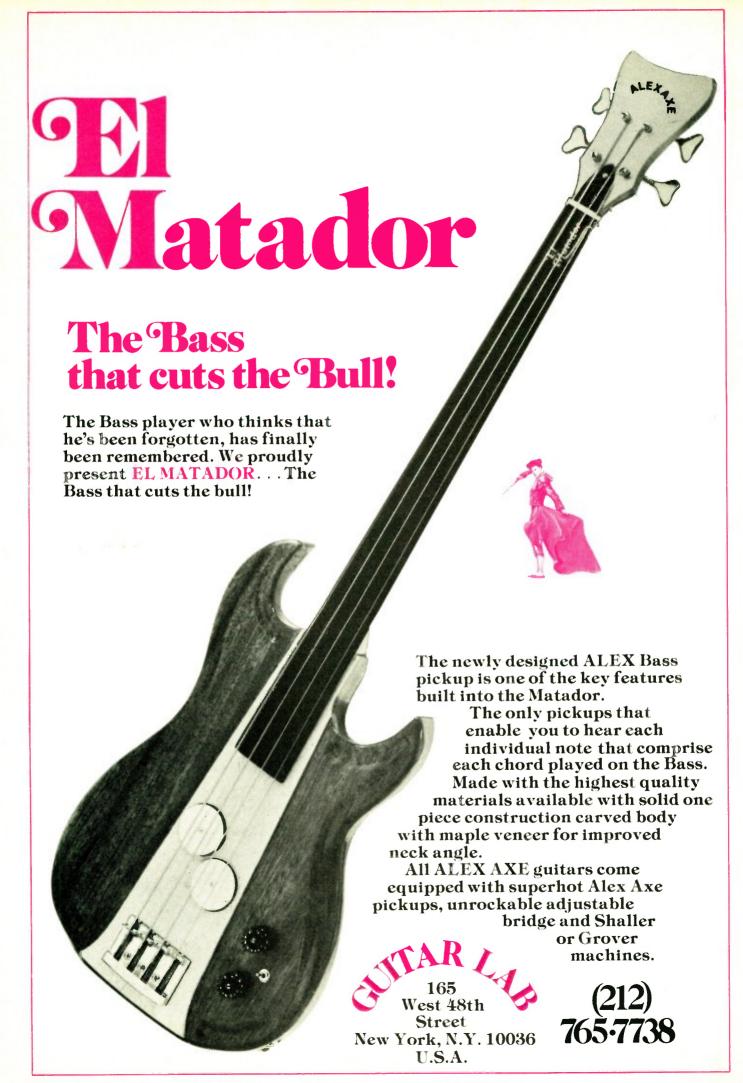
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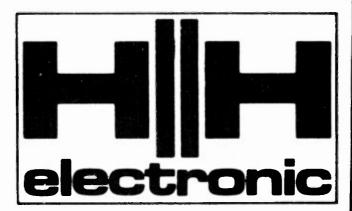
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COMBO GUIDE

The range of combos available these days is staggering and any musician looking for his ideal piece of equipment can be forgiven for feeling totally confused by all the permutations of amplification around him. IM's following guide to combos goes, we hope, some way to helping you isolate the ideal combo for your needs and pocket.

MODEL	WATTS RMS	SPEAKER SET-UP	DIMENSIONS	CHANNELS	INPUTS PER CHANNEL	MASTER VOLUME	EFFECTS Tremelo/ Vibrato Reverb	Sustain/ Distortion	SPEAKER EXTENSION SOCKET	CASTORS	PRICE U.K. EXC. VAT	COMMENTS
CARLSBRO	100	212	001/00101/#	0		./	/	,	SOURET	,		
Stingray	100	2x12	26½×23×10½"	2	2	✓ 	√	V	2	V	209.00	176 W into 4 \(\O\) Cover & double foot switch
Stingray Bass	100	1x15	26½×32×14′′	2	2				2		215.00	Bandpass filter
Stingray Supe		2×12	26½×23×10½''	2	2	V	\checkmark \checkmark	$\sqrt{}$	2	1	240.00	176 W into 4Ω Cover & double foot switch
Scorpion II	35	2×12	26½×22×11″	1	2	_	\checkmark	$\sqrt{}$		ations	155.00	Cover & double foot switch
Scorpion Custom	35	2×12	26½×22×11′′	1	2	_	V	$\sqrt{}$	_	_	165.00	Cover & double foot switch
Hornet Custom	35	2×12	26½×22×11′′	1	2	-	$\sqrt{}$		_	_	125.00	Cover
Hornet	25	2×10	22½x18x9½′′	1	2		./		_		82.00	
Wasp	10	1×10	19x16x8½''	1	2				_		69.00	
FENDER							Υ					
Twin Reverb	100	2x12	20×26×10½''	2	2	\checkmark	\checkmark	\checkmark	1	/	398.59	JBL Version £498.00
Pro Reverb	45	2x12	20×26×10½''	2	2	v.	/ /	\checkmark	1	/	316.07	
Super Twin	180	2x12 heavy duty	20x26x10½''	1	2	v ·	✓	/	1	V	443.62	5 band Graphic EQ
Quad Reverb	100	4×12	31½×26½×11½′′	2	2	✓	✓	✓	1	V	464.84	
Super Six Reverb	100	6×10	49½×26½×11½′′	2	2	V	✓	/	1		451.94	
Vibrosonic Reverb	100	1x15 JBL	20×26×10½′′	2	2	V	✓	\checkmark	1	✓	426.85	For steel & jazz guitar
Super Reverb	45	4x10	24½×25×10	2	2	V	✓	\checkmark	1	\checkmark	339.50	JBL Version £526.00
Vibrolux Reverb	40	2×10	18½x24¾x9½′′	2	2	_	V V		1	_	263.73	1020.00
Deluxe Reverb	20	1×12	17×24½×9½''	2	2		V V		1		216.92	
Princeton	12	1x10	16¼×19¾×9½′′	1	2				1	_	122.43	Reverb Version £169.00
Vibro-Champ Champ	6	1x8 1x8	14½×17×7¼′′	1	2				1	_	71.28	Vibrato
Bassman 10	50	4x10	14½×17×7¼" 29½×25¼×11¼"	1	2				1		65.10	
Musicmaster				2	2				1	\	276.19	Deep & Bright Switch
Bassamp VOX	12	1×12	20%×17×9%′′	1	2				1		106.70	
Vox AC 30	30	2×12	27×21×10′′	3	2	_	✓		_	_	232.50	
Vox AC 30 Reverb	30	2x12	27×21×10′′	3	2	_	V		_	_	255.85	
Vox AC 120	100	2x12 heavy duty	57x77x27 cm	4	1	V	$\sqrt{}$	$\sqrt{}$	1	_	294.50	New Line 5-band EQ
Escort	6	1×8	32x13x21 cm	2	1	_		(to u	1 se as pre-amp)		43.40 32.55	Mains battery Battery
Escort	30	1×12	Not available	3	1				_	_	80.60	

СМІ		_			1		_	_	_	51.69	
10 watt Combo CMI	30	1x8 3x10	12x22x8" approx. 63x22x71 cm	1	2			7 = -	_	124.60	
maximin CMI	100	2x12	63x22x71 cm	1	2			_	-	212.39	
maximin CUSTOM SOUN	d D					•			✓	204.50	0
Standard	75	1×15	60x57x30 cm	2	1			3		201.50	Overtone
DB (Bass)	75	1×15 heavy-duty	60×57×30 cm	2	1	_		3		220.10	Harmonic contrast switch
	150	1x15	60x57x30 cm	2	1	_		3		238.70	Overtone
DARBURN SRV 100	100	2x12 Celestion	28×21½×10′′	2	2	to be fitted	\ \ \ \ \ \		V	245.37	Overload + noise gate + bright switch
SRV 50	50	1×12 Celestion	19%×21%×10′′	1	2	✓	V V V	2	_	180.57	Overload + noise gate + bright switch
KGP 100 (available mid- July)	100	2x12 Celestion	23½x30x12¾"	2	2	WATER A STATE OF THE STATE OF T	V V	1	V	245.00 approx.	Treble boost specifically keyboard
KGP 50 (available mid- July)	50	1x12 Celestion	23½×19½×11½''	2	2	_	V V	1	-100	175.00 approx.	Treble boost specifically keyboard
DYNACORD	150	2×12	27½×22¼×9½′′	2	2	\checkmark	√ · ·	_		not available	Footswitch supplied
EUROTEC	25	110	not available	1	2	_		_	_	92.13	
Transit II	45 45	1x12 1x12	not available	2	2			_		100.46	
н∥н			21 00 01/1	4	2		V	_	_	148.80	16½ kilos
Studio 50 VS Musician	50 100	1x12 2x12	21×22×9½'' 21×26×7½''	2	2 2	<u>v</u>		1	· ·	207.70	35 kilos + v/s
	100	2x12	21×26×7½''	2	2		V	1	₹/	224.75	35 kilos + v/s
Reverb VS Bassamp	100	1×15	35×21½×15′′	1	2		· / /	/ 1	+ brakes	227.85	42 kilos + v/s
HIWATT SA 212	50	2×12	22×27×12′′	2	2	\checkmark		1		187.55	Specified as lead Guitar unit
SA 212R	100	2×12	22×27×12"	2	2	V	✓	1	/	248.00	Specified as lead Guitar unit
LANEY					_		V			54.63	12 kilos
K 20 K 40L	²⁰ /70	1x30 cm 1x30 cm	39×59×20 cm 46×59×20 cm	1	2 2			(to give 70 watts)		126.71	"Klipp" conti Built-in low roll off at 30
K 40B	40/70	1x38 cm	46x59x20 cm	1	2		<u> </u>	(to give 70 watts)	-	126.71	"Klipp" cont Top and bass boost switcheroll off 30 Hz
K 70	70	2x30 cm	53x75x20 cm	1	2		V V	_	_	173,60	bass cut swite "Klipp" low roll off at 30
K 120	120	2x30 cm	53x75x28 cm	1	2	was.			V	342.42	"Klipp" low roll off at 30
MAINE Musician	120	2×12	698×292×585 mm	2	2	✓		/ 1	v′	249.55	36 kilos

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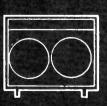
JC 60 60 watts 1 channel



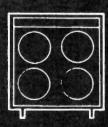
JC 80 60 watts 1 channel



JC 120 120 watts 2 channel 30cm x 2



JC 160 120 watts 2 channel 25cm v 4





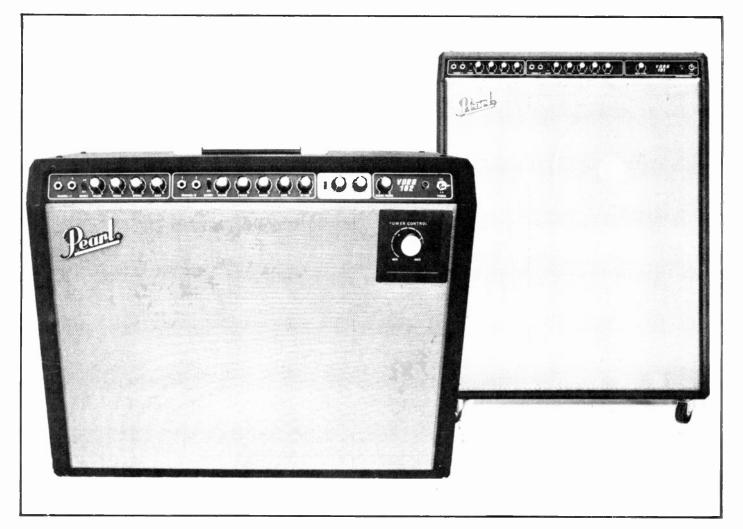




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MARSHALL	20	212	405 040 040								
2201	30	2x12 vertical	405×240×210 mm	1	2				_	125.11	lead
2202	30	2x12 vertical	405×240×210 mm	1	2			Manual .	_	125.11	Bass
2199	30	2x12 horzł.	745×570×230 mm app	prox. 2	1 + common			_	-	137.73	
2040	50	2×12	80×76×29 cm	2	2	_				231.34	Valve
2200	100	2×12	740×565×225 mm	2	1 + common	V		_		244.12	lead Boost & cut switches
2077	100	4×12	106x81x38 cm	2	2 + common			External lead		266.62	Bass
2078	100	4x12	106x81x38 cm	2	2 + common			External lead		266.62	
MUSIC MAN 112-65		1×12	17×24½×10½′′	2	2	1	\ \ \ \	∠ ∠ ∠	_	396.87	lead Footswitch for
115-65	65	1x15	20½×24½×11′′	2	2	1	1///	✓		436.94	rev/trem Footswitch for
210-65	65	2×10	15x24½x10½''	2	2	1	- -			436.94	rev/trem Footswitch for
410-65	65	4×10	24½×24½×11′′	2	2	1				517.12	rev/trem Footswitch for
212-65	65	2×12	19½×26½×11′′	2							rev/trem
					2	ı	✓ ✓ ✓	\checkmark	_	517.12	Footswitch for rev/trem
210HD-130 212HD-130	130	2×10	15×24½×10½"	2	2	1	✓ ✓ ✓	\checkmark	\checkmark	517.12	Footswitch for rev/trem
	130	2×12	19½×26½×11′′	2	2	1	✓ ✓ ✓	\checkmark	\checkmark	601.30	Footswitch for rev/trem
412HD-130	130	2x12	25½×24½×11′′	2	2	1	✓ ✓ ✓	\checkmark	✓.	601.30	Footswitch for rev/trem
PEARL								_			· · · · · · · · · · · · · · · · · · ·
Duo Reverb	100	2×12	20×26×9½"	2	2	✓	✓	✓	\checkmark	252.00	
Vorg 102	100	2x12	27×21½×10¼′′	2	2					300.92	D
				for		✓	✓ ✓			300.92	Power overload control. Built in phaser
PEAVEY											
Pacer	45	1×12	20×20×11"	1	2	✓	\checkmark			170.50	000000000000000000000000000000000000000
TNT (Bass)	45	1×15	24×123×265′′	1	2						Optional overdrive
Session 400	200	1x15 or 2x12	26¼×20×11′′	1						209.25	Bass application/ optional overdrive
ETD 400					2	<i>V</i>	✓	1		410.75 (basic model)	designed for steel guitar
	200	1×15	20×20×11′′	1	2	_	✓	1	_	503.75	J
Artist	120	1×12	20×17½×11"	2	1	V	V.	1	_	333.25	with Automix
Deuce	120	2×12	26¼×20×11′′	2	1			1	_	333.25	with Automix
Classic	50	2×12	26¼×20×11′′	2	1	/		1		248.00	with Automix
Classic	50	4×10	26¼×26 11″	2	1			1	_	294.50	with Automix
Mace	160	2x12 or	261/4×20×11" or	2	1	V (2) / /	1	_	441.75	with Automix
		4×12	26¼×31×11"	2	1	✓ (2		1	_	527.00	with Automix
RANDALL Commander						V 12	, ,	,		527.00	With Automix
IG120 210	120	2×10	2716x17x10''	2	2	✓	✓	\checkmark	_	273.00	Treble boost
1G120 212	120	2×12	27½×22×10′′	2	2	<i>✓</i>	√	√	_	292.00	Vibrato Treble boost
IG30 110	30	1×10	20×16×9½''	1	2				_	Not	vibrato Treble boost
IG120 410	120	4×10	27½×31½×10′′	2	2	/	<u></u>		_	Available Not	vibrato Treble boost
IG120 610	120	6×10	27½×45×12	2	2	V				Available Not	vibrato Treble boost
REDMERE Soloist	140	2×12	26×14×28′′ approx.	2	2	<i>V</i>	✓	✓	·	Available Not Finalised	Built in flightcase + phase 3 voices

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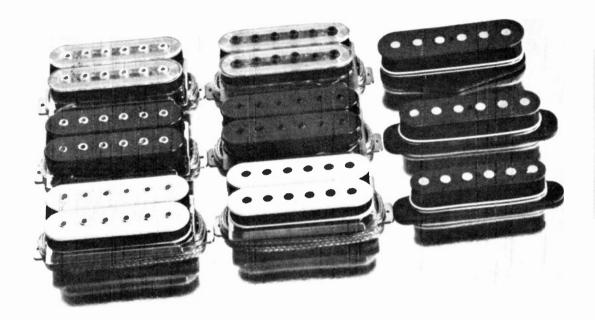
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MODEL	WATTS RMS	SPEAKER SET-UP	DIMENSIONS	CHANNELS	INPUTS PER CHANNEL	MASTER VOLUME	EFFECTS Tremelo/ Sustain/ Vibrato Reverb distortion	SPEAKER EXTENSION SOCKET	CASTORS	PRICE U.K. EXC. VAT	COMMENTS
Dual Soloist	140	2x12	26x14x28" approx.	2	2	\checkmark	V V	✓.	\checkmark	Not Finalised	Built in flightcase +
Bass Master	140	2x12 Celestion/ATC	26x14x28" approx.	2	2	/	\checkmark	√	V	Not Finalised	Built in flightcase +
Session Man	140	2×12	26x14x28" approx.	2	2	1		✓	✓	Not Finalised	phase 3 voices Built in flightcase +
ROLAND JC 60	60	1x30 cm	600×225/255 ×480 mm	1	1	✓	V V	1	\checkmark	292.15	phase 3 voices Vibrato speed/
JC 80	60	1x38 cm	600x225/255 x600 mm	1	hi/lo 1 hi/lo		V V	1		327.23	depth + chorus Vibrato speed/
JC 120	120	2x30 cm	750×240/270 ×540 mm	2	ni/lo		V V	1	√	406.73	depth + chorus Vibrato speed/
JC 160	120	4x25 cm	750×240/300 ×700 mm	2	2 hi/lo	<u> </u>	J /	1		452.13	depth + chorus Vibrato speed
ROOST Session- master SM 50	50	2×12	51x71x28 cm	2	2	✓		✓	_	170.71	depth + chorus
SM 50R	50	2×12	51x71x28 cm	2	2					107.46	
SM 100	100	2×12	51x71x28 cm	2	2					197.46 200.00	
SM 100R	100	2×12	51x71x28 cm	2	2	V.				226.85	
SM 104	100	4×12	91.5x71x28 cm	2	2		V			263.89	
SM 104R	100	4×12	91.5x71x28 cm	2	2	1/				290.74	
SELMER 15SS	15	1 x (13 x 8) elliptical	21½×13×6½"	1	2	_	V	_		40.89	
Super Reverb 30	30	2×10	19x24½x10′′	2	2	_	/	_	_	123.56	
Futurama 3	3	1x6	15½×13½×5½′′	1	3	_		_		23.55	
SUNN										23.55	
Stage Lead	50	2x12	29×24×12"	2	1		./	/			
Stage Bass	50	1x15	29×24×12''	2	1			V		240.00	
TRAYNOR YGL3	100	2×12					,			240.00	
Twin Reverb Bass Mate		1 x 15	36×6×24'' 36×16×5''	2	2		✓ 		_	269.00	Vibrato
Guitar Mate	30	1 x 12	30x24x5"	1	2			/	_	130.00	
WEM		1 7 12	00/24/0		2				_	130.00	Vibrato
Dominator MK III	15	1x12	20×20×8′′	2	1	_		_	_	107.00	Treble boost
Dominator Bass MK I	50	1×15	20×20×8′′	2	1	_		_	_	119.00	Treble boost
Dominator 30 Standard	30	1×15	20×20×8′′	2	1	_		<i>''-</i>	_	165.00	
Dominator 30 Reverb Dominator 5	30	1×15	20×20×8′′	2	1	_	✓	una-	_	182.00	
YAMAHA		2×12	25×25×10	2	1			-	_	198.00	
G25 112	30		47x45x20 cm	1	2	_	V V			141.00	
G50 112	50	1x12	53.1x45x25 cm	1	2		VV			141.33	00.1.11
G100B 212	100		70.8x59.7x25 cm	2	2					212.03	20 kilos
G100 115	100		70.8x59.7x25 cm	1	2		,			276.85	29 kilos
G100 410	100	4×10	70.8x75.2x25 cm	1	2					310.18	31 kilos
B50 115	50	1×15	70.8x73.2x30 cm	1	2		V V V			365.74	33 kilos
B100 115	100	1×15	70.8×97.2×35 cm	1	2					254.62	34 kilos
,					_	_		_	\checkmark	337.96	51.5 kilos

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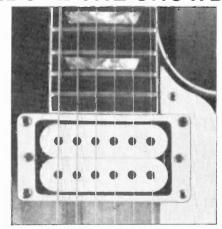


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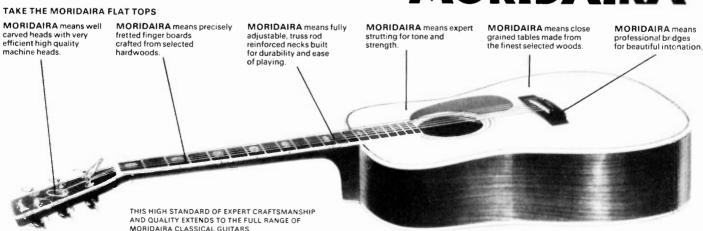
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TONY BACON TALKS TO PORKY & BILBO

The cutting engineer is probably more important than you think. More often than not, musicians tend to overlook that part of the process in the long chain of events that go from entering the recording studio to seeing your record in the shops.

George Peckham, cutting engineer at the Master Room in London's Riding House Street, says, "An artist, or his record company, will spend, say, £10,000 in the studio recording the material, then the cutting will be done in some back room in the studio. They'll just chuck it on and take no notice. You can ruin a record that way."

The Master Room aims to make things a little different, and certainly a lot better, in that area. The fashion, or rather the norm these days, especially for singles, is to have as much level on the record as possible, in other words for the record to be as loud as possible. But, in a lot of cases, with multi-tracking being the accepted way of doing things, the tape brought to George, or partner Denis Blackham, will suffer from too much sound coming out. The sheer volume of sound on the tape will be overwhelming. "For the great percentage of tapes we get, we sit there and say 'what shall we do?'. The client is screaming for level, but there's been so much going on in the studio originally and they've just thrown it all on. It's basically down to lazy artists," they say.

Another thing cutting engineers have to put up with is being, arguably, the last link in trying to achieve some sort of quality control in the records that are the end result of everyones' efforts — from artist through producer and recording engineer and on to cutting engineer.



George Peckham - "Porky" (left) and Denis Blackham - "Bilbo".

"I think records suffer from 100% worse surface noise now than they have ever had. Most people are into this level thing, mostly because they want to cover up all the clicks and bangs that accompany most pressings these days. Those who, in the past, wanted to dub straight from tape to disc just can't do it anymore," George says.

High-quality masters and acetates are the Master Room's bread and butter. George and Denis operate on a one-day-on, one-day-off system which seems to work to everyone's advantage.

"We usually work a pretty long day. Clients will ring up saying they want to work specifically with either George or myself. Fashions change quickly in the cutting world. Someone will get some new gear in and, for a few months, will be the "in" place. But we've built up a solid reputation now," Denis claims.

The accent was on reggae on the day I.M. visited. But past clients have included everyone from the Beaties to the acclaimed "Evita" album.

"For the Evita record, they'd tried three other places without luck, apparently. They wanted the cut as close to the tape as possible. That might sound like the easiest thing in the world to someone not familiar with cutting techniques — a flat cut should be easy! But with most places you're going via EQ systems that just multiply any distortion that you've

got on the tape — it becomes the square root. A lot of cutting rooms say they've got all this fabulous gear. But any tape you're cutting has to go through all this gear and you're multiplying your noise at each stage.

"We overcome this problem with a jack-bay that allows you to cut out any particular piece of equipment you're not specifically using for that cut. So you can almost go straight from the tape to disc. This is how we got such a nice sound on the "Evita" album," George told us.

Master Room can also do EQ copies as they are cutting. That way you can send your EQ'd copy to, say, Australia, and the cutting engineer there just has to cut it with that tape as the reference. That way you avoid the confusion to the artist with several different cuts going round in various countries.

The equipment at the Master Room includes a VMS 70 lathe and a Neumann VG 74 cutting rack, which gives 600-watts compared to the previous 150.

So the next time you're listening to an album and marvel at the ridiculously good sound leaping out of your speakers, give a thought to the cutting engineer. If the sound really is ridiculously good it could well be your sentiments should be directed to the Master Room.

If you look closely at a Master Room album you'll be able to tell whether it was Dennis or George who cut the master. Between the edge of the label and the last groove in the run-off area, you'll find 'signatures' scratched in the vinyl. George's monicker is "Porky Prime Cut" and a Denis cut is signed "A Bilbo Bopper". So now you know.

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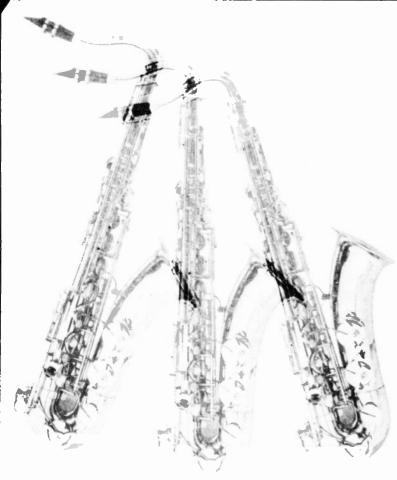
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SAXOPHONE STYLES

by Alan Holmes

hat makes currently famous musicians play the way they do?

STYLE! To have good taste and the money with which to prove it. In the case of the saxophone it has nothing to do with being rich as there are few rich saxophonists. It is a great deal to do with good taste although it can be argued that the few wealthy saxophonists have poor taste. It is very much a matter of opinion. It is where they got the ingredients that make up their individuality, that fakes the progression of style from the twenties to the present.

The variables are; tone, inflection, rhythmic feel, vibrato, bending of notes, make of instrument, mouthpiece and reed, type of music being performed, and interpretation which together produce the unique-

ness of a performer's style. This means that if any of the great players were to play the same scale in their own way on a record they would be instantly recognisable in the same way as the speaking voice is unique.

Who influenced who is a subject argued with the same blind stubborness as the Flat Earthists, so rather than go into that I am going to recommend a representative collection of records so that today's player can retrace the development of past styles, its various exponents, to its main influences and hopefully take from the roots to make yet another individual voice.

There are two individual voices that stand out as not only having changed the style of sax playing but the style of music today. These

are Charlie Parker, an alto sax player and John Coltrane, a tenor sax and soprano player. Charlie Parker, nicknamed 'Bird', was at first laughed off the stage in the early forties for he was no longer improvising on the melody horizontally but on the chords, or vertically, which meant he was playing nearly all the notes of every chord in a bar, cramming them together at great speed.

His own tunes were based on the chords of old tunes like 'I've Got Rhythm' but with this jagged syncopated approach which was called Be Bop or Bop for short. A genius he certainly was and, like many genii of the arts, became a drug addict. This made his recording career patchy as it was difficult to get him to the studio in good health and with an instrument, as he kept pawning them to buy drugs.

He made most of his famous recordings on a King Super 20 alto sax which was bought by Phil Woods after Parker's early death from addiction at 34. He can be seen in pictures using a Brilhart Personaline plastic mouthpiece and later with an early Selmer bronze model. It says much for his genius that he was able to play so well whilst under the influence of, and handicapped by. drink or drugs.

On the infamous 'Lover Man' recording he had to be held up in order to play and the record is the chilling sound of a man fighting to get the ideas out after drinking a quart of scotch.

John Coltrane took
Parker's approach further and
was known for his 'Sheets of
Sound' in which he added
chords to the bar and played
exceptionally fast chordal
runs with a very hard tone.
He later simplified his
approach and became slightly
less angry in his playing but
kept his awe-inspiring dedication which became very
religious on his

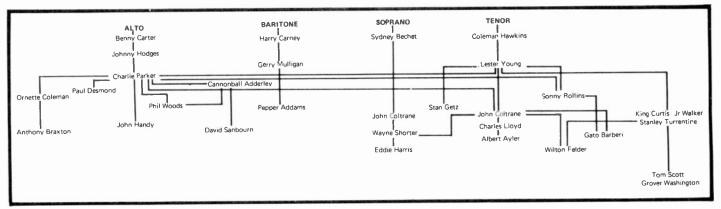
'Love Supreme' album. The simplified approach being improvising from a scale consisting of several chords stuck in a vertical stack, this being the only chord used throughout the number. He used the 13th chords quite often too and the single chord tune can be heard on some current Weather Report albums. featuring Wayne Shorter who is very influenced by Coltrane on Soprano sax. Coltrane's recording of 'My Favorite Things' and 'Naima' are examples of his soprano style using a Selmer Mk 6 soprano with a Selmer metal mouthpiece, probably an F and a 3½ or 4 reed.

His tenor sound was very distinctive too, again with a Mk6 but with an Otto Link metal mouthpiece 7 or 8* with a Vibrator No 4 reed. He shared with Parker an amazing technique which was used to constantly push forward the boundaries of creativity, constantly searching for something that had never been heard before. He was a man who lived for music and who was obsessed by it till his death in 1969.

lot of the currently successful players are in the 'blues' style and the two great influences on this way of playing are Cannonball Adderley on the alto, and King Curtis on the tenor. Cannonball, like Parker, used a King Super 20 alto probably with a Meyer 7* mouthpiece. He had commercial success with small bluesy quintets and was one of the first to use an electric rhythm section. His simple bluesy tunes with titles like 'Dis here' and 'Dat dere' influenced groups like the Crusaders in their writing. He always worked, gigging all over America, as his sort of bluesy dance music will always be popular. He died in 1976 shortly after filming 'Jazz Ship' for T.V.

King Curtis has had an enormous influence on today's group players. His early solos on the Coasters records are classics of their type. I worked with him in 1965 on a Beatles tour of America and had the chance to blow his sax which was a Selmer Mk6. He was using, at that time, a Berg Larsen mouthpiece which had been relayed to a 15* as a special

World Radio History



favour by Otto Link. An equivalent would be something like 160/2/sms, with a hard La Voz reed. This was practically impossible to get a sound out of without turning blue in the face.

Curtis blew it with ease but had enormous lips which probably closed the reed up to a more sensible tip opening.

He was physically big, like Coltrane and Sonny Rollins, and a tenor on these men looked like an alto. He had a cleft palate which caused him to speak with a lisp, and I suspect that the ferocity with which he blew was the frustration of a speech impediment being overcome by music. He was stabbed to death in 1971 on the steps of a house he owned whilst trying to stop an argument. His last record was a live album 'King Curtis Live at Filmore West.' It is one of his best.

As you can see from the chart, some of Parker's influence on alto transmitted across to the tenors of Coltrane and Rollins. Coltrane influenced some of the alto players and it gets quite complicated if you include all the players instead of just the few important or representative ones I have mentioned.

So the alto styles would go from Benny Carter and Johnny Hodges with their Conn altos and big tone on to Parker and his hard tone on to Paul Desmond with his Selmer and thin pure sound to Ornette Colman and a Plastic Alto, John Handy with a Selmer full tone, Phil Woods with Parker's old sax and sound, Cannonball Adderley with the Blues and the King Alto and Meyer mouthpiece. On to David Sanbourn with

a Selmer and a Brilhart Level Air stainless steel mouthpiece, probably 6* with a 2½ Rica Royal reed. Anthony Braxton is breaking new ground with a Selmer and a Berg Larsen mouthpiece, at a guess 85/0/M with a 2½ reed.

On the tenor we have Coleman Hawkins with a Selmer and Berg Larson mouthpiece at a guess 100/0/M with a 2 or 2½ reed. (These guesses may not be exact but you will be able to get the same sound with what I suggest as I have tried nearly every make and lay possible and know what sound comes out of them).

On to Lester Young nicknamed 'Pres' with his thin sound from an early Selmer and Mk 1 Otto Link mouthpiece which was not so edgy as the later versions. Pres started on drums but noticed that by the time he had packed up his drumkit all the others in the band had left with the girls, so he bought a sax so he could pack up quick and pull the chicks. He was a great influence on Stan Getz who was the main influence on the cool school of playing with his airy tone from a Selmer with a 5* Otto link ebonite mouthpiece with a 1½ or 2 reed. Sonny Rollins uses Selmer with a Berg Larsen (at a guess 100/0/M) with a 21/2 rico reed or Guy Hawkins metal. Gato Barberi the Latin screecher uses Selmer with, what sounds like, a 95/0/M Larsen metal with a 21/2 reed.

Stanley Turrentine uses Selmer with an Otto Link W.1 or wolf tayne lay which I think was about a six star. 2½ rico again. Wayne Shorter of Weather Report uses a Selmer and Otto link at a guess 7* with a rico 3 reed. Wilton Felder of the Crusaders uses a King Super 20 with what sounds like a steel Larsen of 100/0/M with a 3 Rico Royal reed, Grover Washington uses a Selmer with a steel Larsen of what sounds like 95/1/M with a 3 Rico Royal reed. Tom Scott uses a Selmer with an obscure mouthpiece in ebonite that had an adjustable tone chamber by means of a slide on the top I think it was called Strathborne and it sounds like about 6 or 7 star. An equivalent that you could buy would be an Ebonite Larsen of 90/0/M and a 3 rico royal.

The records are difficult to put in order and the availability of some of the early ones depends where you live. But make a start with the most important first, then it depends on where and what you intend to play. I will assume you are going to try to make a living out of music which means being familiar with the popular styles.

Firstly, something by Charlie Parker. Most of his recordings were on 78s but there have been several compilation albums of these and tapes from live shows. It depends where you live, but just ask if there is anything in the current catalogue. He used to be on the Vogue label.

John Coltrane is another 'must'. He was on Atlantic and there are a lot of his albums still in the catalogue; perhaps a 'Best of' or 'A Love Supreme'. Commercial players should then go for Cannonball Adderley again. It depends what is in stock but he didn't make any bad albums with his own group. 'King Curtis Live at the

Filmore West, if you can get it, is again of interest for commercial style. The Best of the Crusaders is a recently-issued album which shows Wilton Fe'der at his best on tenor and soprano.

Tom Scott's 'New York Connection' has some nice playing and Grover Washington's best-selling 'Mr. Magic' demonstrates the blues. Stanley Turrentines 'Don't mess with Mr. T' for the blues again. For Alto players, there is "Sanbourn" by David Sanbourn, or more jazzy Anthony Braxton's latest. The non-commercial player is recommended something by Sonny Rollins who spent some time playing on top of Brooklyn Bridge to get it all together and has an unexpected turn of phrase.

Stan Getz is 'Captain Marvel' more conventionally, or noisy Gato Barberi who freaks out over a Latin rhythm and has recently taken to wearing a cowboy hat.

A Lester Young record would be nice for the stylist determined to explore the past, although these are pretty hard to get. I have tried to simplify the issue by leaving a lot of people out so if any of your favourites are not mentioned it's only to avoid confusion.

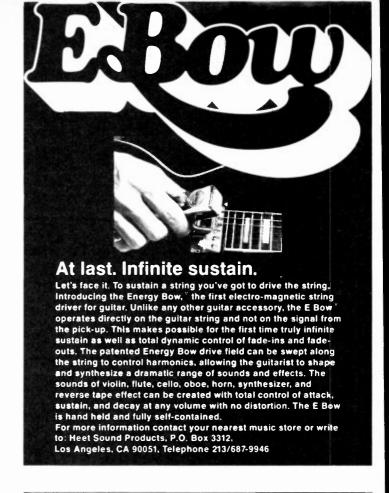
Above all, listen to all the names listed if you can, You don't have to buy the old records but it does help to know what they sound like. Play along with the musicians you wish you could play like and try to find where they put the notes and how they play them. One of the first steps in forming a style is to be able to copy exactly. Then, when you hear your own sound, you will have the technique to achieve it.

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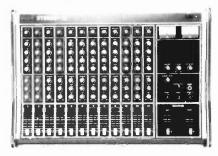
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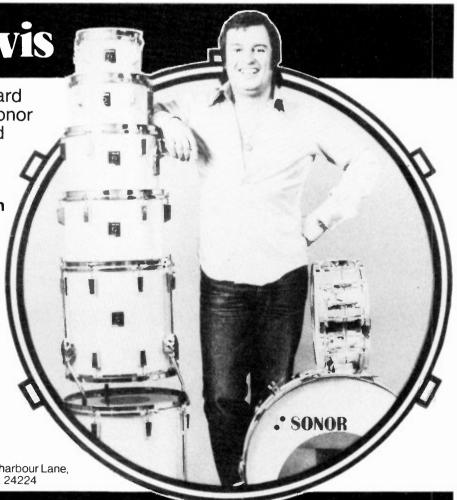


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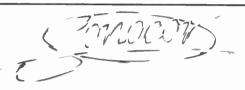
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