

# INTERNATIONAL Musician AND RECORDING WORLD

November 1978 50p

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INSIDE



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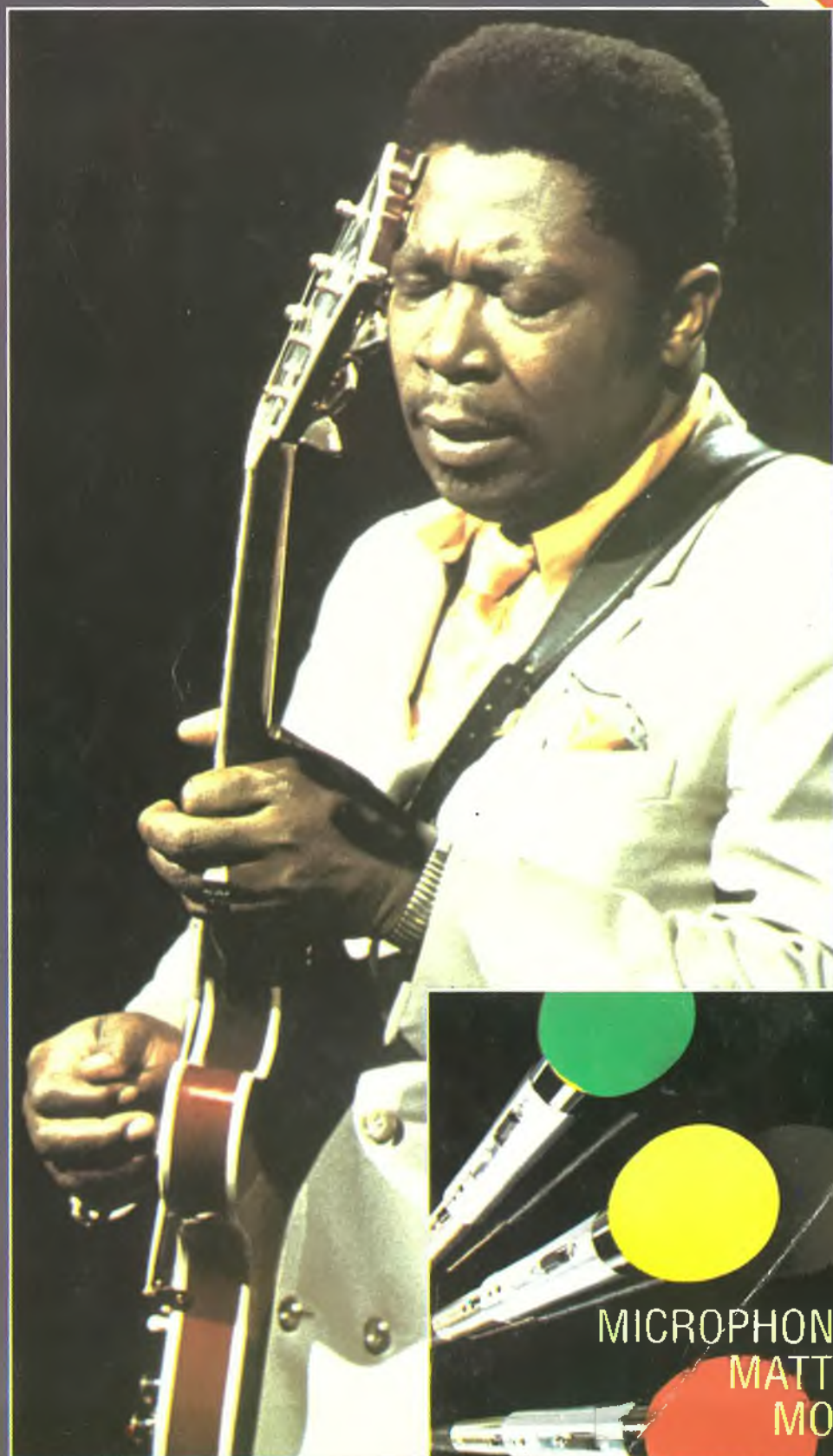
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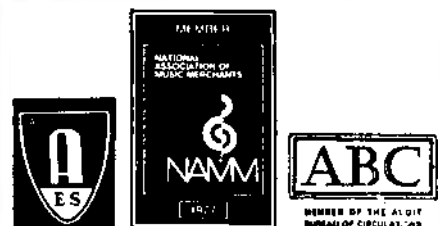
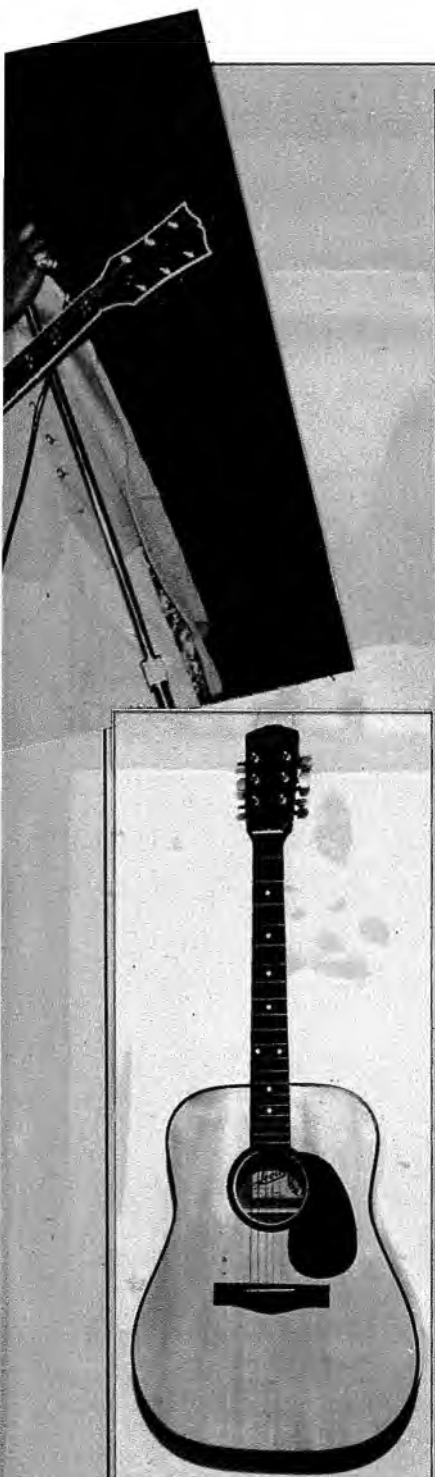
Another detailed driving lesson from Ken.

# EDITORIAL

Just before this issue went to press, your worthy Assistant Editor David Lawrenson had a chat with ace guitarist Al DiMeola – the interview appears in next month's IM – and learned something interesting. It seems that in the States there are rock magazines who wouldn't dream of interviewing DiMeola because he's too far into jazz. Similarly, there are jazz-oriented mags who wouldn't touch B.B. King, for instance, because he's strictly blues.

In our view, this narrow outlook doesn't do music any good. International Musician's policy has always been to cover comprehensively the whole field of contemporary music – from heavy rock to jazz to folk to blues to pop... from the session man to the supergroup to the local band cutting their first demo. It's all music, it's all valid, and to the true musician it's all interesting. For example, we reckon that any guitarist worthy of the name should be able to learn something from *both* B.B. King and Joe Pass – which is why we have no hesitation in featuring them both in this issue.

Whatever you play, however well you play it, there's something for you in IM. And if there ain't, don't just sit there, let us know. We want to produce the magazine you want to read. So don't stop telling us how wonderful we are (we kinda like reading those letters) but don't shrink from telling us what else you'd like to see within these pages. We look forward to hearing from you.



VOL. 4 NO. 11  
NOVEMBER 1978 (UK)  
DECEMBER 1978 (USA)

# Letters

## Gizmo due soon

Dear Sir: I would greatly appreciate it if you could let me know the nearest place where I could try out or buy a gadget for guitar called a Gizmo, as described in the November 1976 issue of International Musician.

Martin Keatch,  
Ashford,  
Kent.

Ex-10cc members Kevin Godley and Lol Creme developed the Gizmo, which is being produced by Musitronics and should be available in the UK by Christmas. The price is expected to be between £75 and £100.



Godley, Creme and Gizmo

## Fuming mad

Dear Sir: As a guitarist and regular reader of International Musician and Recording World, I wish to register my disapproval of the front cover photograph for your October issue (Francis Rossi), which implies that cigarette smoking is fashionable and associated with musical success. I would like to point out that many non-smoking musicians dislike smoke-filled venues, that their health could be at risk through working in such places and that many smoking musicians who want to give up the habit find it more difficult because of the environment in which they perform.

I would be interested to hear the opinions of other musicians on this matter, and compliment you on an otherwise excellent and enjoyable publication.

Colin Slater,  
Tipton,  
West Midlands.

## In search of studios

Dear Sir: I am at present trying to get a rundown on all the recording studios in the Oxford area. I thought that perhaps you might be able to supply this information. If you can't do that, perhaps you could put me onto someone who could.

C. Taylor,  
Oxford.

We would suggest you check the Studio Guide in the back pages of I.M. every month. The most comprehensive list of studios can be found in the "Billboard International Recording Equipment and Studio Directory", which is available from Billboard Publishing, 7 Carnaby Street, London W1.

## Museum pieces

Dear Sir: Please could you tell me where I could get hold of any information on old

guitars and possibly lutes dating from the 16th century onwards and especially if you know of any actual examples which I could possibly see and photograph. My reason for asking is that I have to show actual examples of guitars for an Art A-level topic titled "The design and decoration of guitars from the 16th century". I would be extremely grateful for any assistance you could offer.

John Singleton,  
Uppermill,  
Oldham.

Stephen Delft replies: The Lute Society (c/o Diana Poulton, 5 Wilton Square, London N1) is a good source of information. The Victoria and Albert Museum, London, has a large collection of lutes and other early stringed instruments as does the Ashmolean Museum in Oxford. You may also be interested in the Old Instrument-Making courses held at the London College of Furniture, Commercial Road, London E1. Finally, an excellent German book on the subject, which includes lots of photographs, is "Die Gitarre und Ihr Bau" by Franz Jähnel. A good bookseller will order it for you from the publishers Verlag Das Musikinstrument, Klüberstrasse, Frankfurt-Am-Main, West Germany.

## Free gear, please

Dear Sir: After reading the letter by B. Robertson in the September issue of International Musician, I feel that I am speaking on behalf of many young musicians when I say that there are many young bands ready to start in the music business (after all, The Rolling Stones had to start somewhere) but are prevented from doing so because of the lack of decent equipment. I mean a (very) cheap copy guitar (£20 from the local junk shop) played through a converted radiogram is not the ideal setup to start from. So, if there are any musicians ready to part with any old or even broken



Runaway Joan Jett

equipment, I'd be glad to hear from them.

Secondly, concerning the magazine, although the features on the various musicians is very informative, there never seem to be any on the new-wave musicians - in particular, I am thinking of the rhythm and lead playing of Joan Jett and Lita Ford of The Runaways. Anyway, keep up the good work.

J.W. Franklin,  
Bridgewater,  
Somerset.

## Reviewer rebuked

Dear Sir: With reference to Robin Lumley's review of the Elka Solist synthesizer which appeared in the August 1978 issue of International Musician, I would like to comment on certain points. I have used the Elka Solist in my educational work and general promotion of electronic keyboards with Chris Stevens Music Centre and the London Synthesiser Centre. As you know, there have been

Continued on page 215

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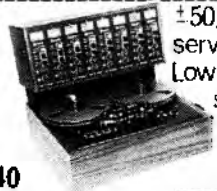
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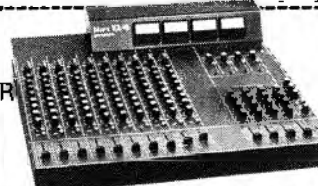
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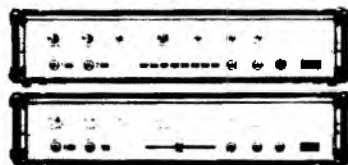


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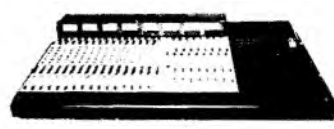
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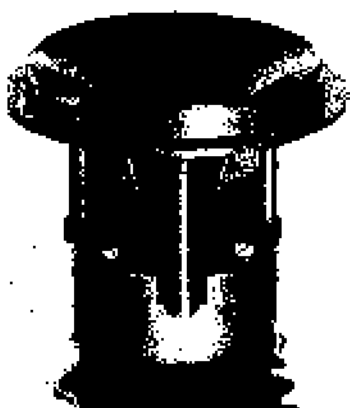
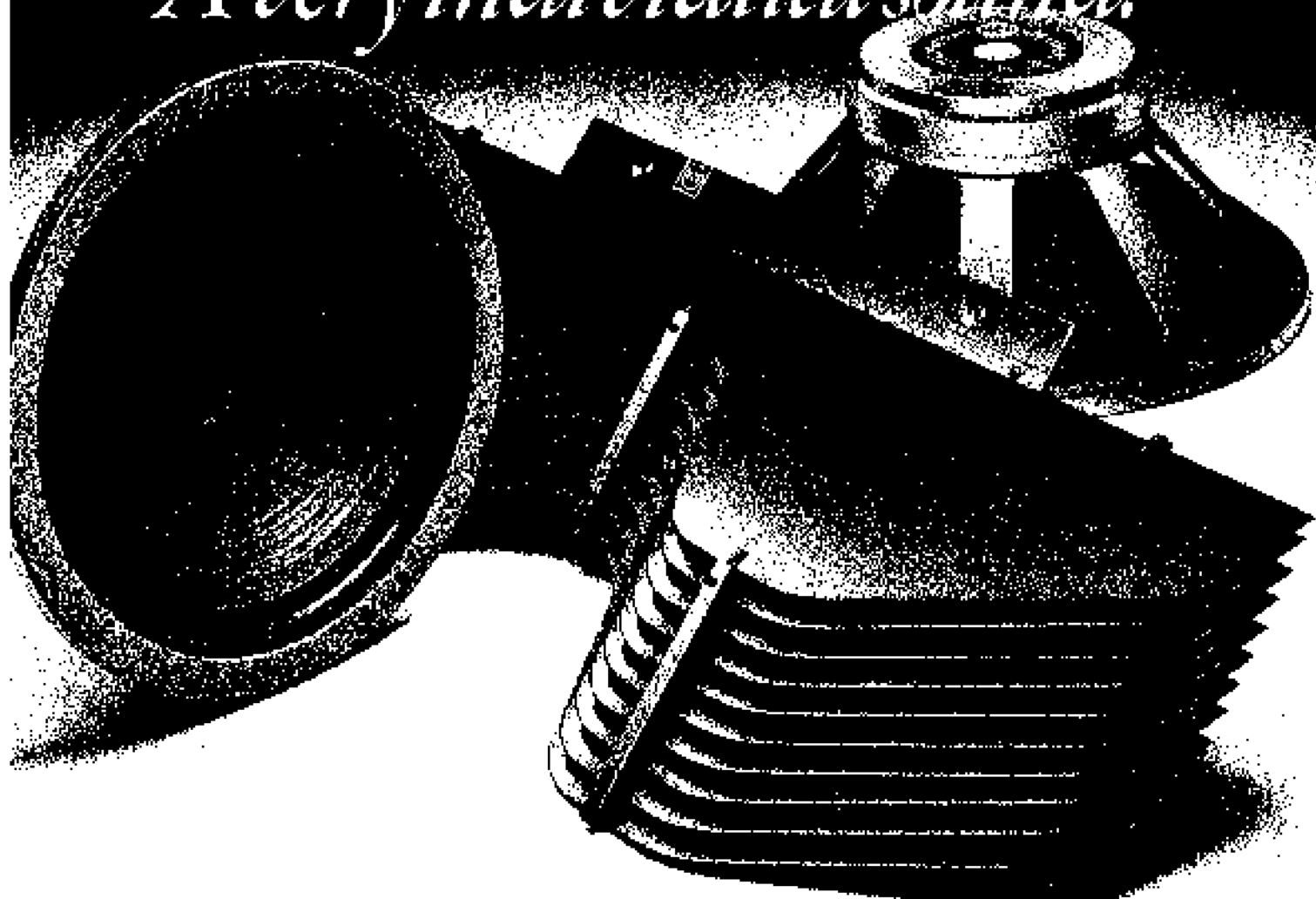


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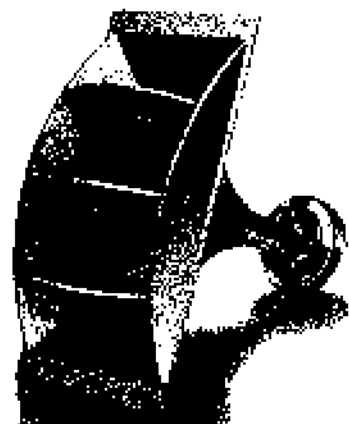
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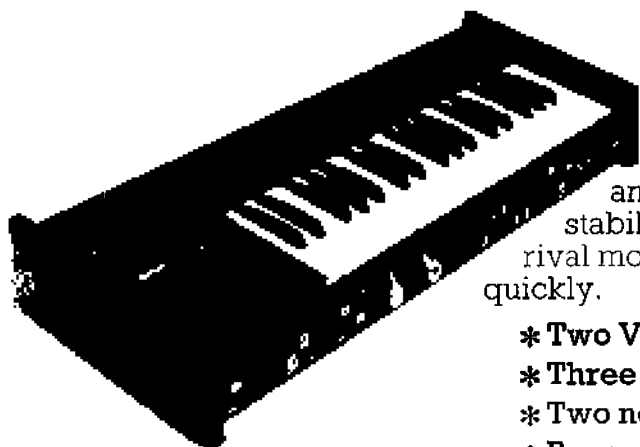
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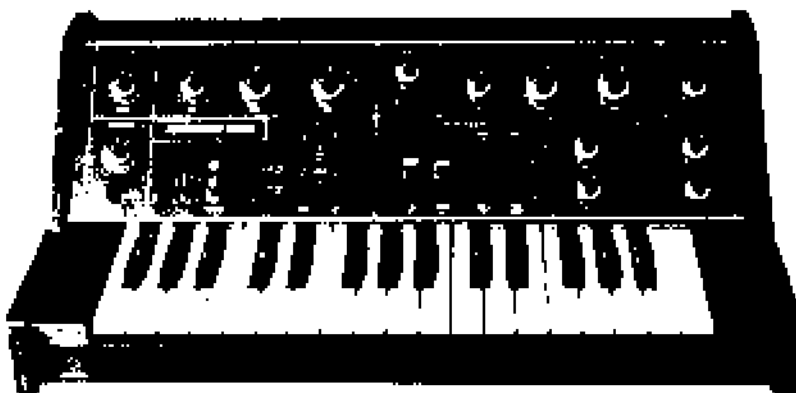
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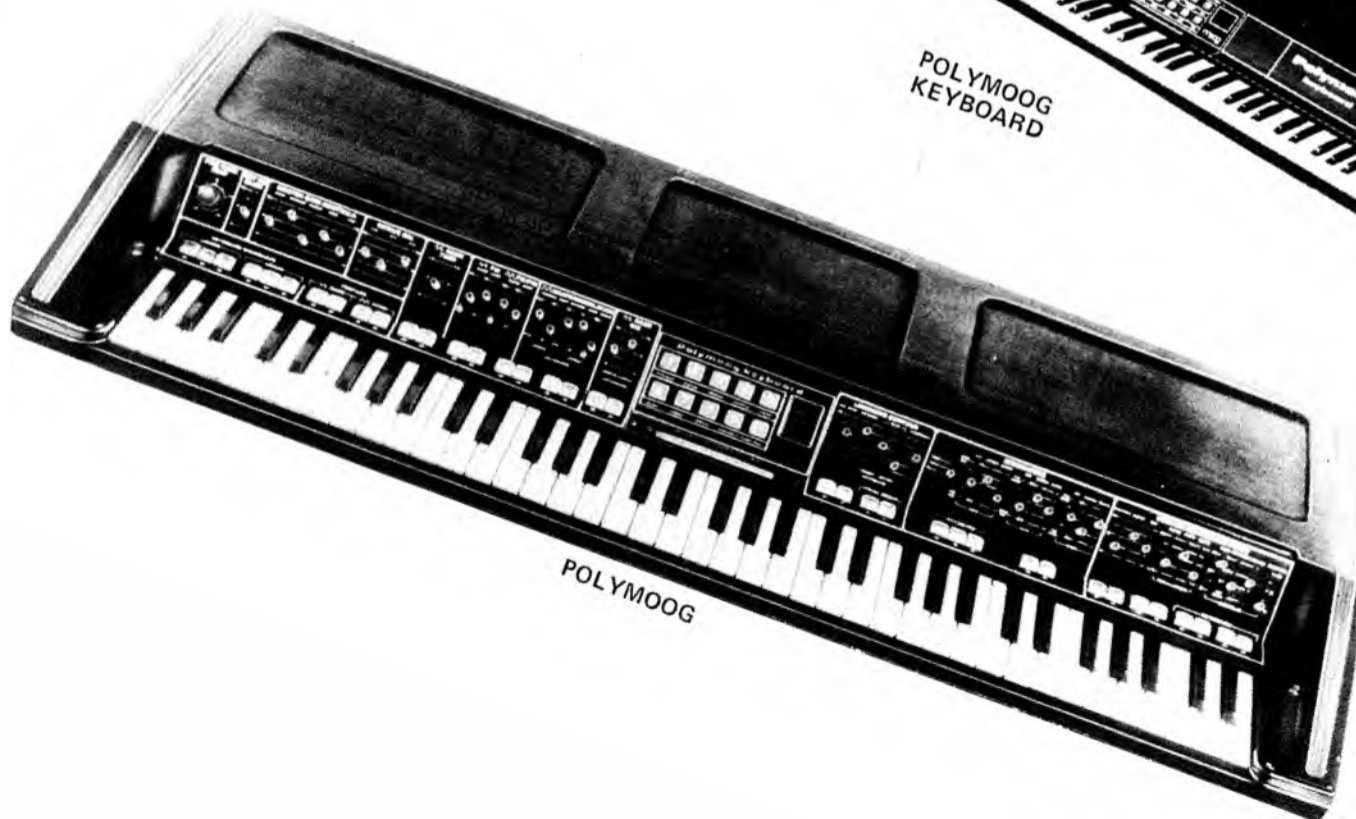


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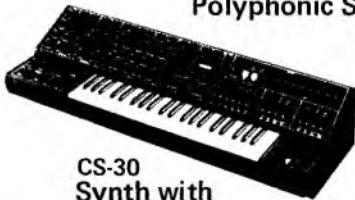
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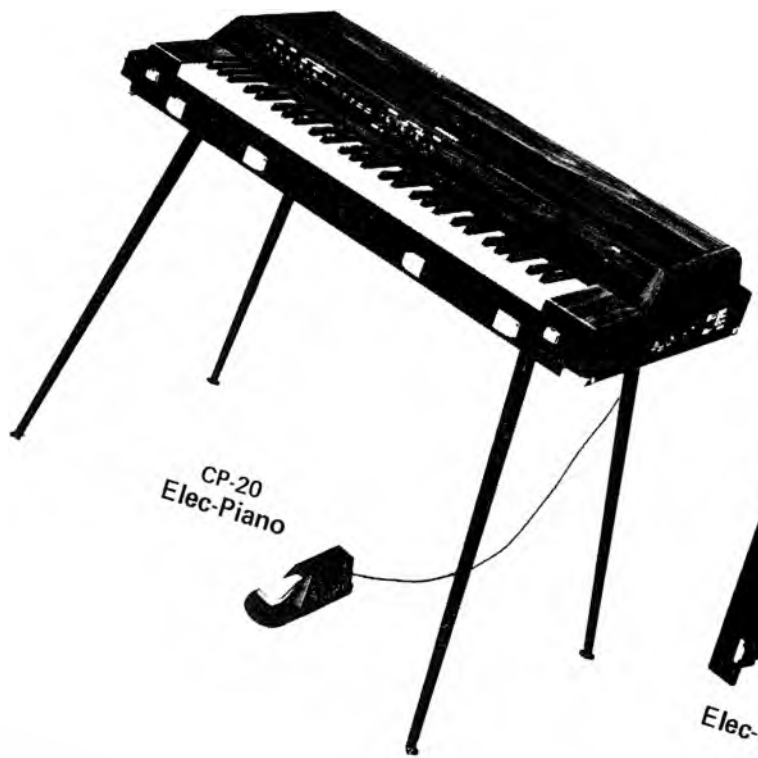
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# The King of blues guitar

**BB** King is the ultimate blues guitarist. Often imitated but never surpassed, he remains a charismatic performer and a living legend in the world of popular music. Yet his talents extend beyond the confines of exceptional guitar playing, a fact which has undoubtedly made him such a durable artist.

Born Riley King on a Mississippi cotton plantation in 1925, he was soon playing the blues on an old acoustic guitar in the style of the old country blues artists. He moved on to an amplified instrument and was given his first big break by Sonny Boy Williamson, who at that time was running a radio show.

King's obvious love and feel for the music earned him the nickname "Blues Boy" which gave him the initials "B.B.", the name by which he became affectionately known. From his early twenties to the present day, B.B.'s recorded work and live shows have been prolific, with such classics as "The Thrill is Gone" cropping up at regular intervals along the way.

He developed a unique guitar style which incorporated the basic blues technique with a clean, clear jazz sound. However, he introduced a feature of his own — a slow vibrato following a bend, which portrayed the consummate passion and feel of the blues. This became not only his personal trademark, but also that of urban electric blues.

Because of his unique guitar playing, B.B.'s voice is often overlooked, although it contains all the purity and emotion of his guitar. He remains a rather enigmatic performer in that he cannot sing while playing and admits to being a poor rhythm guitarist.

Despite his blues heritage, he has never been afraid of absorbing new influences, secure in the knowledge that whatever he plays will reflect the blues. It might be expected that a B.B. King concert today will be little more than a nostalgia trip, but nothing could be further from the truth.

From the minute he walks on stage and launches into a stinging guitar solo, all the power and emotion that first astounded audiences in the Forties is present. Of course, the history of the man and his music is well covered in the performance, but B.B. is such a profes-

sional as to make it an integral and highly entertaining part of the show.

Now in his 53rd year, the man who has influenced so many of today's guitarists, from Eric Clapton down, still has much to offer. If he never played another note his legendary status would remain intact, but he continues to enhance his formidable reputation with superb popular recordings such as his latest album on ABC, "Midnight Believer".

**BB** King's love for guitars is well known, and illustrated by the fact that he christened his favourite instrument "Lucille". For a man who has been playing guitars for over 40 years, most of the time dealing with electrics, he has first-hand knowledge of the developments and innovations the instrument has seen.

He is always eager to talk about his instruments and his equipment, and remembers his first guitar vividly: "I started playing many, many years ago on a guitar which was a red Stella, which was about two feet long, about the size of a ukulele today. That was an acoustic guitar.

"Then, the sanctified preacher at the church that I went to, played an electric guitar and that was the first time I'd seen one. Later on I heard T-Bone Walker on the juke box and that really did it. When I heard him, I got to the stage where I said, 'I've just got to have me an electric guitar.' The first one I had was a black Gibson — an acoustic guitar with the f-holes — and I had a pickup put on it and had a Gibson amplifier. That was the very first I ever had, and of course I can remember that like it was yesterday."

B.B. is renowned for using a Gibson 355 model, although during his career he has played a variety of makes and models. "I had a Fender for a long time, one of the first Fenders that came out. I also used to play an Epiphone that looked like the big L400 Gibson, so those are two



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## *B.B. talks to David Lawrenson about instruments, amps and his love affair with 'Lucille'*

---

that I used to use on stage for a while.

"But I like Gibsons, I like the necks. There's one thing about a Gibson guitar: any time you pick one up, with the exception of the one that I have now, the necks are all about the same. I have a Les Paul at home and the neck feels the same. I have a 12-string Gibson and, believe it or not, the neck feels the same. When you put your fingers on the strings it's different, but the neck itself feels the same. This is one thing which I think is kind of like Rolls-Royce — you know you've got a good instrument.

"The one I'm playing now I've had

since May of this year. It's a new one the company made for me. Prior to that, I had been playing the same guitar for about 10 years. I guess this one was specially made for me and it's called Lucille, the only one that has the name Lucille printed on it. There aren't too many modifications on it: the neck is wider, it has a steel nut on it and it doesn't have a tremolo handle. The pickups and a few other things are a little more expensive than the regular ones, but I don't think it's any better.

"I didn't actually suggest the wider neck but I went along with it because

they wanted to try it. I didn't want the tremolo on it, but I did want the steel nut because the way I play, it makes the strings a little more live than they would otherwise be, but that's about it.

"The reason for the new model was that for years and years I have talked about a Lucille model. I think they felt that I have been one of the prophets for Gibson and as there have been many guitars named after people by the company, it would be kind of nice to make a Lucille model. So they made the one that I have. It's kind of expensive, being about a \$5500 guitar compared to the normal one you can get for \$11-1200."

**C**hoosing the right guitar is one thing, but selecting the correct amplification is another. B.B. has probably used as many different amplification set-ups as he has had different guitars, but whereas he can take his guitar with him wherever he goes, he cannot do the same with his amp.

His thoughts on amplification and the way he gets round any problems could prove enlightening to many a rock musician. Despite the wealth of equipment and facilities available to them, difficulties seemingly abound at most gigs and many insist not only on a particular make of amplifier and speakers, but the actual unit that they always use. For B.B. King, the answer would appear to be simply professionalism.

He explains: "The system I use is an SG, that's Standell Gibson, and I've been using that for the last couple of years. Prior to that I used many different kinds, but I've been connected with Gibson for about six or seven years now and most of times I use their product. In the States, like over here, I don't carry equipment with me that often. My group and I fly most of the time.

"We find it a little expensive to rent equipment every place we go, but it's more convenient. So instead of trying to ship an organ and all the works that we need, most times I have a rider in my contract for the promoter to pick this up, rent it for us and we pay him back the night of the engagement so usually it's all there when we arrive.

"It's not like a lot of rock groups who

*Continued on Page 25*



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I am what you would call a very beginning Guitar Player and at the age of 24 it's a hell of a time to begin. I figured that at this age it would be harder to learn to play the guitar so I would need extra incentive. I saved up and bought what I consider one of the best Rock guitars: a Les Paul Custom (Black, Left-Handed). Now, I'll never need another guitar! Like my guitar, I would like to have an amp that I wouldn't have to upgrade. (But maybe add a couple more.)

I have always liked the sound of Marshall and Orange but they just don't compare to that unbelievable Laney sound. I would love to get my hands on one but the problem is, "None".

Since Black Sabbath is the only group that I have ever seen use Laney, and since I have never seen any literature in magazines about your product, I'm hoping that they are not made exclusively for Black Sabbath. If so, Pm SCL.

All kidding aside, I would appreciate knowing any little detail about Laney amps that you could give me. The number of speakers in the cabinet, speaker size, number of watts and most helpful would be the weight. When Black Sabbath comes down next month I'd like to see if I could carry one on my back!!! Sure!

I appreciate your help very much and I hope to hear from you.

Sincerely,  
Mark Lachew.

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*"If you asked me what sound I'm looking for I couldn't tell you. But when I hear it I'll know it's right"*

have special equipment that they have to carry with them. I work an average of about 300 days a year and the equipment is always there when I arrive and there when I leave. It's kind of expensive, but when you think about it overall, it's worth it in the long run. So I do practically the same thing that I'm doing over here, that is use whatever is there. We request what we need and use what we can get.

"A lot of times the SGs are not available, so Fender amplifiers are usually our second choice because they are durable and usually plentiful, you can find them almost any place you go. A Fender Twin Reverb is what we usually ask for as a second choice in the States when we can't get what we want.

"We ask for two professional guitar amps, one professional bass amp, an organ, preferably a B3 Hammond, a piano and a set of professional drums. Now, while we're in England, whatever they have in the professional guitar end that's available, whether it be Fender, Orange, Acoustic or whatever, it's OK with me as long as it's powerful. Of course in most cases we find that a lot of the places we're playing now, the sound system is good. So, if your amp is not the best, if it's miked well you can still get the balls that you need and that's what I usually like. Something that when I open it up I can really hear it."

**T**he Standell Gibson that B.B. uses is a standard factory model but it is one which he finds particularly suitable. "The one I have is a 100 watt with two 12" speakers and the output on it is very good. I think what the Standell people were trying to do was to get the sound of many different amplifiers. They

have a setting where you can get the frequency of the Fender Twin, you can get the frequency of an Acoustic and several others. If you listen very carefully, you can get close to the sound of other amps. It also has its own sound, the frequency starts at 400 and goes up to 700, normally I set it on a frequency of 700 and that's where I leave it.

"I know this probably sounds weird, but technically speaking when it comes to sound or electronics I'm really dumb. I know what I like but to describe it is difficult. I know, for instance, that when I hear a sound and like it, I stay with that particular one. I've been trying very hard to perfect a sound on the guitar for years, but I didn't start out looking for it. If you asked me what I was looking for I couldn't tell you, but I do know that it's something else that I hear that I haven't yet done. I'm still working on it, but when I hear it I'll know it's right."

B.B.'s line up of Gibson products is completed with his choice of strings — and the strings he uses gives an insight into how he evolved his particular style. "I'm using Gibson 740XL strings at the moment although for years I used Black Diamond regulars. I didn't know anything about any other strings and on those, the gauge is very thick. I think through the years of using them and not paying much attention, it strengthened my fingers and that's how I got into that bit of pushing and pulling the strings. The trilling came about through listening to guys playing bottleneck guitar, I would trill my hand and to my ears it would sound like that."

Although he plays his guitar straight through the amplifier without using any effects at all, he is not against using units to change his guitar sound. He is not the purist that many musicians would perhaps imagine and has positive views on the use of electronics in music.

He recalls: "Once, on an album called 'Lucille Talks Back', I used a Cry Baby. I like the sound, but the reason why I didn't do much of that was because it made me lazy. I got to the point where it sounded so good, but I didn't have to do so much work so I kind of got away from that a little bit. I don't use any effects right now, but I do plan to again.

"Hopefully, I'll do an album in the future where I will use electronic equipment. I think it's good, but I just didn't want to rely on all that. It's sort of like recording with other people, you don't want to get the feeling that if the album

doesn't have X amount of people with big names, you won't sell records. The same thing applies to electronic equipment. I think there is plenty of room for them, I love to hear the things today like synthesizers, in fact one day I hope I can get a synthesizer to use on an album.

"There seems to be a lot of equipment like synthesizers for the guitar, but it's only just starting. I want one so that when I play one string I can hear a chord behind it. I'm sure they'll come to it, like when you play a Moog and get the string sound, that's what I want. I'm not up on everything that's happening so it's possible they may already have it, but I haven't heard one yet.

"I've always been up front as a soloist all the time, single string you know, and I'm not very good with chords. I want to get me a synthesizer where I can play chords. I want one so that with one note, I can set it where, let's assume we're playing fourths or fifths in the key of C, if you hit a C, maybe that would be the tonic of the chord. That's what I want one for."

For someone whose life has been so much bound up in guitars, B.B. does not own a vast collection, which he blames on the sheer bad fortune of being in the wrong place at the wrong time when thieves have come calling. In fact he has just half a dozen instruments, which include a National, an old Epiphone acoustic and a Martin.

Although he started out on acoustic, he only plays electric on stage and will rarely be seen with an acoustic model. "I play acoustic only for my own enjoyment at home. When I'm home sometimes I'll pick one up and play it, but not as much as I'd like. I have spoken to Bruce Bolen of the Norlin company and hopefully they are going to get me an acoustic guitar that I can carry around.

"I've also been working on a show which will cover the beginning of my career up to the present day. The idea is to start out on acoustic and go right through the early blues to the electric. I've been working on this for a couple of years so hopefully the next time I'm in England I'll be able to present it."

Watching the man perform on stage makes you wonder whether such a show is really necessary. For the history of the blues and B.B. King is right there in every song that he sings and every note that he plays.

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# Joe Pass-Virtuoso



By Jeff Pike

He has been called "The Virtuoso of the Jazz Guitar" and "The Art Tatum of the Guitar". To many, he is quite simply the finest living jazz guitarist. Joe Pass has recorded with lots of the all-time jazz greats — Duke Ellington, Dizzy Gillespie, Oscar Peterson, Ella Fitzgerald and many more — and in recent years has surpassed even those achievements with a string of albums and live performances featuring his unaccompanied guitar.

He was in London last month, after a European tour with the Oscar Peterson trio, to play two weeks at Ronnie Scott's club. For 12 nights, patrons sat in awestruck silence as the little man strung together solo improvisations that were bewildering in both their beauty and their brilliance of execution. But why did he choose to play these gigs unaccompanied? "Well first there are the hassles involved in getting a rhythm section together — you can't always get hold of the people you'd like. Then I've been playing solo a little while, concerts as well as clubs, and it seems to be working out.

"It's a little harder in a club because you have to play two or three sets a night, with a group playing in-between, but people don't seem to mind that I'm playing without a rhythm section. I've been fortunate in that I've never played a club that was really noisy. That would be a problem."

His solo style is unique. He uses the thumb and fingers of his right hand most of the time, playing bass lines and lead melodies simultaneously, throwing in chord passages, filling in all the gaps so comprehensively that a rhythm section is not only superfluous, it would be an intrusion. He uses a pick sometimes, too. Or rather, half a pick. "It's simply that — a pick broken in half. It's a habit that I don't suppose I'll ever change. I like to be as close to the strings as possible and a larger pick just doesn't feel right.

"When I'm playing with, say, the Oscar Peterson trio I'll use the pick maybe half of the time. But playing solo, I use it on only about two tunes in a set, that's only five or six out of the 30 I might play in one night. I use the pick when the tempo is fast because at fast tempos my fingers get too stiff to get really good phrasing. I find the more I play with my fingers at various tempos, the more my left hand does the playing — and that causes one slight problem. I start playing the set with my fingers and my left hand gets busy. Then when I start using the pick, the pick wants to do everything. You get two hands fighting over the same notes and sometimes the co-ordination goes wrong. It takes a little while to adjust to playing all the notes with my right hand."

Joe attributes his phenomenal technique to ►

# Joe Pass-Virtuoso

► the influence of his father – who knew practically nothing about music! “He was a steel mill worker and he didn’t play any instrument, but from the time he bought me my first guitar when I was nine, he would make me practise up to six hours a day. He was very strict.

Every time I practised when he was around, I’d have to start from the very first thing I ever learned and play everything up to wherever I was. Then when I was through with all that, he’d say, ‘Now make something up.’ He didn’t know what he was talking about but I had to make up a tune to please him. He made me practise scales too, though he didn’t know what they were. So I figured out all sorts of scales, all over the fingerboard, majors and minors, whole tone scales, diminished scales, chromatic scales . . . just to please him. I practised out of fear.”

He also had a few lessons from a family friend who showed young Joe some chords and taught him to read music. “I had the Nick Lucas book and also a Carcassi classical guitar method. I didn’t work through the Carcassi book, I never studied the lessons in it, but it contained lots of nice little things like minuets which I liked because they were much more ‘musical’ than the stuff in other guitar books. I think that helped me develop my ear.”

Around 1942, when Joe was 13, his father took him to meet a jazz group who played in their hometown of Johnstown, Pennsylvania. It was a violin-led combo, based on the Hot Club de France quintet. “It seemed I could play little melodies and pick up things quick, so I became a member of that group, playing at dances on Saturday night. They had records of Django and that was the first time I had listened to jazz. I started hanging around the music store in town, listening to jazz records. That’s where I first heard Dizzy Gillespie, Charlie Parker, Coleman Hawkins . . . I also heard Art Tatum. He had a trio at that time, with Tiny Grimes or Oscar Moore on guitar and Slam Stewart on bass, and they really excited me.”

But it was Tatum’s piano playing that excited Joe most, not his guitarist. “I never listened to guitar players – I made a point of listening to horn players and piano players. I tried to avoid playing all the guitaristic tricks, all the things that are peculiar to the guitar which all players seem to include in their bag. For instance, I never bent any notes. I always tried to play clean, melodic lines instead of the standard guitar riffs.”

In the mid-Forties, Joe started playing gigs in New York, sitting in with different groups and sometimes going on tour with them. But around the same time, perhaps as a reaction against his strict childhood, he started drinking. That led to drugs and within a few years he had a heroin habit which put the brakes on his musical career. “I was never around when I was supposed to be, I didn’t do anything right, it just got worse and worse. I was still playing for most of that time, but every place I’d go, I’d

exhaust all the people who’d try to help me, then I’d move on to another city and start all over again. I kept that up till I ran out of friends . . .”

Finally he sold his guitar, stopped playing altogether and got jobs in California washing dishes and picking fruit. Then came the most important day in his life – “December 19, 1960,” he remembers proudly. He entered Synanon, a drug rehabilitation centre in Los Angeles. He was there for two years, during which time he kicked the habit and started playing again. “I organised a little group and we would play for guests and visitors at weekends. Pacific Records were among the sponsors of the Foundation and they said, ‘Let’s make a record and donate the proceeds to Synanon.’ I didn’t even have a guitar of my own then. On that record I played a Telecaster that had been donated to the Foundation by Fender.”

That album, called “Sounds of Synanon”, was the turning point. Joe was soon making a living from studio work in Los Angeles, playing all sorts of music on all sorts of sessions. He played all sorts of guitars, too, including solids and 12-strings, according to what the session demanded. But he also started playing jazz dates, and for those he stuck to Gibson f-hole models, usually the 175. Then, about two years ago, Jimmy D’Acquisto made him a guitar to his specifications and since then he has used nothing else.

Joe describes what those specifications were: “I wanted a guitar that had a decent acoustic tone (which the Gibson didn’t – if you didn’t use an amp, it sounded very thin and stringy) and played through an amp had a warm electric sound. Lots of guys have asked Jimmy to make one like mine for them, so he produces guitars on this model, though they don’t have my name on them.”

Joe’s guitar is beautiful to look at: simple, classic lines, with one pickup, a tone and volume control and no gimmicks. It’s also very light and the body is unexpectedly thin, yet it has a satisfying sound when played acoustically. “I use flat-wound electric strings,” he says, “but even so, it’s about three times as loud as the Gibson. If I used round-wound acoustic strings, it would be even louder.”

Onstage he uses a small Fender combo amp and is quite satisfied with the intimate sound he produces. But on record, he’s less happy. “I never get the right sound in the studio. I’ve tried lots of different studios and lots of different ways of recording – miking the amplifier, miking the guitar and the amp, miking the guitar and not using an amp, going directly into the board. . . it never comes out how I want it. The straight single-note electric sound I play with a group, that varies from record to record but it’s always pretty much the same and satisfactory. But when it comes to solo recording, that intimate sound is hard to get.

“The nearest I’ve got to it so far is the last solo album. I just played quietly and acoustically in the studio and went straight into the board,



*"People don't seem to mind that I'm playing without a rhythm section"*

but even there, as soon as it goes through any sort of amplification or electronic process, like a mixer, the sound changes."

The last solo album is the third he has recorded for Norman Granz's Pablo label and is titled "Virtuoso 3". Astonishingly, it was recorded in one afternoon. "I just went into the studio in Los Angeles and played through 10 or 12 numbers and that was it. I never do more than two takes of any tune, and most of them, you're hearing the first take. I think I'll spend more time on things in the future, recording more takes of tunes, four or five, or 10 or 20, until I get the one that I want. The trouble is, with jazz, the more takes you do, the more self-conscious you become. You're thinking, 'Watch this part, don't make a mistake here.' The result is that when you finally get a take with no mistakes, the music is dry — it has had all the life taken out of it. At least, that's what they say. I've never tried it that way."

Despite his apparently flawless technique, Joe claims he never practises these days. "I often start out meaning to practise but it never lasts more than a day. I just play. I do a lot of playing on gigs, then I'll play at home when guitarists visit me, maybe for three or four hours. But sometimes I don't play for days, even weeks if I'm not working. I think that once you have the facility, you don't lose it by

not playing. You get a little rough, maybe, but your hands don't forget what they can do. It's not like a horn player who needs to keep playing so as not to lose his lip.

"The other thing I do is sit down and listen to new things sometimes. I'm getting interested in some of the stuff the new guys play, but I'm not setting out to change my style radically. I try things out and I let my memory decide what I take in. If things stay with me, I play them and incorporate them into my music. If they don't, I let them go.

"Over the last year or two I've been experimenting with writing a few more tunes and playing more original material in my solo set. I did one whole album of originals — now I'm trying to remember what they were! I haven't played some of them since then. I've always played a lot of standard tunes, right from when I started playing guitar, and I think that for solo work maybe it would be better to do more original tunes.

"I'd like to try writing some film music. I've never done that, although I did some things for television documentaries a while back. I remember the first film I ever saw with guitar prominent throughout was "Blood and Sand", with Vincente Gomez playing. I've always thought that solo guitar would be very suitable for films — and it would save the producer a lot of money."

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### Rockford Hart

News from Northern Ireland about a band currently enjoying great popularity there called Rockford Hart. A versatile four-piece, they consist of Fred Courney (vocals/guitar), Jon Carswell (lead guitar/vocals), Rab Connery (bass) and Dave Kennedy (drums). The band play a wide range of material and a similarly wide range of gigs throughout the country. The band's manager can be contacted on Ballynahinch 2041.



Rockford Hart

### Semuta

The story of a five-piece band called Semu centres around the City of Leeds College of Music. The band was formed by Ian Ballantine, a student at the college, in early 1976 and their music has been compared to Chic Corea and Weather Report. The band made their debut at the Royal Park Hotel in Leeds and soon attracted a large following. By January 1977, they were attracting audiences from Bradford, York, Manchester — and the Royal Park had to make alterations to their music room to accommodate 300 people. Now it is full at every gig. In October 1977, they played their first London gig at the Bull's Head, Barnes and have been back five times since, increasing the following every time to the extent that, on the last gig, people were being turned away.

Semuta comprise Ian Ballantine (vibes), Munch Manships (tenor, soprano, flute), Alan Cook (keyboards), Dave Tyas (drums) and Frank Dawkins (bass, guitar).

### MU's Rock Workshop

IM's saxophone/technical writer Alan Holmes will be joining the Musicians' Union Rock Workshop for the first time when they begin their winter programme at Surbiton Assembly Rooms on November 14th at 8pm. The event is organised by the Union's newly-formed Kingston Branch (Secretary: Mike Coombs, "Springfield", Hawthorne Avenue, Carshalton, Surrey) and admission is free.

The other musicians taking part will be Rick Morecombe (guitar), Geoff Castle (keyboards, synthesizer), Colin Hodgkinson (bass guitar) and Peter Baron (drums). The new-style workshop toured Scottish branches of the Union in the early part of the summer with great success, and this is the first time it will have been seen in the South.

### Fan Club

Fan Club are a five-piece band from Brighton who have been together for just over eight months, although all members of the band have had wide musical experience. In fact, the band was formed from two local new wave outfits, Plastix and Wrist Action. They have already built up a large following in the Sussex area and recently made their London debut at Ronnie Scott's club, where a coach load of fans gave enthusiastic support.

They recently recorded a single, financed by the band, called "Night Caller" b/w "Avenue". Both songs are group compositions, as is all their material which they describe as "basically pop".

They are currently trying to gain a distribution deal for the record and are also looking for gigs. Fan Club can be contacted through Paul Martin on Brighton 553607.



Really Free



Fan Club

### Vitavox Live Sound Award 1979

Entries for the 1979 Vitavox Live Sound Award are now being invited. This annual award is made to the British group producing the best live sound and is open to all categories and styles of music. Founded in 1976, the previous two winners were Landscape (I.M. October 1978) and Screens. Groups which have not reached the Top 50 albums or singles charts in the 12 months ending November 1st, 1978 are eligible to enter. Bands may enter themselves or may be nominated by any music business organisation or individual with a responsible role in the entertainment field.

Prizes for the Live Sound Award, sponsored by Vitavox Ltd., will include equipment to the value of £2,250 and the closing date for entry is January 31st, 1978.

For further details, contact Pat Schooling on 01-940 9749 or write to her at 27/28 George Street, Richmond, Surrey TW9 1HY.

### Really Free

Really Free are a new four-piece band based in Uxbridge who write all their own material and, in common with many bands, recently released a single on their own label, Sea Song. Both sides of the single, "New Day Dawning" and "Thank You Jesus", were written by lead vocalist Cliff Bergdahl, who also plays guitar and keyboards. The rest of the band is Mick Almond (bass/vocals), Bill Downes (drums) and Gary Cunningham (guitar/vocals). The band, who play a wide variety of gigs all over the country, intend to record more of their own material soon, and can be contacted c/o 105 Victoria Avenue, Hillingdon, Uxbridge, Middlesex UB10 9AJ.

Remember, Buzz is your column, and we welcome news of your band, whether amateur, semi-pro or professional. Send details and pictures to: Buzz, International Musician, 141-143 Drury Lane, London WC2B 5TE.

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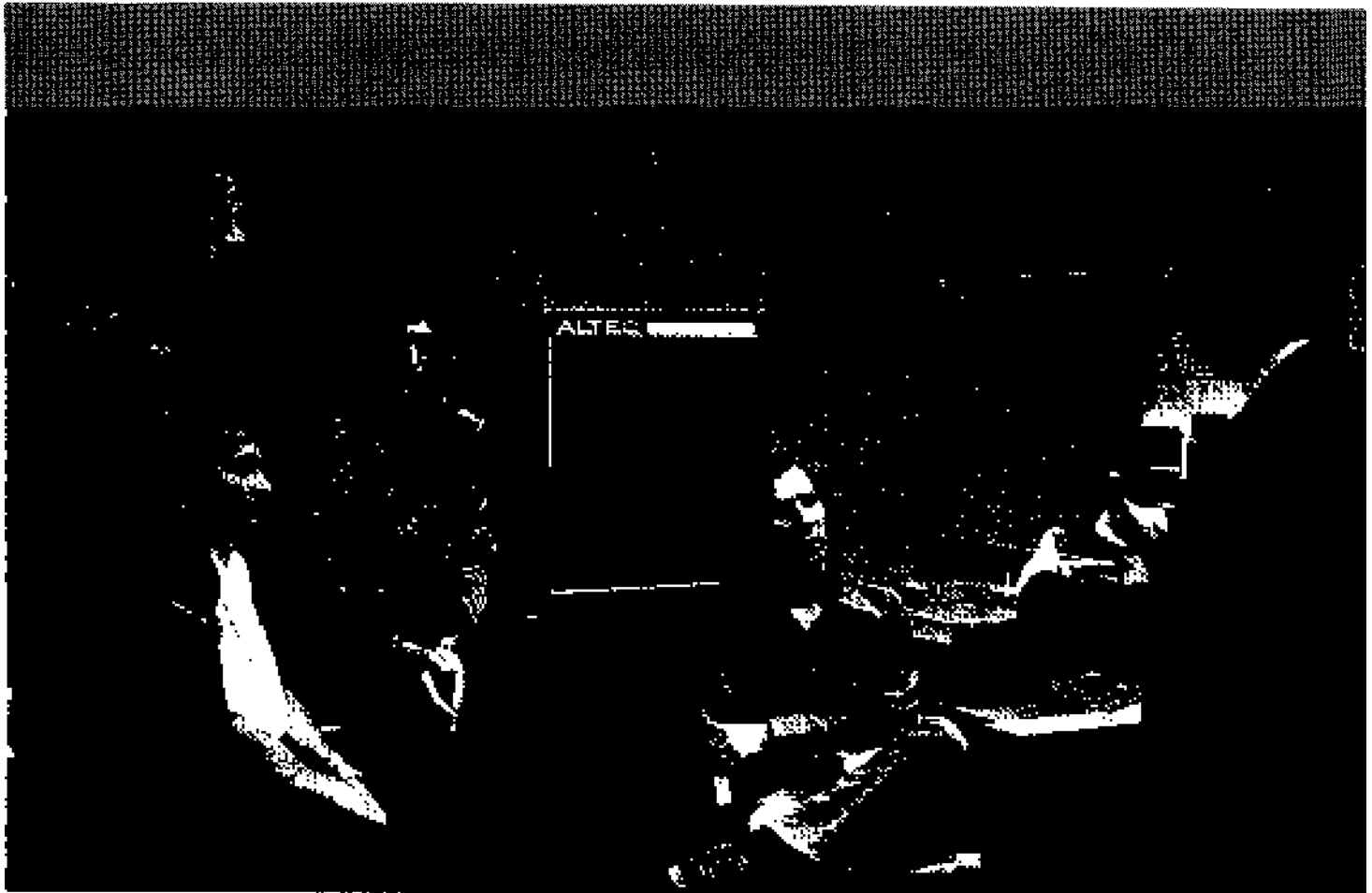
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**SG-101**



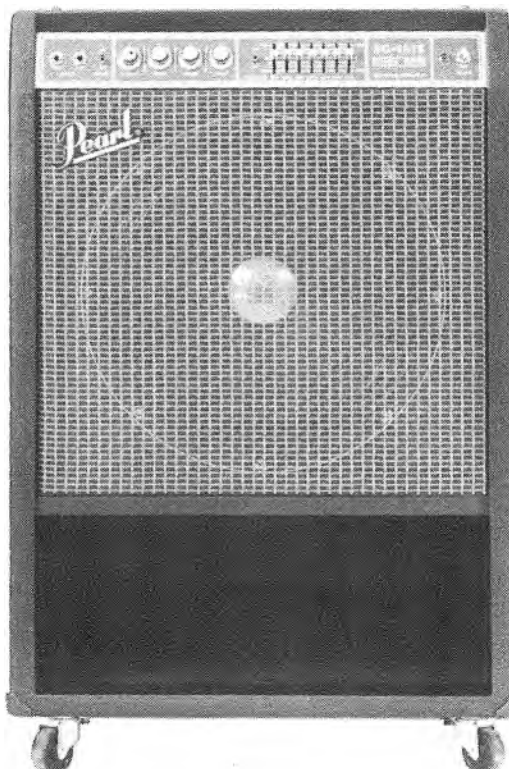
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 CONTROLS: Volume, Treble, Bass, Distortion  
 SEMICONDUCTOR: 8 Transistors, 7 Diodes  
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 SEMICONDUCTOR: 10 Transistors, 2 FET, 4 IC, 7 Diodes  
 CONSUMING POWER: 250W  
 DIMENSIONS: H820 x W535 x D335mm  
 WEIGHT: 33.5kg  
 ACCESSORIES: Vinyl Cover

**SG-101B**



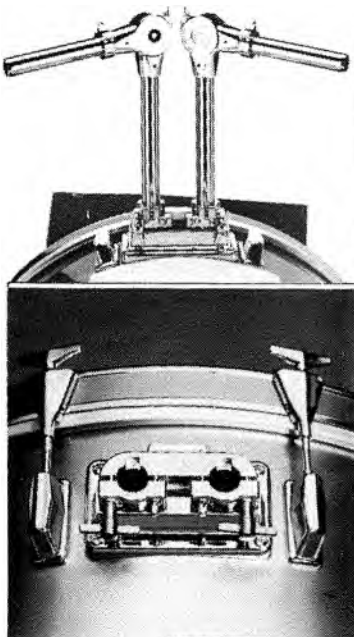
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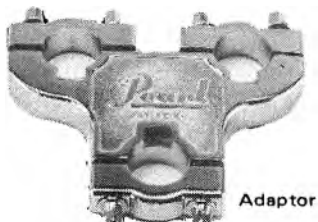


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# STEEL WORKS

by Dave Hayward

## PART 3

### Tuning

So far in this series I have assumed that your steel guitar is correctly in tune for each exercise. Now we're going to examine ways of achieving this. In the first part I gave the notes for each of the 10 strings and the notes which are obtained by using the pedals and lever. For those of you with access to a piano or organ there should be no problems in matching the notes for tuning purposes. There are also electronic tuning devices and I don't see why one of these shouldn't be used, although it would have to be one with all 12 notes of the scale, because and the number of strings and pedal combinations on a steel, nearly all twelve notes can be achieved at the open position. I must get around to trying out one of those gadgets with a steel sometime.

However, when necessary, it is reasonably easy to tune by ear in much the same way as a normal guitar; it just takes a bit longer. What you *must* have is a tuning fork or pitch pipe to get one string correct as a reference to start with. I suggest an 'E', which will give you concert pitch for the fourth string on your steel. Having got this one right, the other strings may now be matched to it as follows:—

Place the bar on the fourth string at the second fret position and match the open first string to it. (What you do is lift the bar and use the rounded tip of it to contact only the desired string, which enables you to play any of the remaining strings open for matching). Be careful always to position the bars exactly over the fret marking line. Unlike a normal guitar fretboard where the length of the vibrating string is governed by the fret with the string held down by a finger close behind it, the steel guitar has no frets. I've found it's a good idea to imagine that the bar is a "moveable fret" and should therefore be positioned exactly where the frets would be on a normal guitar, using the markings on the steel as a guide. By the way, at this stage all the tuning is done at the machine heads.

Carrying on, next place the bar again on the fourth string, but this time at the fourth fret, and then match the third string open to it. To tune the second string, place the bar on it at the first fret position and adjust it until it matches the open fourth string. The fifth string is tuned by placing the bar on it at the fifth fret and matching it to the open fourth string. Halfway there now!

Tune the sixth string by placing the bar on it at the third fret and matching it to the fifth string open. Tune the seventh string by placing the bar on it at the second fret and adjusting it to match the open sixth. The eighth string is tuned by putting the bar on it at the second fret

and matching it to the seventh string open. (The eighth is an octave below the fourth string and this is a useful check at this stage). Next, tune the ninth string by placing the bar on it at the second fret and matching it to the open eighth. Lastly the tenth string is tuned by placing the bar on it at the third fret and matching that string to the ninth open.

The accuracy of the tuning can be checked further by comparing pairs of strings which are an octave apart: the fourth and eighth, which I've already mentioned, then the third and sixth, first and seventh, and the fifth and tenth.

Obviously, with the number of strings on a pedal steel guitar, the procedure outlined above isn't the only way to tune by ear, and everyone will no doubt develop their own variations as they gain experience. But tuning your steel doesn't stop here. The pedal actions must now be adjusted so that they pull or slacken their respective strings to the correct notes.

When you operate a pedal or lever you will notice that one or two of the screw heads arranged in rows on the right-hand endplate travel in and out. These screws form the stop against which the pedal travel is arrested and, therefore, the point at which the movement of the string stops. By adjusting these screws the string is allowed to be pulled or slackened to a greater or lesser degree. Before touching these adjusters, there's one thing to clear up. There are two basic systems of mechanism used in pedal steel guitars. One is known as an "all-pull" mechanism and the other a "push-pull". I don't propose to go into details about the differences between the two systems at this point, but there is one important aspect and that is how the methods of pedal adjustment differ.

With an all-pull system the open strings are tuned first as described earlier and then the pedals and lever tuned at the adjuster screws. A push-pull system is different in that each string is tuned first but whilst holding down any floor pedal which operates on a particular string, if any. Of course, while doing this, the pedalled strings are tuned to their "raised" notes rather than their "open" notes. Each pedal is then released and the adjusters at the endplate (not the machine heads) used to bring the note of each string that has been pedalled to its correct open pitch. To finish, the action of the knee lever is adjusted at the endplate.

Whichever method you need to use, the notes of the pedalled strings can be found by matching in a similar way to before:

**Pedal A** (which raises both the fifth and tenth strings from B to C sharp).

Hold the pedal down and place the

tip of the bar on the fifth string at the third fret position; this should be the same note as the open fourth string. With the pedal still held down, place the tip of the bar on the tenth string at the third fret position and match this note to that of the open eighth. This note is of course an 'E' one octave below the fifth/fourth match we have just done.

**Pedal B** (which raises both the third and sixth strings from G sharp to A).

Hold the pedal down and place the tip of the bar on the fourth string at the fifth fret; the raised note on the open third string should be the same as this. With the pedal still held down, place the tip of the bar on the eighth string at the fifth fret position and match the raised open note of the sixth string to this.

**Pedal C** (which raises the fourth string from E to F sharp and the fifth string from B to C sharp).

Simply hold down the pedal and match the note of the fourth string to that of the open first. For the fifth string, the raise is exactly the same as that of pedal A and so can be easily matched to this. You may well find that the same adjustable stop is used for both these raises and so it will require no further attention.

**Knee lever** (which lowers both the fourth and eighth strings from E to E flat).

Hold the lever over and the open note on the fourth string should be matched to the open second. With the lever still operating, place the tip of the bar on the ninth string at the first fret position and the lowered open note of the eighth string should be matched to it.

### Variations

Some steels vary in the way the knee lever operates, or rather in what it does. Sometimes it only lowers one of the 'E' strings instead of both, in which case just ignore the relevant part of the foregoing tuning procedure. The other possibility is that it will lower the second string instead of the fourth, maybe with the eighth lower still included. If this is what your steel does, then it should lower the second string from E flat to D. For the purposes of tuning by ear, this is how to match it; hold the lever over and place the tip of the bar on the second string at the second fret position and make this note correspond to the open fourth string. There's another check you can use here, because the D of the open lowered second string is one octave above the open ninth string.

I know this description of tuning seems a bit lengthy and involved, but in practice it works simply and fairly quickly. Besides being necessary to get your instrument in tune, it also has a useful function in that it will help to train the player's ear as he (or she) gets used to it, and it also serves to illustrate, and fix



in the mind, the intervals between strings. This is very useful when working out ways of playing chords and melodies.

**More chords**

In the last article I gave several ways

of playing different chords of C, and used the examples to illustrate a system of tablature. I suggest you refresh your memory by re-reading it then try each of the following chords of F: (Fig. 1)

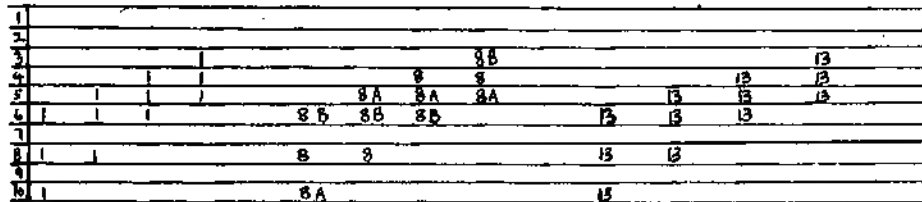


Fig. 1

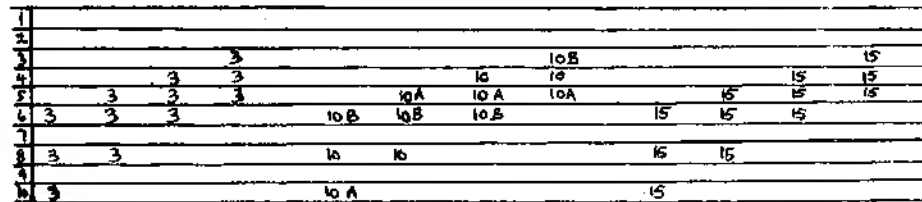


Fig. 2

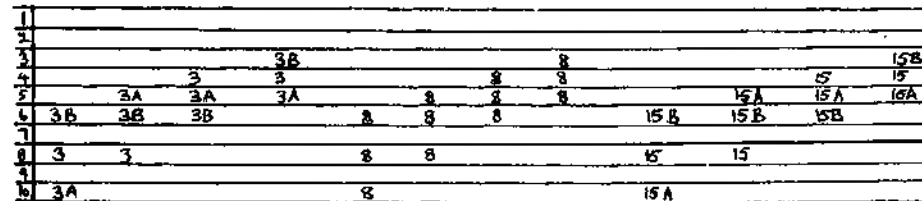


Fig. 3



Fig. 4

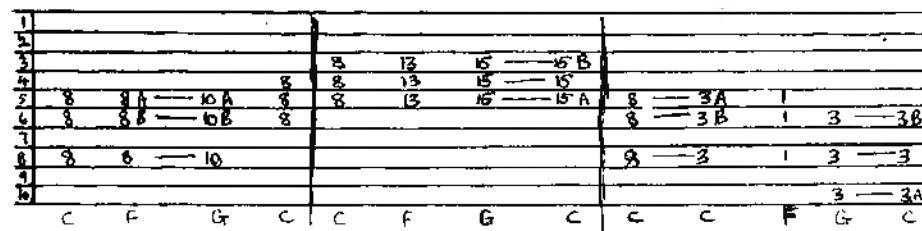


Fig. 5

There are twelve 'F' chords here altogether. Practice them one at a time until each string in each chord is sounded clear and balanced in volume with the other strings. When you can do this confidently with each separate chord, try playing the whole sequence of 12 at an even speed, very slowly at first, then building up gradually. You'll notice that there are no markings in this set of examples telling you to slide the bar, as there were in the previous article. This is intentional. What you must do here is use a "damping" or "blocking" technique with the edge of your right hand to cut off the ringing of each string just before picking the next chord. It will really show whether you are doing this successfully when you move the bar between chords. In this exercise you should not be able to hear anything of the bar slide because it should take place very quickly between blocking the preceding chord and picking the next.

When you can play all 12 of these chords at an even pace, and with no hesitation where bar movement is involved, go on to the next two sets of chords. The first consists of G chords and the second of C chords. (Figs 2 and 3).

These sets of chords are played in the same way as the previous one. You'll notice that in the set of C chords there are several which were used in the examples I gave in the last article, but played in a slightly different way.

When you've become familiar with all the chords we've covered so far, try playing them in a different order to give you sequences such as C, F, C or C, F, G, C etc. Some examples are shown in Figures 4 and 5.

When playing these exercises, remember that where the chords are linked by lines it means that the second chord is not picked, but sounded by letting the strings ring after moving the bar or operating the pedals, or both. For instance, in the second exercise in the C, F, C sequences, the strings are picked only once, with the bar movement and pedals producing the rest of the progression.

By now you'll be starting to recognize some of the familiar sounds of pedal steel. Of course, so far we've only touched on simple sequences involving three major chords in the key of 'C'. Obviously this is by no means all the possible combinations, but it's a start, and I suggest you try putting together your own sequences developing from the ones I have shown. If you can begin to do this then you will have made a start in discovering what steel playing is all about.

In the next article, we'll cover some more chords such as sevenths and minors along with some additional points on technique.

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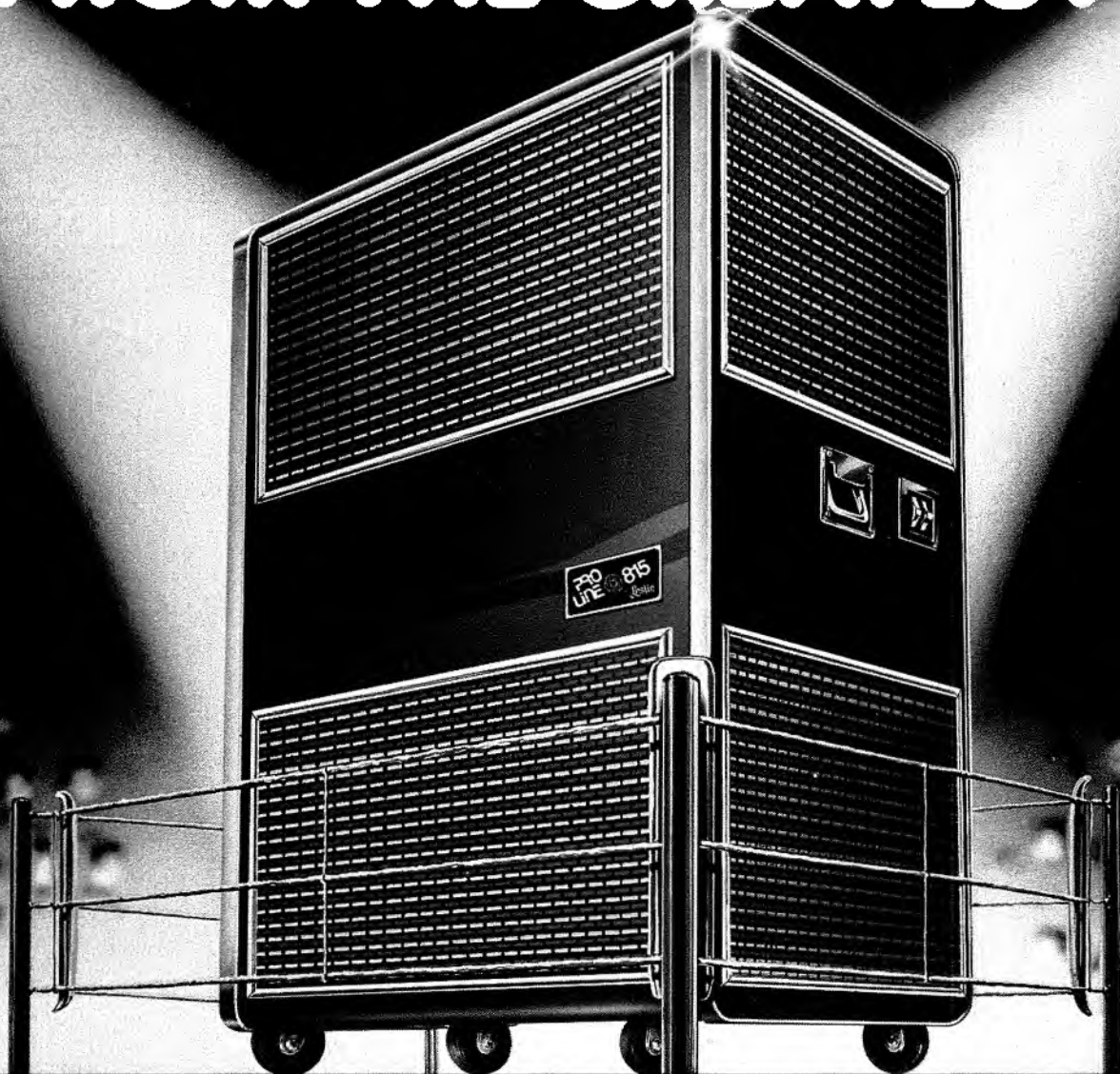
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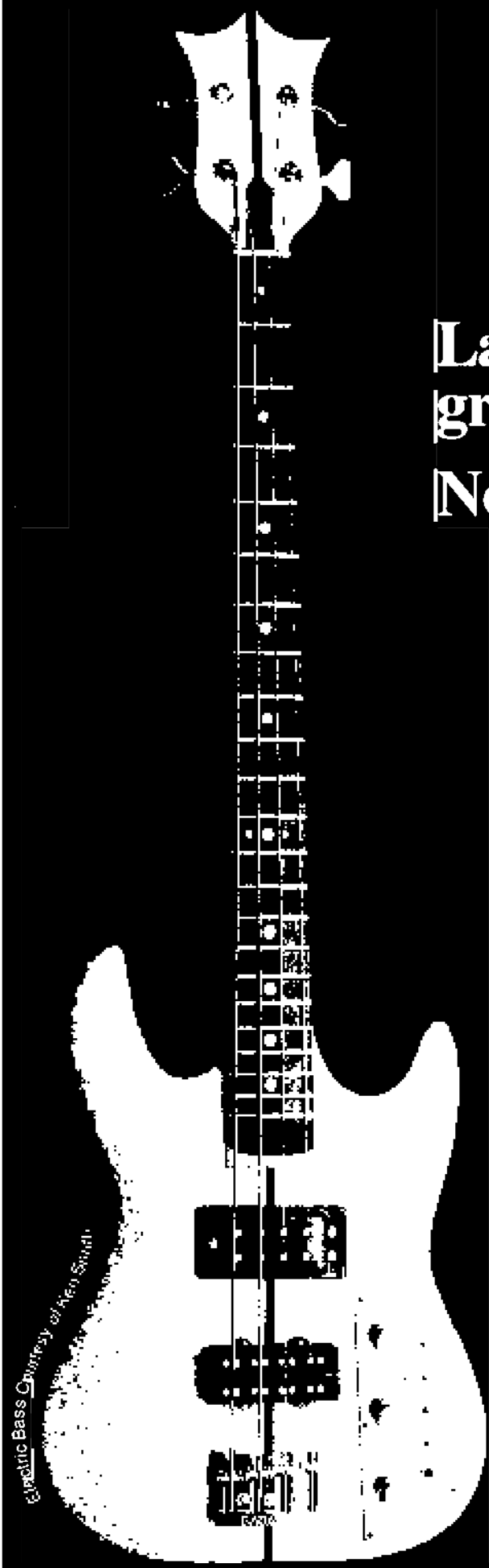
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# Lumley's SYNTHCHECK

Robin Lumley is a multi-keyboardist and a former member of Brand X. He is now a free-lance producer with over 16 albums recorded and produced since 1975. He is also responsible for many TV jingles and film scores and, although works mainly in the UK, he spends one third of each year in USA studios.

**TEST ON:** Sequential Circuits —  
Prophet Synthesizer

**DATE:** October 1978

**PRICE:** £3,500 inc. VAT  
(Flightcase included)

The California-based company of Sequential Circuits is relatively new, and began life in 1974, under the auspices of David Smith, an electronic designer. The firm first started manufacturing sequencers, starting with the Model 600, and the later Model 800. By 1977, they'd produced the very successful Synthesizer Programmer, which sold a bundle, and provided Smith and Co. with enough money to set about designing and producing an idea for a polyphonic synthesizer which they'd been nursing as an idea for some time. This instrument finally appeared on the market in the early summer of 1978 as the Prophet 5, along with another version known as the Prophet 10, of which, more later.

The past 12 months has seen an upsurge in the development and sales of polyphonic synthesizers, with the Polymoog, the Yamaha CS series, and the Prophet being the most important of all. But whereas the Polymoog and the CS series are more or less in direct competition with each other by reason of size, facility and ergonomics, the Prophet stands on its own to fulfil a different role altogether.

On first appearances, the Prophet looks like a lengthened Mini-Moog, but don't try and pull up the control panel; it's fixed down! But there are the familiar Moog-type wheels to the left of the keyboard for pitchbend and modulation and, with the nicely finished wooden case and smooth keyboard feel, any Mini-Moog fan would feel at home already, before even switching on the instrument.

But the keyboard is much longer than the Mini-Moog, being five octaves (from C to C) and up to five voices at a time can be heard. In other words, you can play five notes at once, but unfortunately no more. This compares a little unfavourably with most other polyphonic synthesizers, who average out at about eight voices, but to the great credit of Sequential Circuits, they did produce a 10-voice instrument (the Prophet 10), which was identical in every respect to the Prophet 5, except that you could play 10 notes at once. Sadly, this 10-voice version was withdrawn almost as soon as it appeared because, apparently, the 10 voices caused the power supply to run at a temperature too high to allow guaranteed tuning stability.

Obviously, Sequential Circuits are going to lose a lot of prospective customers by withdrawing this version, but it's to their credit that they're not prepared to sell anything that is slightly below their high standards. I've played about on a Prophet 10 many times, and I must say that I experienced no more tuning problems than with, say, a Mini-Moog that had been on the road for a couple of months and was displaying slight drift symptoms. Nevertheless, the Prophet 10 is out for a while though, no doubt, after further research into cooler-running power supplies, it will re-appear on the market.

So, the Prophet 5 is a five voice instrument, and is arranged as an homogenous system. This means that the filters, envelope generators and the oscillators on each voice are all linked to a single set of controls on the front panel, and will therefore be slaved to a common setting. This is one difference with the Prophet as compared to, say, an Oberheim 4-voice. But the individual voices do have exclusive control facilities on their keyboard control voltage, and internal oscillator bias voltage, to take care of the tuning. The overall advantage in this idea is that the front panel controls are similar to a monophonic synthesizer, such as a Mini-Moog, except that each control affects all five voices simultaneously.

Let's examine the electronic configuration of a Prophet voice system. There are two VCOs: one has sawtooth wave and variable pulse width waveshapes, whilst the other has sawtooth and triangular waveform capabilities, as well as pulse width waveshapes. Further features for processing the raw oscillator signal include a mixer, a white noise source, voltage controlled low pass filter with Attack, Decay, Sustain, and Release envelope, and a voltage controlled amplifier with ADSR envelope.

Also, one can modulate in two distinct ways; either by a synchronised modulation, common to all five voices simultaneously, which is operated by the wheel inboard of the pitchbend on keyboard left, or by the Polymod system. This modulation is separate for each voice, and sounds perhaps more natural, since each modulation source is not synchronous between voices.

The pitch bend wheel, which is the same as the Mini-Moog, is situated in the same place relative to the keyboard as on the Mini-Moog, and bends all voices simultaneously either up or down from a centre-stop, which can be felt by the player. The Prophet features an overall tuning pot, which again tunes all five voices at once, but the individual relative

tuning within voices is performed automatically.

By pressing another button, all the voices are thrown into unison, which in effect makes the instrument monophonic. All the voices are producing the same sound, but not synchronised, so that the player obtains that very rich, multiple-oscillator sound, which is great for soloing. Reversion to the polyphonic state is performed by a quick cancellation of the unison button. The glide facility, incidentally, can only be used when the instrument is in unison.

Thus, up to now, we've been describing a sort of super Mini-Moog, with five voices, that enables chords as well as single notes to be played but behaves like, and has the inherent richness of sound of the Moog. (Note the constant reference back to the famed little instrument from Norlin: this is because constant comparison to the Mini should be useful to you as a term of reference, and also because for any instrument to be compared favourably to a Mini is a compliment to its ergonomics, its sound, and its satisfaction in operation.)

But now comes the super scoring point of the Prophet 5: its ability to remember and store patches, or set-up sounds. Using the memory system, every time you set up a sound you like and find useful to your library of musical raw material, you can store it in the Prophet's unique memory system, and recall it instantly, without fiddling about with wires, cables or plugs. The importance of this for live work, and indeed, studio time-saving, is incalculable (at least, I'm not going to try to calculate it).

So, you've set up a real good string/organ/piano/trumpet/clean air system or whatever sound right across the board. Normally, to be sure of finding it again, you'd have to laboriously write down each pot setting and, when needed, dig out a dog-eared piece of paper and copy all the settings back onto the instrument. But with the Prophet, you press a memory switch, and it's there, forever stored and recallable whenever that particular memory number is pressed. Although "forever" is slight hyperbole, the Prophet can store any particular sound for around ten years, even when the instrument is switched off for months at a time, because of a battery with a ten-year life span.

Up to 40 different sounds can be stored at a time, and the only difficulty would seem to be remembering where they are in that 40-possibility system. But by using a numbering arrangement mathematically known as "base 8", (rather than base 10, which is how we usually count), this be-



comes simplified. There are two digits representing each patch store, the left hand one being any number from 1 to 5, and right hand being any number from 1 to 8. The programmer, as with the rest of the signal switching and routing buttons, is of the "momentary touch" variety, with a built in LED to indicate its state. The programme numbers are also LED displays, to tell you which programme you are using. Therefore, to record a new patch, set the numbers to correspond to either a blank bank, or one you wish to update, switch off the memory disable button (which normally acts as a safety device to prevent you from accidentally erasing a favourite sound), and press "record" with your new programme set up on the board. To recall, simply punch up the LED numbers, and play. Also, any programme recalled can be further modified by the controls on the board without

affecting the stored memory.

Sequential Circuits supply some factory-programmed presets as a guide, which you can either keep, or discard at will (or at anyone else). The factory-supplied patches are all really good, and include clavinet, electric piano, strings, flutes, and bass. Of course, non-musical sounds as well can be stored, providing you can synthesize them on the instrument, and thus you could conceivably throw in a thunderstorm or jet plane momentarily during a solo. (Why you would do this is open to question; try writing to the Ministry for Being Frightened by Large Pieces of Farm Machinery).

The only two limitations I can think of with the Prophet are only quibbles: the five voice limitation, and the lack of triangular waveform ability on VCO 1. Also, it would have been nice to incorporate the glide in the five voice mode,

instead of just in unison.

But this instrument represents a formidable step forward in synthesizers and, unlike other polyphonics, is really small, light and portable. Already, Prophet 5 models have been seized and carried off by many famous name players, who all report highly of them. (You should have heard Peter Robinson of Brand X extolling the virtues of his Prophet to Jon Lord the other night - he made a better salesman than most!) Rick Wakeman, Patrick Moraz, Bob Styles, and Dave Lawson are all reported as Prophet owners, and the list is growing. Only the fairly slow arrival of the product into the UK is stopping a boom from occurring. If you are into synths, you *must* try the Prophet, and if you're not, try one anyway, and you'll be converted for sure.



# delft's GUITARCHECK

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

**TEST ON:** Hagstrom Swede

**DATE:** November 1978

**PRICE:** £525, incl. VAT

In March 1977, I reviewed the Hagstrom Swede. There were a few points about it which I thought could be improved. I was pleased and surprised to hear that most of these points were considered by the makers, and appropriate changes made within a matter of days. Now there is the Super Swede. I do not know whether it is intended to replace the Swede, but it is in any case likely that both models will be available from UK music shops for some time to come. It would appear that the Super Swede is both a deluxe version and a logical development of the earlier Swede.

Referring to the Swede review, I notice that my sample had the fancy "designed by Jimmy D'Aquisto" machine head buttons, but fitted to machine heads of middling price and quality. I was told this was a temporary measure, and that Hagstrom were waiting for modifications to the design of the buttons so that they could be fitted to Schaller machines. The Super Swede has very similar buttons, now fitted to Schaller machines. (As the previous arrangement was described as a temporary measure, I assume that the new machine heads will be available to existing owners of Swede guitars, as and when replacement becomes necessary.)

I also commented on the Hagstrom screw-on neck system which was used on the Swede. It was not particularly rigid, and Hagstrom responded by gluing and screwing the neck on later Swedes. This is quite a good compromise, and at least one American company has recently advertised exactly the same method as if it was one of their own inventions. However, the Super Swede has done away with bolts and screws altogether and uses a conventional glued-in neck. In "production" guitars, the way the neck is fastened may affect the sustaining properties of the instrument. I cannot be certain whether the Super Swede has any particular advantage in this respect over the screwed and glued neck. In both cases, the performance seems to be quite satisfactory and variations in timber are likely to swamp any other small differences. Either method is greatly preferable to a bolted or screwed neck joint, in which the mating surfaces are finished with hard modern lacquers.

The tops of the frets on the Swede which I reviewed were slightly rough. On this sample of the Super Swede, they are polished to something like a mirror surface. The Swede was fitted with selec-

tor switches which had sharply knurled knobs. I managed to snag one of my fingernails on the knurling, and I felt that this could present a problem for anyone who uses their fingernails for playing guitar. The switches on the Super Swede have smooth plastic knobs fitted over metal levers. No more torn fingernails!

I am relying on memory here, but it seems to me that the tone of this super Swede is not quite as 'hi-fi' as that of last year's Swede, and a little closer to the characteristic sound of high-output American humbuckers. As these pickups have been fitted with a coil-tap connection, it is possible that there may also have been some other modifications. I notice that there seems to be a relatively little magnetic "pull" applied to the strings (or any other iron or steel object placed near the pickups) yet the guitar gives the subjective impression of providing a very high output from the pickups with little effort from the player. I have noticed this combination of effects on certain examples of very old Gibson guitars, and it suggests that "super-hot" high-powered magnets are by no means essential for a guitar to have an impressive electrical performance.

For some years, one characteristic feature of Hagstrom Swedes has been the second "selector" switch which operated a bass-cut or treble-cut circuit. This is absent from the Super Swede, and it has been replaced by a miniature three-way switch near to the volume controls. The central position is neutral, and the left and right positions operate coil-taps on each of the pick-ups. Although the sounds from the two pick-ups are obviously different, in each case the effect of the coil-tap is to make the sound from that pick-up brighter, and a little lower in volume. The effect is popular with some players because it extends the tonal range possible from two humbucking pick-ups in a way which cannot exactly be duplicated by any combination of tone controls. The tap disables one of the pair of coils in each pick-up unit, and the effect is similar to that of a single-coil pick-up as found, for instance, on some Fender and Gibson guitars. With the coil tap in operation on either pick-up, that pick-up ceases to be "humbucking" and there may be an increase in noise and hum superimposed on the guitar signal. It is possible to "trade-off" a less impressive tone-change, against continued, but possibly reduced, hum-cancelling properties. However, this would require a more complex wiring system.

A coil tap is one of the features which is supposed to be popular with add-on accessory pick-ups, and I don't see why it

should not be similarly popular when fitted as standard by the guitar makers. Hagstrom have chosen to use one switch to operate the taps on two pick-ups. This has a slight operational limitation, in that one cannot "tap" both pick-ups at the same time. I do not think this would be a serious limitation for most people, and I am generally in favour of anything which reduces the number of unnecessary controls on the front of a guitar.

If my memory is correct, the Swede used (and may possibly still use) a conventional nut made of some white material. The Super Swede has replaced this with a "zero-fret", combined with an ebony nut to guide the strings and define the spacing between them. The vibrating length of the string stops at the zero-fret, which is minutely higher than the other frets to give some clearance to the open strings. This system is an alternative to the conventional slotted nut: surprisingly, in some countries it is traditionally considered to be superior to the conventional type, while in other countries it is associated with cheaper imported guitars, and has a poor reputation by association. In practice, either approach can be made to work well if enough care is taken in design and adjustment. On my sample of the Super Swede, the open strings vibrate cleanly from the zero-fret, and in spite of the rather indeterminate bearing points of the strings on this fret, the guitar's intonation at the lower positions seems about right. I would be happier about the long-term performance of this zero-fret if it were more uniformly rounded on top. On my sample it is relatively flat where the top string rests on it. This could cause buzzing and/or a tuning shift, as soon as string pressure and movement causes a little wear.

I am also relying on memory for this but I notice that the bridge on this Super Swede is fairly high above the body, while the string action is quite low. It would appear that the neck is angled back from the plane of the body rather more than on the previously reviewed Swede. Now I find electric guitars in which the neck slopes back from the body rather more comfortable than those where everything is built in a straight line. I have asked other players about this and it seems many of them have not even considered the possibility of neck angles. There is no reason why a good musician should need to know the finer points of instrument geometry. However, if one day you should wonder why two very similar guitars feel distinctly different, try holding them both up sideways and comparing the angles between neck and body.





I noticed that the sustain on last year's Swede was generally good but a bit variable, depending on which string and where it was fretted. The sustain on this Super Swede seems about equally as good and rather more even over the whole range. It still seems to me that it is

too long on the bass strings, as compared to the treble. Personally, I find I prefer guitars which have longer sustain on the lower notes, but this is a highly subjective matter, and I would not wish to criticise either the Swede or the Super Swede in this respect. The sort of discerning player

for whom this sort of thing would be important would also be able to assess such a guitar for himself, and decide whether or not it pleases him. (I do appreciate that female guitarists can be equally knowledgeable and equally discerning. I use the male form throughout my articles to indicate both genders, according to long-standing convention).

### Conclusion

This is a well made and very cleanly finished instrument: the ebony fingerboard and the frets are excellent. It is obviously similar in general appearance to the Gibson Les Paul guitar (and its many imitators) but like the Swede, it is not a copy, and it has a distinct character of its own. I am a little embarrassed that the Super Swede seems to follow, almost exactly the modifications I suggested for the Swede in March last year. However, this being so, the guitar fits my own tastes and prejudices very closely, and I cannot easily find serious fault with it. In an effort to redress this artificial balance, there are a few things which I do not like. Firstly, the cover over the tailpiece rings on certain notes, and appears to affect the sustain slightly on these notes. Secondly, the front edges of the body and fingerboard are rather sharp in places. Also the pick-up screws look cheap. The intonation settings on the bridge were not set correctly for the strings fitted, and no instructions were provided for care and maintenance. In particular, I should like to see a large pictorial diagram, indicating at least how to unlock the vertical bridge screws before attempting to raise or lower the action. I also feel that the sound from the pick-ups is now halfway between American and Scandinavian tastes, and it might be better placed firmly on one side or the other.

The electrical assembly inside is well screened, and Hagstrom's guarantees are excellent. This is certainly one of the better solid guitars available in the UK.

### Measurements on Hagstrom Super Swede. Serial No. 53-043001.

Scale length 650mm (this is relatively long for a solid guitar)

String spacing at bridge 54mm

String spacing at nut 36mm

Fingerboard width at nut 45mm

Action as supplied 1mm treble/1.1mm bass

Lowest 'standard conditions' action About the same

Depth of neck at first fret 20mm

Depth of neck at 12th fret 23mm

Depth of neck at 15th fret N/A. Body joint and heel level with 15th fret

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# delft's GUITARCHECK

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

TEST ON: Levin W36

DATE: October 1978

PRICE: £183.60 inc. VAT

I think many people in England will have fond memories of Levin guitars which they have owned at some time in the past. In other countries, the same instruments may have been sold under the name of Goya. Some of these instruments are still in the hands of their original owners; others were part exchanged against the purchase of famous American instruments, and re-sold to less well-off musicians. A few, of course, were damaged beyond repair by the usual sort of accident, but many are still with their first or second owners and most of them are still working. Any well-used instrument needs regular maintenance. Some of the old Levins have received this, and some have not, and this is reflected in the varying condition of these instruments, but even the neglected ones still seem to work tolerably well. In retrospect, old Levin "jumbos" seem to be wearing about as well as Gibsons and Martins of similar age. When one considers that the Levin guitars of 10 and 15 years ago were sold at the time for considerably less than their American counterparts, it is to their credit that so many are still in working condition, particularly since less expensive instruments often seem to receive less careful handling.

A few years ago, the Levin company became a part of the C.F. Martin organisation. Although Martin guitars and Levin guitars retained their separate identities, some new Levin models did appear in England at about this time. The ones which I examined were good instruments, and were offered for a reasonable price, considering the high standard of workmanship, but they do not appear to have been wildly successful in the UK. I think they suffered the misfortune of appearing at the same time as the first of the moderately-priced Japanese "copies" of pearl-inlaid fancy Martins. Although much of the "pearl" inlay was plastic, and most of the rosewood was something rather less exotic under the surface, these ornate Japanese instruments attracted a lot of attention when the first "cut-price" versions appeared. It was about the worst possible time for Levin to launch two understated and tastefully decorated guitars.

I did not hear much said about them at the time, and I had not heard very

much of Levin's activities since, until I met their UK representative at the annual London music trade fair in August this year. Several new Levins were on show, some entirely new models, and some older instruments in new versions. I felt that the W36 was similar to the sort of Levin jumbo which many people here will remember, and that it would be interesting to see how it compares with the earlier instruments.

Certainly, there have been changes: the W36 which I have for review does not correspond exactly to the Levin catalogue which I was given only a few months ago. My sample has not been played much, yet it already has the characteristic "Levin jumbo" tone which I remember from earlier instruments. I would expect it to improve further with reasonable care and regular playing. I agree with Levin's stated principle that guitars are essentially for making sound, and this guitar certainly makes the right sort of sound. It also costs about the same as a Japanese "copy" of an American guitar, with a solid wood soundboard but laminated sides and back. The Levin, being constructed sensibly, and entirely of suitable solid wood rather than plywood, is likely to end up as a more responsive instrument than the laminated-body Japanese version. There are always exceptions to this sort of general statement, but it is a sensible guide in most cases. If you do not intend to travel with your guitar between alternate tropical and desert climates, and if you are likely to appreciate a guitar which is sensitive and responsive, without being deficient at the bass end, you may consider the Levin to be better value than the Japanese instrument.

On the other hand, this instrument does not have quite the grace and finesse of the old Levins I remember. I suspect that an element of rationalisation has crept in somewhere. I do not find the neck comfortable, and it is certainly not the same shape as the old Levin necks. There is no reason why it must be the same. It may be that for other players, the new neck shape represents an improvement.

The W36 is made entirely from solid wood. The back and sides are American mahogany, stained to the conventional reddish-brown colour for American mahogany guitars, and the front looks like Canadian spruce. I seem to remember that Levin guitars used to have European spruce fronts. They were very pale in colour at first, but eventually darkened with the effect of light and air, on the wood and the covering lacquer. The front of my sample has a coarser and

more "ribbony" texture, and an orange colour which I associate with some Canadian timber. I have never minded waiting for my guitars to "tan" but quite a few people used to criticise what they called the "white" fronts of old Levins. I suppose they will be happier about this orange or gold colour. In my experience, guitars made with this sort of soundboard tend towards a generally warm tone with plenty of bass, but with less clarity and separation in the treble notes, compared to similar instruments using European alpine spruce soundboards.

I have a fairly good memory for the tone quality of different guitars, and it is my impression that the earlier Levins had a colder and more distinct treble range than this review sample. The older type of instrument also had a colder and less-full bass end, and some examples required a great deal of playing to make any real improvement to the tone in the bass. It remains to be seen how much this review sample will improve after a few years' playing, and in which directions the tone will be extended.

The neck is of similar mahogany to the body, and the fingerboard, bridge and head facing appear to be rosewood, of various sorts. The neck is straight, the frets are well finished and the instrument was supplied in an acceptable state of adjustment with one minor exception. The first string is a little too low in the nut, and is buzzing on the first fret. I believe this guitar has been used for demonstrations and it is possible that someone has re-adjusted the nut, with more enthusiasm than good judgement. However, I think it more likely that there was insufficient margin left for wear when the nut was originally fitted and adjusted. Many companies err in the opposite direction and leave so much margin "for wear" that the guitar is difficult to play at the first fret, and plays out of tune. Whoever adjusted this nut tried very hard to make it perfect and went (just) too far on one string. It represents a problem on this sample and required some adjustment to the nut but, in general, I would not wish to criticise this too much. The price one must pay for finely-adjusted nuts is that the occasional one will need re-adjusting.

The inside of this instrument is finished and strutted in roughly the same way as earlier Levins. My sample is, if anything, better shaped and finished inside than it is outside. This is usually the sign of an economy guitar from a reputable maker, and that is probably a fair description of this Levin Model W36.



### Conclusion

Levin do make more expensive guitars, in this and other styles. I have deliberately chosen the cheapest of their steel-string guitars in the "jumbo" or "dreadnought" size and shape. At £183.60 including tax, it is about £100 cheaper than the nearest American instrument which uses similar materials and workmanship. It is likely to improve more with a couple of years' hard playing than the majority of Japanese "Martin copies". In spite of its sensitivity, the W36 appears to be solidly built. Given reasonable maintenance, I would not expect it to give any serious trouble. This is intended to be a good, budget-priced guitar. As such, I think it is successful and I think it represents good value for money.

Incidentally, I am told the old Levin Goliath model is still as good as ever and still available, although it is obviously going to cost rather more than £183.60! I have asked for a sample to review some time in the New Year.

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### Measurements on Levin W36

Serial No. 557898

Scale length 632mm

String spacing at bridge 55mm

String spacing at nut 36mm

Fingerboard width at nut 43mm

Depth of neck at first fret 22mm

Depth of neck at 10th fret 24mm

Action as supplied 2.5mm treble/3.8mm  
bass



# sawicki's SOUND CHECK

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

**TEST ON:** Laney K100R Combo Amp

**DATE:** October 1978

**PRICE:** £210 (inc. VAT)

## Introduction

Electronic Manufacturing Ltd. of Deritend, Birmingham, manufacture a whole range of musician's amplification gear under the trade name of Laney. Both solid state and valve technology is employed in Laney's instrument amplifier range. Typical examples are the A100/A200 (with or without reverb) and the L100 Klip - a popular 100 watt valved construction which was in fact withdrawn from production back in 1976 but recently reintroduced again because of the persistent demand for this type of product.

The PA side is represented in the Laney range by two 5-channel (10 outputs) amps, the PA 100 and PA 100 Reverb, and also the PA 200, which is basically similar but with a 200 watt RMS output into 4 ohms speaker load. There are also various Laney speaker cabinets available with 2 x 15" or 4 x 12" driver combinations (rated in both cases as 200

watt systems) and a family of power slaves - 100 watt, 100 + 100 watt, 200 + 200 watt and even a 400 watt unit.

The product range is completed by four combination/practice amps, the K30, K30 Reverb, K50 Reverb and K100 Reverb.

The Laney K100R is a 100 watt, two-input reverb combo, equipped with two heavy-duty Celestion Rola G12/50/8 ohms loudspeakers wired in parallel for a total of 4 ohms operation.

## Construction

The K100R has full tone controls, reverberation, tremelo, Klipp and full circuit protection (short/open CCT protection incorporated) as standard features. Both reverb and Klipp can be controlled by the footswitch, using the sockets mounted on the front panel.

Also on the front panel are (from left to right): rectangular on/off power switch, reverb/speed/depth potentiometer, top switch, volume, presence, bass, treble, Klipp and a pair of ¼" jack input sockets. The rear has slave in/out connectors, two speaker outlets, headphones socket for quiet practice, and a set of two 5mm fuse sockets for speaker

protection (5A slow blow) as well as mains (2A slow blow). The mains lead socket is a standard I.E.C. rectangular "Euroconnector" socket.

Access to the K100R's insides is easy, as the amp consists of two parts, the amp head and the speaker cabinet. The main chassis is bolted to the woodwork with four OBA Phillips screws and the only practical connection with the enclosure is the speaker's lead terminated originally with a handy ¼" jack plug. As the amp is a rated 100 watts RMS, I was quite pleased with my measurements (at onset of clipping): it delivered 120 watts in excess and the THD level (see the performance table) was as expected in the region of 0.13 - 0.25 per cent, with the highest level corresponding to the lowest measured power output (1W RMS into 4ohms at 1KHz). Both inputs had ample sensitivity for most electric guitar application and you need about 10.5mV (input 1) or 21mV (input 2) to get a full 120 watts RMS power output into 4 ohms.

As far as the tone controls go, they do their job satisfactorily. The top switch, however, instead of the claimed +17 dB boost @ 5KHz, gave about 7 dB less. But



the bright was still quite good when played with my Kasuga guitar. After reading about the short/open CCT protection system in the manufacturer's booklet, I decided to give the Laney a full minute's short test. The amp tolerated it with ease, although the heatsink's temperature was well above normal operating conditions.

Now for the very heart of the amp. The electronics are pretty well standard, good quality components grouped into middle-sized PCBs (pre-amp and output stage) — a nice sounding unit and an adequately designed power supply. But it does contain some rather disappointing

metalwork which was not noticeable from the outside. Having second thoughts about this we telephoned Laney who explained that all production models going out to dealers have tooled-up or jigged chassis, and that we had been sent an amp with a prototype chassis which they used only in their own test department. The external appearance of the combo is good. I particularly like the simple and clear layout of the front panel, with most of the controls grouped into two effects and contour sections, smart SIFAM knobs and expensive looking footswitch "metal" jack connectors.

## Conclusion

The noise level on the amp is by no means offensive but to get the improvement in the signal/noise figure it could be worth while considering a small design modification at the preamp stage. The manufacturer claims about -70dB but the difference could be explained by the fact that we had an early prototype amp with a new standard circuit board layout. The overall tonal range on the K100R is quite good and the controls are fairly comprehensive. At the present price the amplifier is competitive and is a good contender in the lower price bracket of the combo amp market.

PARAMETER	RESULT	TEST CONDITION	COMMENTS
<b>Specific power output</b> Watts (RMS) Ref. 1KHz	W. RMS 121 W. RMS 76 W. RMS 42 W. RMS	Onset of clipping into 4 ohms Onset of clipping into 8 ohms Onset of clipping into 16 ohms	The Laney K100R is equipped with 2 x 12" Role-Celestion G12750/8 ohms speakers wired internally for 4 ohms operation. The power amp stage is equipped with a pair of 2N3442 (SGS-ATES) devices mounted on two large black anodised aluminium heatsinks. External speaker lead can also be connected 1/4" jack socket at rear.
<b>Total harmonic distortion THD</b> Ref. 4 ohms dummy load	0.22% 0.18% 0.16% 0.16% 0.25% 0.31%	@ 100 W. RMS @ 70 W. RMS @ 30 W. RMS @ 10 W. RMS (Ref. 1KHz) @ 5 W. RMS @ 1 W. RMS	Manufacturer claims 0.2% THD @ 80 W. RMS/4 ohms, 0.1% THD @ 10 W. RMS/4 ohms. Mainly 2nd harmonic distortions. The Laney "Klipp" control acts similarly to the fuzz circuit with two silicon diodes connected back-to-back and provided for symmetrical clipping. "Klipp" control adjusting the clipping level as required. For all THD tests "Klipp" control in Off position.
<b>Input sensitivity in mV RMS</b> for 120 W. RMS (21.9 V. RMS)	10.62 mV. RMS 21.07 mV. RMS	Input No. 1 ) Input No. 2 ) Ref. 1KHz/4 ohms	Manufacturer claims input sensitivity for 100W. RMS/4 ohms: No. 1 = 12mV. RMS, No. 2 = 24mV. RMS, Ref. 1KHz. Amplifier sensitivity for most electric guitar applications. The K100R is equipped with 2 x 1/4" jack sockets on both inputs fitted into the rightside of the control panel.
<b>Tone controls range</b> (swing in dB)	43.4 dB swing 39.7 dB swing 20.1 dB swing	Treble @ 10K Hz (Bass/Pres/Flat) Bass @ 50K Hz (Treb/Pres/Flat) Presence @ 900Hz (Treb/Bass/Flat)	Manufacturer claims: Treble @ 8Kz +21dB-16dB, Bass @ 80Hz + 16dB-10dB, Pres @ 1.5KHz +12dB -10dB. Nice and quite symmetrical. For all tone control measurements, top switch in off position.
<b>Top switch range</b>	approx. 10 dB	@ 5KHz	Adds some "Bright" to total sound, very efficient.
<b>Signal noise ratio</b>	-65dB	Tone controls flat. Ref. 100 w RMS/4 ohms. Input source impedance 47 K ohms.	This figure represents an unweighted measurement.
<b>Slave output level</b>	approx. 0.707 V. RMS	Ref. 10 K ohms, 1K Hz	
<b>Capacitive load test</b>	OK	2uF/non-electrolytic cap. + 4 ohms dummy load.	Satisfactory, but a small overshoot observed.
<b>Short circuit test</b>	One minute!	Short circuit at full drive. Tone controls — max.	No ill effects, worked perfectly when short was removed.
<b>Open circuit stability test</b>	OK	Volume — max, tone controls — max, top switch — on, dummy load removed.	Quite good stability margin.

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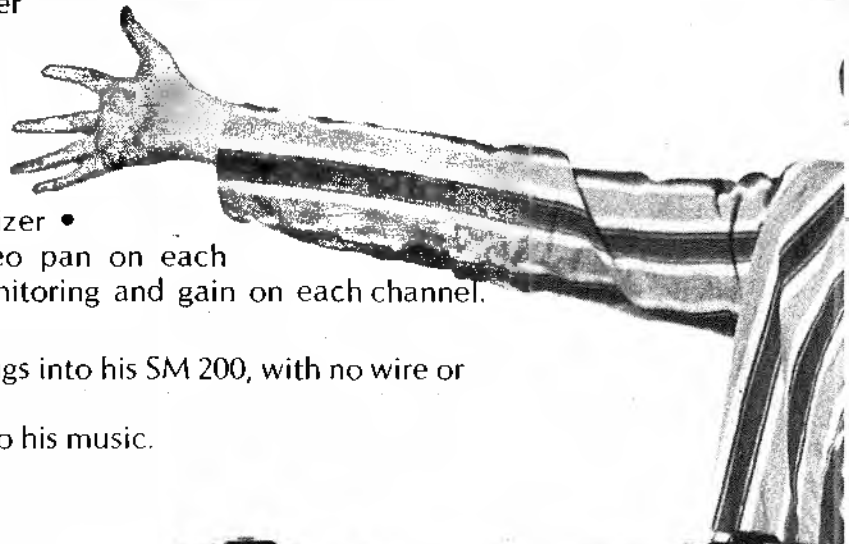
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# mattacks' DRUMCHECK

Dave Mattacks is a freelance drummer whose numerous credits include five years with Fairport Convention.

**TEST ON:** Slingerland set No. 80N

**DATE:** October 1978

**PRICE:** £700.00 (including VAT)

Founded in 1916, Slingerland can be included among the small, exclusive hierarchy of long-established (and still running) American drum companies. For many years the products of these companies were the criteria against which other manufacturers' drums and accessories were assessed. More recently the emergence of quality percussion instruments from Japan — especially hardware — has in part changed this state of affairs, and I was curious to see how a current Slingerland outfit fared against contemporary competition.

If the 80N outfit looks familiar in its set-up it's because it was played — until recently — by a popular drummer. No prizes. The set comprises a 22" x 14" bass drum (he plays a 24" actually), 13" x 9" and two 16" x 16" toms and a 14" x 5" wood shell snare drum. The hardware includes hi-hat, bass drum pedal, snare stand and two cymbal stands. From now on all Slingerland sets in England (distributed here by Conn, their parent company in the USA) include their new tubular legged stands, and all the drums have the new five-ply shells. America still has the choice of five-ply or a shell with glue rings.

## Sound

The bass drum was reasonably solid sounding. It had been set up with the wooden hoop on unevenly so the head had wrinkles in places, but after some quick re-tensioning an acceptable sound emerged. The toms I liked — an open sort of sound without being too boomy. The 13" x 9" was hindered by the damper. The tone of the drum was good, but the damper was stuck in the "on" position and was consequently killing the drum's natural resonance.

The wood shell snare drum I wasn't keen on. Several things put me off. First, I've never been that fond of Slingerland's counter-hoops. As usual, I stress this is personal taste, but for me they have neither the advantages (or disadvantages for that matter) of the Ludwig/Pearl/Tama style triple flange hoop nor of the Gretsch/Premier/Asba style cast Mazac hoop. Ten years ago these hoops were made from brass and they did at least have a solid feel to them. The new ones appear to be made from some sort of alloy, judging by the rather poor chrome plating I saw on some of them. The

second problem was the damper. The style is the standard V-shaped spring steel type, but the piece of steel itself is the flimsy sort one usually finds on a cheap drum kit. This is normally attached to the shell with a small nut and bolt, but this has a thread tapped through it. On the snare and the 13" x 9" tom, this piece of steel had somehow been bent upwards too much, so that unscrewing the knurled knob on the outside of the drum didn't release the felt pad from contact with the drum head. In other words, one couldn't "turn off" (unscrew) the damper.

Finally, the snares themselves. They extend right past the edge of the shell so that the snare butts aren't in contact with the snare head. Both snare strainer and snare butt have a metal bar which sits proud of the fitting and butt. When the snare head is at an optimum tension, all is well. But when the tension of the snare head is increased, some interesting things happen. Like all snare drums, tightening the bottom head makes the snares rattle more, so one compensates by tightening the snare tension but pulls up the snare butts. Because the butts lie *outside* the edge of the shell, this causes the snares to bow and lift off completely from the middle of the snare head. (If this is confusing, picture a box — say 14" square — with a thin 16" ruler lying across its top. When you press down on the ends of the ruler, it bows up in the middle.) To compensate, the distance between the snare butt and the strainer — the plastic strip — has to be altered by undoing the screws that keep the strip in place. This makes altering the tension of the snare head a very time consuming and boring operation.

## Shells

The three off-putting factors that I detailed above seemed to crop up here and there throughout the set in various guises. I found this disappointing because there's no doubt that the basic drum — the new five-ply shell — is good. It isn't constructed from several thin plys but from two different thicknesses. The outer, inner and centre thin veneers are mahogany (maple is used for the outer veneer for the wood finishes) and the two thicker centre cores are poplar. All bearing edges are flat with 45 degree flanges and are neatly lacquered and finished inside (and outside on wood finishes) and all shells have a solid, substantial feel to them.

## Snare drum

The 14" x 5" 10-lug drum has square-headed tension rods — fitted

throughout the set — and three air holes for "improved air dispersion". The damper and snares I described earlier, and the snare release is a large cast upgraded version of a cam-action side-drop type. The appearance of it is smart enough and there are one or two nice features, for example a rubber washer around the snare tension rod to prevent slipping, but in the final analysis, it proved rather stiff and ungainly. The action would probably loosen and settle in time, but that's not too much use right now. As on the toms and bass drum, Slingerland/Remo ruff-coated Ambassador heads are fitted.

## Toms

The 13" tom has six lugs per head and the two 16" toms each have eight lugs per head. Both floor toms are fitted with three wide-angle legs apiece which locate into blocks fitted in the drum. These aren't the eye ring/wing nut type; a wing nut screws through the block directly onto the leg. They work well enough — the knurled leg won't slip — but it isn't as positive as the eye ring style bracket, still the best for cymbal arms, tom legs, etc.

## Bass drum

The drum has 10 lugs per head and wooden hoops. The "T"-shaped tensioners have changed slightly in style, but still look smart and work well. The claws, however, seem to be made from the same material as the counter hoops and their rather poor chrome plating spoils the appearance of the drum. Two pairs of disappearing spurs are fitted, both sensibly mounted at forward facing angles. Two cymbal arms are fitted — one for the ride cymbal, the other for a splash cymbal. The brackets are the same as those fitted to the floor toms for the legs, and both cymbal arms are the telescopic type with tilters at the top. I mention these because I'm sure there are some younger drummers who haven't seen cymbals mounted on bass drums, just a plethora of toms (usually single headed).

The tom holder is a strong, fairly straightforward type. A wing nut set at an angle screws through a large cast block mounted in the middle of the bass drum, and tightens directly onto a stem which passes through its centre. The top of the stem has a large hard nylon ball attached. A casting clamps around this ball (a principle similar to two spoons holding a spherical object) and an attached stem fits into a corresponding block on the hanging tom. The blocks fitted to the bass drum and tom are similar, but the wing nut on the tom block screws into a

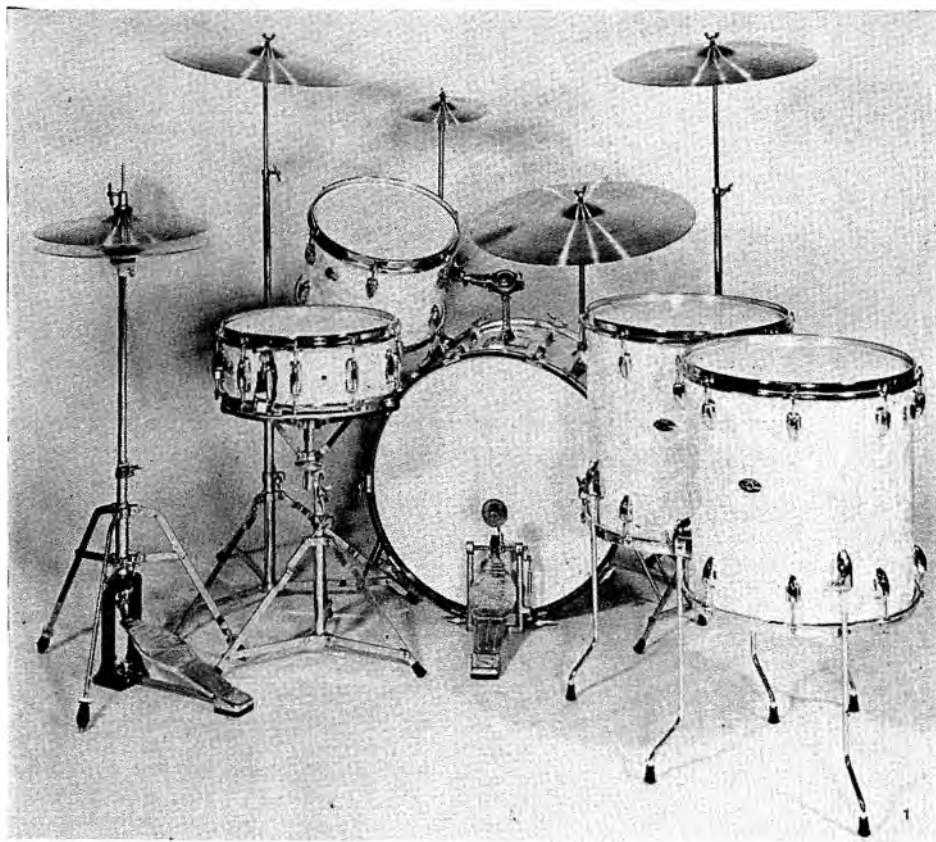
metal clip. This in turn tightens onto the arm, i.e. indirect pressure. I don't know why this preferable method isn't employed on the bass drum block. Apart from that, it's a good sturdy holder.

### Stands/Accessories

Slingerland have a new pedal, the "Yellow Jacket", which they now supply with all their sets. The new pedal has a cast two-piece footplate and twin posts. At each post is an identical spring, three-way stroke adjustment cam, and the spring tension adjustment knobs each have a locking device to prevent slipping. The pedal has twin spurs fitted and a metal link joins the footplate to the beater hub. One point I didn't like was the "improved" method of clamping to the bass drum hoop. It's basically the screw-down/clamp type but with a cam action spanner style lever to lift or lower the clamp on or off. The principle is fine, but the mechanism was so stiff it was as much as I could do to swing the lever around to lock the pedal into position. See my note earlier re the snare mechanism.

The hi-hat (and snare and cymbal stand) have the new style wide-angle base tubular legs with large rubber feet. The footplate is the current Slingerland type. This is at present being changed to match the "Yellow Jacket" bass drum pedal footplate and should be with us by the end of the year. The saddle unit is a heavy duty cast one with a comprehensive spring adjustment mechanism - the tension adjustment knob is at the top - and a large spur at the base. The centre rod is hexagonal and the centre tube is the more common 5/8" diameter and has a nylon bottom cymbal cup at the top. The top cymbal clutch I didn't like. Its base screws into the head (where the wing nut is) but there's no way to lock it into place. This means that the top cymbal has to be clamped tight and even then, there's no guarantee that the two sections won't work loose and separate. While I'm dealing with stands, I'd like to mention that the trend towards tubular legged hardware isn't one I'm in favour of, regardless of who manufactures them. Obviously they've neither the weight and stability of heavy duty double-strutted stands nor the compactness of the smaller flat-base type. It's a compromise of the two without, in my opinion, the advantages of either type.

The snare drum stand is based on the Buck Rogers type. The height adjustment utilises the Walberg style clamp, which I found very stiff, but there are plans to change this in the near future to a clamp



*The Slingerland 80N, pearl finish. Note: the kit Dave tested was in white finish and had tubular stands and the new "Yellow Jacket" bass drum pedal*

with a nylon inset. The angle adjustment is secured with an undersized wing nut which would be more in place at the top of a cymbal stand, and a large alloy locking nut locks the basket arms into place.

The cymbal stand has a nylon clamp at the first height adjustment stage but not at the second. This, like many other small items, will apparently be changed soon. At the top is a new style tilter, not too dissimilar in principle to the Pearl. Two metal parallel rings sit vertically on the top tube and a thick, coin-shaped disc - with a serrated edge for grip - sits inside them. A removable cymbal rod protrudes edge-on from the disc and just behind that sits a wing nut with a small collar at the top. When the wing nut is tightened, the collar meets with the parallel rings so the disc is "pulled up" and cannot revolve. The cymbal rod has a hexagonal base to assist tightening into the disc, but this could only be screwed in so far because the parallel rings prevented the hexagon from turning. The stand also rattled quite a bit and closer examination revealed several loose rivets. I've been assured that "quality control" won't let this continue!

### Appearance/Summary

Overall, the appearance of the drums is excellent. The plain white finish which I saw was smart and the other finishes available - especially a plain red and several of the wood finishes - look superb. There are only five or six that I didn't like out of a choice of over 20. I'm pleased Slingerland haven't tried to "modernise" their bass drum logo and their small oval shaped badge is neat and unobtrusive.

On my way to see these drums I was hoping to see evidence of another major American drum company returning to top quality production. Unfortunately, they seem to have taken two steps forward and one step back. The obvious change is the shells and the move towards heavier hardware. This, for me, has been partly negated by lack of attention to detail: the poor chrome work, the counter hoops, dampers, cymbal clutch and certain parts of the stands. Undoubtedly, £700 is a very competitive price for this kit and I feel many drummers will not be bothered by some of the points that I've brought up. A slightly more expensive set with none of these faults would be my preference.

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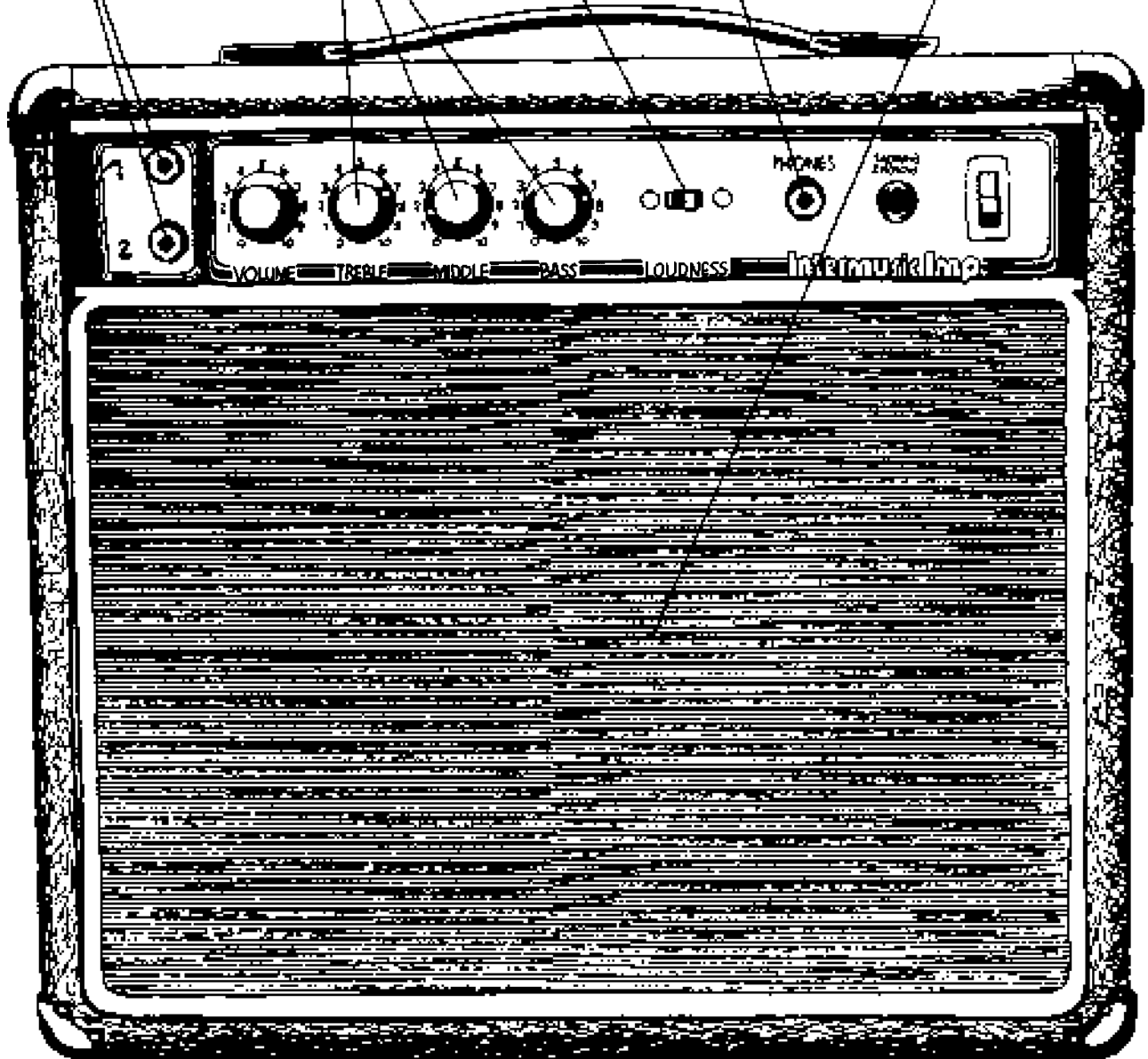
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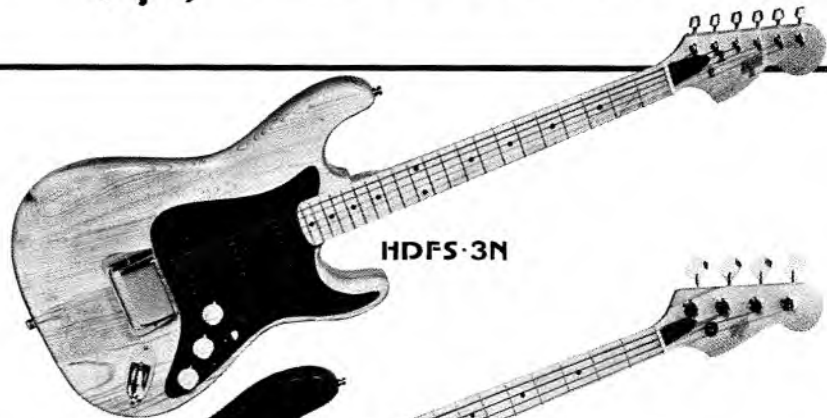


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# Lumley's KEYBOARD CHECK

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



**TEST ON:** Yamaha SS30 String Synthesizer

**DATE:** November, 1978

**PRICE:** £760 inc. VAT

Ach so, a new piece of SS equipment? But it's Japanese, and it's from Yamaha, and it's yet another winner keyboard, imported once again by Kemble Pianos, who distribute the Yamaha keyboard range in Britain. It's been a while since a new string synthesizer worth playing has come onto the market, and this one should make owners of other synths start checking out their pocket calculators for an exchange price. The SS30, by virtue of its features and its intrinsic sound, easily earns its place amongst the Roland RS202 and the ARP Solina as the best string machines on the market, but one's final choice is, of course, down to personal taste. There are plenty of folk who would never change their Solina for anything else, for example. So let's check out the new LSO impersonator.

The SS30 is about the same size and weight as both the Roland and ARP machines, and comes in a mock wood case. It is a four octave instrument, C-C, and starting from the left side of the buttons-and-knobs panel, this is what it does: firstly, there's a double-mounted tuning pot, of which the inside pot takes care of the overall tuning on the instrument as against anything else, and the outer knob causes a slight, but variable, de-tuning of the instrument internally. This can be used to great effect in arriving at "realistic" string section sounds. Then there's a vibrato section, with a delay knob, which lengthens the time after a

note has been played that vibrato begins to occur, and a depth control, for the severity of that vibrato once introduced.

Following that is a keyboard split selector switch, but this refers specifically to the range that the cello pre-sets will operate over, so I'll explain this one in a moment. So, in propinquity, comes a sustain section, with separate controls for the sustain of the cello range and violin range. The cello select area consists of three tabs; one is a two-position control that allows either attack or slow attack on each note, and then two different sorts of basic cello sound. Being pre-sets, as on all string machines, these sounds are already synthesized for you, and it's your own personal taste about these pre-set sounds that, in real terms, determines your choice of string synthesizer. I found the cello selects very pleasant to listen to, perhaps a shade warmer in texture than the Solina sound at its lower end, but a bit edgier than the Roland. But there's two of them, both slightly different in harmonic content, and the player may select one, both or neither. Should you want the cello range sound, you must refer back to the keyboard split selector before anything will happen at all, because this instrument embodies quite a nice feature that is very useful. Looking carefully at the panelling immediately above the keys, you can pick out three white dots. In ascending order, these markers refer to the three keyboard select positions, 1, 2 and 3, and denote how far up from the bottom end of the keyboard that the cello sound extends. If your split select is on 0, then you'll have no cello sound at all, and the other presets for violins and violas will appear wherever you play on the keyboard. Turn the selector to 1, and cellos will appear up to

the first dot; one octave in all. Selecting 2 and 3 extends the cello range progressively to 1½ octaves, and finally 2 octaves. Further, there is a separate balance control for the signal volume of the cellos against the rest of the keyboard, which may be violas or different types of violin. This whole feature of separate low strings selection and balancing is a real boon to both live and recording use.

For the playing of the top end instruments in the string family, there are four pre-set tabs. Incidentally, all the pre-set tabs are smooth action rocker switches, nice and big, easy to see and to use (just like the Roland RS202, in fact). Again, as for the cellos, there's a fast/slow attack switch, with three sounds tabs, respectively Viola, Violin 1 and Violin 2. Similarly, the sounds produced in these ranges are very realistic starting points, and are both rich and warm. Indeed, the whole texture of the voices on this instrument seem very good indeed:— no shades of Stylophone or Sooty organ, as in some string machines you *can* buy (but shouldn't be able to!). A basic EQ for cellos, and separately, the violins, is provided in the form of a brightness (or top end sound) knob, and the top panel of controls is completed by an overall output level knob, and a power On/Off push switch.

With any string machine, providing the basic tab sounds are acceptable, the thing needed to actually provide the slightly swimming sound of strings is some form of modulation, preferably variable, and this the SS30 has. To the left of the keyboard is a section of controls labelled (optimistically perhaps, depending on the player) Orchestra. There's a Depth control, which varies the amount of Orchestra effect when either

the cello or violin tab in the Orchestra section is pressed. This division again of cello and violin is an adjunct, necessary extension of the splitting facilities on the main board. Another rocker tab allows the player to choose two speeds of modulation. Setting up the pre-set sound choices, detuning the instrument slightly on the internal tuning pot, and then selecting the slow orchestra tab with about half depth gives you, finally, one of the best pre-set synthesizer string section sounds available. Then add a little echo or reverb (as any synth will benefit from, regardless of its make or complexity) and the illusion is almost perfect.

But of course, one must realise that, when playing any string synthesized sound, if you want it all to sound as real as possible, you *must* choose the kind of notes that a string section would play. It's no good holding down close interval triads and multi-note left hand chords and expecting to sound like Andre Previn has waved his baton (he's more likely to have thrown it at you). So if you're in a shop, and checking out string synths to buy, do play them properly, because the illusion they create is at your mercy. I've heard players dismiss several string machines for not "sounding right" and it's been their fault, not the instrument's. It's well worth purchasing some miniature scores, and studying the way in which string section parts are written. Some really huge, full sounding chords you hear on record in classical pieces you'll find, on analysis, to be very simple constructions, both in intervals and harmony perhaps with a subtle 7th or 9th note put in at just the right register. The richness of chord sound is really intrinsic to the sound quality and phase collision of massed string instruments, and not dependent necessarily on the number of notes played.

Well, a short discourse on the use of string machines does not, perhaps, come



into the scope of a review such as this, but I feel it important to mention if you intend buying one and trying one out in a music store. So there.

Of course, when considering any string machine, either on a review basis or for ownership and operation, there is no way you can expect the super realism quality that one could obtain from working for hours setting up a sound and vibrato on a larger, complex synthesizer, such as a Yamaha CS800. But this is not the point of owning a string machine; they're around to provide orchestral

sounding thickening, and sustained notes especially for the live gig situation, and are a logical progression technologically from the Mellotron's role.

The SS30 sells for £760.00 including VAT, which makes it a bit more pricey than its immediate competitors in the Roland and ARP range, but it's got that little bit more in terms of features that make the few bob well worth spending. It seems that Yamaha don't make any mistakes with the keyboards they produce for sale, for I've yet to review one that I can fault to any degree.



# IN BRIEF IN BRIEF

"The Jazz Guitar — Its Evolution and Its Players" by Maurice J. Summerfield. Published by Ashley Mark Publishing Co., Gateshead, Tyne & Wear, England. Price £7.95.

As the sleeve notes to this book say: "... an absolute must for jazz lovers and guitarists alike." And who am I to disagree? This book is a hard bound quality book with 240 pages literally packed with pictures and info on all you ever wanted to know about jazz guitar.

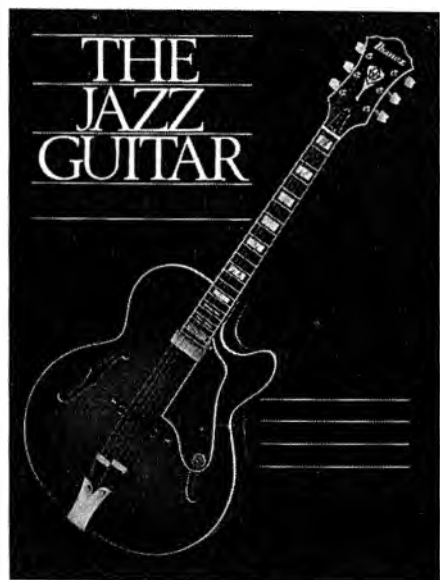
There have been many books published on the guitar and many on jazz, but this book covers the evolution of the guitar in jazz from 1895 to 1978 and details every important jazz guitar record ever issued along with biographies and photos of the world's greatest jazz guitarists.

The book is very thorough — at one end, contemporary guitarists like John McLaughlin and Terry Smith are featured, while the first page features a rare picture of the earliest known jazz band, Buddy Bolden's Jazz Band, circa 1894!

The first chapter deals with the evolution of the guitar in jazz and includes lists of recommended books and records plus a complete list of poll winners from *Down Beat* magazine from 1936 to 1977.

There then follows the major part of the book with biographies, photos, recommended reading and music for over 100 of the top jazz guitarists past and present. This section is particularly informative and also includes many rare pictures.

Towards the end of the book is a chapter on the various guitars themselves and histories of the companies who made them. Last but not least is a long list of sources of information and supplies, where the records, books and music detailed in the book can be obtained.



The book is extremely well-written, very thorough and very informative. Worldwide distribution details are now being arranged for the book but, in the meantime, it can be obtained from Summerfields, Saltmeadows Road, Gateshead, Tyne & Wear, England.

**Eamonn Percival**

## ON TEST: Bass guitar strings

From the point of view of fret and fingerboard wear, the Halfground bass guitar string seems to be an extremely welcome development. Without doubt, the modern Roundwound bass guitar string developed by Rotosound and John Entwistle in the mid-Sixties opened up many new avenues of expression to the bass guitarist, but the physical make-up of its construction tended to wear down frets faster than flatwound strings. The round, stainless-steel wire, wound round the central core, gives the string its characteristic "zing" and treble accented sound, but the corrugated roughness of the string surface has, until now, caused all the wear problems. The Halfground development simply means that the peaks of the windings are ground down, giving the appearance and feel of flatwound strings, but the object being to retain the sound and response characteristics of roundwound strings.

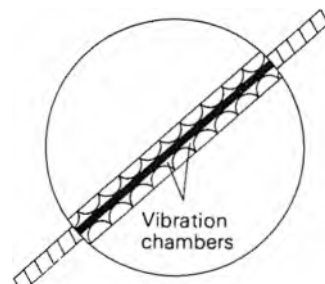
For the purposes of these tests, I used my Fender fretted and fretless Precisions through a 100w valve amp, driving a bass cabinet containing a 15" Celestion Powercell speaker. I felt the only way to judge their relative merits was to compare them directly with a new set of standard roundwound strings which I'm used to, and I strung the guitars thus: 1st or G 'Sounder', 2nd or D Roundwound; 3rd or A 'Sounder' and 4th or E Roundwound. All the tone controls on the amp were set flat, and the gain and treble boost facilities were not brought into operation. This left the strings "on their own" as it were, to produce their sound through the pick-ups which were set at full volume, and full treble.

### *Sounder Halfround bass strings (£6.50 per set, inc. VAT)*

Sounder strings, (half round, as they call them), are manufactured by "Valley Music" of Treorchy, South Wales, who I believe are a fairly new company. The windings are of stainless steel wire, and one of the features the company point out are what they call "vibration chambers".

These are located internally, at the core, and appear to be simply the gaps between the circular-in-section windings, side by side, and the core itself. I do not

see the significance of this feature as an innovation, as any roundwound string will have these gaps.



After a day or two of "playing them in", and swopping the stringing permutations around with the conventional roundwounds, I came to the following conclusions. Without doubt, they give a very bright, crisp and punchy sound. Response was good and even, all the way up the scale, on all strings, and the almost flatwound feel made the strings a delight to play, especially in the execution of a gliss or various swooping phrases on the fretless, as the friction between fingertips and strings is obviously vastly diminished, as is the noise generated by finger sliding.

Despite having the treble characteristics and brilliant 'attack' of roundwounds, they still couldn't match what I've described before as "zing". The shape of the surface contours of a guitar string definitely affect the way it vibrates. Also the "mass" of the metal used in its construction has a definite bearing on its sound, so by grinding off 25% to 50% of the top winding, then obviously this decrease in mass will alter the final audible result.

That distinctive roundwound "open piano string" ringy sound was not sufficiently attainable to my ears, although I feel this string construction offers a new and welcome addition to the range available. Not every bassist wants their axe to sound like the bottom two octaves of a Hohner Clavinet, but I suspect a vast majority would like the top and crispness that flatwounds lack, but with their playing and feel features, coupled with the comparative reduction in fret and fingerboard wear.

These strings are nicely finished with black silk spun on at both tuning peg and ball-ends. One small criticism is that the ball-ends themselves appear to have rather wide central-core seating grooves around the exterior, and look a bit cheap in comparison with the rest of the product, and its attractive packaging.

Both Long and Medium scale are offered, in what appears to be medium to heavy gauge. In my opinion, they provide a good intermediate alternative between flatwound and roundwound strings, with the sound characteristics much closer to the latter.



**Picato halfground bass strings (£9.84 per set, inc. VAT)**

After testing these strings of similar construction to the previous set, although with some minor differences, I've come to the conclusion that this general concept, although valid in its own way, is not the answer to the problem of Roundwound sound retention, with less abrasive string surface characteristics. As mentioned in the previous review, the diminished mass factor, plus the drastically altered surface contours, change the make-up of the string too radically for the resultant sound not to change.

Maybe I've missed the point, but that's the way I see it, and after playing these strings, I'm more convinced that this type of bass guitar string fills a hole in the present ranges available. Picato have been producing quality strings for many years now, and are a part of the long-standing General Music Strings company of South Wales

They offer their set of Halfground bass strings in Long scale only, and soft light gauge only. The windings are of pure nickel and are yellowish, and slightly duller in appearance than stainless steel wrapped strings. The grinding down

process appears to have been carried out to a greater degree than the Sounder set, with the result that the ring at the top end is even less apparent, although the pure treble and harmonic characteristics are perfectly acceptable and prominent. The nickel windings give a warmer roundness to the overall sound produced than stainless steel, and all this goes to prove that like most aspects of bass guitar playing, sound concept is very individual, and what's good for one may be unacceptable to another player.

Quality and packaging wise, this string seems to me to be as good as any other and, in frequency response, falls somewhere between flatwound and roundwound, but more towards flatwound than Sounder, for instance.

**Jim Rodford**

**Acoustic 230 amplifier**

In Soundcheck last month Mark Sawicki reported on the Acoustic 230 lead amp - "basically a very good amplifier" - after testing one supplied by the Carlsbro Sound Centre in Sheffield. We've been asked to make it clear that this dealer is no longer an agent for Acoustic but that there is now a nationwide chain

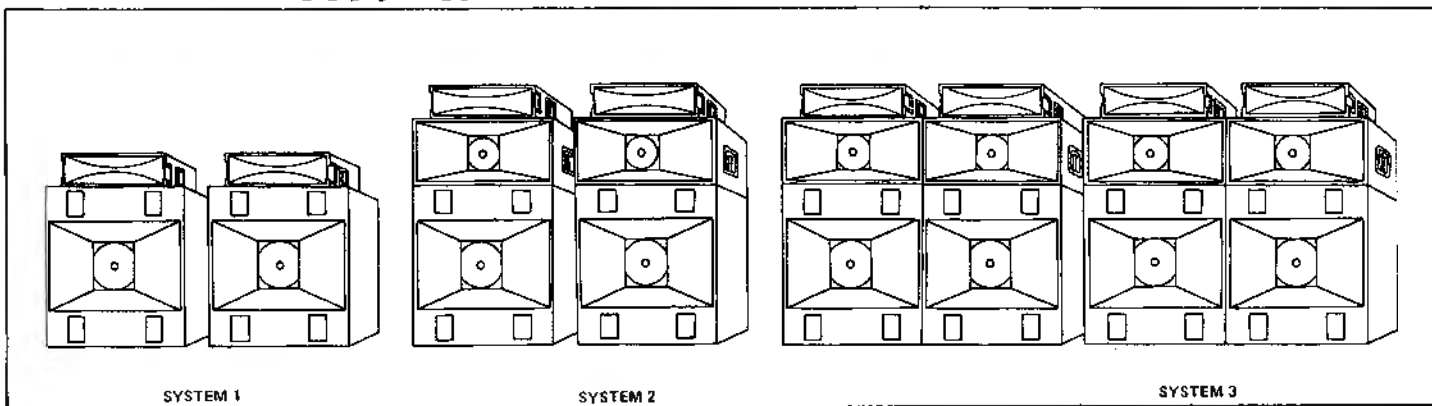
of retail stores handling the full range of Acoustic products.

They are: Kitchens of Leeds, Kitchens of Bradford, Kitchens of Barnsley, Kitchens of Newcastle, Mr. Music in Bedford and Hemel Hempstead, Rushworth Music House in Liverpool, Chester, Southport and Birkenhead, Sound Centre in Cardiff, Newport and Tredegar, Unisound in Chatham and Kilburn, the Loughborough Music Centre, Modern Music in Dudley, Middleton Music in Aberdeen, Grant Music in Edinburgh and M. Cymbal Ltd. of Belfast.

Every Acoustic amplifier carries a full 12-month parts and labour guarantee and each of the above dealers is prepared to do service work, no matter where the amp was bought. In other words, although the Acoustic Control Corporation do not have a wholesale distribution company within the UK, the 20 dealers provide a full country-wide sales and service network.

One other small point: on the amp that Mark tested last month, the mains lead had the old colour coding. We're happy to report that all Acoustic amps supplied through the dealer network now have the standard mains cable fitted.

# SSE P.A. SYSTEMS



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2 ATC 1 X 12 mid range units  
2 JBL 4550/RCF 15" bass bins  
Total power handling 600 watts  
Suggested amplification - 1 MM AP360 or  
1 Turner B502 XLR or  
1 RSD 800B

**SYSTEM 2B**  
As in system 2 but using  
2 Grovopower horns/Electrovoice 1B23M driver with 3k passive crossover  
2 ATC 1 X 12 mid range units  
2 JBL 4560/JBL K140 15" bass bins  
Total power handling 800 watts  
Suggested amplification - as in system 2A

**SYSTEM 2C**  
As in systems 2 and 3 but with the addition of a 2 way Electronic crossover crossing between bass and mid range at 330Hz.  
The system then requires separate amplifiers for bass and mid frequencies -

2 MM AP360's	(total output 600 watts)
2 RSD 800B's	{ " " 880 watts}
2 Turner B502's	{ " " 800 watts}
1 RSD 800B (bass) + 1 MM AP360 (mid/top)	{ " " 740 watts}
1 Turner B502 (bass) + 1 MM AP360 (mid/top)	{ " " 680 watts}

**SYSTEM 3A**  
4 Grovopower horns/RCF TW101 driver with 3k passive crossover  
4 ATC 1 X 12 mid units  
4 JBL 4550/RCF 15" speaker bass bins  
Total power handling 1200 watts  
Suggested amplification as in system 3B

**SYSTEM 3B**  
4 Grovopower horns/Electrovoice 1B23M driver with 3k passive crossover  
4 ATC 1 X 12 mid range units  
4 JBL 4560/JBL K140 15" speaker bass bins  
Total power handling 1500 watts  
Suggested amplification (used in connection with MM 2 way 330Hz crossover) -

2 MM AP360's	(total output 960 watts)
2 RSD 800B's	{ " " 1350 watts}
2 Turner B502's	{ " " 1350 watts}
1 RSD 800B (bass) + 1 MM AP360 (mid/top)	{ " " 1150 watts}
1 Turner B502 (bass) + 1 MM AP360 (mid/top)	{ " " 1150 watts}

**'Standard' range Modular P.A. Units.**

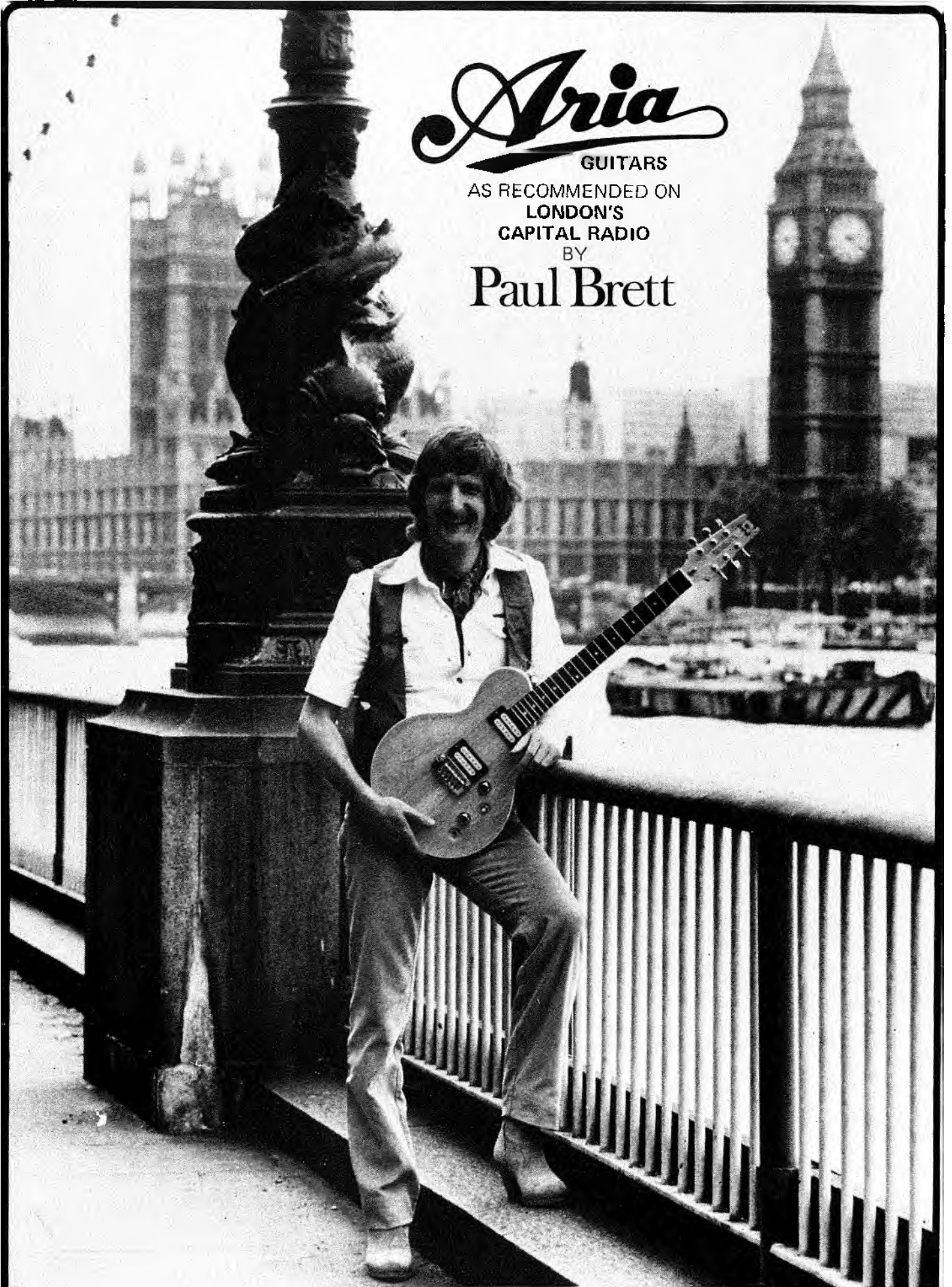
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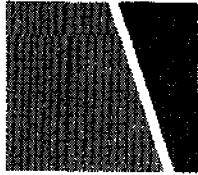
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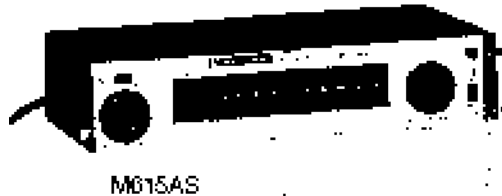
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M615AS



SR107

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envelope level. If a HI LED is lit, the frequency response for that octave is *above* the nominal envelope level. The operator simply adjusts the corresponding sound system equalizer filters until both LEDs for each octave are extinguished. This signals the desired response has been reached. He can achieve accuracy of  $\pm 1$  dB in minutes!

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# SCHECTER GUITAR RESEARCH

## THE SCHECTER STORY

Several years ago David Schecter arrived in Los Angeles from Boston. Getting work in a small guitar repair shop in Hollywood, Schecter began to formalize his ideas on pickups, while custom winding and repairing guitars for practically every major artist in the L.A. Market. Through word of mouth it gradually became evident that Schecter was producing some of the best pickups available, and musicians who heard his work began to search him out.

In those early days David could be very difficult to find. When pressures became too great, he would just pack up suddenly and disappear. He would usually return within a reasonable time with new ideas in mind and a desire to continue his work.

It was under dismal conditions that David survived those first couple years in Los Angeles. Living in his car or a friends garage, he kept his life simple.

It wasn't until early 1976, that Schecter finally joined up with two friends and the plans for Schecter Guitar Research were made. His reputation was already allowing enough business so David could rent a small shop in Van Nuys, California. With each custom hand-wound pickup and skillfully repaired instrument, Schecter Guitar Research built up a following that spread across the country.

Schecter came up with a design which he called the 'Tapped Pickup'. It had two coils in a continuous series. The first or inside coil faithfully reproduces that original Fender sound so the purist wasn't giving up any-

thing. The second coil works as an extension for power increase, but with a basic difference from other replacement pickups, it retained those crisp highs. This was really essential because so many musicians loved their old Fender instruments, but wanted more variations and color, not to mention higher output.

From the moment Schecter and his associates realized the demand for their products, David set about designing efficient means of production without sacrificing any quality. Working day and night for months on end, Schecter actually lived in the middle of his production facility. Virtually every piece of equipment in his shop was rebuilt, modified or designed by David. His abilities were endless. He built, within a matter of weeks, a sophisticated coil winding machine with innovations geared to insuring the consistency of each pickup.

While all of this growing was going on, David's associates Shel Horlick and Herschel Blankenship began to make plans for selling and getting the SGR products to musicians around the world. The end result was the formalizing of International Sales Associates (ISA), which would be the exclusive sales and distribution company for Schecter Guitar Research.

As time continued on, Schecter expanded at a furious rate with David creating new ideas and products, almost on a daily basis. The 'Tapped Pickup Assembly' became a sophisticated product geared to professional musicians which literally opened up endless tone possibilities for Fender

Guitars. Some of the biggest names in the music business became Schecter enthusiasts and used the products religiously.

It wasn't long before the phone was ringing off the wall and demand for other Schecter products was being made. Pickguards, Jackplates, Knobs, Bridges... the list goes on and on, all being made with David's touch and design. The beautiful exotic wooden bodies and necks finalized the reality and it became obvious to everyone that you could order and build a completely custom instrument from Schecter Guitar Research Parts.

Like quite a few other companies in the music business, Schecter Guitar Research has gone from poverty to prosperity in a very short time.

With over 400 items in the Schecter line, the company has grown and become quite an interesting place. Every employee is a musician and skilled technician. New products continue to pop up regularly and David is still right in the middle of it, checking on each part, teaching and training every employee the Schecter Quality.

The outlook is bright for this young company and with the possibility of a completely new guitar design in the near future Schecter Guitar Research is a company to keep your eyes on.

★ ★ ★

Written By:  
Charles Simmons

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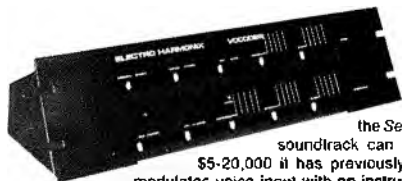
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POWER (to 4 ohm load): 200 watts rms; 375 watts peak  
FREQUENCY RESPONSE: 40Hz-20kHz  $\pm$  3dB  
HARMONIC DISTORTION: Less than 0.2%  
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INPUT SENSITIVITY (for full power output): 1.0 vrms



### ULTIMATE ECHO WITH CHORUS

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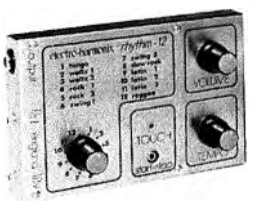
### MINI-MIXER

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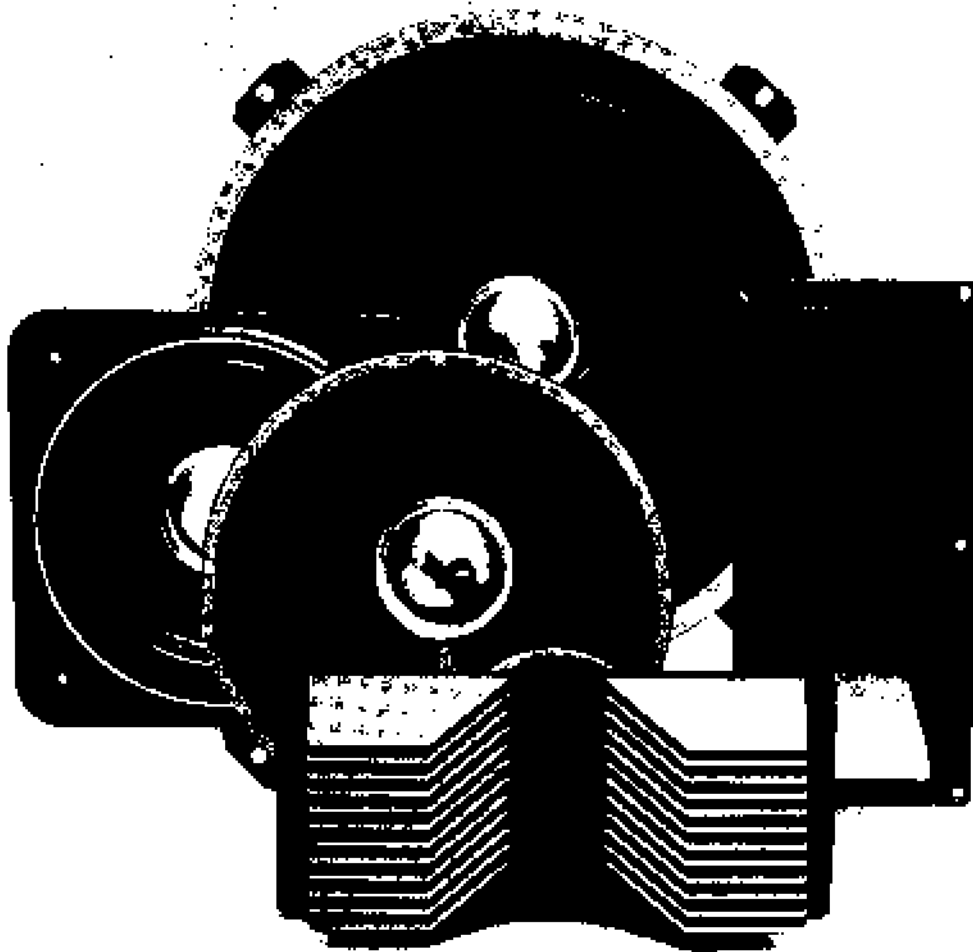
### ELECTRONIC METRONOME

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Hum & Noise: 100 dB below 400 watts rms output (20 Hz - 20 kHz)

Slew rate: 10 volts per micro-second

Load impedance: 4 ohms or greater (stable into any load configuration)

Damping factor: Greater than 100 (1 kHz, 4 ohms)

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# ANDY MACKAY

## IN SEARCH OF ANY RIFF

Since the break up of Roxy Music, one of Britain's most successful bands of the Seventies, much of the spotlight has been focused on Bryan Ferry. Yet, in terms of sheer work and versatility, it is sax player Andy Mackay who has stolen the honours among former Roxy members.

In 1975, Andy released his first solo album "In Search Of Eddie Riff" which showed his potential outside the framework of the Roxy Music set-up. Over the last three years, the work that Andy has undertaken has established him as so much more than just the former sax player with Roxy Music.

During this time, he has written and produced two albums for the television series "Rock Follies", the first of which reached number one in the UK charts, and a subsequent single also made

the Top Ten. In addition, he composed themes for both the "Hazell" and "Armchair Thriller" TV series.

Continuing his musical development, he has just completed his second solo album "Resolving Contradictions", which promises to be one of the most interesting releases of the year. The album contains heavy Eastern influences which reflect Andy's recent visit to China and interest in oriental culture.

Rock music thrives on innovation and experi-



mentation, although few musicians at the moment seem to be prepared to really strike out and try something radical — which is what rock is all about. The work of David Bowie immediately springs to mind, his residence in Germany has had considerable influence on his music over the last couple of years, and Andy Mackay's recent work reflects a similar kind of influence.

A country such as China, with such a large population and long history, but which largely remains a mystery to Western eyes, has obvious fascinations. Many rock musicians have expressed interest in performing there as in other largely inaccessible Communist states, but Andy is one of the few who has actually gained first-hand experience.

So what effect would such a visit have on a rock musician making an album? Andy said: "The main influence of the visit to China was that it gave me a kind of focus for a lot of ideas I had anyway. I was intending to do a solo album, and had done a deal with Bronze Records to do speci-

fically solo albums. I'd got the material together and, just by instinct, I'd decided to wait until I went to China. I felt that probably it was going to be an interesting trip that was going to give me some ideas.

"I was also interested in picking up some new musical ideas purely in terms of sound, instruments, the way they are used etc and, as it happened, that's really the way it turned out. Although I would have done an album which would have been similar in some places, the total album, the way that it actually sounds, is a result of the Chinese experience."

Although Andy's visit was not one particularly designed for musicians, he did gain some insight into Chinese music and the people who play it.

"China has always interested me, as I think it would interest everyone, it is such a fascinating, intriguing place," he said. "The trip we were on was a cultural exchange which wasn't particularly designed for musicians, so I just had to try as best as I could to see music.

"I did get to see quite a lot, but I didn't meet many musicians to talk to, which was the only thing that disappointed me. Maybe the musicians, like musicians everywhere, are a little bit on the wrong end of being non-conformist and it would have been a little bit too much. From what I had seen of musicians in the theatre bands, I suddenly thought, 'Hey, these guys look pretty much like musicians anywhere'; quite cool, very professional, even the way they dress. Most people dress conformistly in China, and I just noticed that the musicians I had seen were wearing things like crew-neck sweaters, which would be very hip in Chinese terms. Its great, I hope that musicians all over the world are still the ravers of society."

The music of China is also quite varied, according to Andy. This ranges from the traditional tunes and folk songs through to the revolutionary operas which were performed during the cultural revolution of the Sixties but are now considered out of favour. The amount of Western music which has filtered through to the country is very limited.

"At the moment, the Western music they're into most is classical, Mozart, Beethoven etc. Rock music is still quite a long way off, they've never heard of the Beatles or Elvis Presley. I played them a few Rock Follies tracks, Rossini overtures, Country and Western, Rock and Roll, but by and large they liked Rossini best, they're not quite ready for the rest yet.

"There is a lot of music in China, you hear it all the time in public places where they have loudspeaker systems. They sell records, 45's on rough crappy plastic and they are so cheap, cheaper than newspapers - LPs are more expensive but freely available.

"Every city has a music shop that sells records and sheet music and an instruments shop at the centre. A lot of people play instruments there and I had great fun going out and buying stuff. Huge crowds would gather outside the shops I went into because I used to try the instruments out and they would gather round to see what was happening."

The current popular Chinese music is a mixture of strange orchestral music played on traditional instruments although they do use French horns, trumpets, oboes and violins and specialise in grandiose arrangements. Andy explained the technical differences between this and Western music: "The thing about Chinese music, in technical terms, from what we do is that it essentially deals with one melodic line and harmonies are not very important.

"If you listen to a Chinese piece, the thing that makes it sound Chinese, apart from a certain amount of ornamentation, is that they double the melody line

several octaves. They would probably have a flute on top, Chinese fiddle in the middle and, maybe an octave lower, a cello or viola type thing with only a very light bass line and no harmony as such. They would then punctuate that with percussion, which is not used to keep the beat going all the way. The modern music uses more harmony, but it's still not important. Strong melody lines are the things that come across and that is harder to relate to Western music because we tend to hear things in harmonic terms."

He is anxious to organise another trip to China, which this time hopefully will be made up of musicians and people interested in music. He then believes it would be possible to ask to see recording studios, meet musicians, visit music schools and perhaps find out if they have any electronic instruments. Andy would also like to perform there, but he feels that this is something which will take time.



**T**he new album, which marries Eastern and Western musical styles, contains several haunting Chinese melodies, which are quite unlike anything you may expect to hear on a rock record and the whole thing works remarkably well. This is a tribute to the sheer professionalism of Andy Mackay, a musician who is not content to stay in one particular music area, but is prepared to spread his talents.

It is this talent and the constant desire for challenges which led Andy into the world of writing music for television. His first big venture was the Rock Follies series, which met with mixed critical reviews. Any kind of drama concerning rock music is usually viewed with much scepticism by the music business. Rock Follies was treading on even more dangerous ground by being a send-up of the whole music business, and the general feeling seemed to be that you either loved it or hated it. However, as television entertainment it proved a winner, as did the music.

Writing for the series involved a whole new way of working which Andy explained: "It was such a different situation. In 'Rock Follies', for the first time, I was presented with finished lyrics and then had to write a melody line. I had to work very closely with Howard Shulman, who wrote 'Rock Follies' as well as the lyrics. Instead of trying out ideas with a group, I was given the lyrics and the script and told what was needed. There was also a lot of pastiche, which was obviously something different.

"There was a musical director situation, where I was responsible for the music and also for spending a not very large budget on the music - I had to stick

within it, which was one of the biggest differences. With a Roxy album, although nobody wants to waste money, we never thought about what they cost. You go into a studio and just go on until you finish it. Then, about a year later, you'd be going through your accounts and say 'Christ, is that what we spent?' At the time we didn't think about it.

"With Follies, the producer would phone me up and say, 'Look I'm worried about this music, the last session was two pounds more than we expected!' Although he was very sympathetic, he didn't have any more money, he had that much to do the music with, and you just had to work within it. Obviously it's a drag, but at the same time if you want to do a television programme you work in those limitations.

"The main difference was not in the music, but the fact that I was in a working situation which was much closer to the theatre. Things like sitting in a cold rehearsal room at 9 o'clock in the morning with an out-of-tune piano. All those things are very different from the spirit of rock, but it's fun. Musically, I did what I always do. I don't know what tunes I'm going to write next week or tomorrow. I was presented with the challenge of trying to create a musical style for a hypothetical group - The Little Ladies. One of the ways I tried to keep it real was to use the same musicians, they were all session musicians but I used the same ones all the time and actually created a group.

"I also, against the advice of a lot of people, used the girls doing their own singing. I didn't use back-up singers to do their singing for them because I wanted it to sound like they were a real group. A lot of people who attacked Rock Follies maybe never considered that particular aspect of it. It was a real group to all intents and purposes. We're now going to do a movie of Rock Follies for next year, and Howard and I are involved in the music."

Working in television helped destroy a few myths and put right a few misconceptions that Andy believes many people have of the media.

"One of the things about television is that you have to live with your mistakes. Everyone gets television wrong, they think it's a lavish area to work in, rock musicians especially say that, but I think they are on the wrong end of the stick. Rock music is the self-indulgent end of the music business, that's where people actually take all the time in the world, which may not be worth the amount of time and money spent on it.

"Television is where you're working against the clock and against the budget. If you want to do it you accept those conditions, I accept them and I think you

## ANDY MACKAY



have got to try and supercede those limitations.

"We used to work on a two-week turnaround for an episode. We'd rehearse it in a rehearsal room for a week and two or three days. Then we'd go into a studio and video-tape it for two days and the music had to be squeezed in somewhere. We'd go in and pre-record the backing tracks at some stage during those two weeks. We were right up against the wall the whole time and I was trying to write songs at the same time. I write some of my best things under that kind of pressure and also let some things go that are maybe my worst things, but that's something I accepted when I took the job on. I think that, out of the 50-odd songs I wrote for 'Rock Follies', I would say there were the best three or four songs I've ever written."

His involvement with Rock Follies led directly to other television work, notably composing the theme tunes for the "Hazell" series, which Maggie Bell sang, and "Armchair Thriller". Once again, this led Andy into another area of music, requiring a different discipline and bringing with it different problems.

Although a lucrative area to work in, writing music for television seems to be a kind of "closed shop" involving just a few musicians. Andy said: "People in TV, by and large, work very hard and put in very long hours and they spend nearly all of their time in TV studios, offices etc., and they don't know many musicians, although a lot of them are rock fans. You'll find the same names do crop up pretty often like Mike Batt, Manfred Mann, Harry Rabinowitz and Lynsey De Paul. They are all good professional people, and it is a tricky job."



**B**efore I did anything, I read the scripts and spoke to the producers to find out exactly what they wanted and tried to write music to fit in with the programmes. That's what I really like and that's how I see my role. I actually preferred 'Hazell' to 'Armchair Thriller' just as a telly watcher, but I hope that both of them fitted what was required for a television theme tune.

"It's funny because it is a lot shorter than a single, you tend to forget that in television you work to within a few seconds. I mean on 'Armchair Thriller', the opening titles were only 28 seconds and the closing titles were either one minute 12 seconds or one minute 40 seconds, depending on whether it was a long or short cast. So we did different versions and it had to be that long, I just played things through on the piano until we got one exactly the right length. A lot of people would see that as a compromise, I suppose that's just a personal decision."

I'm proud of trying to do something which fits the situation it is required for."

Although Andy writes much of his material on piano, his early formal musical training enables him to write down his music straight onto manuscript paper. This is particularly useful because many of his ideas for tunes come while he is travelling, so he usually carries a notebook around to jot down ideas.

Coinciding with the completion of his solo album, came the news that Roxy Music were getting back together. Andy said: "We got together to check out whether it was going to work and it did, so we then extended things to carry on and do an album. The plans are to do an album and that's it. We haven't really started the album yet, we've reached the working and writing together stage, and I should think it will be finished for early next year. It's by no means certain we'll tour, although there's certainly a good chance we will, I haven't done it for ages and I love touring."

Andy is currently working on a new system of amplifying his instruments and using effects. His basic equipment consists of a Selmer Mark VI sax, Selmer mouthpieces and Rico reeds. The oboes and cor anglais he uses are all French-made. In fact he used to make his own oboe reeds.

In common with all horn and reed players, Andy has experienced problems with miking up his equipment on stage and using effects. He said: "I'm still disappointed that sax and wind instruments in general, haven't been developed with the same enthusiasm as say the electric guitar. Even the best players tend to be fairly straight, they play through a mike and don't do much to it."

"Before I go on stage again, I should have a whole new set-up which I've been working on for a long time and it includes a whole lot of pedals and effects. I've been trying to get things built, because no one makes units for sax. They are usually made for guitar and what you have to do is convert them. I'm working on a complete set-up which will include echo unit, pedal board, a studio monitor on stage and a small mixer EQ'd for various signals. Also, I want to start using a radio mike on stage. I hate having to stand by a microphone, while bugs and things always involve huge lumps of wires and I used to keep tripping up and pulling them out."

This constant search for improvement and innovation is a feature of Andy Mackay's work which makes him a truly modern professional musician. His willingness to explore new musical directions mark him as one of the most versatile and accomplished musicians of the Seventies - with the promise of much more to come.



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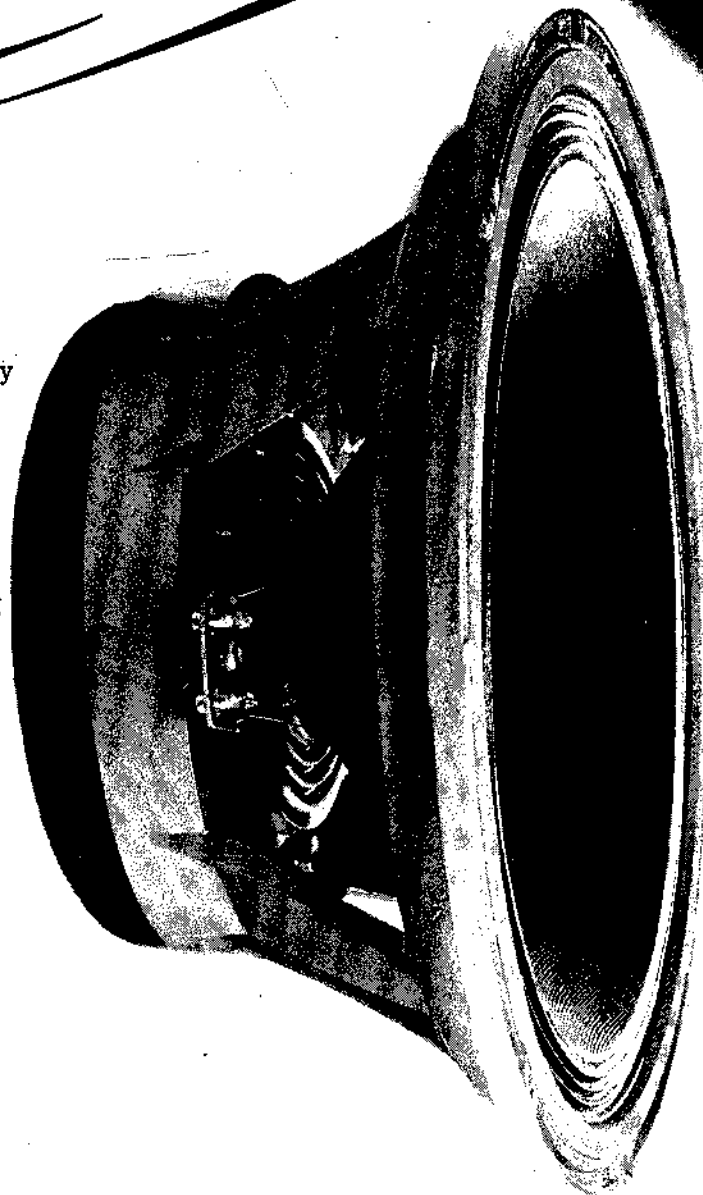
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# PLAYING

## JIM RODFORD

### on amplification—valves v. transistors.

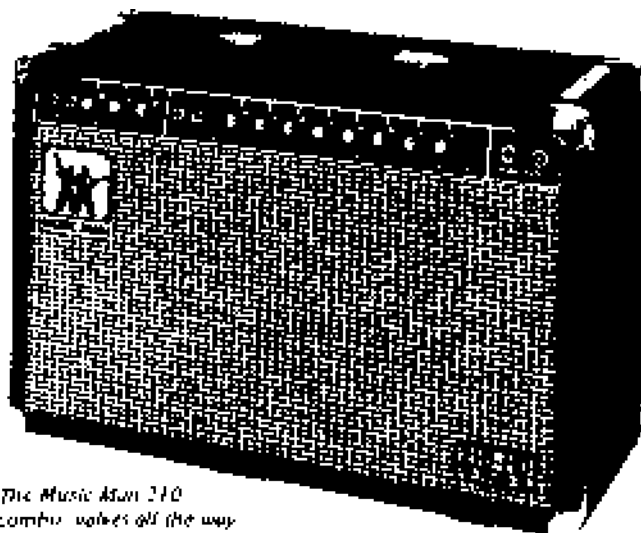
When selecting a bass rig, major considerations to be taken into account are size and weight relative to power capabilities, plus of course reliability and cost. In all of these categories, the transistorised amplifier wins hands down over the valve equivalent. Without any doubt, the transistor was a giant step forward in electrical technology.

The one factor I have not mentioned regarding selection of a bass rig is sound — and even now I don't think there's any substitute for a good 100 watt valve amp that's really wound up. Certainly this is true in relation to six-string guitar amplification, which is borne out by the fact that the vast majority of top pro guitarists in the rock field still use valve amps, more often than not Hiwatt, Marshall or Fender. This is the case despite the fact that these musicians can afford to try all the equipment that's available. For any form of rock instrument amplification, valves have that ballsy, warm, alive quality that transistors cannot match, despite the development of aids like graphic equalisers and ever-improving effects pedals.

Although some manufacturers, Yamaha for example, have come pretty close to duplicating the valve sound with transistors, I have never found a transistor amp to beat valves, despite the claims of countless technicians and amp designers over the years.

The essence of the valve sound has evidently remained something of a mystery, despite intensive research and numerous efforts to duplicate it with transistors. It first became apparent that certain valve amplifiers could be made to produce this sound better than others in the late fifties and early sixties, when many rock 'n' roll guitarists opted for the Fender Bassman amp top in preference to the Fender Showman, the latter being Fender's top-of-the-range six-string guitar amp at the time. Simply, they just preferred the sound and superior sustain, especially when overdriven, of the bass amp design to that of the one technically constructed for the job.

Another salient example is the difference between the new transistorised range of Hammond organs and the old valve range. The majority of the world's top rock keyboard players would seem to agree that there is just no substitute for that indefinable gutsy, attacking sound produced



The Music Man 210 combi valves all the way

by the B-3 or C-3 valve instrument. The basic Hammond design was put together in 1934, and for some 20 years at least was virtually unchanged. The original designers of the product would probably have thrown their arms up in horror if they could have heard then what Keith Emerson, of for that matter Graham Bond, would be producing from one of their instruments. In the same way, Leo Fender had no idea of the way in which his instruments and amps would be used in the future by such artists as Jimi Hendrix or Status Quo.

The point is that, by chance rather than design, the valve has become an integral and, at the moment, irreplaceable component in rock amplification generally. It is predominantly second harmonic distortion that is produced when a valve is overdriven even slightly — and it is this tone colour which gives this admittedly technically outdated circuitry its individual sound. Theoretically, it is possible to overdrive a transistor in exactly the same way, but the result is a jagged, unsatisfyingly cold distortion and sustain, and if illustrated on a graph shows up as a jagged line with pointed peaks. The corresponding graph for valve equipment shows a smooth, wavy line with no hard peaks. Personally I still prefer the more human sound of valves to the clinical sound of solid-state equipment even for gentle, clean sounds. The recent introduction of the Music Man range of valve amplification and the continuing manufacture of valve amps generally from many top companies shows that I'm not alone in my preference.

Apart from all this, conditioning and influence must also play a large part in determining a musician's opinion about sound. While many of the younger generation of musicians still prefer to try to emulate the sounds of their heroes of the past — many power-pop and punk bands use valve combos and stacks — the majority have grown up in the solid-state era. Consequently, many prefer the sound qualities of transistors, especially the fuzz-box concept of distortion and sustain as opposed to the overdriven valve amp variety that it is trying to emulate.

This whole subject is perhaps the most controversial in the spectrum of music amplification, and I've delved into it fairly deeply this month in response to questions I have been asked both in correspondence and on recent clinic tours around the country. Most of the advice sought seemed to focus upon the dilemma caused by solid-state amps which were reliable and portable, yet did not provide a wholly satisfactory sound. Although I've made my personal preferences obvious in this article, I would definitely not advocate that valves are right for everybody, especially in the bass guitar amp field. From a good quality solid-state amp such as HH or Acoustic, perfectly acceptable and wide-ranging sound frequency and power are attainable by the bass guitarist.

It depends on what you want from your bass, and how you see its function. For a fairly punchy sound — and I'm not talking just

about volume — then a transistor amp is perfectly adequate, especially for funk, jazz-rock or middle-of-the-road music. But I personally feel that harmonics and the more singing roundwound sounds are given more texture and colour with a valve amp, especially when the higher notes are pulled and slapped in funk playing. In this statement probably lies the key to my whole thinking on this subject. To get those really deep, rich tones with a full midrange and singing highs, especially at high volume, a transistor amp simply cannot approach the performance of a valve model.

There are compromise units available in the form of hybrid amps using both valves and transistors, with the aim of obtaining the best of both worlds. Most of these consist of a large valve output stage coupled with a smaller solid-state input stage. These are only partially successful because to obtain the overdriven valve sounding sustain, the valve output stage has to be driven hard, resulting in the desired effect being produced only at high volume. And of course the large valve output stage does nothing for the amp's portability.

A different sort of hybrid has recently appeared on the market and may actually provide the best of both worlds. This is the amp with a valve preamp stage, which can be overdriven if desired by the guitar's pickup output (or of course the output from any other electric instrument). Then the resulting sound is amplified to the desired volume by the solid-state output stage. The size and weight of these amps is thus kept down, and of course they have at least some of the reliability that transistors bring.

When it comes to choosing an amp, the only way to judge anything is to try it yourself, under gigging conditions if possible. I hope my observations will be of some help to a very important financial decision we all have to make. I've based my opinion on a wide variety of experience gained through performing at both the smallest semi-pro, social club and pub gigs as well as touring in my professional capacity. I still stand infrequently with local bands in my area when I'm free, and I think this gives me an understanding of the demands made on bass amplification under all playing conditions, as well as keeping me up to date with its technical progress.

# NARADA MICHAEL WALDEN



When a musician makes his first ever appearance on record at the age of 22 playing with the Mahavishnu Orchestra, he must be something special. Narada Michael Walden is something special. He was a semi-pro musician by the age of 11 and continued to play rock, soul and jazz through his teens. In 1973, John McLaughlin invited him to join the re-styled Mahavishnu Orchestra, the version which featured Jean-Luc Ponty on fiddle. (This was soon after Mike had met the guru Sri Chinmoy and adopted the forename Narada.)

He worked with the band for two years and appeared on three albums — “Apocalypse”, “Visions of the Emerald Beyond” and “Inner Worlds” — playing both drums and keyboards and writing more and more material. In 1975, Jeff Beck invited him to London for the sessions produced by George Martin, which resulted in the album “Wired”, released the following year. Life became increasingly busy for Narada Michael Walden. After leaving the Mahavishnu Orchestra, he played and recorded with bassist Alphonso Johnson, Weather Report (on their album “Black Market”), Roy Buchanan, (“Loading Zone”), Allan Holdsworth and Don Cherry.

Then came his first album under his own name — “I Cry, I Smile”, released on Atlantic in 1977. Two albums later, he still finds time to collaborate with the likes of Beck, Santana and Fripp, while also producing albums for other bands. And he's still only 26.

*How old were you when you first started playing drums?*

I was real young. I was banging on the crib, pots and pans, oatmeal boxes and all I ever wanted for Christmas was toy drum sets. So there never has been a problem with me with what I wanted to do.

*Were your parents musical at all?*

Great appreciators. On my mother's side, they all play but they're not professionals. My dad is just a great admirer. He would bring me albums of all the jazz drummers, all the greatest. The collections of Max Roach and all those cats. I used to listen to all that big band stuff, and

that down. What I'm saying is to allow more room for my artistic, melodic, lyric sense to come out.

*What did you do after you finished studying?*

Well, I really never finished studying. I was always being shifted from one teacher to another. One teacher would get jealous or another would be moving out of town. There was never anything solid or steady.

There was one guy who helped me out a lot named Harold Mason who, during that time, was playing drums for Stevie Wonder. He taught me a lot, God bless him. He used to tell me “I'm going to make you one of the

## “Just crying out

then I liked drum solos when I was real young.

*Did you ever take any lessons?*

Yeah, I started taking rudiment lessons when I was ten. That was when I got my first real snare, bass drum and cymbal. I studied for a good five or six years. Just reading and learning how to do hand things, all the rudiments.

When I was 11 or 12, I was playing in bars in Michigan. I had a little duo — me and an organ player. I was 11, he was 10. We were called the Ambassadors. When the main band went off, we would go up for the intermission and play. People were always freaked out at how little we were because we were slaying them! We were doing Jimmy Smith material and that kind of thing.

*Most 10 year olds don't even have control*

I really feel that God has been very kind to me. I've never had any problem with it. If I work at something I can really do it. If I don't work at it, I don't do it. If I'm moved to do something I can do it. I have that capacity. Now the problem I have to figure out is what I want to do. What areas, what I feel my spot is.

The night before last I sat down at this Bossendorff piano. This piano is a woman and this woman, the piano, just told me how much she loved me. I told the piano how much I loved it. I had this vision of myself doing solo concerts on the piano and just singing. I think it is a very strong part of my nature and someday I will do that.

*You don't feel that drums are your main instrument then?*

Yeah they are. I have the most command and mastery over the drums but my heart's fulfillment is writing a beautiful song. Just crying out, that's my heart's fulfillment. And also playing the drums. I'm not putting

world's greatest drummers.” I can remember him telling me that. Back then, it didn't mean anything but, now that I look back on it, he really spent a lot of time with me. Mainly he worked with me getting my independence together. That's one thing that's hard for drummers — to be able to have four-way co-ordination. Four different things happening at the same time. Most drummers have two things happening, the right hand and right foot going. But to be able to break it up is what's happening. To have four different things happening. That's why I admire Sid Williams, Billy Cobham, Lenny White or Harold Mason. These guys can just break it up and play anything at their command. Steve Gadd is a master at that, an absolute master. He is incredible. He's white with a black attitude.

*What kit do you use?*

I'm using a Gretsch kit, the same kit I started off playing with Mahavishnu. I'm always changing the heads and changing the tuning and trying different stuff. I use a deep Ludwig snare. I like that really heavy snare sound. I'm trying a new thing with a Canasonic head. I took a Dr. Scholl's kind of thing with tape on the back of it and taped it to the rim of the drum, so that when I hit the snare, it flops up in the air and then comes back down to the head. Just flops up in the air, so the drum has a chance to be open and cuts off all the overtone. That is something I picked up from Mick Fleetwood. That's how he gets that heavy feel because you hear the natural sound of the drum but then it cuts it off before it gets too out of hand. It works real well.

*What size toms are you using?*

Well, 12", 13", 14", 16" and 18". And in the past, I have been using two bass drums, but this past year I only used one. I have been using one with a

double pedal on it. In other words, it has two beaters. When I went out with the opening of my band, The CBS AllStars, which is Billy Cobham, I think CBS put in the contract that I could only use one bass drum.

*Because of Billy?*

Well, yeah.

*But he has three bass drums*

Only two on stage, though. So I was a little clever and went out and got me this pedal, that makes me still play it like I do, but with only one bass drum.

*So it's still the same approach as if you were using two basses?*

That's right. And I found I like it

only album that I'm really knocked out with as far as the sound goes is *Visions of the Emerald Beyond*. That was hottest to me, drum-wise. I think Billy Cobham's drum sound on *Birds of Fire* is incredible. And both of these albums were done by Ken Scott. I think Ken Scott is the hottest drum engineer ever. In the past I've used people who were taught by Ken, who grew up with Ken; Dennis McKay, and a guy named Jerry Smith. They all come from Trident in England. And now I'm trying to go with more of an American kind of thing and see how that turns out.

*Was Mahavishnu Orchestra your first*

funky. I mean Mitch Ryder and even the MC5 had that funk in it; Ted Nugent and the Amboy Dukes had some funk in it. And that was my competition so, to compete, you had to be loud and raunchy yet still funky. And then Jimi came out and Mitch Mitchell was my strongest influence, because he had the chops and the feel that I admired but he played back. There are three different kinds of time: there's "back" which is like the John Bonham, Mitch Mitchell feel, "very back", almost like it's dragging. Then there's "on top of it" like Tony Williams; it's like so on top of it, you better get out of my way!

# that's my heart's fulfilment"

even better. It's punchier.

*What size is your bass drum?*

24". I'm going to do a rock trio album with Glenn Hughes, Ray Gomez and myself. What I want to do is get some fat drums, some huge drums, and little cymbals. You know, a heavy contrast. But I'm a real cymbal man. I love cymbals. That's my thing, more so than drums. I used to spend time on the coast, just listening to the ocean. I try to capture that ocean sound. That's why I have this 30" Zildjian cymbal and the sound it makes is just like the ocean.

*What other cymbals do you use?*

They are always changing but you know how some guys use "Chinese cymbals"? This Chinese cymbal is authentic, it's right from China. It's not made by Zildjian, it's from Oolong, China and it's authentic. It sounds incredible. And I used to use an 18" cymbal but now I've cut it down to a 14" or a 15", to get that real "splash" sound so it cuts right above everything. That's also a Zildjian, paper-thin. A 24" medium ride, an 18" crash, and it works out great. I used to use more than that because I'm a cymbal freak. That's why, out of all the drummers, I can relate most to Billy because his approach and my approach are very similar. He's a Taurus, I'm a Taurus, he loves cymbals, I love cymbals. And I think Lenny White and Tony Williams' approaches are very similar to each other.

*Are you satisfied with your recorded drum sound?*

No, I'm not. To me it's an endless quest. I just recently found an engineer who I think might do it for me. His name is Allan Sides. He did the sound for *Close Encounters*, *Jaws*, *Star Wars*, *The Fury*, *The Omen*, and when you hear the sound in these movies you actually tremble. But I'm still searching. Up until this point the

*major band?*

Yeah. Right before I joined Mahavishnu, I was a busboy in a restaurant. *Apocalypse* was my first album and I was 21 years old. I went from being a busboy in a restaurant to flying to England to work with George Martin! The album was not an easy one to make, let me tell you. The Mahavishnu Orchestra was in one room and the London Symphony was in another. We were communicating with videos. Michael Thomas had a picture of me and the drums, and I had a camera of him conducting. And I had to coordinate myself with him conducting the orchestra. Then, when that wouldn't work, the orchestra would have to lay their stuff down first and I would have to match my stuff with them. You have to judge things two ways – musical performance and consciousness. The musical performance of *Apocalypse* isn't as hot or as great as other records but the consciousness of *Apocalypse* is incredibly high. You can put that album on and, even though you can point out mistakes musically, the consciousness is very high on that record. Every time I listen to that album I'm re-inspired.

Whereas, on *Visions of the Emerald Beyond*, because we had just come off the road after playing *Apocalypse*, I was a tiger. And it shows because I'm overplaying all over that album. Wherever there was even a tiny space, I'm filling it up.

*Had you listened to Cobham before joining the Mahavishnu Orchestra?*

Yeah, I'm a great admirer of Billy. You see I never came up around jazz. I was a rocker. I come from Kalamazoo which is very close to Detroit and Chicago and of course Detroit white boys growing up had the influence of Motown. They had that soul in them. So, if they were playing rock, it was

And then there are the cats who are in the middle and that's like the pop style. Gadd is even "back", he's way back. But he's beautiful.

*You mentioned playing with Glenn Hughes; did you hear Deep Purple's drummer, Ian Paice?*

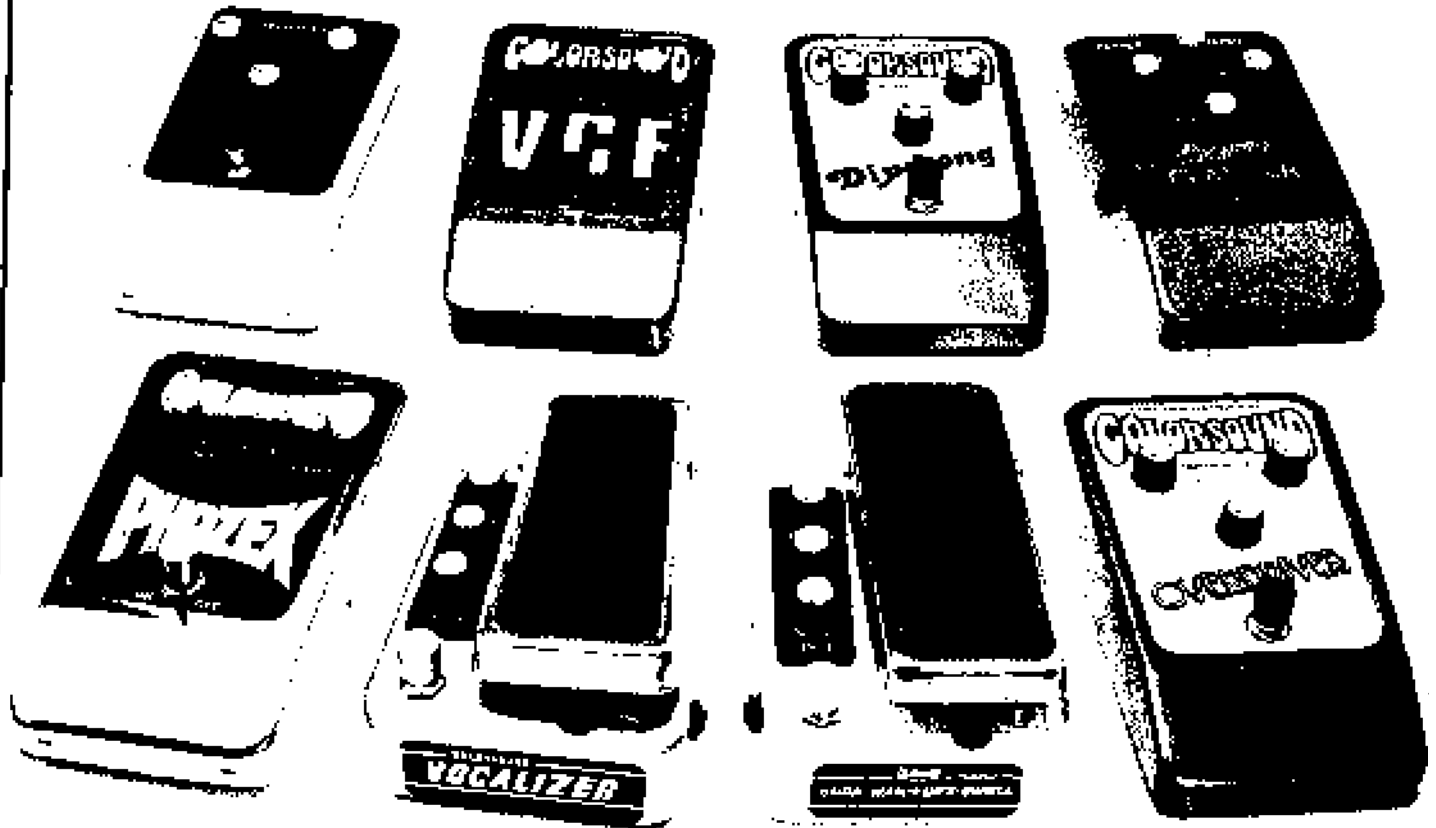
I like him. Bad, bad foot. He had a foot that wouldn't quit. I threatened to kill him, too. I love Ian. You know who else was a major influence on me when I was 18 or 19? There was an album that came out by Cold Blood that had a drummer named Sandy McGee and this cat was so clean. And quick, lightning quick. It's an album called *Sisyphus*.

But my goal was to be Jimi's drummer. I graduated in 1970 which was the year just after he passed. As soon as I graduated I was all ready to go polish his shoes, iron his pants, comb his hair, anything just to play with him. Not that I thought he was that stupendous at that time, because he was going downhill, but he needed some love in his life. The cats around him were feeding off him. Then when he passed, I focused on Mahavishnu because he was the only one who impressed me at that time. Mahavishnu is genius.

Mahavishnu and Cobham are genius. Elvin Jones and Coltrane – the world knows about it, it's history. Mitchell and Hendrix – the world knows about it, it's history. There's chemistry there. It's just the way one guy can feel it and another guy can feel it and the aspiration between the two. It's just magic. I feel that kind of an affinity towards Ray Gomez and I hope someday the world can see that. Jack Bruce and Ginger Baker. Ringo and Paul. That's the magic I'm talking about.

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V.C.F. voltage control filter is triggered by the signal from the Guitar, the harder you play the more effect. A variety of interesting sounds include a staccato, a wah wah type and a funky 'shaft' tone.

## DIPHTHONG

A new sound for Bass Guitar. The Dipthong is the first in a series developed for the Bassist. The device is triggered by a signal from the Bass or Guitar. It has three controls — Overdriver, Speed Depth, Filter Bias. Vowel sounds based on E—OO—AR can be produced in varying degrees.

## FLANGER

The new Flanger produces sounds which are out of this world. The unit features automatic double tracking which gives all the usual flanging sounds, but with superb quality. With a total of four controls regulating speed, depth of sweep filter quality and ADT, the possibilities of this new unit are virtually limitless.

## THE PHAZEX UNIT

Wide variety of effects including a rotating speaker type sound. A new reactance control enables the unit to scan the Phase circuit producing an arpeggio effect.

## VOCALIZER

This is the unit that simply 'speaks for itself' the Vocalizer goes one step beyond the voice box. By merely pressing down the pedal it produces all the vowel sounds AEIOU. The

resonance control enables the player to get a totally different set of vowel sounds and so opens up a whole new world of effects.

## WAH FUZZ SWELL

4 different effects. Wah Wah, Fuzz Swell, Wah Fuzz and swell pedal.

## OVERDRIVER

Gives an extra 'Boost' to an instrument which can overdrive to the extent of producing distortion.

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# CARLSBRO

## Effects Units

### Wah Suzz

A combination pedal of two especially complimentary effects for convenience and a saving in price on the separate units.

Eine Kombinationspedale mit zwei besonders wirkungsvollen Komplementäreffekten und billiger als zwei separate Einheiten.

Une pédale combinée avec deux effets particulièrement complémentaires pour commodité et qui est également une économie de prix par rapport aux dispositifs séparés.

### Suzz Phase

A combination of these two effects gives deep swirling phasing sounds. Effects can be used individually.

Die Kombination dieser beiden Effekten erzielt tief wirbelnde phasische Töne. Effekten sind einzeln verwendbar.

La combinaison de ces deux effets donne des sons de synchro tourbillonnants et profonds. On peut se servir séparément des effets.

### Wah Wah

A rich, full wah-wah with a precision pedal action and solid construction. Also gives treble boost in full position.

Ein reiches, volles Wah-wah mit Präzision-Pedalwirkung, in solider Ausführung. Bei Ganzeinstellung weiterhin mit Höhenanhebung.

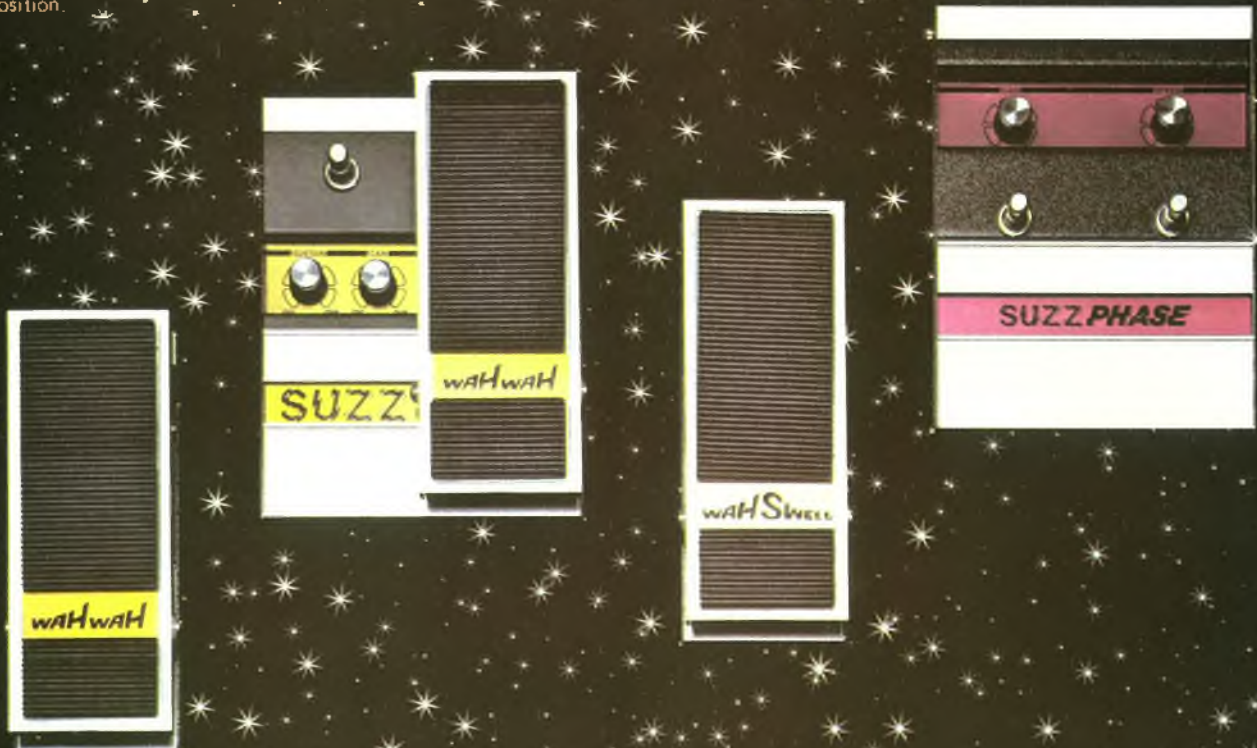
Un wah-wah riche et plein par action de pédale de précision et une construction monobloc. Donne aussi une amplification d'aigus en pleine position.

### Wah Swell

The full wah-wah pedal, plus swell for volume control and varying attack and decay.

Das komplette Wah-wah-Pedal mit Schwellwerk zur Volumenregelung und variablem Anstieg- und Abklingfaktor.

La pédale de wah-wah complet, plus expression pour commande de puissance et variation d'attaque et d'extinction.



electronics  
of the 80s

# Effects Units

## Flanger

Unlike phasing, flanging provides a beautiful continuous series of harmonically related frequency responses to give doppler, rotary, wind, ringing and modulation effects. Rotary controls are featured for speed, depth and Colour, plus an Invert switch, a unique phase-inversion selector.

Im Gegensatz zum Phasing bietet Flanging eine herrliche, kontinuierliche Serie von harmonisch zusammenhängenden Frequenzgängen mit Doppler-, umlaufenden, Blas-, Schwing- und Modulations-effekten. Drehregler für Geschwindigkeit, Tiefe und Farbe, mit Invertschalter, ein einzigartiger Phasenumkehrwähler.

A la différence de la synchro simple, la synchro plus profonde (Flanging) donne une belle série continue de réponses de fréquences harmonieusement liées pour donner des effets doppler, rotatifs, de vent, de tintement et de modulation. Il y a aussi des commandes rotatives pour vitesse, profondeur et couleur, ainsi qu'un commutateur-inverseur, sélecteur unique d'inversion de phase.

## Echo

A mains powered solid state echo unit, cased in solid steel and aluminium. Employs latest charge transfer device for echo and A.D.T. effects. Delay continuously variable from 20 mS to almost 1/2 second. Plus a built-in compander circuit providing low noise operation. Controls for mix, delay and swell. Two outputs, direct and mixed. Very simple to operate.

Eine netzbetriebene Festkörper-Echoeinheit mit starkem Stahl- und Alugehäuse. Ausgerüstet mit allerneuester Ladungsübertragungsvorrichtung für Echo und ADT-Effekten. Mit Stellverzögerung von 20 mS bis fast 0,5 sec. Zusätzlich eingebauter Kompandorschaltung für geräuscharmen Betrieb. Blend-, Verzögerungs- und Schwellregler. Zwei Ausgänge, direkt und gemischt. Äußerst einfacher Betrieb.

Dispositif d'écho à l'état solide fonctionnant sur secteur, renfermé dans de l'acier et de l'aluminium en un seul bloc. Fait usage du tout dernier dispositif de transfert de charge pour Echo et effets A.D.T. Retard continuellement variable de 20 mS à presque 1/2 seconde. Comprend aussi un circuit compresseur-expandeur intégré donnant un fonctionnement à faible bruit. Commandes pour mix, retard et expression. Deux sorties, directes et mélangées. D'un emploi très simple.

## Mantis

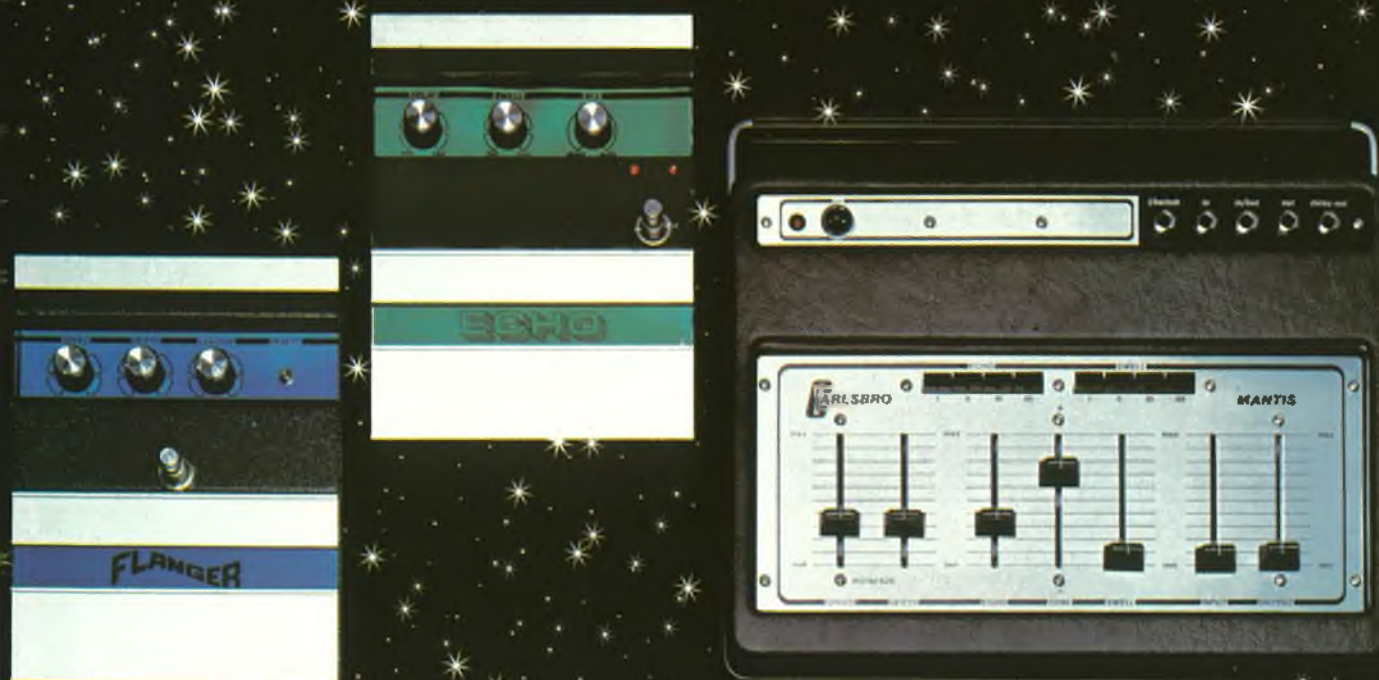
The Mantis is our electronic echo unit employing the advanced concepts of digital technology. Using the Mantis instead of old-fashioned tape echo units means no more tape hiss, tape replacement, motor breakdowns or wow and flutter. Special features include 240 different push-button selections of echo delay and swell. Slider controls for Echo, Swell, Echo Tone, Input and Output levels. Illuminated footswitch to indicate whether effects are on or off. Outputs for original signal plus echo or echo signal only. Lightweight, portable, maintenance free and simple to operate. Delay 1/64 m/s 1/128 m/s 1/11 1/92 m/s 1/111 1/256 m/s Or any combination.

### DIE MANTIS – ELEKTRONISCHE ECHOEINHEIT

Die Mantis ist eine ausgezeichnete, vollelektronische Echoeinheit, die von den vorgeschrittenen Konzepten der Digital-Technologie. Wenn man eine Mantis anstatt einer altmodischen Tonband-Echoeinheit benutzt, gibt es weder Tonbandzischen, Tonbandauswechslung, Motorstop noch Wow und Flutter mehr. Sie bietet besondere Merkmale wie eine Druckknopf-Auswahl von verschiedenen Effekten für Echo, Delay und Swell an. Schieberegler für Echo, Swell, Echoklang, Ein- und Ausgangsstufen. Leuchtfußschalter zeigt an ob Effekte ein- oder ausgeschaltet sind. Ausgänge für Original-Signal mit Echo oder auch nur für Echosignal – ideal für Stereo-Anwendungen. Federleicht, tragbar, unterhaltungsfrei und leicht zu bedienen. Verzögerung 1/64 m/s 1/128 m/s 1/11 1/92 m/s 1/111 1/256 m/s Oder irgendwelche andere Kombination.

### LE MANTIS – UNITE ELECTRONIQUE ECHO

Le Mantis est une écho entièrement électronique, qui utilise les conceptions avancées de la technologie digitale. Employez le Mantis au lieu des unités écho démodées sur ruban et vous n'aurez plus de sifflement, et même de remplacement du ruban, de pannes de moteur ou de pulsation du son, et de grésillement. Les traits caractéristiques spéciaux comprennent 250 choix différents, par poussoirs, de l'écho retard et du swell. Contrôles à curseur pour écho, swell, ton écho, niveaux d'entrée et de sortie. Interrupteur au pied illuminé pour indiquer si les effets sont en marche ou non. Sorties pour signal original plus un écho ou signal écho seulement. De poids léger, le Mantis est portable, ne demande aucun entretien et fonctionne simplement. Retard 1/64 m/s 1/128 m/s 1/11 1/92 m/s 1/111 1/256 m/s Ou n'importe laquelle de ces combinaisons.



## Graphic Equalisers

### EQ-6

A 6 band graphic equaliser for P.A. and instrument application. An inexpensive battery powered pedal in a solid steel and aluminium case. Push button on/off switch and slider controls. Provides 15dB boost and cut at 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz.

Ein graphischer 6-Band-Entzerrer für Beschallungssysteme und Instrumente. Ein preiswertes, batteriebetriebenes Pedal in einem starken Stahl- und Alugehäuse. Druckknopfschalter für Ein/Aus und Gleitregler. Bietet 15 dB Verstärkung und Trennung bei 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz.

Egalisateur graphique à 6 bandes pour sonorisation extérieure et emploi avec instruments. Pédale peu onéreuse fonctionnant sur pile, enfermée dans un boîtier en acier et aluminium d'un seul bloc. Commutateur marche-arrêt à bouton-poussoir et commandes de registre. Donne 15 dB d'amplification et coupe à 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz.

### EQ-10

A 10 band graphic equaliser for P.A. instrument applications. Small, neat and cased in solid steel and aluminium. Mains powered with push button on/off switch and slider controls plus LED indicators for on/off and equaliser on/off. Provides 15 dB boost and cut at 31 Hz, 62 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz.

Ein graphischer 10-Band-Entzerrer für Beschallungssysteme und Instrumente. Klein und übersichtlich, mit starkem Stahl- und Alugehäuse. Netzbetrieb, Druckknopf Netzschalter und Gleitregler, plus LED-Anzeiger Ein/Aus und Entzerrer Ein/Aus. 15 dB Verstärkung und Trennung bei 31 Hz, 62 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz.

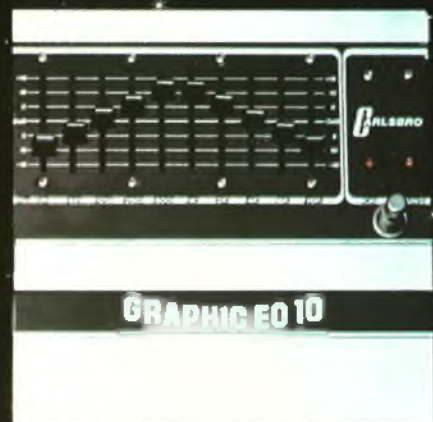
Egalisateur graphique à 10 bandes pour sonorisation extérieure et emploi avec instruments. De faible encombrement, net et enfermé dans un bloc d'acier et d'aluminium. Fonctionne sur secteur avec commutateur marche-arrêt à bouton-poussoir et commandes de registre, et aussi voyants à diode à leurs pour marche-arrêt et marche-arrêt égalisateur. Donne 15 dB d'amplification et coupe à 31 Hz, 62 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz.

### EQ Type D-10

A rack mounting stereo graphic equaliser, 10 bands per channel. Features input gain control and LED on/off indicator. Comes in a tough case suitable for stage work. Remove the end caps and the unit rack mounts. Each channel provides 15dB boost and cut at 31Hz, 62 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz.

Ein stereographischer Entzerrer mit Untergestell, 10 Bänder pro Kanal, Einschleiflich Eingangsverstärkungsregelung und LED-Ein/Aus-Signal, starkem Behälter für Bühne. Nach Abnahme von Abdeckungen kann die Einheit auf ein Untergestell gesetzt werden. Jeder Kanal bietet 15 dB Verstärkung und Trennung bei 31 Hz, 62 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz.

Egalisateur graphique stéréo monté sur baie, 10 bandes par canal. Comporte commande de gain d'entrée et voyant marche-arrêt à diode à leurs. Livré dans une caisse robuste convenant parfaitement pour travail sur scène. Pour le monter sur baie, retirer les capuchons en bout. Chaque canal donne une amplification de 15 dB et coupe à 31 Hz, 62 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz.



# Effects Units

## Suzz

A mixture of pure sustain and fuzz using uneven harmonics to produce a range of sounds from long smooth sustain at low level through to an aggressive rasping fuzz at high output.

Eine Mischung, völlig ungedämpft und unscharf, wobei mit ungeraden Oberwellen ein langer, glatter, ungedämpfter Tonbereich auf niedrigem Niveau bis zu aggressiv rauher Verschommenheit bei hohem Ausgang produziert wird.

Un mélange de "sustain" pur et de flou utilisant des harmoniques inégales permettant de produire une gamme de sons allant du "sustain" long et doux jusqu'à un flou grinçant agressif à sortie élevée.

## Sustain

The valve-sound pedal. Uses sophisticated circuitry to provide even-harmonic distortion characteristic of the 1960's valve amplifier. Adds warmth and depth to full chords without breaking up, but also gives a powerful driving sustain for soloing.

Schallrohrenpedal mit hochentwickelten Schaltungen, um die auf geraden Oberwellen beruhenden Verzerrungseigenschaften der Röhrenverstärker in den 60er Jahren zu wiederholen. Volle Akkorde werden warmer und tiefer gestaltet, ohne unterbrochen zu werden, mit starker ungedämpfter Treiberstufe für Solovortrag.

La pédale de son à tubes. Elle fait utilisation de circuits sophistiqués pour produire une distorsion harmonique égale caractéristique de l'amplificateur à tubes des années 60. Ajoute de la chaleur et de la profondeur aux accords à plein jeu sans altération, mais donne aussi un "sustain" puissant et plein d'énergie pour les solos.

## Phase 1

A simple and economical phaser for most applications. Features a rotary speed control and preset depth. Dynamic phasing effects plus reliability and quality construction.

Ein einfacher und wirtschaftlicher Phaser für die meisten Zwecke. Mit Drehregler für Geschwindigkeit und voreingestellte Tiefe. Dynamische Phaseneffekte plus Zuverlässigkeit und Qualitätsarbeit.

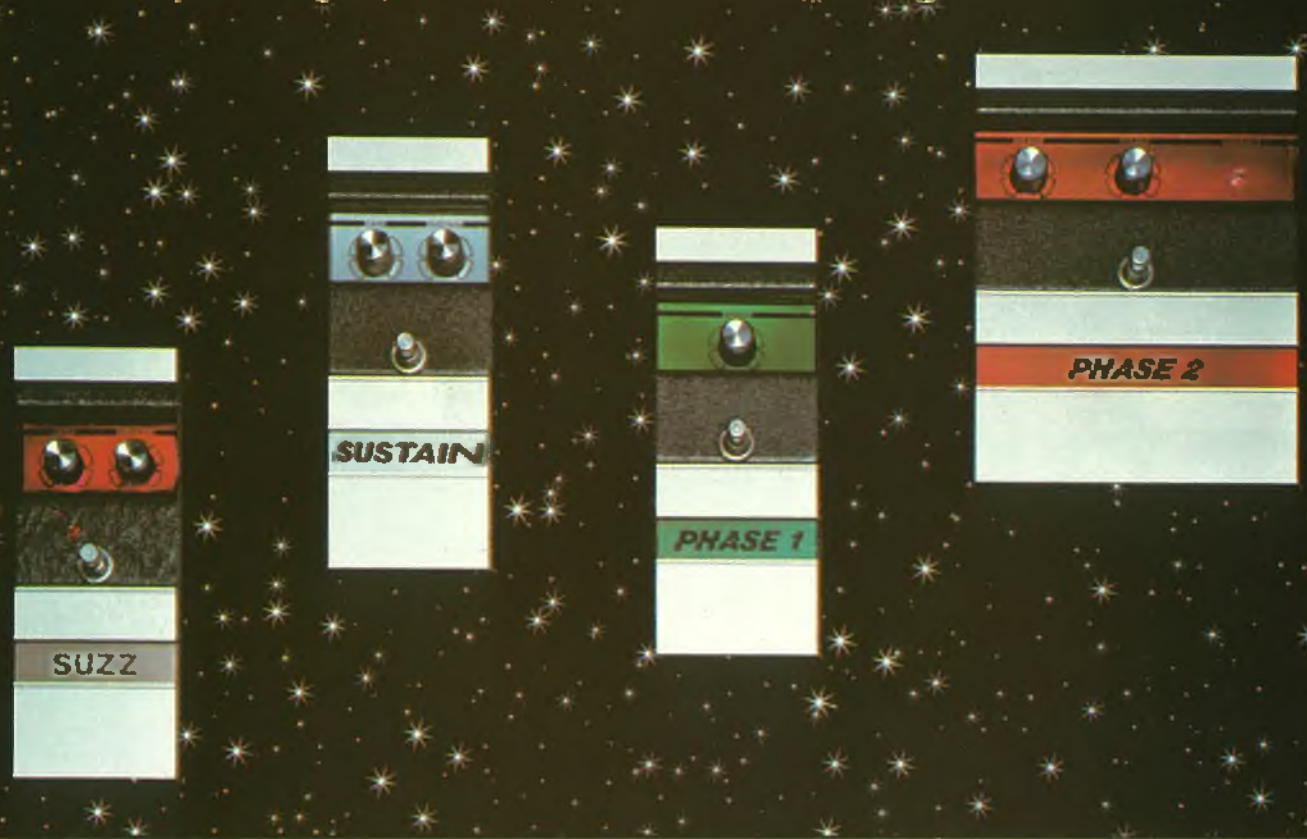
Synchroniseur simple et économique pour la plupart des applications. Comprend en particulier une commande de vitesse rotative et profondeur pré réglée. Effets de synchro dynamiques avec fiabilité et construction de qualité.

## Phase 2

A professional multi-stage phaser at an unbeatable price. Has an extensive spectrum of phasing effects with the built-in bonus of Carlsbro reliability. The simple but comprehensive controls feature rotary speed and depth for varying the phase rate and amount plus a miniature toggle switch for Colour, a feedback control to accentuate the effect.

Ein Profi-Mehrfachphaser zu einem einmaligen Preis. Mit weitläufigem Spektrum von Phaseneinstellungseffekten und dem eingebauten Vorteil der Carlsbro-Zuverlässigkeit. Die einfachen, jedoch umfassenden Regler umfassen Drehknöpfe für Geschwindigkeit und Tiefenvariation der Phasenrate, ein Miniaturkippschalter für Farbe und ein Rückkopplungsregler zur Akzentuierung des Effekts.

Synchroniseur multi-phase professionnel à un prix imbattable. Présente une gamme étendue d'effets de synchronisation, avec en plus la fiabilité Carlsbro. Les commandes, simples mais complètes, comportent en particulier vitesse et profondeur rotatives pour faire varier le taux et le volume de phase, plus un interrupteur à bascule miniature pour Couleur, commande de réaction pour accentuer l'effet.



# A string for all sessions.



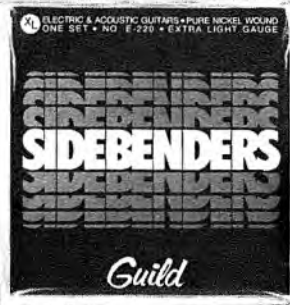
Studio shown—Soundmixers, NYC

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# EDDIE SPENCE



## Turning Orchestras into Keyboards



GORDON GILTRAP BAND  
left to right: (back) Eddie Spence, John Gustafson  
(front) Roger Hand, Gordon Giltrap, Ian Moseley, Rod Edwards

by Eamonn Percival

When Gordon Giltrap released "Visionary", it surprised a lot of people. Gordon was one of the first acoustic guitarists signed to Transatlantic in the days when every self-respecting sixth-former's record collection included the complete works of Jansch and Renbourne. With "Visionary", Giltrap moved away from folk and into a semi-classical sphere. The album was based on the poems of William Blake and was also heavily orchestrated. The album also crossed into the rock field with the presence of a full-blooded rhythm section.

"Perilous Journey" followed later last year and last month saw the release of his latest, "Fear Of The Dark". With Giltrap's new direction, it also became necessary for him to form a touring band, which in its present form comprises Eddie Spence and Rod Edwards (keyboards), John Gustafson (bass), Roger Hand (guitar), Ian Moseley (percussion) and, of course, Giltrap himself on assorted guitars.

Eddie Spence shares keyboard duties with Rod Edwards, one of Giltrap's producers. While Rod handles grand piano, string machine and Mini-Moog, Eddie plays organ, synthesizer, string synth and electric piano – and also takes a large hand in the band's arrangements. Spence took piano lessons as a child and later played with numerous bands in and around Leeds, before moving to London where he played with The Wild Wally Rock 'n' Roll Show, Strange Days and Jimmy James and The Vagabonds. He has been with the Giltrap band for two years and also keeps busy with session work.

"Visionary", "Perilous Journey" and "Fear of the Dark" are all fairly heavily orchestrated and Eddie and Rod share the awesome task of duplicating the string and brass parts as closely as possible for the stage show. Eddie transposes most of the arrangements for the keyboards and, surprisingly, finds it quite easy.

"I like doing it," he says, "so I don't find it particularly difficult. I like to feel I'm doing more than going on stage and playing exactly what I'm told to play. I'm not playing my own material so, when you feel you've done a bit towards it, you've got more enthusiasm. I'm not a trained arranger, of course, but I enjoy it and I also write things and arrange my own material at home which gives me a lot of practice. Not long ago I arranged a piece of my own for a brass section and recorded it on the Roland, building up a brass section track by track. I'd already written the arrangement and it really sounded like a brass section.

"There's a secret to playing brass and string lines on keyboards. The way to do

it is to play the way those instruments are played. Not just the phrasing but the spacing. There's no point in playing a block chord as you would on an organ. It's no good playing C, E and G for a C triad - you have to spread them out. A string section would probably have first and second violins a long way apart, maybe a fifth apart instead of a third and then the violas another harmony down. If you spread the notes out, it'll sound more like strings.

"That's been my philosophy with every band I've played with - to look at the material first. I always try to get the music over first and foremost. Our stuff is originally orchestrated so I make it sound as though it's orchestrated. I treat all bands the same. First, look at the material and then agree on how it should be done, then reproduce it the way you've all agreed."

Anyone who has seen the Giltrap band live can confirm that the sound they produce doesn't suffer by the transposition of orchestral parts to keyboard lines.

"A lot of people tell us that," says Eddie. "You get a lot more guts from drums and bass live anyway. In fact, some people prefer the live versions of some of our material. I think it's all down to enthusiasm. You enjoy yourself onstage, you know when a good bit is coming up and you lay into it! The main thing is that loud bits are louder, quiet bits are quieter - you can always exaggerate the peaks. You can't get those peaks on record anyway, so I'm told."

Eddie's keyboard line-up onstage comprises a Hammond M102 organ, a Roland SH2000 synthesizer, an Elka 610 string machine and a Wurlitzer electric piano. Those keyboards are fed into the PA via a small HH mixer which Eddie controls onstage.

"The M102 is quite a small Hammond really, I don't find it necessary to have anything bigger. It's a good backup to the rest of the keyboards. If I'm playing a line that needs a harmony to it, I can use the Hammond to play a harmony but in such a way that you can't really tell it's an organ. I use it a lot as bottom behind the string machine. It's not too obvious but the string machine would sound empty without it. I do tend to use it to complement something else, rather than as a solo instrument. I use the Hammond on a lot of the material from "Perilous Journey". Its not obtrusive, but you'd notice if it wasn't there. There's a lot more Hammond on the record than you'd realise, it's just not featured."

It was a little surprising to learn that in the Giltrap Band's keyboard department, there is nothing more complicated than Rod Edwards' Mini-Moog and

Eddie's Roland SH2000 synth.

"I think it's really important for a band like this to have a pre-set synth because it's important to get the sound of a trumpet or whatever at the touch of a switch, while the other hand can be holding a chord. It's really important to have that control without having to fiddle around with lots of controls or, in some cases, headphones. What we do isn't electronic music, although we use electronic instruments. We're trying to emulate the sound of strings or brass most of the time. Although synths and string machines can't ever sound the same as natural horns or natural strings, we're trying to do the same job in an efficient way. I think the music should always come first rather than sitting there getting amazing electronic noises. With the Roland, I just press a switch and I've got my sound in seconds - and it sounds very realistic."

While Eddie recognises the qualities of the ever-popular Fender Rhodes electric piano, he prefers the Wurlitzer for its versatility: "I think the Wurlitzer is more of an all-round piano than the Rhodes. The Fender is great for a smooth jazzy sound, much better than the Wurlitzer in fact, but the Wurlitzer's got a bit more attack and a lighter action for me. It's got a lot of scope - you can have it bassy for a jazzy sound, or beef up the treble and it's great for rock 'n' roll."

"The Elka 610 is a nice string machine, although it's maybe not so good for studio work. There's quite a lot of hiss because it's quite a toppy instrument and there has to be that amount of top on it for it to get anything like a string sound. But it's great for stage. It has a really good clavichord stop which is like a harpsichord. You can play it with the strings and clavichord both on, so you can hold a chord and the clavichord will fade while the strings carry on. The strings are controlled by the swell pedal so you can play a clavichord figure and then "swell" in the strings behind it. Actually, there is a way to get a good sound in the studio - you record the high strings first with a certain setting on the desk, and then change the setting and do the cello parts. That way you can get a good sound - the thing is to never do them together in the studio."

Eddie has no aspirations to do an Emerson or a Wakeman with stacks of keyboards, patchboards and TV screens. Rather, he admits to being somewhat of a traditionalist keyboardman.

"I'm not really a progressive thinker in keyboards. If someone wants a weird noise on a synth, I'll get it for them but I tend to think more in terms of orchestras. That's the whole thing about keyboards

progressing. Musically, you can develop everything we've got. You can still get new tones and colours with a conventional orchestra, never mind anything else. You can still use instruments they had hundreds of years ago and go on getting different combinations and colours. One of the steps that I am waiting for in the development of keyboards is when they make them cheaper and smaller. When they get polysynths down in price, it'll be a lot easier."

In keeping with his anti-keyboardstar stance, Eddie is happier getting the right sound for the right piece of music than proving how fast he can play.

"I get as much out of that because there's that much more in Gordon's music. There isn't really much room for improvisation, apart from 'The Deserter' from 'Perilous Journey', but even so, I don't find it clinical at all. I try to get the most out of each piece in the way you attack it and present it. I get a lot of pleasure out of that and people sit and listen, which is nice. They're not raving while you're playing - hopefully, they'll do that at the end! From the audience's point of view, there's a lot to listen to. Gordon plays half a dozen different guitars with different tunings and we've worked it out so we cover for him when he's changing guitars. Every few bars, there's something coming up you have to get ready for and it takes a lot of concentration. I not only have to work out which settings I'm going to use, I also have to work out, say 16 bars before a section, where I need to change settings. I have to work out when I'll have a chance to take a hand off and set it up for it then. Then when that's set, I have to leave it until the next gap I've worked out. A lot of people wouldn't bother about that but I think it's important. I never think, 'Oh, nobody will notice because the drummer's doing a fill or because they're watching Gordon.' If you start on that line, you won't get anywhere. You should aim for a performance where, if people were listening to you and nothing else, it would sound OK, interesting and well played."

The future for Eddie Spence is an open book. As the Gordon Giltrap Band really only exist for tours and concerts, Eddie has a lot of freedom to venture into other fields.

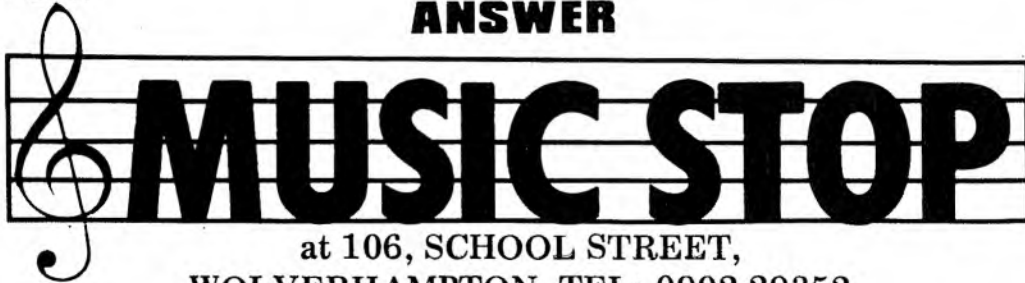
"Obviously, I'd like to get into arranging at some stage. I've never done any real producing apart from joining in on mixing and sessions but I would like to try a few production jobs. I know what I want to hear in terms of both playing and sound. Apart from that, I'll carry on playing live with Gordon and doing sessions."

# QUESTION

WHAT DO THESE MANUFACTURERS HAVE IN COMMON —

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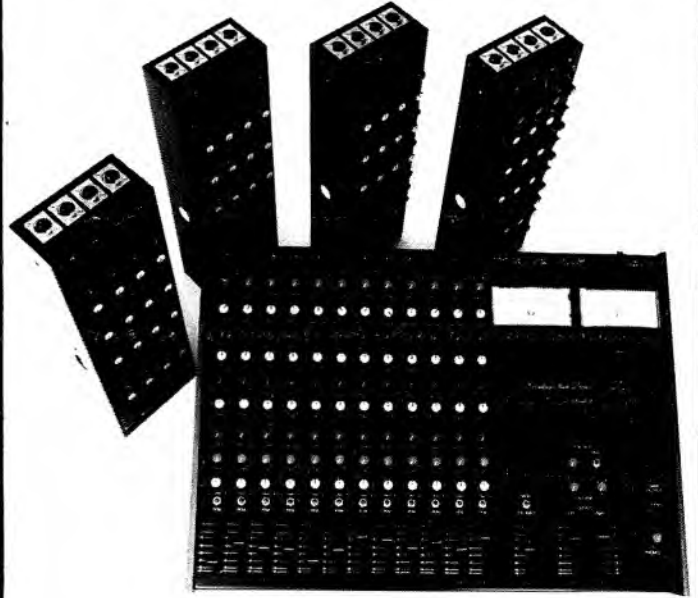
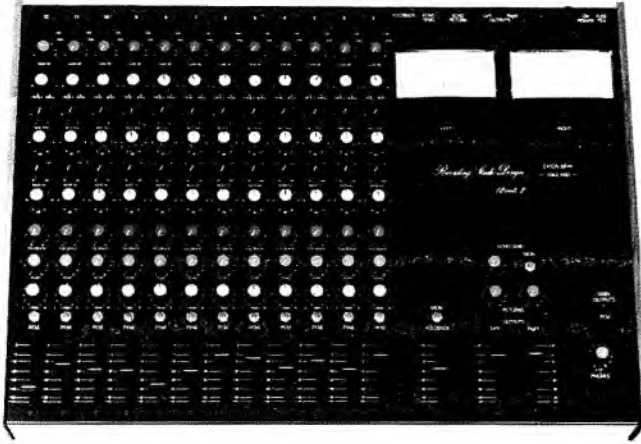
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## Jones The Bass

### Welsh wizard Percy Jones talks to David Lawrenson

*Over the years plenty of British artists have found it necessary to leave these shores in order to find success. However, even bearing this in mind, the idea of a Welshman playing in an English band and being voted the best new jazz bass player in America may seem a little odd.*

*Still it's this rather enviable position that Percy Jones finds himself in. Percy plays bass with Brand X, one of the*

*more interesting and adventurous bands on the British circuits, who have also gained much critical acclaim in the States.*

*Now permanently resident in America, Percy returned to London recently for a highly successful Brand X concert at the Rainbow. Before flying back almost immediately, he took time out to talk about his career, his playing and his instruments.*

From his early days in Wales, Percy has always played bass. Many bass players start out on guitar and then switch, but from the beginning of his musical life with school groups and local bands Percy has been a bass player. He made the jump from local semi-pro outfits to a professional band when he went to university.

"I went to university in Liverpool in 1966 and met a guy called Andy Roberts who was a guitar player," he said. "He was playing with Liverpool poets Adrian Henry and Roger McGough, and Adrian decided to put a band together which became the Liverpool Scene. I worked in that for about three years from about 1968 to 1971.

"Playing in the bands in Wales, we used to do barn dances and stuff like that, but with the Liverpool Scene we were touring. In that respect it was a big step, but musically I was never particularly happy with it. I always wanted to get into the jazz-rock area, but at that time there was no real outlet for that kind of thing.

"I'm not at all proud of anything I played in those days — it was pretty bad. I was really impressed with what Miles Davis was doing in the late Sixties, things like 'Bitches Brew' were really important. Also, Lifetime were working and that was the sort of area I wanted to get into."

Following the demise of the Liverpool Scene, Percy dropped out of music for a while and went to work on a building site. Eventually he moved to London and began taking an interest in music again.

"I was living in South London and working for a construction firm when I gradually started getting a bit of session work. The first session I had was for Eddie Howell, then Rob Lumley and Jack Lancaster had a couple of concept things and I played on those. I then started doing stuff with people like Brian Eno, Roy Harper and Nova, and about 1975 the Brand X thing started coming together.

"Getting the session work was just through luck really, and Robin Lumley helped me a lot in that respect. He was producing Eddie Howell's album and asked me to do that, which I did and things sort of picked up from there.

"Robin was blowing with some friends in a rehearsal studio and didn't have a bass player one night and so he asked me to go along. We spent two or three evenings just playing together. That group of people included John Goodsall, our guitar player. The following week we had an audition with Island Records, so we all went along — and got a recording deal out of it.

"So we recorded an album for them which wasn't too adventurous. The nearest description would be Average White Band funk-orientated stuff. We didn't like it and asked Island if we could scrap it and do another. They agreed, so we recorded another album with a different line-up which included Phil Collins on drums. This turned out to be 'Unorthodox Behaviour', the first Brand X album."

In fact the album was turned down by Island, so the band moved to Charisma Records who released it. The band remained in a fluid state for some time, with gigs fitted in when all the players were available. Eventually, the line-up settled down to its present membership and the albums began to take off in America.

Percy has his own theory about this "coals to Newcastle" success. "It's a strange situation, because the style of music we were playing originated in America, but I think we put in some European influences because we are European players, and Americans find it different from the bands working over there."

He recently switched from Fender basses to playing a Wal, which was made by Ian Waller. "I've been using it for about six months and am really pleased with it. Ian brought one

along for me to try and I found it very difficult because the balance wasn't too good. I mentioned it to him and he came back with a better balanced model. There is one particular pickup setting I really like because it brings out all the midrange, which I always had trouble getting with a Fender bass.

"The action of the Wal is nicer, the sustain's better, the tone's better and I think he has come up with a really good instrument. It has two pickups which are his own design, and has a winding for each pole-piece, so you can switch them in parallel or series. I usually use the back pickup with the winding switched in parallel so it brings out all the midrange. You get a lot of definition, much more than a Fender.

"I have two Wals, both fretless. I'm much more at home with a fretless bass. It's very easy to play out of tune and in that respect much more tricky than a fretted bass. With a fretted bass you can play almost without hearing yourself, and you know you'll be in tune. On the fretless you get more of a singing effect in between notes, quarter tones and can do much more with harmonics."

"Wal bases have pre-amps, and it's always possible that it could break down, a chip could go or something. It is unlikely, but you never know so I keep a Fender around as a spare, just in case."

For his amplification he uses an Ampeg SVT top with Ampeg speakers, although he is hoping to change to a new system in the near future. "I've tried a lot of systems, Acoustic, Fender and so on, and Ampeg has come the closest to what I want. But because the speakers are all the same size in the system there are no crossovers and a limited amount of EQ. Therefore it's hard to get the sound spot on. You can get the midrange right on and the bottom end won't be quite right, you get the bottom right and the midrange will be off, you just have to compromise a little.

"I'm hoping to change soon to a Gelf system which should have two cabinets, each with two 15" for bass, 10" for the mid and a tweeter for the highs, three power amps and a three-way active crossover. I suppose it will be like a hi-fi system."

While at Liverpool University, Percy took a course in electronics which, although he only completed two years, has proved valuable in his career as a musician. So much so that he has been able to build his own effects units.

He explains: "The electronics did come in eventually when making the two custom effects boxes which I have. One of them is a flanger, where you can have the delay time proportional to the envelope height, or proportional to pitch. Having it proportional to pitch, when you hit something like an open E string, the delay time doesn't shift very much. As soon as you hit a harmonic, because the frequency's higher, it goes right over so it is really subtle. You can change the phase of the delay signal in or out of phase and regeneration of the phase is possible as well as other combinations. I like it because it is very subtle. I hate things like fuzz boxes. They are just too bland.

"I think the area where a lot of work could be done is pickups. The actual idea of electro-magnetic pickups hasn't changed in about 30 years. Pickup design has improved enormously, but I'm sure there's a better way of doing it. Pickups have limited frequency response and I'm sure they're non-linear too, which can sound good if you want that sort of

distortion, but with that type of pickup I don't think you'll ever get that hi-fi natural sounding instrument. I'm sure there must be a way of using lasers or something to improve them."

He is a firm believer in Rotosound strings, and although he has heard good reports of several new makes, he respects the pioneering work done by the Rotosound company and continues to use their strings.

Despite being with a hard-working band, Percy still enjoys sessions — although the problem is finding the time to do them. "I don't think I've done one for about a year. The last one I did was with Big Jim Sullivan which was a really good album with Simon Phillips on it. That was the last thing I did, but the album was turned down by EMI so it never got released.

"I enjoy doing sessions as long as it is the right situation. I'm not a good reading musician, so I find I work best when someone uses me on a session because of my style—they want that particular style of bass player. Also, you can actually contribute more and give out your own ideas on that situation.

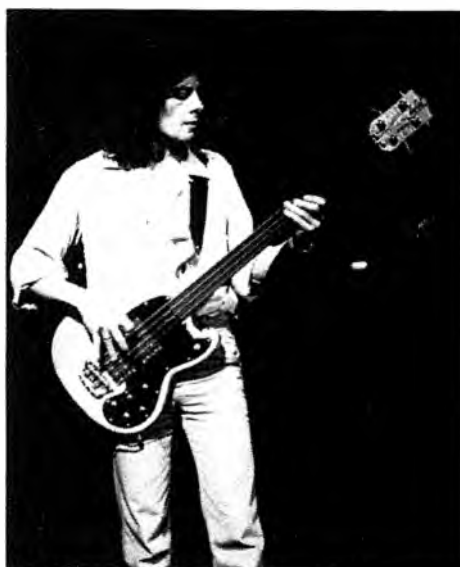
"If I was in a situation where a part was put in front of me and I had to play it note for note I'd be completely the wrong person. I've been lucky in that respect, in that the session stuff I have done has been fairly interesting on the whole. Things like the Brian Eno stuff I always enjoy. When you work with him you put loads of stuff down and a lot of it doesn't get used. I worked with him a couple of years ago and some of the stuff is on a new Eno album 'Music for Films' (which has just been released by Polydor).

I do some upright bass on one of the tracks which is really atmospheric."

Percy is one of those musicians who listens to a wide variety of music and tries to incorporate what he hears into his own distinctive style. "I've listened to a lot of people over the years, in fact I listen to people all the time. I might turn the radio on and hear something, I have no idea who the bass player is but if I like it I listen to it. Over the years the biggest influence has been Charles Mingus, especially when I was in my early twenties. It wasn't so much his technique, it was just his feel, his choice of notes and where he put them. And I really liked his compositions.

"The standard of bass playing has gone up enormously since the beginning of the decade, technique has improved and sound has got better. I mean, even a Fender bass sounds better on albums now than it did 10 years ago, although the instrument hasn't changed. It's all down to better recording techniques and better playing. The Fender bass used to have that sort of characterless thump to it, getting bottom end and lower mid and nothing else. Now Jaco Pastorius, for instance, has really looked into a Fender bass and brought out all that midrange richness.

"I think Jaco is really excellent, there's also Eberhardt Weber and I used to like a lot of the stuff Michael Henderson did with Miles. I always keep my ears open to what other people are playing, I'm always searching in myself for new ideas. I think it's important to keep that balance. If you don't use your head but just listen to other people, then you're never going to get your own style. You've got the other extreme where you ignore everything that's going on and just turn right into yourself and you get too narrow. I think you have to keep that happy balance."



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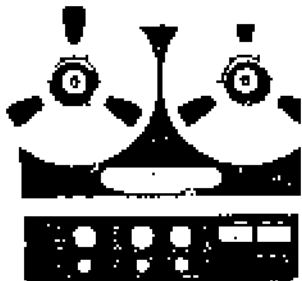
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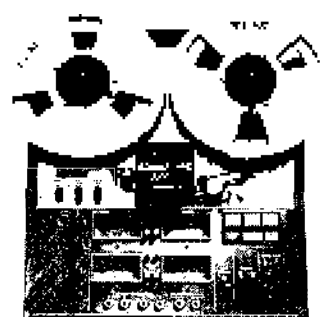
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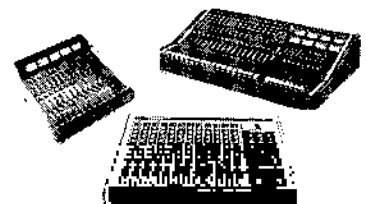
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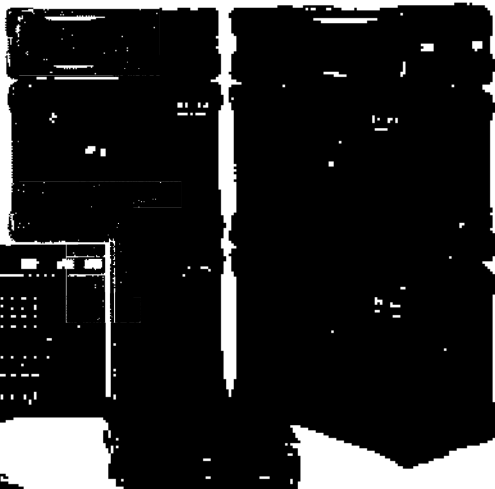
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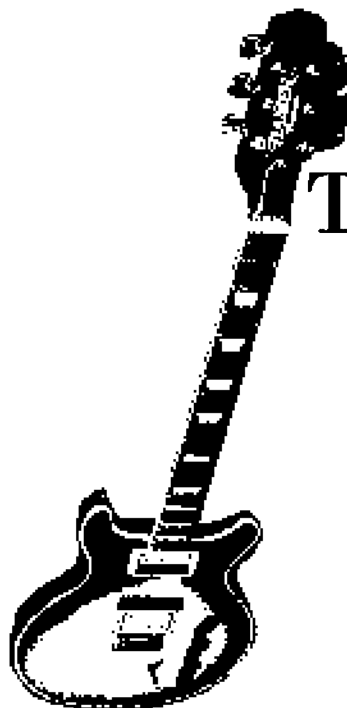


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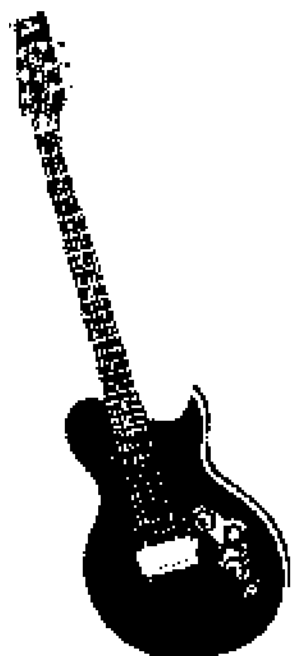
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Although open for less than a year, Rod Argent's Keyboards has rapidly established itself as the U.K.'s leading specialist keyboard store and, as such, numbers Pink Floyd, Led Zeppelin, Genesis, Yes, Wailers, Camel, Colosseum, The Rumour, Tangerine Dream, Peter Gabriel, Brand X, Manfred Mann, U.K., Talking Heads, Steve Hillage etc. among its many regular customers. Obviously there must be a reason why these stars visit the store and on undertaking a visit to Denmark St, it is easy to understand why. For only here is it possible to see the largest range of keyboards and ancillary equipment ever demonstrated in the UK. Not only do

Argent's show all the regular equipment available in this country, they also import many lines which, although their names are familiar to musicians, have not been previously obtainable. Amongst these are Oberheim, RMI, Sequential Circuits and Helpinstill.

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### ROD ARGENT

Held in high esteem by fellow musicians, Rod has recently finished recording a solo LP with Phil Collins and Alphonso Johnson amongst others which is scheduled for imminent release by MCA Records. Star of the Zombies & Argent and featured keyboardist on Andrew Lloyd Webber's "Variations" and the new Who LP, Rod is the epitome of the musician "Par Excellence" and loves encouraging new talent.



# Argent's Keyboards

## The People Behind The Keyboards

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Friend of the stars, manager of the store and George Duke fanatic, Bob, an ex-pro musician, takes great pride in making any good keyboards available and offering the best possible service and facilities to any musician including yourself.

### **DAVE** (*Oberheim rules*) **CROMBIE**

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### **MEL** (*Mine's a System 700*) **WESSON**

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Left to right: Dave, Mel, Andy, Bob

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## Yamaha Scoop the Polyphonic Market



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So finally the winner in any race such as

that of polyphonic must be the one who builds both the best product and the most reliable. If you are thinking of upgrading to a polyphonic synthesizer you really ought to make sure that you check out the Yamaha CS-80!

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Obviously the most important feature of any shop is the stock it carries and Argent's can easily back up their claim to having the largest stock of synthesizers and other keyboards in the U.K. Not content with just supplying the most popular makes, Argent's have made available many American lines not previously available in this country so, whatever your needs, we can meet them at a price you can afford.

### SYNTHESIZERS

Offering the versatility of dynamic touch response and the ability to mix different sounds, the Yamaha CS80 with 22 pre-set sounds, four memory banks and two panels is the top of the Yamaha range of synthesizers and has proved most popular with many top musicians who have purchased them from the store. This amazing polyphonic instrument is ably complemented by the smaller CS60 and the four-note polyphonic CS50 all of which are kept in stock.

Argent's are proud to make available from the U.S.A. the Sequential Circuits Prophet polyphonic synthesizer, the industry's first completely programmable synthesizer providing 40 memory banks in which to store your own sounds with the added flexibility of both pitch and modulation wheels. Although relatively new, the response this instrument has been met with is nothing short of overwhelming.

Long regarded as the "Rolls Royce" of synthesizers, the Oberheim range including both the 4 and 8 voice models is always on demonstration. The unique feature of these instruments is that each voice is assigned to a totally separate synthesizer and thus it is possible to have one note simulating, say, a violin, another a cello, another a flute and so on. When you consider that this is allied to a programmer offering the facility to store 16 separate sounds from each of the synthesizers, you can understand why most albums proudly include the credit "Oberheim played by ....."

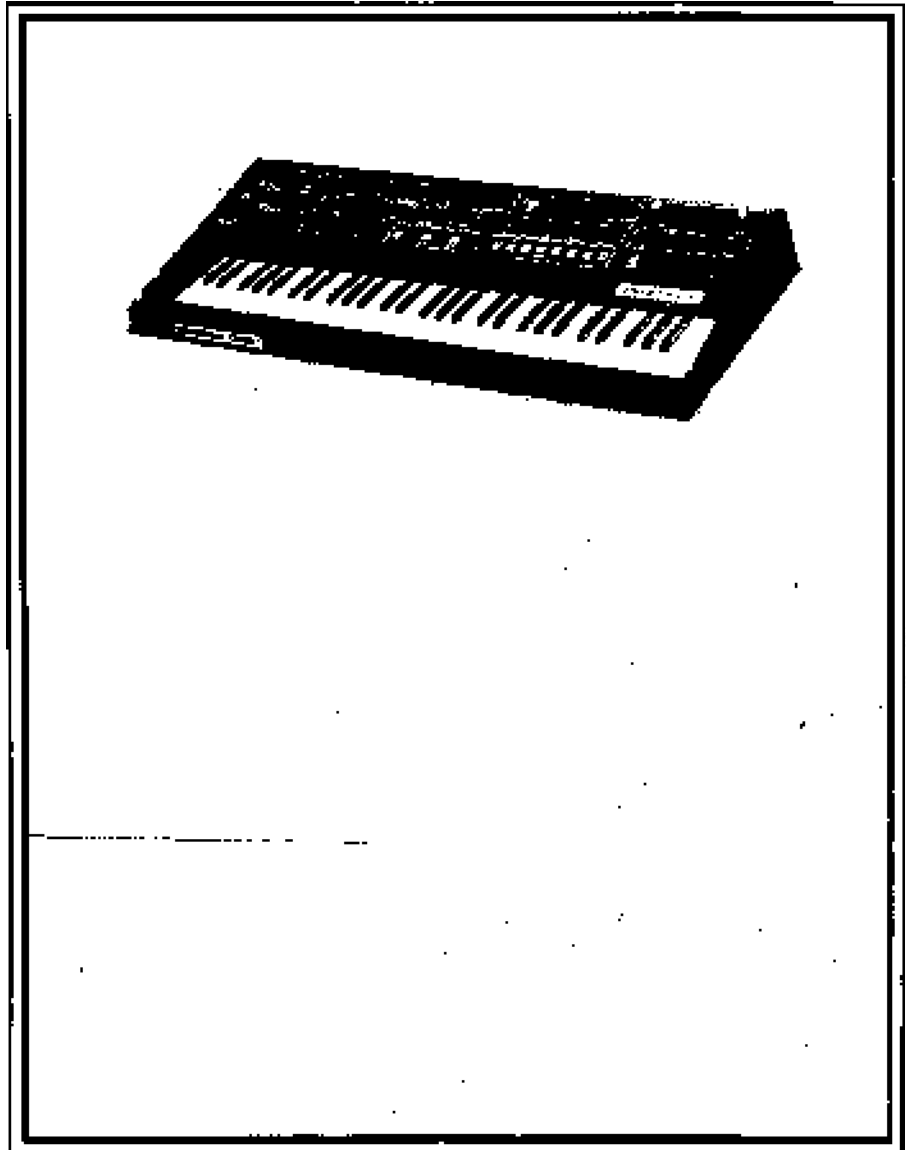
There can't be many musicians who are not familiar with the Polymoog Synthesizer, recently complemented by the new Polymoog Keyboard which offers 14 realistic presets. Both these models are always carried in stock and must be heard to be believed.

Another fantastic instrument which like the Prophet & the Oberheim range, has not been previously available in the U.K. is the RMI Keyboard Computer, a completely digital Polyphonic instrument with two separate channels, programmable by computer cards for a tremendous range of sounds. Words

cannot adequately describe this tremendous instrument. Seeing is believing.

The Roland Jupiter-4, recently unveiled, is this well respected firm's 1st polyphonic synthesizer and once again Roland have introduced another world-beater. With ten presets and eight memory banks, this instrument provides features and sounds not available on synthesizers costing three times as much. What more can we say but COR!! Also worth checking out is the RS505 Paraphonic Ensemble.

Certainly, one of the most popular synthesizers has got to be the ARP Omni-2, essentially a hybrid of a string machine and a synthesizer with the ability to mix sounds from those two sources. With ARP reliability and its compact size, the Omni is a proud addition to the rest of the range.



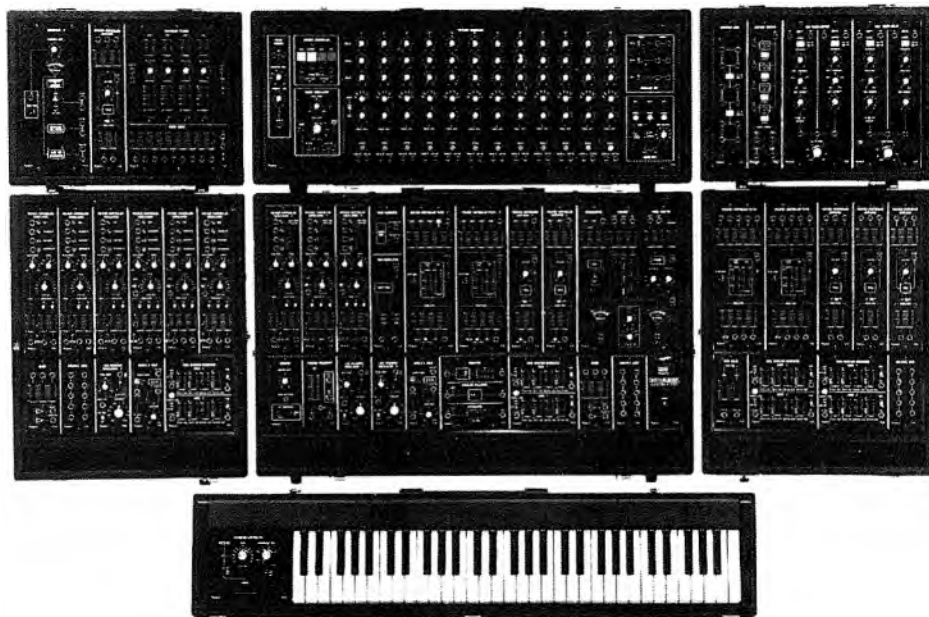
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The Roland System 700 is the ONLY modular synthesizer available in Britain off the shelf -- and that's the way Argent's like to supply it. The studio system is a fully expanding modular system allowing the ultimate in creative freedom. You can choose as much or as little as you want. The complete system is made up of a keyboard control unit, the main console (with three VCOs), an analog sequencer (three channel, 12 step), a further bank of six VCOs, a bank of six VCFs and VCAs, an interface/mixer unit and phase shifter/audio delay unit.

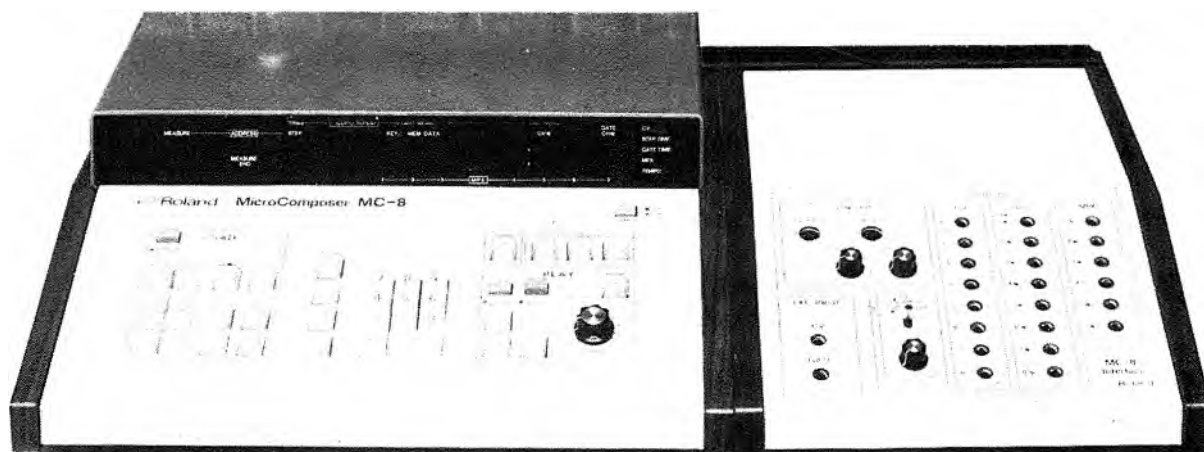
On the main console most common connections are made internally without need for patch cords but all modules have provisions for external patch cord connections for maximum versatility.

## Argent's Keyboards offer the Roland system off-the-shelf



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Writing a simple tune on a musical staff is step one. You can programme the sequence of notes into the MC8 (each note has its own number) and you can then decide what type of sound you would like your composition to have, the tempo it should be played at and so on.

The MC8 is capable of much more than this amazing feat. It can put out up to eight different melody lines at the same time and when you've programmed your composition into the MC8's memory you can off-load the information onto a tape in a standard cassette tape recorder and re-use the MC8's memory. Then, when you want to, you can reload your original composition back from the cassette tape into the unit's memory.

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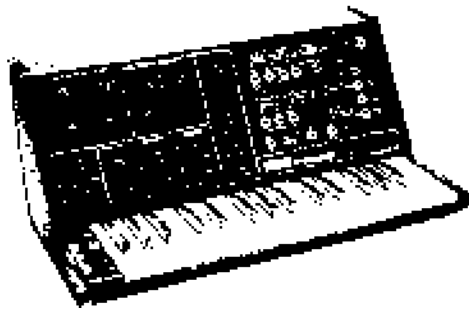
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Of the new electric pianos, the Yamaha CP30 and its smaller brother the CP20 have proved their popularity, offering a tremendous range of piano & harpsichord voices with variable pitch, delay, tremelo and tone and true weighted touch response.

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### SYNTHESIZERS

Pride of place in the store goes to the Roland System 700, the unique modular system which can literally do anything at anytime and is the most flexible, versatile modular synthesizer commercially available in the world.

Perhaps the most popular lead line synthesizer, the Mini-Moog, is even more popular than ever particularly since the new addition of 100% Stable Oscillator cards negating pitch drift. A new model to the Moog range is the Multimoog which fits between the Micro and the Mini Models with two oscillators and, for the first time, a touch-responsive keyboard. By the way, all Moog models have been recently greatly reduced in price thus offering even better value for money.

Psst! Wanna see an ARP? Then come to Argent's for the new Odyssey, Axse and 2600.

As this is the dawning of the era of programmable synths, do yourself a favour and check out the Oberheim OB-1 with 8 - yes 8! - programmable memory banks enabling the instant selection of your own sounds. Every function is programmable and you know what that means. Who isn't playing an Oberheim?

The new Korg MS10 and MS20 Synthesizers offer exceedingly good value for money as does the new Korg Vocoder, and the new range has already turned quite a few ears.

It's been a long time coming but its here and it's worth the wait:- the Jeremy Lord Skywave with its unique Joystick control for pitch bend and modulation and 4 octave keyboard. Boy, does it sound fat?

For pet lovers, what better than an Octave Electronics Cat or Kitten - no wonder people love cuddling up to one at Argent's.

Regarding synths, mention must be made of the exceptional new Yamaha range of the CS30L and the CS10 models which are worthy additions to the range of equipment.

Still not satisfied? Then try their Roland range - 'nuff said.

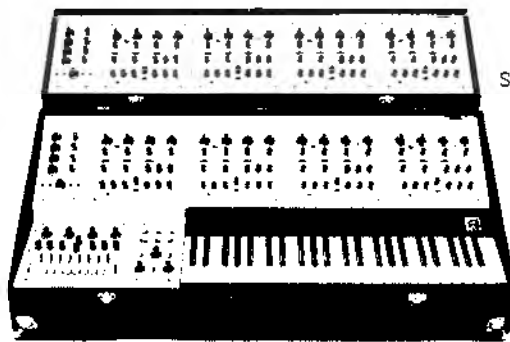
Argent's also hold in stock the Roland Micro-Composer, Oberheim Digital Sequencer, Sequential Circuits Programmer or Digital Sequencer, Synthesizer modules by Oberheim and Steiner-Parker, various effects including MXR, Bell, Electro-Harmonix, Roland, Carlsbro and WEM, a tremendous range of amplification and mixers, leads, tuners, accessories etc. - the list goes on. Magazines like "Contemporary Keyboard" and "Synapse" are also available from them on subscription.

**IN SHORT, IF IT'S GOOD - ARGENT'S WILL STOCK IT**

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In recognising the cost of many synthesizers which put them beyond the reach of many musicians, Argent's are proud to make available the WASP - the tremendous new instrument which competes favourably with many synths costing at least six times as much. With 2 oscillators, a separate LFO, two envelopes, 3-way filter, built-in speaker, stable tuning, pitch bend, sample and hold, noise - demand for this instrument is bound to be nothing short of great.

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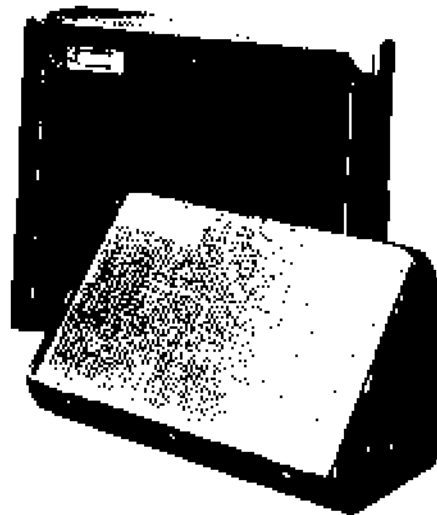
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## David Bowie: Stage (RCA PL 02913(2))

This is the long awaited live album set which chronicles David Bowie's 1978 tour. As such, it does not really count as a follow-up to the experimental "Low" and "Heroes" albums and can therefore be seen as more or less "the story so far...." recordings.



David Bowie

Of course, to new Bowie fans this compilation will be invaluable, while to the diehards (or people who couldn't get tickets) it recalls one of the musical highlights of 1978. As with all Bowie's work, there is interest from a variety of aspects.

Side One of this double album covers the Ziggy Stardust period with five tracks beginning with "Hang On To Yourself" and ending with "Star". The numbers are taken slightly faster than the original versions and as such lack a little conviction, almost as if he is merely going through the motions for the sake of his fans — which isn't a bad thing.

Roger Powell's synthesizer opens Side Two with incredible train noises driving through the speakers punctuated by Adrian Belew's guitar "whistles" to introduce a storming version of "Station to Station". This really builds up into an incredible tour de force with each member of the seven-piece band firing on all cylinders. "Fame" and "TVC15" follow, both remaining faithful to the originals.

Before the concerts, many people were wondering just how Bowie's newer material would be both put over and received in a live situation. For those who were not fortunate enough to see the live show, "Warszawa" will clear up any

doubts. In concert the entire audience sat almost mesmerised as the sombre tones filled the hall, and that all-enveloping atmosphere is translated to disc. The haunting melody is enhanced even further by the gypsy-like violin work of Simon House to produce a number of awe-inspiring power — truly modern classical music. "Speed of Life" and "Art Decade" continue in the same superb vein.

"Heroes" introduces Side Four and although it's one of his best numbers, this is not quite up to the studio cut. But Powell's superb fills more than minimalise virtually any criticism.

The band that Bowie assembled round him comprises Carlos Alomar (guitar), Adrian Belew (lead guitar), Dennis Davis (drums, percussion), Simon House (electric violin), Sean Mayes (piano, string ensemble), George Murray (bass), Roger Powell (keyboards and synthesizer) and Bowie himself on synthesizer. I make no apology for listing the entire band, because their playing and tightness is what makes this album work.

Mention must also be made of producer Tony Visconti who has done such a good job in the production (along with Bowie), recording and mixing. Crowd noise is kept to a minimum and all the intricacies of the playing are brought to the fore. If it weren't for the brief applause in between numbers, it could easily be taken for a studio album, the quality is that good.

Unfortunately there are no indications as to where the numbers were actually recorded, although it is fairly certain that they were done on the American leg of the tour.

This is one of the best live albums I've heard, and although it adds nothing new material-wise to the Bowie catalogue, with a cut like "Warszawa" you can witness the man at his best.

### David Lawrenson

*Recorded by Tony Visconti. Produced by David Bowie and Tony Visconti. Mixed by Tony Visconti, live sound mixed by Buford Jones. Recorded live with the RCA Mobile Unit.*

## Cliff Richard: Green Light (EMI EMC 3231)

If you're looking for a definitive English pop album, look no further than any of Cliff Richard's last four LPs. There seems to be a certain magic about the liaison between Cliff and his producer Bruce Welch (although his last, "Small Corners", was self-produced) that always results in a classy collection of tracks. This latest is no exception. As always, Cliff and Bruce have gathered the cream of sessioners to provide tight and flawless backing. This time out, they include Terry Britten, Tim Renwick, Alan

Parker and Alan Tarney (guitars), Alan Jones and Alan Tarney (bass), Brian Bennett and Trevor Spencer (drums), Graham Todd, Alan Tarney and Duncan McKay (keyboards) and ol' regulars Tony Rivers, John Perry and Stuart Calver on vocals, assisted this time by Alan Tarney and Cliff.

The arrangements, as always, are superb and each track stands up on its own. A lot of thought and attention to detail has gone into this album. For example, when vocal harmonies are employed, they very rarely repeat themselves — if the same line occurs later in a track, there's usually a subtle change somewhere along the line to "lift" it. The album was recorded at Abbey Road Studios, a well-equipped complex to say the least, but even so, studio trickery is not overdone on the album. When any effect is used, it is with taste and moderation.

Without a doubt, the most adventurous and, for me, best track on the album is "Never Even Thought", which closes the first side. Both the verses and middle eight are in a minor key and there is an excellent build-up with very dramatic chord sequences. All credit to Richard Hewson here for his superlative string arrangement. With exquisite use of staccato cello figures and sweeping violins, Hewson has come up with the most moving string arrangement I've heard since "Eleanor Rigby".

The first track on Side Two is "Free My Soul", written by Terry Britten with a Kinks soundalike guitar figure as the main riff. The song is complemented by interesting synth and very imaginative guitar throughout. The vocal harmonies are rich and smooth, while the lead vocal has a very "dry" sound, similar to a couple of tracks on "I'm Nearly Famous".

"Can't Take The Hurt Anymore" is one of the slower cuts on the album and is enhanced by very close vocal harmonies on the chorus. There is also a nice subtle touch of repeat echo on the piano arpeggio which darts in and out of the versus.

"Ease Along" is another adventurous track with a heavily flanged intro and an interesting melody. The funky delivery of the song is helped by Brian Bennett sounding more like Steve Gadd, and Hewson has again come up with a very inventive, Eastern-sounding string arrangement.

Overall, the material, production and arrangements on the album are faultless. There's no heavy message on "Green Light", it's just the latest in, hopefully, a long line of classic Cliff Richard albums.

### Eamonn Percival

*Produced by Bruce Welch, engineered by Tony Clark and Peter Vince, recorded at Abbey Road Studios.*

## Deep Purple: The Deep Purple Singles A's & B's (Harvest Heritage SHSM 2026)

This album could be looked upon as something of a collector's item in that it features Purple's first six singles and their respective B-sides. Whether you like Deep Purple or not, the fact remains that, from the summer of '68, this band played an important part in the shaping of rock's heavy department. The first side features the first Purple line-up of Jon Lord (keyboards), Ritchie Blackmore (guitar), Ian Paice (drums), Nick Simper (bass) and Rod Evans (vocals).

The album opens with "Hush", their debut single, a powerful arrangement of the Joe South classic. This cut is particularly interesting as it demonstrates Blackmore's excellent phrasing and taste, two qualities sadly lacking in latter-day Purple and present-day Rainbow. It also features the definitive Hammond organ sound from Lord used, in this case, to great effect as rhythmic punctuation throughout the track. The B-side, "One More Rainy Day" doesn't fare so well, however. An unbelievably trite song, it sounds like sub-Marmalade both lyrically and melodically.

"Emmaretta" is a little-known Purple single from 1969 which, initially, sounds like Blackmore's foot is tied to a wah-wah pedal but really shows what an influence Hendrix was on most guitarists at the time. The B-side is an instrumental called "Wring That Neck", a jazzy 12-bar with Lord and Blackmore playing harmony lines between solos. A good track, an early Purple showstopper, marred only by a surfeit of reverb and an embarrassing, silly Blackmore ending.

"Hallelujah" was written by Greenaway and Cook of all people but lends itself well to Purple's heavyish approach. Blackmore plays tasteful licks over a doom-laden minor descending chord sequence and it is the first Purple cut that features Evans on primeval scream, taken up on later tracks by Ian Gillan and David Coverdale who did it better (and more often). The B-side, "April Part One", closes the first side. It's an edited version of a three-part "suite" from the third Purple album, complete with church organ and Blackmore on acoustic and is a pointer to Lord's "Concerto For Group and Orchestra". Pretty in its own way, but the instruments are dreadfully out of tune with each other.

Side Two shows Purple's rapid development from early 1970 to late 1971 and features the Mk.II line-up with Simper and Evans having been replaced by Roger Glover and Ian Gillan. "Black Night" really must be one of the classic HM singles from that period and features superb fills from Paice. This track is also interesting in that the main riff sounds



Purple's Ritchie Blackmore

uncannily like The Nashville Teens' "Tobacco Road" played backwards. The B-side, "Speed King" really was a killer live number which Purple used to open with but didn't transfer to vinyl too successfully. Live, it was faster and more powerful. On record, a very pedestrian piano seems to hold it back.

"Strange Kind of Woman" was their next single. The sound is powerful yet clean and is best played at deafening volume. The other side was a track called "I'm Alone" and, as it didn't appear on any Purple album, I would imagine it was a "throwaway" cut.

The penultimate track is "Demon's Eye", the flipside of "Fireball" and, apart from a great Hammond sound, hasn't much else going for it. "Fireball" closes the album and is indicative of Deep Purple at their best. Paice amazes throughout with a relentless driving bass drum and supersonic drum breaks.

Apart from "Emmaretta", all cuts on Side One were produced by Derek Lawrence, while Side Two's tracks are band-produced and, on the whole, much better.

**Eamonn Percival.**

## The Cars: The Cars (Elektra K52088)

Identikit rock 'n' roll for the sophisticated teenager is taken to new limits by the image-obsessed but essentially soulless Cars. The front of the sleeve gives it all away: like Deaf School's first, but tackier. The inner sleeve is also papered with stark black and whites which prove conclusively that you can't transplant Roxy Music artwork to the USA.

The music is of course professionally played and lacks only that spark of inspiration. The synthesizers do their stuff dutifully, as does the lead guitarist. Ric Ocasek wrote everything except half

of "Moving In Stereo", and would seem to be the guiding light behind the Cars. He has taken care to assume an early Perry pose on the inner sleeve, and a lot of the singing on this record also sounds like Bryan. Others might say it's Talking Heads, especially on Side One's "Best Friend's Girl". This is, in fact, a tight, fast, commercial tune which could well be a chart contender. Opening with a neat guitar riff played on two or three strings in the manner of Lou Reed, there are some nice harmonies — something the Cars do well and some surprisingly effective country guitar licks.

This is followed by my favourite tune on the album, "Just What I Needed". It inherits the scratchy guitar from "Girl", and sports a pleasing chord sequence and plaintive synthesizer. Whoever sings lead on this (either Ric Ocasek or Benjamin Orr) has adopted Old Father Reed's trick of repeating a word, like "Time-Time". Effective too. The chorus inexplicably sounds exactly like Boston which almost gets a black mark, but altogether this is a great track.

"I'm In Touch With Your World" is the least usual track here and was evidently meant to be so. It has a lurching rhythm, quavering guitar and strange electronic noises. The lyrics are daft futuristic stuff — "I'm a psilocybin pony you're a flick fandango phony" — which are best ignored, like most of the lyrics throughout. There's absolutely no desire to experiment here, just somebody's idea of clever electronic effects and a slightly different rhythm from the other songs.

Thoughtful programming has consigned all the really drab stuff to Side Two. Practically all the songs on the record have the same riff-building-up-to-chorus format which works best on "Best Friend's Girl" and "Just What I Needed" but falls flat on such tedious pieces as "Bye Bye Love" and "You're All I've Got Tonight."

The Cars fall continually into the trap of stating, or restating, the obvious, like the crass stereo effects on (believe it or not) "Moving In Stereo". Too many of the songs sound alike and they should fire the art director. But they could have potential.

### Adam Sweeting

*Produced by Roy Thomas Baker, Engineered by Geoff Workman and Nigel Walker, Mastered at Sterling Sound, New York, by George Marino.*



Blondie's Debbie Harry

### Blondie: Parallel Lines (Chrysalis CDL 1192)

Over the past six months, Blondie have become one of the hottest bands around thanks to a combination of their electric vocalist, Debbie Harry, and a tight adventurous band. If anyone is wondering how to define pop in the Seventies, they really need look no further than this American six-piece.

This is the band's third album, one showing marked improvements on the previous offering. One obvious change on "Parallel Lines" is the switch in producers from Richard Gottehrer to ace British pop purveyor Mike Chapman. The move is a good one, because he gives the tracks more instant appeal, and the album throughout is more consistently punchy than its predecessor.

On the "Plastic Letters" album, the opening track "Fan Mail" was my particular favourite and this is the case once again with "Parallel Lines". "Hanging On The Telephone" is Blondie at their best with Debbie Harry's urgent vocals leading a vibrant up-tempo song complete with thumping drums and interesting guitar work.

"Picture This" is similar but doesn't carry quite the same power as the opening track, while "Pretty Baby" sees the band in lighter mood with Miss Harry contributing breathy vocals which really begin to soar. "Sunday Girl" is the stand-

out on Side Two, a tongue-in-cheek number with overtones of early Sixties pop which works well and really goes to show the versatility of the band.

The playing is excellent throughout, from the simple but effective drum work of Clem Burke with its Dave Clark overtones, through to the lead work of Chris Stein who also plays 12-string and F-bow and works hard to complement the pyrotechnics of keyboard player Jimmy Destri. Once again the vocal range and versatility of Debbie Harry reigns supreme — this lady is definitely not just a pretty face.

### David Lawrenson

*Produced by Mike Chapman. Assistant engineer Grey Russell. Recorded at The Record Plant, New York.*

### Roy Ayres: You Send Me (Polydor 2391 365)

Roy Ayres will be well known to jazz buffs as the exciting young vibes player who emerged from under Herbie Mann's wing and then went on to form his own band, Ubiquity. He was one of the first jazz players to cross over into the more lucrative but musically less demanding fusion market, taking in both easy listening and disco material — a move which culminated for Ayres in a UK disco smash last year with "Freaky Peaky".

This new album follows the pattern set by his other recent offerings, i.e. a mixture of early night dancing and late night smooch material. The album opens with the title track, "You Send Me" which is the old Sam Cooke classic, definitively performed by Aretha Franklin in the Sixties and subsequently mutilated by Rod Stewart in the Seventies.

The latter plodding version is not much improved upon here, as the original chords are reduced to fewer changes and taken at a ponderous pace. It is curious to find a rather wooden rhythm section on such an album, but the fault re-appears again on Side Two, even on the ironically titled "Rhythm", where the leaden drumming contrasts sharply with the bright and airy vocal sound of Ayres himself and newcomer Carla Vaughan, operating in the now well-defined style of quiet, unison chants eventually breaking into improvisations over the main vocal riff.

However, the album does come alive on the up-tempo numbers, especially "Can't You See Me", where we finally hear Roy doing what he does best — playing vibes — accompanied on this occasion by some great brass work and then his own delightful scat vocals.

He would be well advised to play to this particular strength more in the future, since the relative rarity of his

instrument gives him a distinctive sound in a rapidly saturating market of largely sappy music. Nevertheless, as it stands this album will doubtless please his growing British following and confirm his status among the jazz/funk elite.

### David Lawrenson

*Produced by Roy Ayres. Engineered by Mike Hutchinson and Jerry Solomon. Recorded at Sigma Sound, New York and Electric Lady, New York.*

### Phineas Newborn: Look out — Phineas is back! (Pablo 2310 801)

Remember pianos? Those big wooden things keyboards men used to play before they plugged in their pianets, clavichords, organs and synths? In the jazz world, there are still plenty of musicians around who are happy to stick to the original article and create good music on it. And the instrument is not the only thing that's traditional about this album. It's the classic jazz trio of piano, double-bass and drums, and a fairly orthodox selection of tunes: two standards, a couple of bebop classics, a few Newborn originals, a blues and a benign nod towards modernity with Stevie Wonder's "You are the sunshine of my life".

Newborn is a vigorous, two-handed pianist who attacks every number with gusto and a prodigious technique. The question asked about every fast piano player since Tatum, and probably some before, is: does he play too much? And the answer, as with Tatum and the rest, is: yes, sometimes. But the occasional pyrotechnic excesses are forgivable when the sheer brilliance of the improvisation reaches the breathtaking heights that Newborn's sometimes does.

It's not all up-tempo swingers, either. Gershwin's "The Man I Love" gets an unaccompanied treatment which opens and closes with a massive, romantic interpretation worthy of Rachmaninov, sandwiching a chorus in Fats Waller's lazy stride style. On all the other tracks, Newborn is accompanied by the incomparable Ray Brown on bass, nudging, pushing and kicking the trio into top gear, and Jimmy Smith playing drums steadily enough, but in an uninspired clockwork style.

The Stevie Wonder song doesn't work too well. It's as if Newborn can't decide which rhythm to settle on, or just how to improvise on the quirky chord sequence. For the rest, he's right at home in the jazz piano tradition. As long as there are players like him around, piano makers shouldn't worry about going out of business.

### Jeff Pike

*Recorded December 1976 at RCA Studios, Los Angeles. Produced by Ray Brown.*

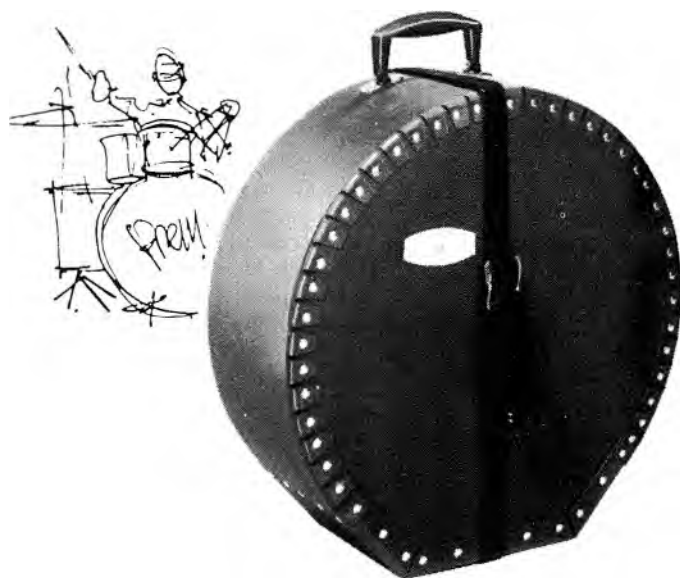
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# Anything to Declare?

*Smuggling instruments into Britain is a growing pastime among musicians. But a rather exceptional Customs officer convinces DAVID LAWRENSEN that it's not worth the risk.*

Ever since the Beatles began their transatlantic invasion, British groups have tended to regard the USA as a country whose streets are paved with bargain gold-plated Les Pauls and Stratocasters

There are many tales of musicians who have stumbled across priceless musical instruments hidden away in dusty old junk shops. It would seem that, for many musicians, such bargain hunting takes precedence over the gigs when they tour America, and they use the opportunity to stock up with both new as well as second-hand instruments because they are so much cheaper than in Britain.

There is only one stumbling block to this highly lucrative trade – the Customs. To most people, the Customs mean trying to bring through an extra bottle of booze or carton of cigarettes after a holiday. But, for a variety of reasons, musicians have come to dread the men from Her Majesty's Customs and Excise department.

However, little seems to deter them from trying to smuggle in a guitar or two, except perhaps when they get caught. The average musician's idea of a Customs officer is someone who may just have heard about the Beatles and Elvis Presley, but is hardly likely to know the difference between an Ibanez and an Antoria. This may be true in many cases, but then they probably haven't come up against Ken Ross!

Ken is a Customs officer with a passion, and that passion is guitars. The musician who tries to smuggle an instrument past him would be in for a shock, because Ken probably knows as much about the thing as the person who made it. He first became interested in guitars when he saw Chuck Berry in the Fifties

and, from there, bought a guitar and learned to play.

Not content with just playing, the first thing that Ken used to do when he bought an instrument was to take it apart and clean, polish and improve it where he could before re-assembling it. Now, 14 years and almost 20 guitars later, Ken is using his knowledge on behalf of Queen and Country.

"I've been with HM Customs and Excise for 14 years," he says, "and, during that time, have worked at London Airport, Prestwick in Scotland, Southampton docks and Belfast docks. In all, I've had 16 different jobs in the United Kingdom. I've always had an interest in instruments and, very often, people who were coming through the Customs were doing nothing wrong, but I would just speak to them about their instruments.

"Something that always amazes me is how little musicians know about their own instruments. They don't really know very much – apart from changing strings – and even then some of them leave their strings on for years. It's amazing what they don't know.

"Within the Customs and Excise department, there are specialists in all kinds of things like cameras, fur coats, jewellery, hi-fi and so on. One way and another, somebody knows something about everything. It's not a deliberate policy, it's something that just happens. The department is starting to encourage this specialisation more and more, and is beginning to run courses using both professionals and amateurs like myself, to pass on their knowledge to officers in the department."

Smuggling musical instruments into Britain has increased over the last few

years, although it would appear that most musicians are ignorant of the consequences and penalties involved. Few cases of smuggling ever hit the headlines, although many are taken to court and dealt with severely.

"In the past," says Ken, "various well-known groups have had great problems with our department because they had smuggled something in deliberately. Generally speaking, a few musicians get the rest a bad name, but there is still this great temptation to buy high-quality musical instruments abroad and not declare them. If they are declared, the Customs assess the duty tax, charge it and the passenger can take it away.

If it were, say, an acoustic guitar from a Common Market country like Holland, there would be no duty on it, just VAT. As it's an acoustic guitar it would be eight per cent VAT, which isn't too heavy, and as the Common Market progresses, the rates will come down further and further.

"If it's an electric guitar from the USA, there is 10 per cent to pay, plus 12½ per cent VAT. So the duty on a \$1,000 guitar would be about \$240. If it were smuggled, then the penalties under the Customs and Excise Act are heavy.

"If caught smuggling, you would be liable to a fine of three times the value of the goods and possibly a prison sentence of up to two years, depending on the gravity of the offence. In the case of a high-value instrument, it would have to go to court, there is no option. With low-value items you can be given the chance to pay a fine on the spot, but with most musical instruments you would have to go to court.

*continued overleaf*

"In the case of that American electric guitar, you would have to pay three times the duty-paid value: the \$1,000 plus \$243, multiplied by three. That's what the Crown sue the offender for. Of course, the instrument is lost immediately. When a person is caught smuggling, the goods are seized as forfeit to the Crown, so he leaves the Customs hall with nothing except a receipt.

"At a later date, they are auctioned off to the general public and/or the trade - but Customs officers aren't allowed to buy them! This happens with all things seized by the Government. They are auctioned usually in London, Liverpool and Glasgow once or twice a year and any member of the public can go and bid. When they are sold, both the duty and tax must be paid."

The average musician is probably just as unaware of the powers and the authority of the Customs and Excise department as they are of the penalties they can impose. The procedure when questioning a suspected smuggler is very precise, and the lengths the officers will go to in investigating goods are quite extensive.

Ken outlined the procedure that anyone suspected of smuggling an instrument could be expected to go through. "I would first ask him in which country the instrument was purchased, how much he paid for it and was it the true price. If I wasn't satisfied with the value he placed on it, I would ask for a receipt - which might or might not turn out to be false.

"If the person is guilty of smuggling and is doing it deliberately, then I can ask him to fill in a document stating the make, how old it is, where he bought it and what he paid for it. Generally speaking, if he were sensible, he will tell the truth either at that point or before, because any person making a false dec-

laration on that document is liable to a fine.

"If, for example, he says he bought the instrument in a London shop, it's quite easy to pick up a telephone and phone that shop. If he says he bought it from a friend, it's quite easy to phone another Customs officer, whether it be in the North of Scotland, West of Wales or wherever and say 'Would you please go round to this house and ask the friend?' And they do do this."

It's not just guitars which people try to bring into the country illegally. Just about everything you can think of has been tried at some time or another and been duly thwarted by the department.

"I've never heard of a piano being seized by the department, but no doubt somewhere it has been done. Anything from tubas to flugelhorn, bass guitars to electric pianos, drum sets, mikes, synthesizers - and it doesn't have to be small amplifiers. It's not the case of people trying to conceal something small, but the fact that they try to say it's old or they bought it in Britain.

**Goods to declare**

If you are taking any prohibited or restricted goods or goods for commercial purposes, go into the RED CHANNEL and declare them to an officer.

**Nothing to declare**

If you have nothing to declare, the restricted goods or goods for commercial purposes go straight through the GREEN CHANNEL unless asked to stop by an officer.

**Duty and Tax-Free Allowances**

You are entitled to the allowances set out in Column 1 for Column 2.

	Column 1	Column 2
<b>TIMBER</b>		
Softwood	100 kg	200 kg
Hardwood	25 kg	50 kg
Wool	10 kg	20 kg
Alcoholic drinks		
Wine	2 litres	4 litres
Beer	2 litres	4 litres
Perfume	250 gms (8.8 oz)	500 gms (17.6 oz)
Toilet water	250 gms (8.8 oz)	500 gms (17.6 oz)
Other goods	£50 worth	£100 worth

**If you are in doubt, go into the red channel.**



**GOODS to declare**

"You see, anything musicians can think up to evade the controls has already been thought of by the department. Don't forget, it's one of the oldest departments in the country - it has been going for a thousand years! It is quite possible that a new, high-quality instrument can be in an old case with good reason. Similarly, it is quite possible that an old instrument worth £5 can be in a case costing £50. People have also tried to walk through the green channel (Nothing to Declare) with high-quality classical guitars in polythene bags, making them appear to be £5 souvenir guitars. They get picked up too.

"People have tried to evade the controls by flying from say, New York to Paris, then coming across by car ferry and appearing that they came from France on a day trip or something. Or flying to Norway and coming across the North Sea to Newcastle. It's all been thought of and done and, for those that have been caught, the penalties have been severe."

It is not only rock musicians who try to evade the Customs controls, but musicians of all types. Classical musicians have been known to try and smuggle

high-quality brass, woodwind or string instruments, but the penalties are the same."

Ken cannot emphasise too strongly the futility of trying to smuggle instruments: "Don't smuggle, it's not worth it. It's not worth it financially, it's not worth the embarrassment, it's not worth the delay and it's not worth losing a nice musical instrument. I don't like to see people lose their instruments.

**I**f it goes to court, they'll probably end up with a criminal record. It may not matter much in some cases, but in others it may affect someone becoming a resident of a foreign country, and I believe that the USA are very strict on people with a foreign criminal record."

Keeping up with the latest products and developments on the guitar scene is virtually a full-time job, which Ken has to fit into his spare time. Still, he has an incredible appetite for any information concerning guitars, spending a great deal on books and writing away for catalogues. He also takes time out to visit trade shows and has met many of the top guitar specialists including Mr. Golder of Shergold, Paul Hamer, Ken Achard;

Stephen Delft, Maurice Summerfield and, recently, Mario Maccaferri.

As yet, Ken has never been really stumped when opening a guitar case: "I can recognise a Gibson, or a Fender or a Martin or something like that from 100 yards. I like to think that if you gave me a bridge off a Japanese guitar, I could tell it was Japanese."

He remains convinced that honesty is the best policy both when coming into Britain with equipment or travelling abroad: "Any documentation is helpful both in getting into and out of a country. I would declare high-value musical instruments, tell them what you've got and also tell them that they are your professional effects, tools of your trade and, in most countries, you won't have any problems.

"If you are moving a whole lot of equipment, it is certainly worth going to the Chamber of Commerce and getting a carnet completed. That's the only sensible way to do it. The British Customs will not issue you with any document, purely because the officer concerned probably doesn't know where the instrument came from in the first

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place. An officer will not issue a document saying that such a guitar was exported from London Airport or wherever."

The stories surrounding musicians trying to smuggle in instruments are many and varied. Ken recounts one such incident: "I once met a young semi-professional pop group and they had a carnet with a list of instruments printed on it. It said 'Gibson Les Paul, serial number etc, and it also had a Fender Precision bass plus serial number.

"The lady Customs officer who was dealing with it called me over and asked me if I wanted to have a look at them. I started checking and everything was OK, but I asked where the Fender Precision bass was. A young musician of about 19 said 'This is it and there's its serial number.' I said, 'Young man, did you scratch that on with a needle or with a pin? He said, 'No, no, that's what it is, a Fender Precision bass'.

"I said, 'Young man, that is a cheap Japanese copy of a Gibson bass. Not only

does it bear no resemblance to a Fender Precision, not only is it not a Fender Precision, but you've scratched the serial number on it.

"I said, 'You're trying to make a fool of me. Would you like to tell me what is wrong? He said, 'Well actually the bass player is sick and has pulled out of the group and he sent me over instead.'"

Ken's motto is "Declare your axe and pay your tax." It certainly seems a wise course of action with someone like him around!

## What the musicians say...

Many musicians who have toured abroad have their own stock of horror stories relating to Customs. Many have come unstuck by foolishly trying to smuggle instruments in and out of the country. Many have been, at worst, penalised and, at best, delayed by not paying close attention to detail when filling out carnets and the like.

Nick Michaels, guitarist with Bethnal, recalls such an incident: "The only real trouble we had with Customs was crossing the French-Belgian border. Because we travel with the gear, my guitar was in the back of the truck and no-one realised the guitars should have been listed on the carnet. At the border, the Belgians checked the list and noticed the guitars weren't on it. We hadn't put the guitars down because we thought they would be classed as hand luggage. They weren't of course, so the Belgians decided to confiscate the guitars.

"We had a gig that night so it was panic stations. We talked to the Belgians and they decided to hand back the guitars, provided we put up a bond that the guitars were not to be sold in Belgium and the bond was returnable on leaving the country. Not only that, but we found the Belgians to be very difficult. They insisted on speaking in Flemish, not even French!"



Nick Michaels

Tony James of Generation X agrees that filling out carnets carefully, though a tedious job, is important if you want to avoid delays.

"I've had trouble every time I've been abroad," he told us, "and most of it is to do with carnets, because you have to list every single item of equipment and that can be difficult because of the country of origin of

certain pieces of equipment. If something was made in America, for instance, it might include a piece that's stamped 'Made in Japan' and they can pull you up over that. Also, it's easy to miss out odd little bits. We once went abroad with a couple of guitar leads that weren't on the carnet and we had them in the glove compartment. We felt like criminals! I'd suggest that everyone should be really careful when they fill out carnets — put everything down.

"I once went to America and carried my guitar straight through Customs and there were no problems. On the way back, though, I had to prove I had taken the guitar out with me. Luckily, I had been warned about things like that happening so I'd taken the receipt with me. So I'd also suggest everyone should bring their receipts from where they bought the instruments.



Tony James

Things like that can cause unnecessary delays — we're always kept waiting for an hour or so, wherever we go."

Complaints about Customs don't always mean problems with carnets and receipts. Judas Priest have made many Stateside trips and guitarist Glen Tipton's main criticism is the way instruments are treated while going through Customs.

"The last time we came back from the States, they took all our guitars out of the cases looking for drugs. I had my Strat and my Gibson with me and when I got them back, the Strat was in the Gibson case and vice versa. Not only that, but they had put the Strat back in upside down and ripped all the linings of the cases. I was lucky in that the Strat was OK but putting it in the case upside down could easily have snapped the neck. If they're going to look at the guitars, I've got no objections — that's their job —



Glen Tipton

but I think I do my job well and I expect them to do their job well. Sometimes they don't. I have to base my assumptions on how I find the gear when I get it back. I don't know whether they've got it in for musicians in particular but we're always kept waiting a long time. The good thing about the Customs learning all about instruments is that it should mean they'll treat the guitars with respect."

Ian Gomm, an ex-member of Brinsley Schwarz, now embarking on a solo career, had a unique experience in Ireland.

"It was with Brinsley Schwarz and we were crossing the Irish borders with our guitars in their cases. The shape of the cases attracted the guards' attentions and we were pulled out of the van and told to get our hands on the van and our legs apart — just like Kojak! That was an isolated incident, but I do tend to think Customs give musicians a hard time. Let's face it, we're pretty obvious game. I think it depends how clever you are to some extent. And the straighter you look, the easier it is."



Ian Gomm

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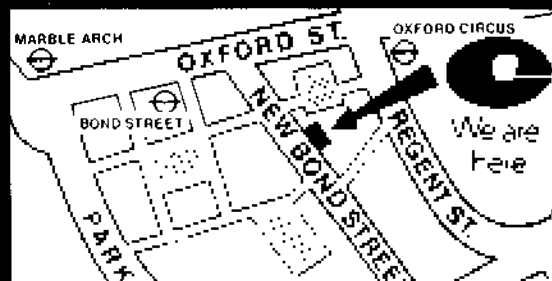
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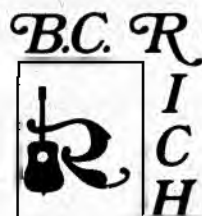
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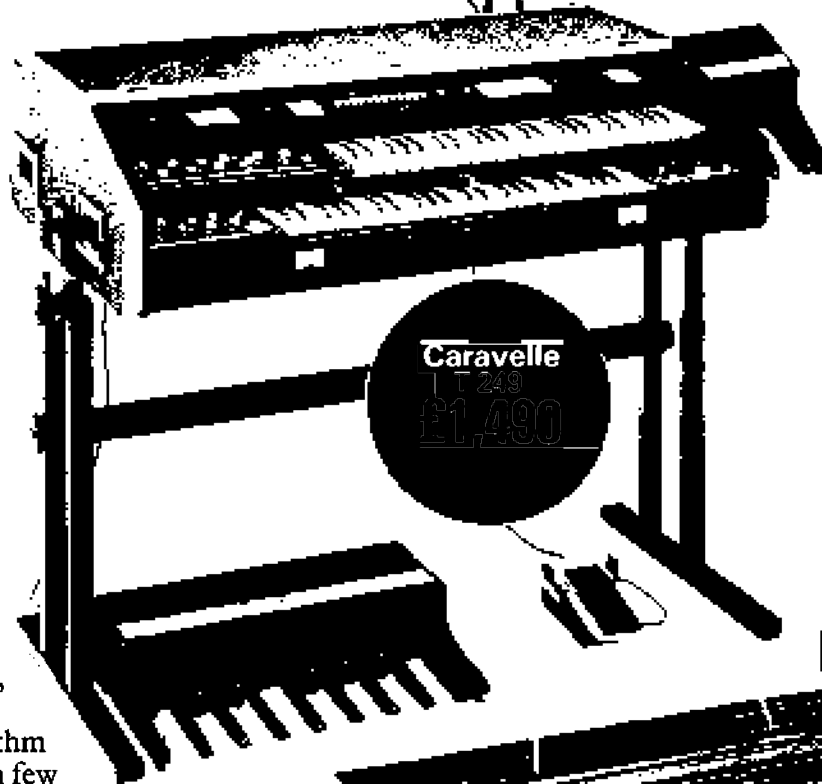
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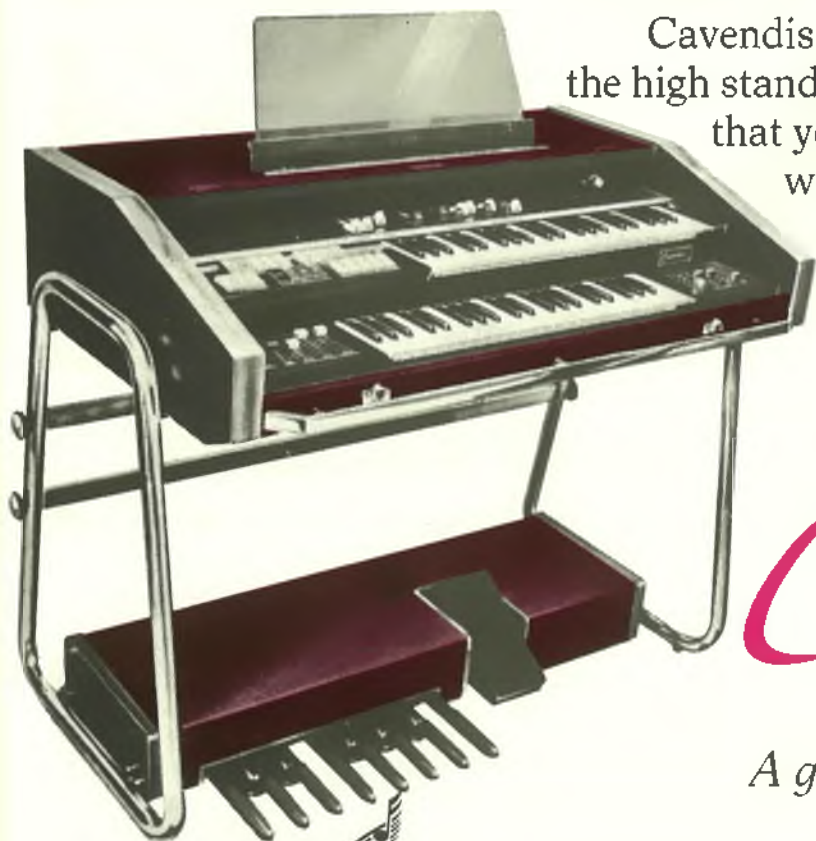
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# BLOWING IN THE WIND...

**O**ver the last few months, our resident reedman Alan Holmes has delved deeper than deep into saxophone mouthpieces, and reached some conclusions which don't meet with universal approval. But, having played more than 40 mouthpieces, he now summarises his conclusions.

Perhaps the most important factor in the ease of playing the saxophone is the width of the mouthpiece tip opening. In Part One of this series I said: "It doesn't matter who you are or how good you are playing at the moment, you will play better on an alto mouthpiece less than 90 thou or 7\*, or tenor less than 110 thou or 8. Used in conjunction with a 2½ or 3 reed you will be able to play the instrument from top to bottom with ease and get more notes per lungful, as well as standing a much better chance of being in tune. Never mind that your idol plays a 15\* or 140 thou tip opening, his mouth is probably so strong that the reed is being closed up to a 7\* anyway."

Leslie Evans, a long-established sax teacher, has disagreed with this point in another magazine, so my first duty to him and to you is to explain the reasons behind my thinking. The basis of the theory is that every flute player has to adapt to the mouthpiece provided by the makers, namely the lip plate hole size the manufacturer decides is appropriate for his instrument. The flute is very much more sensitive to changes in breath pressure and direction than the saxophone and yet all players can adapt to the standard mouthpiece, regardless of the lip, jaw and dental irregularities they may have.

Advanced performers have a head joint made specially for them, which is the equivalent of changing one's saxophone mouthpiece. A large hole makes the flute louder but more difficult to control. A smaller hole gives a smaller sound and if it's made too small, it can cause a loss of resonance on the bottom notes, exactly as on the saxophone mouthpiece tip opening. A bevel on the right side of the hole gives more edge to the tone and the treatment of the interior edges also affects the tone, as does the material of which the head joint is made.

So the changes of dimensions, shape and material of a flute head affect the performance of the instrument, yet with the exception of the very accomplished performers who have custom-made heads, every flute player gets good results on the standard head.

Obviously, the saxophone is a different instrument from the flute but its mouthpiece affects the performance of the instrument in exactly the same way. If the tip opening is too narrow, the resonance of the bottom notes suffers. The bottom part of the vibrations is inhibited by the reed not moving far enough and the notes emerge as harsh squawks. The same effect is caused by the reed being too hard and not flexible enough. If the tip opening is

too large, the top notes have a tendency to crack and slip down to a lower harmonic and generally make the intonation more difficult to control. The instrument becomes much more difficult to blow, to the point where the player has to take a breath every three or four seconds. The increased effort for the lungs creates tension in the body, which stiffens the fingers, so that not only are the breaths too frequent, the whole technique is inhibited.

I discussed this effect with Geoff Lawton, the player and maker of Lawton mouthpieces, and he entirely agrees with the maximums of 110 thou or 8 for tenor and 90 thou or 7\* for alto. The only advantage in playing on 9 or 10 lay is a broader, thicker tone at the expense of controllability of the instrument. But a really fast technique can only be accomplished if the sax is almost effortless to blow.

## HARMONIC RANGE

All my comments in Part One, especially those on lip bleeding, take account of the fact that I consider the harmonic range of the saxophone (above top G) to be included in the compass of the standard range of the instrument, with the possible exception of the baritone and soprano. (This applies equally to the other members of the woodwind family. The top notes of the oboe are produced harmonically as a matter of routine and are considered very much a part of the standard compass (D, E flat, E, F). And of course the third octave of the flute is produced by harmonic fingerings which differ considerably from those of the first two octaves. Yet it is very much part of the standard range of the instrument).

I consider that the useful range of the saxophone extends at least a whole octave above the conventionally produced range, so all that I have said regarding tip openings takes account of this harmonic octave too. This means that narrow lays of less than 5\* or 85 thou for tenor and 5\* or 70 thou for alto are ruled out, because of the difficulty in producing harmonics. So too are the wider lays I mentioned earlier, not only for their detrimental effect on the player, but because they are too tiring to play using the harmonically extended range of the saxophone.

Bearing this in mind, a standard tip opening for tenor becomes between 5\* or 85 thou and 8 or 110, and for alto between 5\* or 70 thou and 7\* or 90 thou. Mr. Lawton also mentioned that new Selmer Mk6 saxophones used to contain a card reminding the player that they were designed to play in tune throughout the range with the same embrochure and that it was not necessary to drop the bottom jaw for the lower octave. This practice is the most common cause of poor intonation. The characteristics of the mouthpiece become more pronounced if you rely on it to do its job without dropping

the jaw or "humouring" it in any way.

Mr. Evans, in his defence of the wide lay, quotes the fact that Plas Johnston, the famous session player, uses 160 thou Larsen on tenor and 130 on alto. But his lips are so strong and well-developed that he achieves a much greater area of lip contact with the mouthpiece, and this in practice closes up the lay to a more sensible amount.

The late, great King Curtis played a Larsen that was the equivalent of 150 thou. But he had it "doctored" by having the facing recut by Otto Link, which had the effect of shortening the length of the lay from 1.050" to .875" or nearly a fifth of an inch, a very considerable amount in this context. I understand from Mr. Lawton that it is common practice in America to send your Larsen to a mouthpiece specialist. He will relay and refinish it so that it performs quite differently from a standard one. The shorter lay makes it much easier to blow and more controllable.

Of course, many players develop their lungs and lips to an abnormal degree, rather like athletes who build up their bodies to Charles Atlas dimensions. Highly developed muscles are usually a product of taxing them repeatedly to their limits. But it is my theory that if you learn the saxophone on a standard size mouthpiece and stay on it subsequently, your muscles should not be over-taxed and thus would not grow to be too strong and require a wider lay.

I was a victim of the process where, for the first three or four years, you increase the size of your mouthpiece and use this as a sign of progress. I started on a tenor 7 and after a year got a 7\* then the next year an 8 then an 8\*, until after six years I was using a Larsen 130 thou or 10. Each change of mouthpiece caused a slight increase in the effort required to produce the same effect and the end result was that, after three years on the 130 (the largest size I could blow using a medium hard reed), my playing deteriorated slowly without my noticing. It was only when I switched to session work from touring with my band that I realised just how far I had slipped. It took another three years of progressively smaller tip openings to get back down to 6\* or 95 thou and it was only this relatively narrow lay that made it possible to practise the harmonic range of the saxophone for long enough to gain control of it.

Even though you can blow a wider lay by taxing the jaw and lips and so strengthening them, there is still a point where the harmonic range gets too tiring and the top notes prone to cracking. If we add to this the requirements of maximum volume, control of intonation and ease of blowing throughout the entire range, including the harmonically produced octave, plus a fixed jaw position, we are narrowed down to between 95 or 6\* and 105 or 7\* for tenor and 70 or 6 and 85 or 7 for alto. So you end up with the same kind of compromise as



# Mouthpieces and Muscles

by Alan Holmes

the flute-maker, who has to produce a mouthpiece which will provide the best results in each factor without adversely affecting the others. More volume means worse tuning, better tuning means less volume and a pinched bottom range, more edge means less control... all the factors are interlinked so the optimum eventually becomes possible to pinpoint.

The choice of 6\* or 95 for tenor and 75 or 6 for alto when starting a beginner on the instrument should have the same effect as the standard flute head. Learning to play on this particular tip opening, he will find a way of adapting to it, regardless of the lip, jaw and dental considerations. It is interesting to note that Selmer, who have been great innovators in the development of the saxophone, don't make a wider tip opening than 105 (H) or 7\* for tenor - an example of the manufacturers deciding what is best for the player.

The other main advantage for the advanced player of using these smaller mouthpieces is that it no longer becomes necessary to practise the saxophone just to keep up to the level you have reached. A layoff of a week will be remedied after five minutes' practice, but this is not true of wider jaws, when lay-offs can result in much more deterioration, owing to relying on the sheer strength of the jaw to close up the mouthpiece.

## INTERIOR SHAPE

The other factors which affect the ease of blowing are the length of lay and the shape of the interior. Lawton mouthpieces are very easy blowing, to the point that the 7\*B tenor blows as easily as other manufacturers' 6\*. The combination of narrow rails, aerodynamic rounded interior, and the fact that the smaller throat bore corresponds to the crook bore of the saxophone all contribute to cancel out the difference of 10 thou in tip opening in terms of blowing resistance and controllability. The sound that you are after, and the choice you make regarding the interior shape of the mouthpiece, length of lay and width of the tip rail and side rails will all contribute toward the overall ease of performance.

Of course, there are very good players who get results on very wide tip openings but my object is to provide a specific reference point for players who are not satisfied with the results they are getting from their present mouthpiece, or with their ability on the saxophone in general.

Regarding tone, I think that people's ears have become accustomed to more and more noise, musical and otherwise. Tastes and standards change, to the point where drummers would not dream of using the calf-headed drums popular 15 years ago and the semi-acoustic guitar, with its very heavy gauge, unbendable strings, has been replaced by solid-

body electrics with light gauge strings and very powerful pick-ups, to give a very cutting, topky sound. Synthesizers have become a common voice in modern music and are capable of some very bright tones. The once humble double-bass has been replaced by solid bass guitars with sophisticated electrics and light gauge strings. In the hands of Stanley Clarke, Jaco Pastorius and others, it has taken on a solo virtuoso role. And of course PAs have grown into gigantic hi-fi systems, with four-way frequency splitting and horns to project the higher ranges at mercilessly high levels.

All this escalation of toppiness, brightness and loudness has left the saxophone sounding almost polite. The seductive mooring of the large-bore sax of the 'thirties has had to be replaced by more and more edge and penetrating ability.

Tom Scott and David Sanborne, on tenor and alto respectively, are to be heard on countless albums and are arguably the most influential of younger players. Their commercial success as sessionmen is due not only to their outstanding musicianship but also to the fact that they both have very distinctive and piercing tones. This is due to the type of mouthpiece they are using, which has a very constricted interior, and the fact that they are hearing and producing the tone which is perfectly suited to the brightness of modern records.

With this in mind, and noting the sound produced by the H.Couf Jazz S which I liked so much in the ebonite tenor review, I have tried to persuade Larsens to consider making a "King Curtis" model for rock playing and Geoff Lawton to make a BB model with even more brightness than the B for use in rock.

It does seem odd that the popularity of rock music has as yet not given rise to a mouthpiece specifically designed for the right sort of tone to fit in with the guitar and synthesizer-oriented solo. If you have to follow a solo by either of these instruments on a live show then you need all the edge, cut and volume you can get if you are not to sound dull. The sliding tone chamber ebonite mouthpiece used by Tom Scott is not made any more, and the Brillhart "Level Air" used by David Sanborne is not on sale in Britain, so I am very keen to see something comparable on the market in Britain, such as a super edgy BB Lawton and a rock model of the ebonite and metal Larsens.

After playing and testing nearly 40 mouthpieces for this series, I reached a few conclusions. One is that ebonite is quite a lot more edgy than metal. Another is that a constricted tone chamber usually means sharpness in the upper range and consequently some of these models needed to be 1/2" longer to have sufficient overlap of the crook so that they did not wobble. Narrow and parallel side rails and rim tip greatly help the harmonic range, enhance the edge and enable the instrument to

"speak" more easily.

A long lay or the length of reed left free to vibrate on the mouthpiece makes the intonation more likely to be inaccurate. The short lengths of the Selmer models are particularly easy to keep in tune. Manufacture demands great care and precision, for even slight inaccuracies affect the performance.

Different mouthpieces really do affect the sound and performance of the saxophone to a very large degree. The mouthpieces I thought suitable for modern music were: ebonite tenor - H. Couf J8S, Beechler s7s, Larsen 100/0 or 1/M; metal tenor - Lawton 7\* B, Selmer Jazz g, Otto Link 7, Brillhart Lever Air 6; ebonite alto - Meyer 6\*, Beechler S 6s; metal alto - Lawton 6\*, Selmer Jazz E. Brillhart Level Air 5. These should all give professional results.

In the competition for the listener's attention, the saxophone has got to speak up for itself if it is to be heard above the clamour of the rest of the band. It sometimes seems there is some sort of plot by sound mixers at concerts to keep the sax quieter than the guitar. When did you last go to a concert and hear a sax solo as loud as a guitar solo?

But back to the tone of the sax. When I did "Rat Trap" on the Boomtown Rats album "Tonic For The Troops", the producer had already tried four other reputable players but found they all sounded too "polite" to convey the song's feelings of frustration at being bottled up in a city. If we don't produce the right sort of energy and tone, it is all too easy to replace sax solos by synths and guitar. To keep us all in work, make sure you play with every bit of energy you can put through the horn. Playing the sax as though one is half asleep is unfortunately still common, although no longer fashionable. But this apathetic approach has made it easy for the saxophone to be elbowed out of the limelight by what used to be called "the rhythm section" who are, because of their more vigorous approach and the fact that they don't depend entirely on the PA to be loud, the stars of the show.

Thanks to records like "Chanson d'Amour" and "Baker St", the saxophone is enjoying a return to popularity, so let's look toward the Eighties and try to create a new, aggressive, competitive image for the instrument which was once banned for being too sexy.

Even though Leslie Evans disagrees with me on a number of points I still admire the contribution he has made to British sax playing by his teaching and the excellent service he gives with his seven days' trial against cash mouthpiece service which offers the best stock in England at 275 Colney Hatch Lane, London, N11 3DH, Telephone (01) 368 4137.





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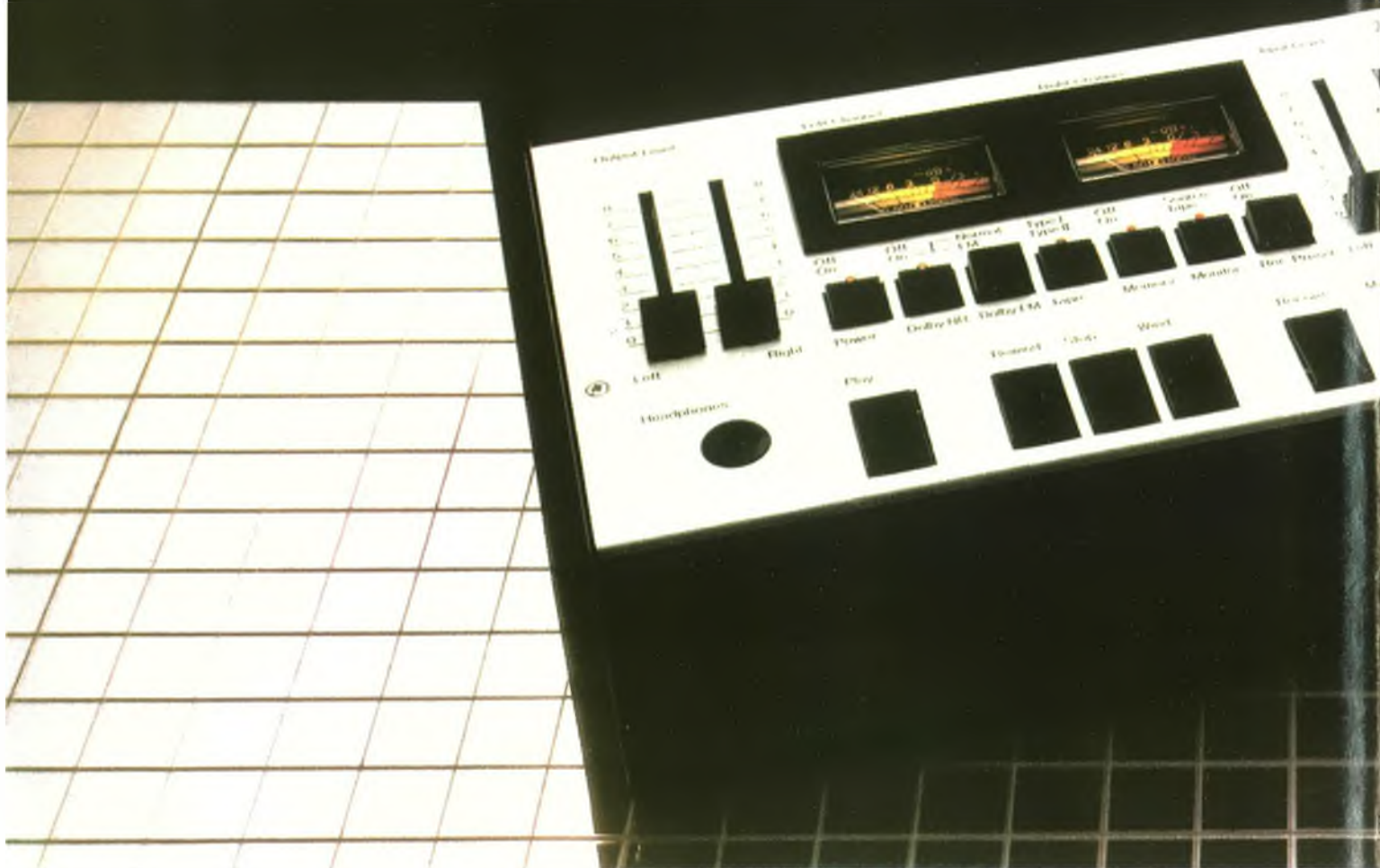
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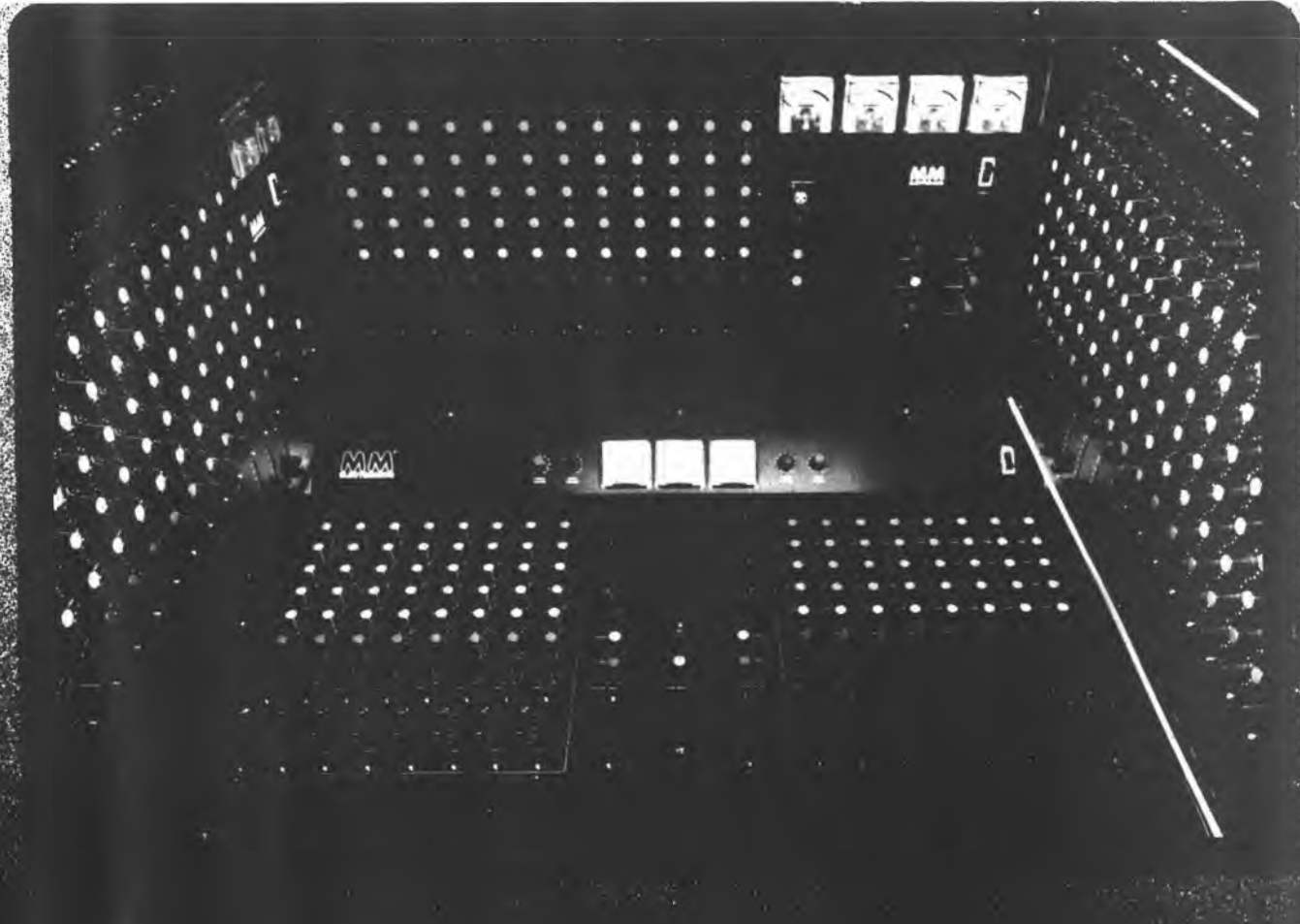
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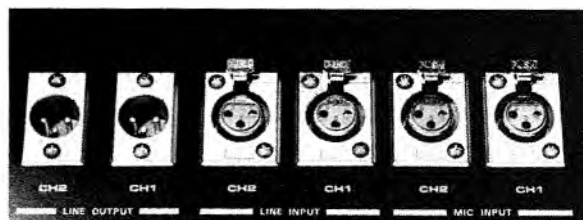
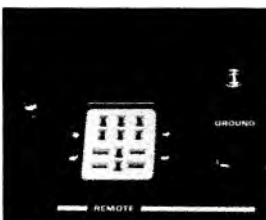
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# ••••• Guitar Workshop •••••

## In the first of a series on pickups, Stephen discusses magnetic fuzz and how to get rid of it.

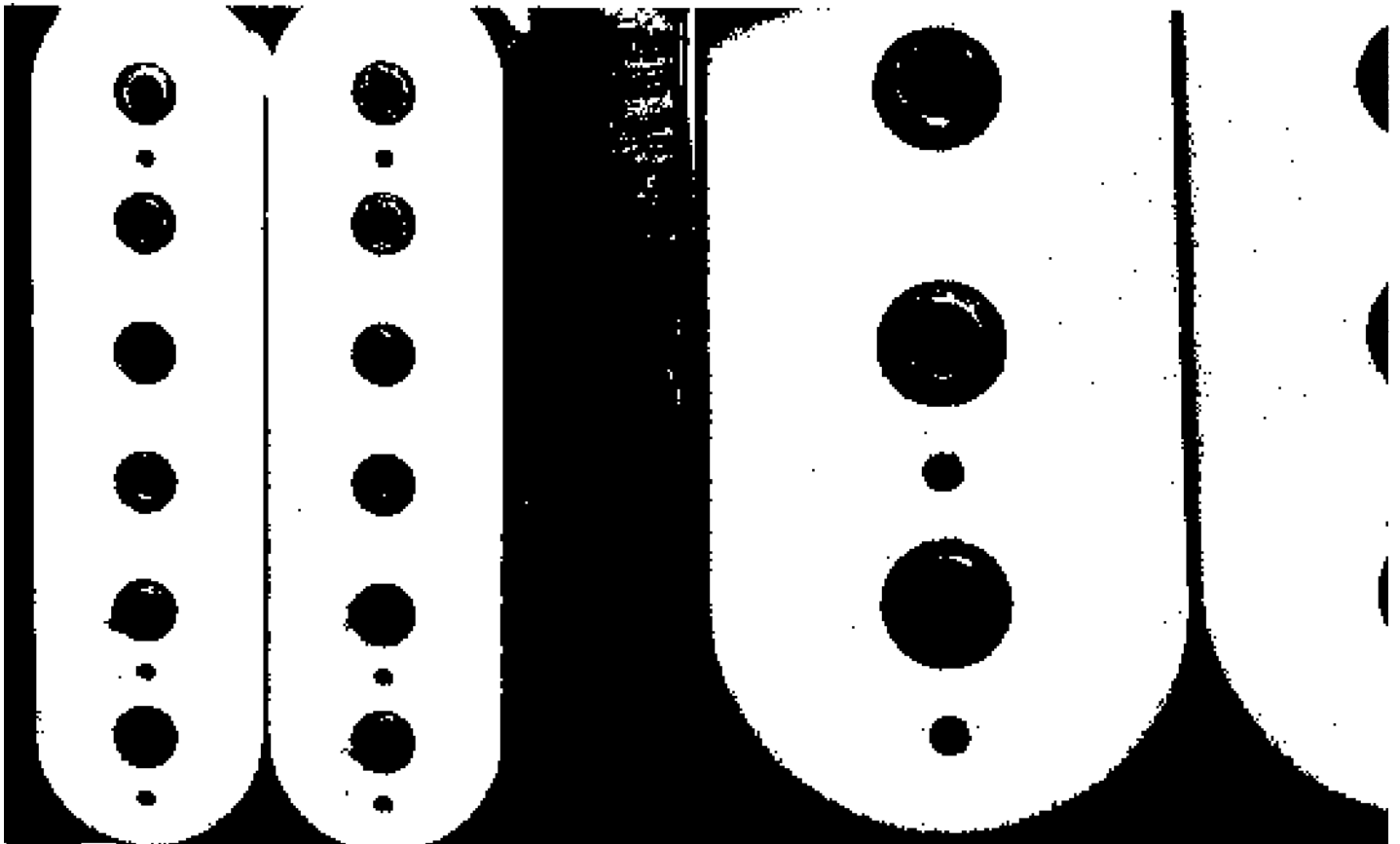
Starting next month, I shall be discussing the subject of accessory pickups. If you are planning to buy some better/different pickups for your guitar or bass, it can be rather difficult to decide whether one company's "Blue Suzzie" is the same as another company's "Laid-back Eric" and whether either of these is better than a third company's "Super x-27 mark 4". As far as I can see, almost everyone claims that their super high-output pickup is better than other super high-output pickups, and most of them can produce pictures with squiggly lines to prove it! On the same principles, there are several "vintage" pickups available from different makers, under different names, and while the ones I have tried are all good and

useful pickups, none of them sound exactly like any one of three genuine "patent applied for" Gibson pickups which I use for reference. This does not seem unreasonable, since none of my original "patent applied for" Gibson pickups sounds exactly like either of the other two.

Now if this is confusing for me, it must be several shades worse for the poor fellow who knows what sound he wants, but doesn't really want to buy 20 pickups, to be sure of getting two which are right for him. It would be foolish of me to attempt to grade pickups and announce which are the 'best': for a start, there is no arbitrary "best". There is no international standard meth-

od of measuring pickups, and any manufacturer whose pickups I placed low on the scale of desirability would be free to prove me "wrong" by using a different grading system which happens to favour the characteristics of his own products. In any case, if there were such a thing as a "best" pickup for any particular job, nothing stays secret for very long, and most other manufacturers would soon start making the same thing. It is possible that some pickup companies are making more-or-less the same product in certain cases, but you will have to wait until next month to find out!

At least part of the assessment of pickups must be subjective. As I have a profound distrust of committees, this



1. Before: metallic "hairs" cluster round the pickup

2. After: cleaned and fuzz-free

## by Stephen Delft

means I would have to express an opinion on various pickups, based on my own dreams, my own prejudices, and my own musical upbringing. Although this is useful additional information, it is not a sensible basis for a comparative review of accessory guitar pickups. We could easily spend the next 10 years arguing the relative merits of competing pickups, setting one professional expert against another, and employing more and more complex measuring techniques. While this might well be fun for me, it would be of little use to you. We would merely replace conflicting advertising claims with conflicting experts and conflicting sets of numbers. Net progress for our readers' enlightenment about pickups – approximately zero!

What I can do for you, starting next month, is to take all the accessory pickups I can buy, beg, or borrow, and try to assemble them into groups of roughly similar pickups, with roughly similar properties. For example, there will be one group of vintage-type humbuckers, one group of high-output humbuckers, one group of "strat"-type pickups, and so on. Then in the following months, I shall take one group at a time, and apply the same tests to each of them, under the same conditions. I shall also have a look at their mechanical construction and at the instructions which come with each pickup. Some companies give you more comprehensive wiring diagrams than others. Some pickups are supplied with hardware included in the price: others are not.

This will not tell you which is the best pickup in each group, but it should enable you to make up a short-list of a few units which seem most suitable for your own needs. If you have very specific requirements, you may even be able to pinpoint exactly the most suitable pickup for you. Alternatively, you may conclude that you already have the most suitable pickup(s) for your own circumstances, and save yourself some wasted time and money.

Meanwhile, there is something you can do this month, which costs practically nothing, is unlikely to do any harm, and may improve the sound of a pickup which has had a few years' use and doesn't seem to be quite as good as it used to be.

Photo 1 shows such a pickup. Instead of changing it, I took a close look at it, and saw that it was covered with a sort of magnetic fuzz, attracted and held by the field from the pickup. This is fairly common on old guitars, but it is usually mixed with dust and greasy debris, and

difficult to photograph clearly. On this occasion, the metallic hairs were still bright and clean and relatively easy to photograph.

I have found that one can often improve the sound of a pickup in this state by carefully removing all the fuzz. It is sometimes possible to see sections of this fuzz vibrating in sympathy with the guitar string. As this is likely to affect the distribution of the magnetic field within the pickup, it is not surprising that it can also affect the electrical output of the pickup, causing a muddy sound.

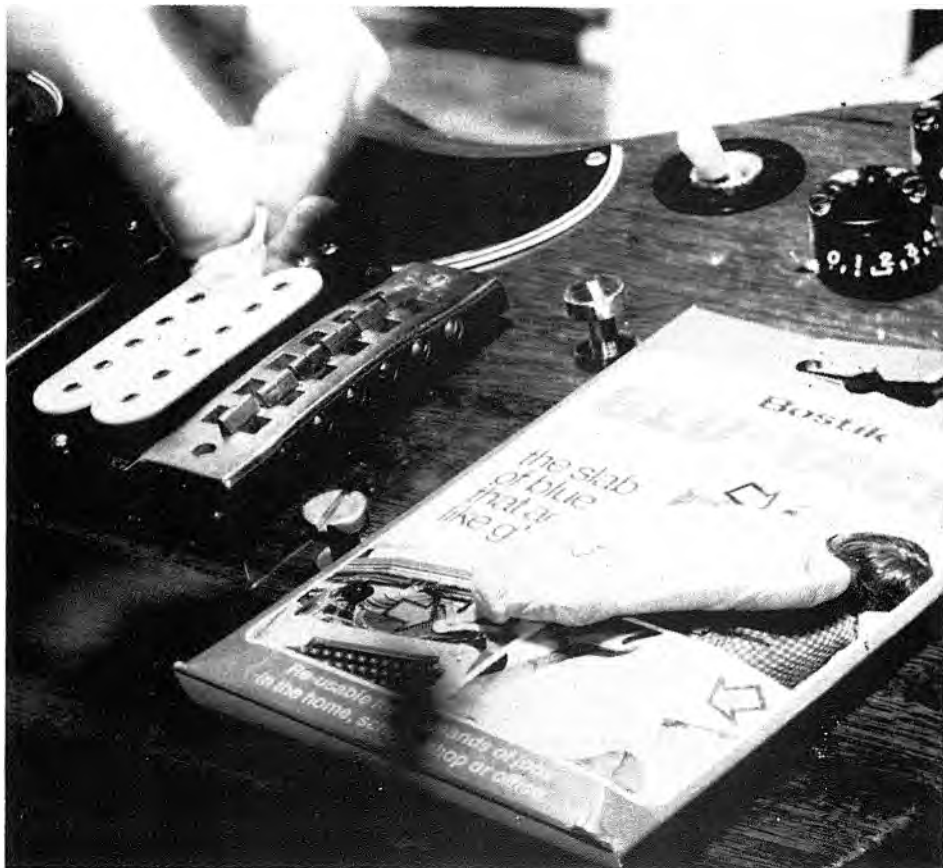
Although the contamination in photo 1 looks rather dramatic, it is usually less easy to see, and it is always difficult to remove. I used to use adhesive tape, but one day made the chance discovery that an adhesive putty sold in the U.K. as "Bostik Blu-Tack" did the job much more efficiently. In photo 3 you will see the phantom hand pressing a lump of Blu-Tack onto the pickup. If the putty is then peeled off gently, most of the contamination will come off with it, and can be kneaded into the centre of the lump, thus exposing a fresh, clean, adhesive surface. The lump of putty can be formed into different shapes, for cleaning the less accessible parts of the pickup, and it is

usually possible to leave the pickup and surround fixed in place on the guitar body. Photo 2 shows the same pickup after cleaning. The rest of the Blu-Tack may be used for a variety of purposes, some of which are listed on the back of the packet. It is good for fastening plans and charts to a fairly smooth wall.

Next month – Part One on pickup types. If you have enquiries about this, or any other letters on my articles, you may write to "Letters Page", Grosvenor House, 141-143 Drury Lane, London WC2.

If there is sufficient interest in a series on home-built pickups, I may do something about it after the present articles on *manufactured* pickups.

If there is any specific information you want, on making pickups or on other DIY Projects, let me know well in advance, marking the *envelope* clearly, "D.I.Y. Projects". Please accept that while I shall take note of your requests, I cannot possibly answer these letters individually. Letters on other subjects will be answered either in "Letters page" or by mail, at our discretion. Please do not send letters relating to my articles in I.M. to my home or business address. They will be answered more quickly if sent to "Letters page".



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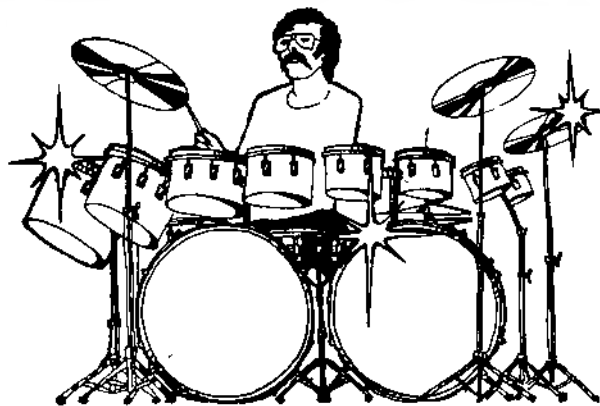
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**KORG Guitar Tuner  
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D(146.83 Hz) G(196.00 Hz)  
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**WEIGHT** 275 gm **BATTERY** 006P 9V x1

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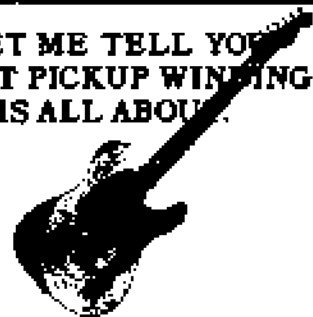


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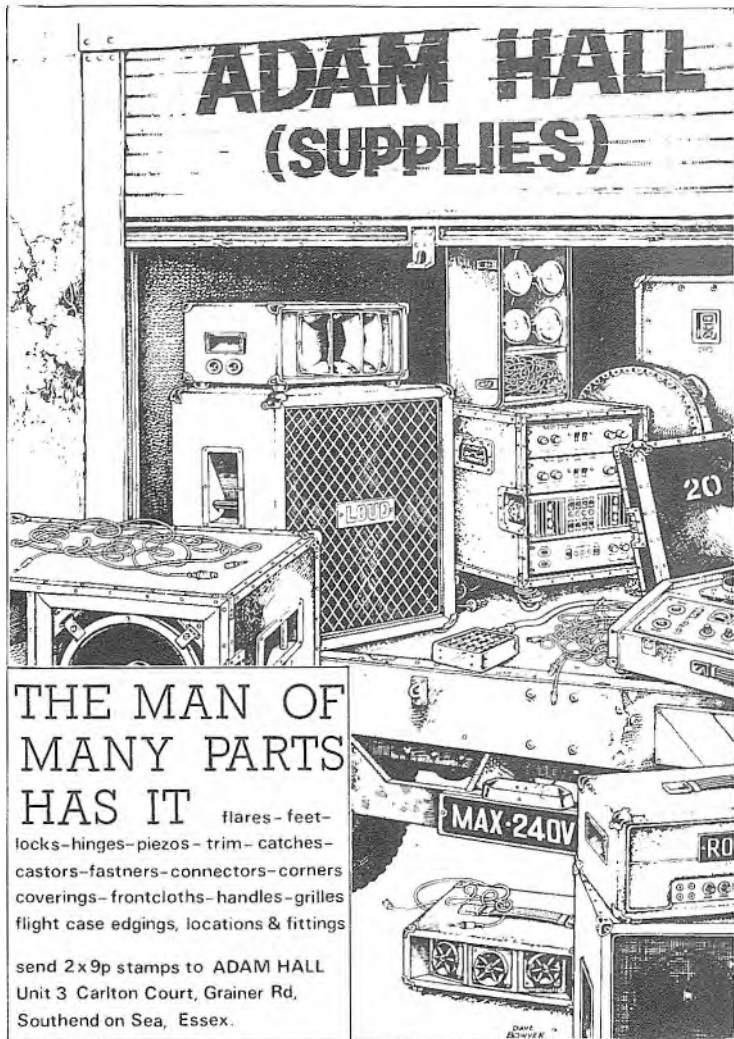
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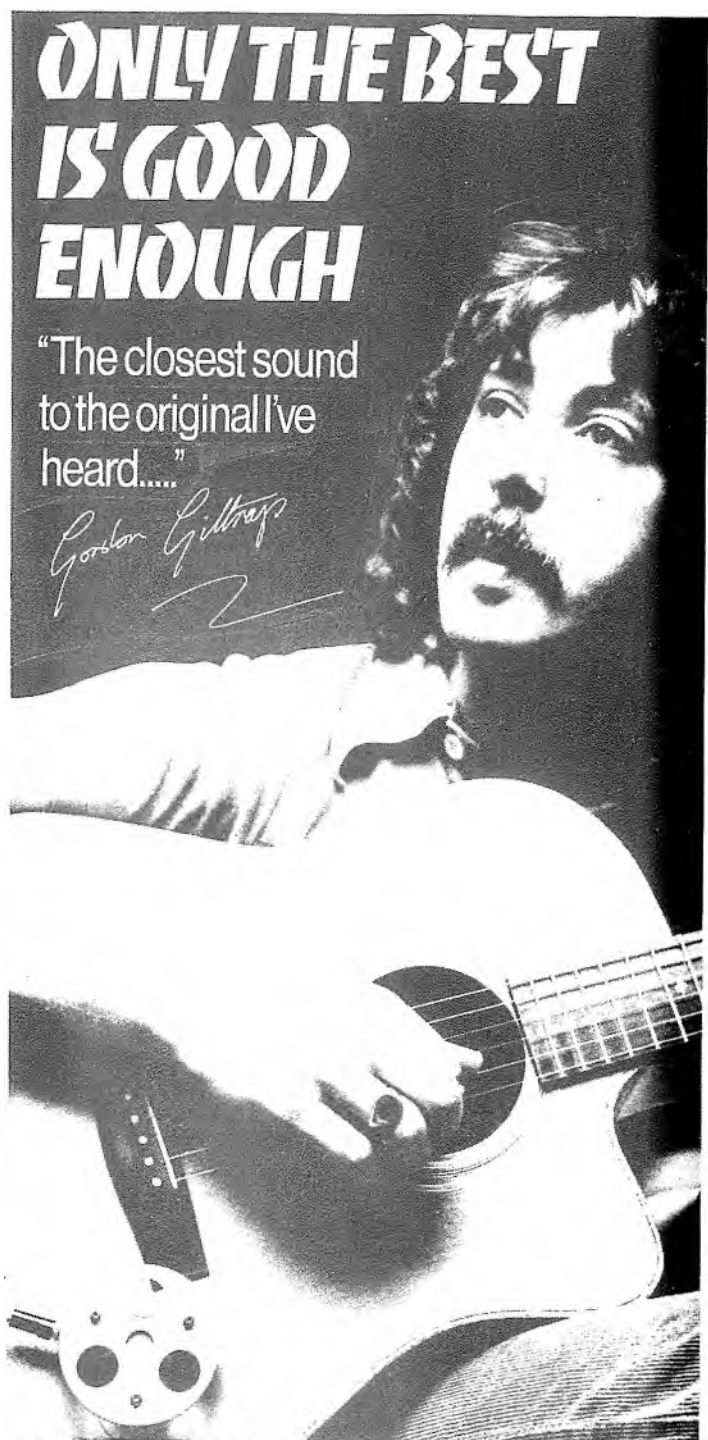
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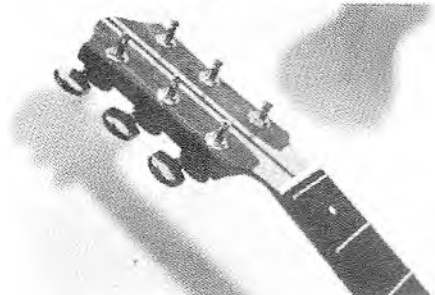
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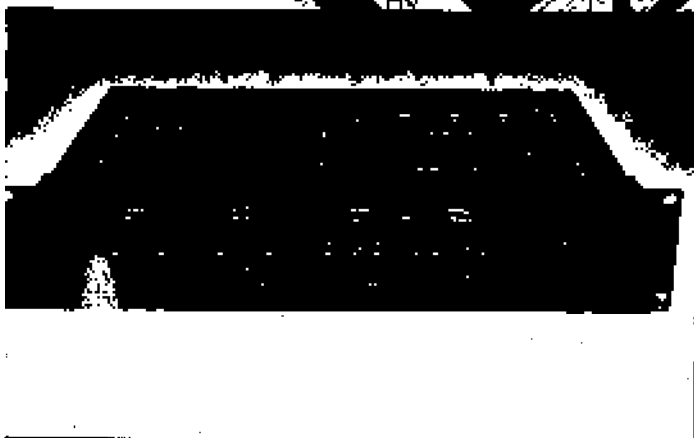
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# UNDERSTANDING SYNTHESIZERS

PART 6

## Introduction

Last month I explained that a synthesizer keyboard module in its simplest form produces two output signals — the keyboard voltage and the keyboard gate pulse. The most important use of the keyboard voltage is the control of VCO frequency, and I am going to start this month by showing how one keyboard can be used to control two or more oscillators. Then without going into details until next month, I will introduce the voltage-controlled amplifier (VCA) and the envelope generator (ADSR) and explain the role of the keyboard gate pulse.

### Additive synthesis using two VCOs

Two or more oscillators can be used to produce new sound qualities by additive synthesis — a technique I described in Part 3 when I introduced harmonics and frequency spectra. In that article I showed the outputs of four sine wave oscillators being added together in an attempt to produce a waveform resembling the sawtooth wave. It is possible to add or mix together any two waveforms to produce new sounds. All that is needed are two oscillators and an audio mixer as shown in Fig. 1. The control voltage inputs are both connected to the keyboard voltage output of the keyboard module (see Part 5), and the audio outputs of the VCOs are connected to the amplitude controls (usually called "level controls", or "faders") at the mixer inputs. (You will notice that I have labelled the oscillators "VCO modules" 1 and 2. This would usually be abbreviated to "VCO1" and "VCO2" but the idea is to remind you that a VCO module incorporates an input control-voltage mixer and frequency controls as I described in Part 5).

Let's imagine that we have just played the A above middle C on the keyboard; the keyboard voltage would be steady at say 2.6 volts. There would be no need to hold the key down because the keyboard memory (see Part 5) would keep the keyboard voltage constant, at least for a minute or two (after which it might "drift" noticeably). Despite the fact that we have pressed note A on the keyboard, by adjusting the frequency controls of the two VCO modules, any two notes could be generated by the VCOs. However to keep matters simple, let's imagine amplitude control 2 to be turned right down (see Fig. 1) so that we can only hear VCO1, and let's tune VCO1 to 440 Hz (the correct frequency for the A above middle C) with reference to a tuning fork or the "standard oscillator" which is sometimes provided in the synthesizer. (Having tuned VCO1 it might be worth tapping A on the keyboard again just in case the keyboard voltage has drifted.) Now if amplitude control 2 is turned up, VCO2 will be heard along with VCO1 and by setting the frequency controls of VCO2, the two oscillators can be tuned to any interval apart, for example an octave, or an octave and a fifth.

If you have access to a synthesizer with two VCOs, you will very soon discover that in order to produce new sound qualities by additive synthesis, the higher oscillator will usually have

to have a relatively low amplitude. You will also find that you are restricted in the choice of intervals between VCO1 and VCO2. For example, if VCO2 is tuned a third above VCO1, unless VCO2 is very soft you will probably hear two notes. If VCO2 is tuned an octave or an octave and a fifth above VCO1, you will probably hear only one note with a different tone quality. The reason for this is quite simple; if VCO2 is producing a fundamental which is a harmonic of VCO1's fundamental (see Part 3), the ear simply recognizes the combination of the two VCO outputs as one harmonic spectrum i.e. one note with a new tone quality. If VCO2's fundamental is not a harmonic of VCO1's fundamental, the ear more easily detects that two notes are sounding. (Remember that the second harmonic is an octave above the fundamental; the third harmonic is an octave and a fifth above the fundamental).

### Synchronization

Now let's return to the keyboard; the two VCOs were tuned after note A was pressed. When another note is pressed, the keyboard voltage will change and produce the same pitch change in both oscillators (see Part 4) which of course is exactly what is needed to produce the same harmonic spectrum in the new note. However, no two oscillators are perfectly matched and it is common to find that if a wide range of notes is played on the keyboard, the interval between the two oscillators will in fact vary very slightly. If this is troublesome, it is usually possible to synchronize the two oscillators, making the higher VCO oscillate at an exact multiple of the frequency of the other. "Sync", as it is called, usually introduces some distortion into the synchronized oscillator waveform; this can be useful as an additional means of sound colouration — but it can also produce some very unpleasant periodic "clicks"!

### Parallel harmonies

An exciting use of two oscillators is the production of two audibly separate notes of comparable volume, tuned say a fifth apart. Things which would be technically difficult or impossible on organ or piano keyboards (such as fast passages of parallel fifths) then become relatively simple. Try a chromatic run of fifths using two VCOs, then try doing the same thing with one hand on an organ keyboard if you don't believe me! To get the maximum impact from this technique, the amplitudes of the two VCOs should be similar, and harmonically rich waveforms such as the sawtooth or pulse wave should be used.

### Duophonic keyboards

Many synthesizer keyboards produce only one keyboard voltage; if two or more keys are pressed down simultaneously, the keyboard voltage will correspond to the lowest or highest key. Such keyboards are said to be *monophonic* — only one note can sound at a time (unless the set up shown in Fig. 1 is being used to produce parallel harmonies). Some synthesizer keyboards are *duophonic*, producing two keyboard voltages (see Fig. 2), one corresponding to the highest and one to the lowest note pressed. (When only one key is pressed the two keyboard voltages are the same.) All duophonic keyboards should really contain two memories, otherwise when the last note is released, both oscillators jump to the last note played. Although duophonic keyboards allow two independent parts to be played simultaneously, there are certain restrictions on playing technique which are best discovered by practical experience! *Polyphonic* synthesizer keyboards which allow the player to produce 4 note or 8 note (or even fatter) chords are extremely sophisticated (and consequently very expensive) and I will be discussing these later in the series.

### Voltage-controlled amplifier (VCA)

Voltage control is something we have so far considered only in relation to the frequency of

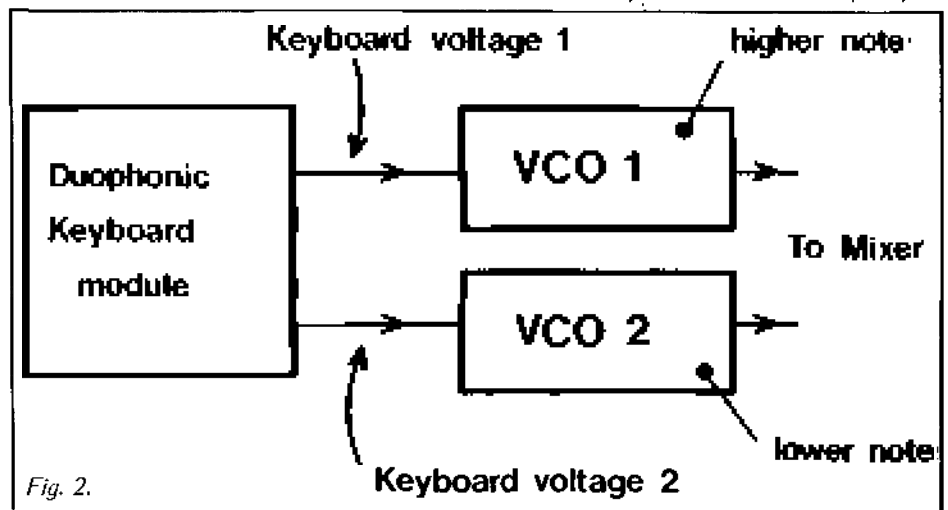


Fig. 2.

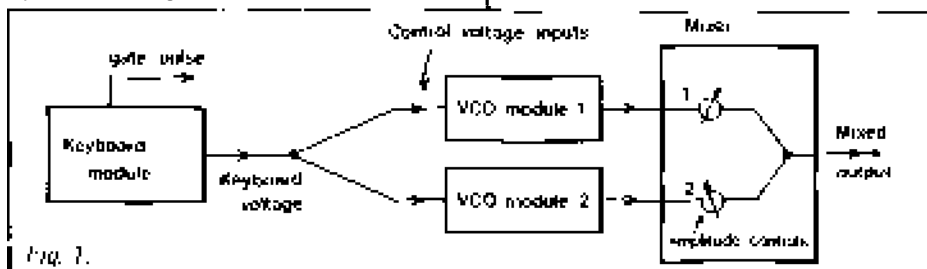


Fig. 1.

oscillators. However, the great importance of the voltage control idea derives from the fact that any function of a synthesizer module which can be manually controlled can in principle be voltage-controlled. Synthesizers contain amplifier modules which control the amplitude of audio-signal waveforms, and in these modules the amplification is voltage-controlled.

The amount by which an amplifier output is magnified relative to the input is known as

the (voltage) *gain* of the amplifier. In a conventional amplifier, the "volume control" effectively determines the gain.

Fig. 3 shows an amplifier module operating at different gains, which can be expressed as x1, x4 etc. or in decibels (see Part 1). Actually, the amplifier output can be *less* than its input, but we still call it an amplifier!; in this case the gain is negative e.g. -6dB, -12dB (see Part 3).

In a voltage-controlled amplifier (VCA), the gain is under the control of an externally applied voltage (as shown in Fig. 4). When the control voltage is zero, the amplifier gain is so low (typically less than 1/1000 or -60dB) that the amplifier is effectively switched off. As the control voltage is increased, the gain progressively increases. So if we connected an oscillator to the amplifier's audio input and (somehow) increased the control voltage from zero, we would initially hear nothing, then a sound which became progressively louder (see Fig. 4).

I will be saying more about the VCA next month, but I have described it briefly here so that the envelope generator introduced below will make more sense.

**Envelope generator (ADSR)**

The envelope generator, more often called the ADSR module for reasons which I will explain next month, is the most important source of the control voltage for the VCA. Between them, the envelope generator and the VCA effectively break up the continuous oscillations produced by the VCOs into the discreet "notes" we expect to produce when playing any instrument - with the possible exception of the Bagpipes (the Scottish, not the Northumbrian variety)!

Have a look at the set-up shown in Fig. 5. Suppose you have just switched the synthesizer on and no key is depressed on the keyboard. The keyboard voltage might be anything. Whatever it is, it is determining the oscillator frequency, and the oscillator's output waveform is reaching the audio input of the VCA. The keyboard gate pulse is not present (i.e. the input to the envelope generator is

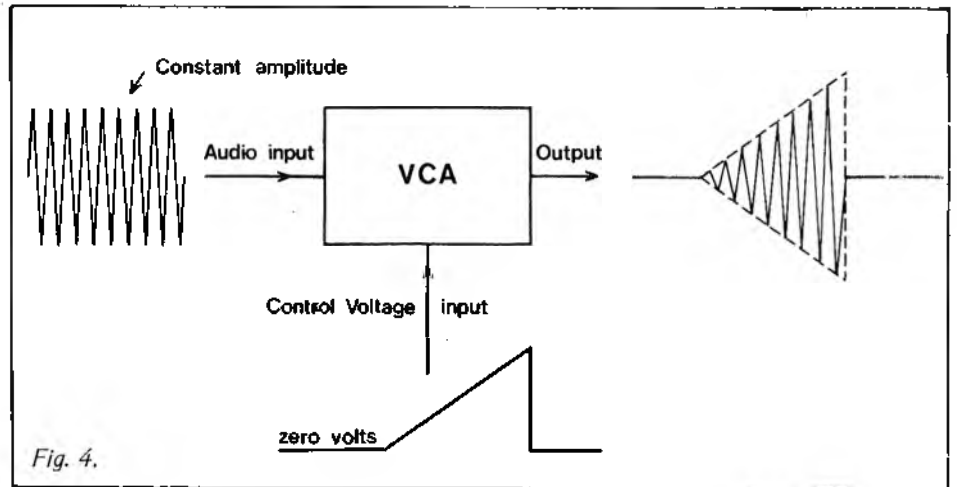


Fig. 4.

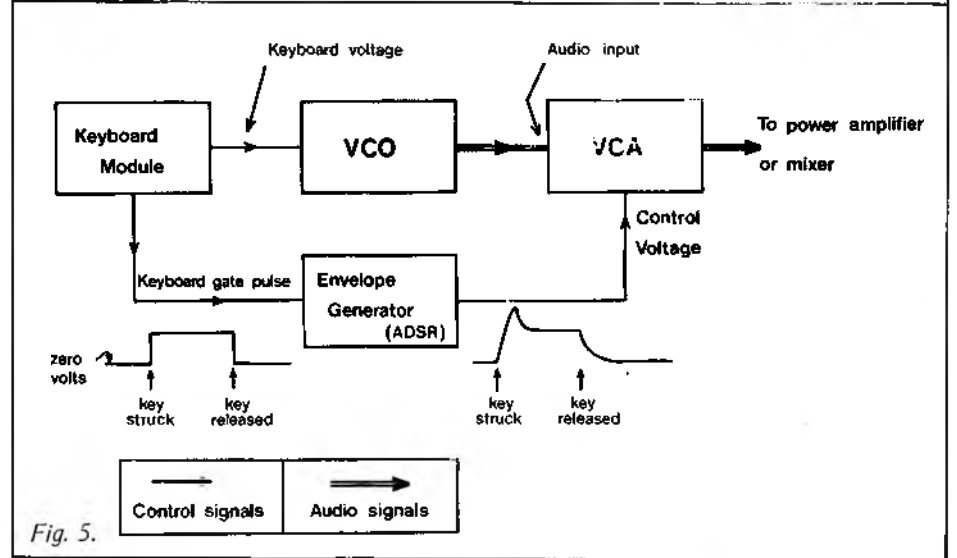


Fig. 5.

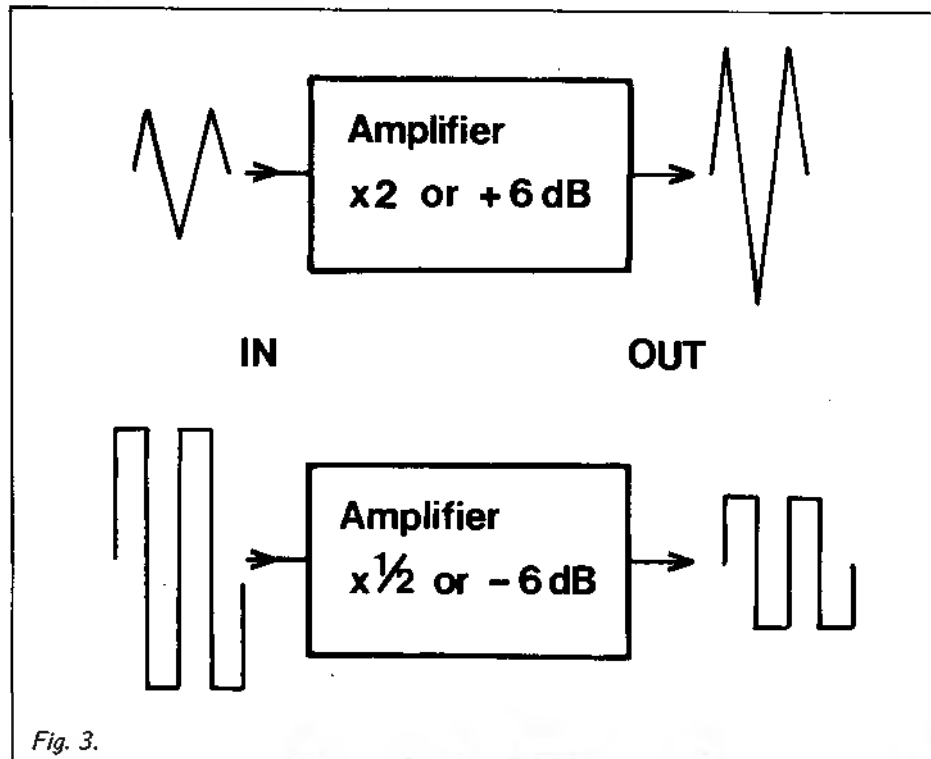


Fig. 3.

zero volts); as long as that pulse does not appear, the *output* of the envelope generator will remain at zero. This output is the control voltage for the VCA gain, so the VCA is effectively switched off. The oscillator's waveform is blocked by the VCA, no audio signal is reaching the power amplifier, and you hear nothing.

Now suppose you press down a key on the keyboard, then release it. The keyboard voltage immediately changes to its new value and stays there. The keyboard also produces a keyboard gate pulse which stays "high" as long as the key is depressed, returning to zero when the key is released. This pulse "triggers" the envelope generator which produces a waveform of the type shown in Fig. 5, *once* and once only. This waveform increases then decreases the gain of the VCA, the oscillator's signal reaching the power amplifier and speaker as long as the key is held down. So by their combined efforts the keyboard gate pulse, the envelope generator (ADSR) and the VCA produce a discrete "note" from the continuous train of oscillations generated by the VCO.

If you can find copies of Parts 1 and 2 in which I described "amplitude modulation" and introduced the idea of the "envelope" of an audio waveform, you will realise why the source of the VCA's control voltage is called the envelope generator. If not, it will become clearer next month when I describe in detail how the envelope generator (ADSR) and VCA work together to produce the changes in loudness (dynamics) within each note.

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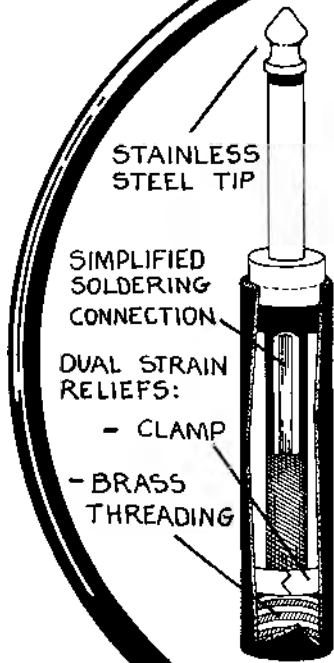
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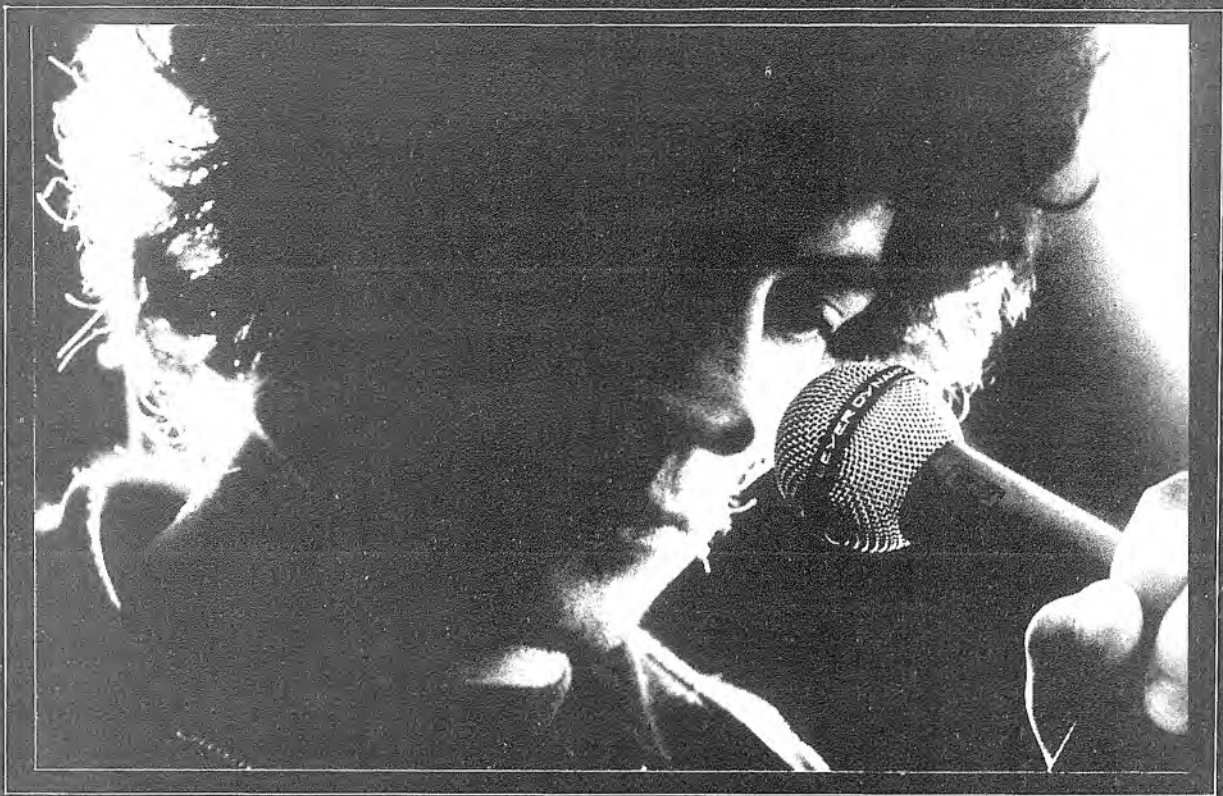
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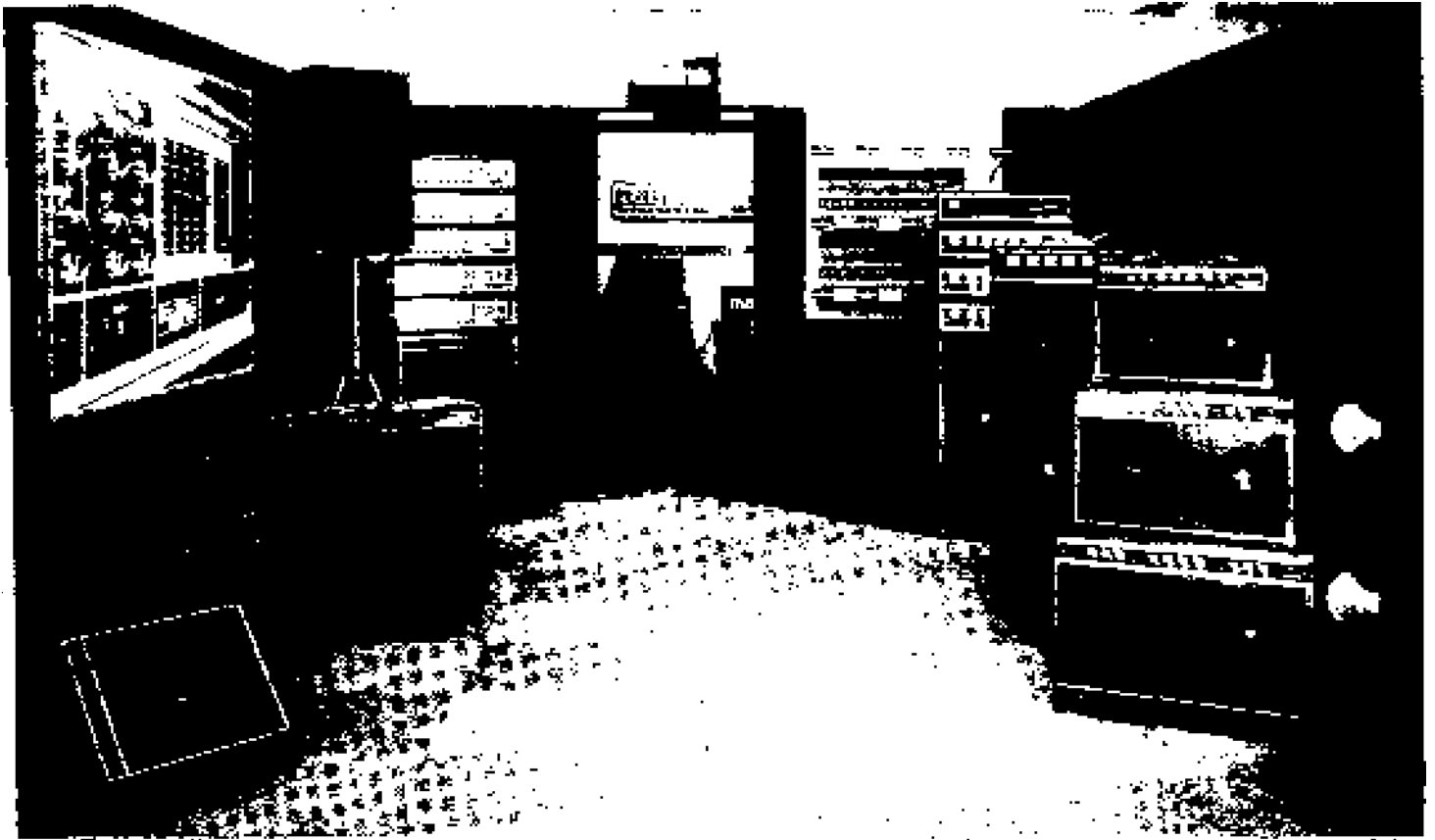
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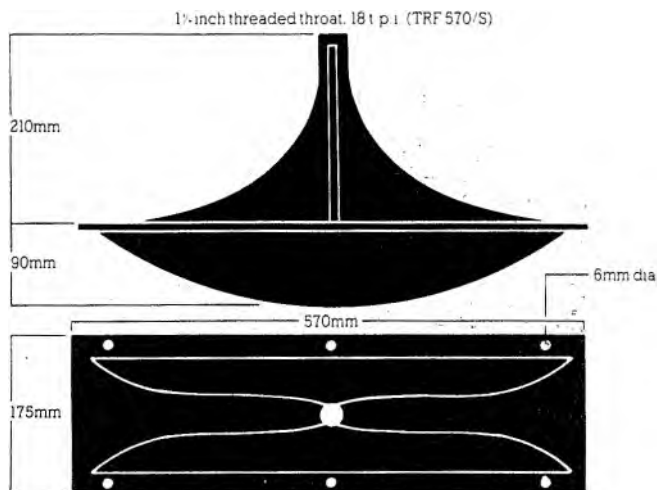
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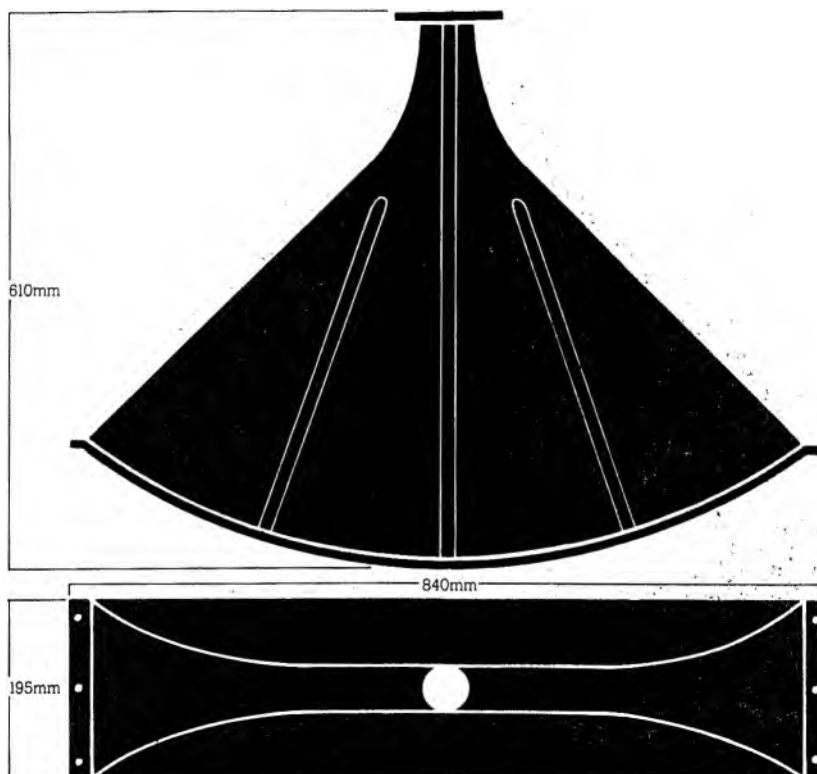
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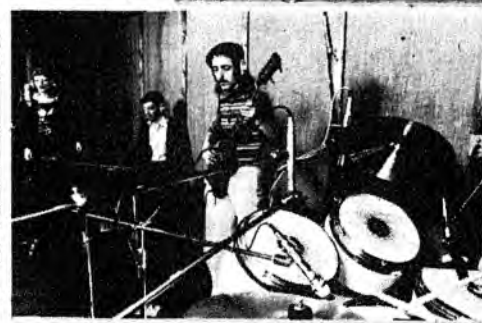
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First impressions of the Telecomms music shop and Sound Studios turn out to be correct. Situated on a corner of a busy Portsmouth street, Telecomms looks like a professional and hard-working business, and an ever-increasing number of musicians from Portsmouth and elsewhere will gladly endorse this view.

Portsmouth has turned out to be an ideal location for this eight track studio. A large number of musicians live in the area, and demand for the studio's facilities is intense.

Telecomms was started by Mike Devereux 10 years ago as a radio and components shop and, after five years, he started to branch into music with PA equipment for groups. The shop moved to its current premises about two and a half years ago. Mike started the studio soon after, which is conveniently situated on the floor above the now-flourishing music shop.

"I was initially going for the first-timers and for bands and songwriters wanting to make demos," Mike explained. "At the same time, I just wanted to get a studio working and busy. I was really anxious to get guys who were coming into the shop to buy equipment to come and use the studio. The sort of guys you sell to in a local music shop are all the local musicians who are probably gigging locally, but they're not in name bands."



The Telecomms studio started off with just a Teac four-track machine, and Mike waited to assess the amount of local interest in the venture before adding more sophisticated equipment. He anticipated at least a year of lean bookings and minimal financial returns, but he needn't have worried because business was brisk right from the start. As a result, an Allen and Heath mixer and Brenell eight-track machine were quickly installed. Acoustic Design were brought in to design both the studio and control room, and sound-proofing was introduced.

The engineer at Telecomms is Roger Kennedy, who studied electronics at Manchester University. Roger gained some recording experience while at Manchester, using the University's mixing desk and Revoxes to tape live gigs. After this, he worked in electronics for a while before joining Telecomms. Now, he is responsible for engineering and production at practically all Telecomms' recording sessions, and relishes the scope which this gives him.

"One of the advantages of working in a smallish studio is that it gives you the opportunity to get involved in production work, as opposed to working as just an engineer in a large studio. Any good engineers or producers in the business have a fairly solid technical background, which is essential. Basically, we can offer advice on production to people who are new to a studio, and in most cases they're grateful for it. It's especially satisfying when a band's been to a really top-name studio and then comes here, and says 'That's a much better drum sound than we were getting at X Studios.'"

## Tracking down Telecomms



Engineer Roger Kennedy

Telecomms handle a broad range of recording jobs. Many new-wave bands have been in as have Staa Marx, winners of Melody Maker's Rock/Folk contest. Nick Hugg, brother of former Manfred Mann drummer Mike Hugg, is a regular visitor to Telecomms and a solo artist, Joe Jackson, recorded a demo at the studio and, as a result, is now recording an album for A&M with David Kershenbaum producing.

Roger Kennedy's influence has been responsible for Telecomms handling a lot of radio commercials, since he worked for BBC Radio Manchester as well as for Manchester's commercial station, Piccadilly Radio. Telecomms have produced ads for Capital Radio and LBC, as well as for Portsmouth's Radio Victory, and have recently won the contract to handle all radio advertising for Portsmouth's largest multiple store.

Equipment at this small but hectic studio comprises a Brenell eight-track recorder, a hi-speed Revox A77 half-track machine, and an Akai 4000 DB tape deck. An Ampex AG440 is shortly to be installed for mastering. Monitoring in both studio and control room is via Tannoy speakers, driven by a Bose 1800 amplifier, and the studio is equipped with microphones by Neumann, AKG, Beyer and Shure. In addition, Telecomms offers the use of Roland RE 201 echo units, Sony cassette decks, and various effects by Scamp and MXR including ADT, flangers, phasers, compressors and graphics.

As well as all this, there is a Production Suite designed for making radio commercials, demo tapes and disco jingles; the suite is fitted with Gates Broadcast Turntables with Grays Arms, an Allen and Heath Production Mixer, an ITC NAB Cartridge recorder, an SIS NAM Cartridge Player S 130, and an AKG D202 ES Microphone.

Apart from making radio commercials, Telecomms run a one-day Presenter's Course for radio when studio time is available, when would-be presenters are shown various techniques necessary for radio work. They can make a demo tape of themselves, using Telecomms library of jingles from various stations, and Roger Kennedy is on hand to offer expert advice about radio matters.



The outstanding success of the Telecomms studio has inevitably led to Mike Devereux and Roger Kennedy making plans for future expansion.

Mike plans to introduce 16-track equipment, and hopes that within a year Telecomms will be as established as a 16-track studio as it now is with eight-track. Furthermore, he intends to maintain the studio's very reasonable rates by charging only about £5 to £10 more per day for 16-track recording.

It is the Telecomms policy of hiring out the studio on a full-day basis that has led to the enormous number of bookings. The whole-day packages give musicians use of the studio from 10am to 6pm, with a break for lunch; it is cheaper to use this arrangement at Telecomms than it would be to hire the studio for odd hours throughout the day. Add to this Telecomms' offer of free use of any musical equipment from the well-stocked shop downstairs, as well as an Arbiter Autotune drum kit already set up in the studio, and it's easy to see what makes musicians come to Telecomms.

Customers now come to the studio from Cheltenham, Dorset and all over the West Country, as well as from London — a remarkable achievement for the studio if one takes into account the number of eight-track studios already available in the London area, many of which offer cheap rates. What's the key to Telecomms' success? Mike Devereux has no hesitation in answering that one: "The success of the studio has been our engineer."

# **THEATRE PROJECTS**

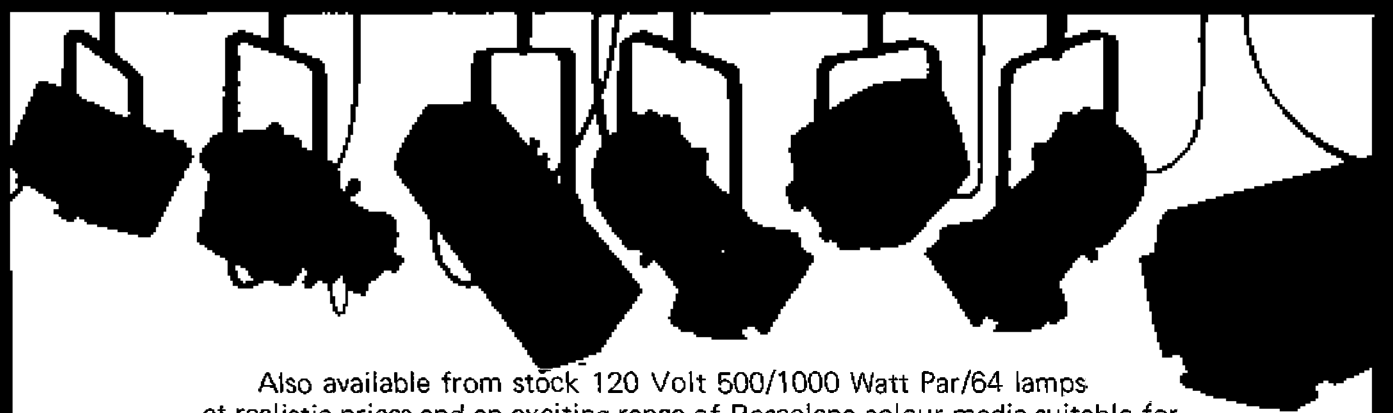
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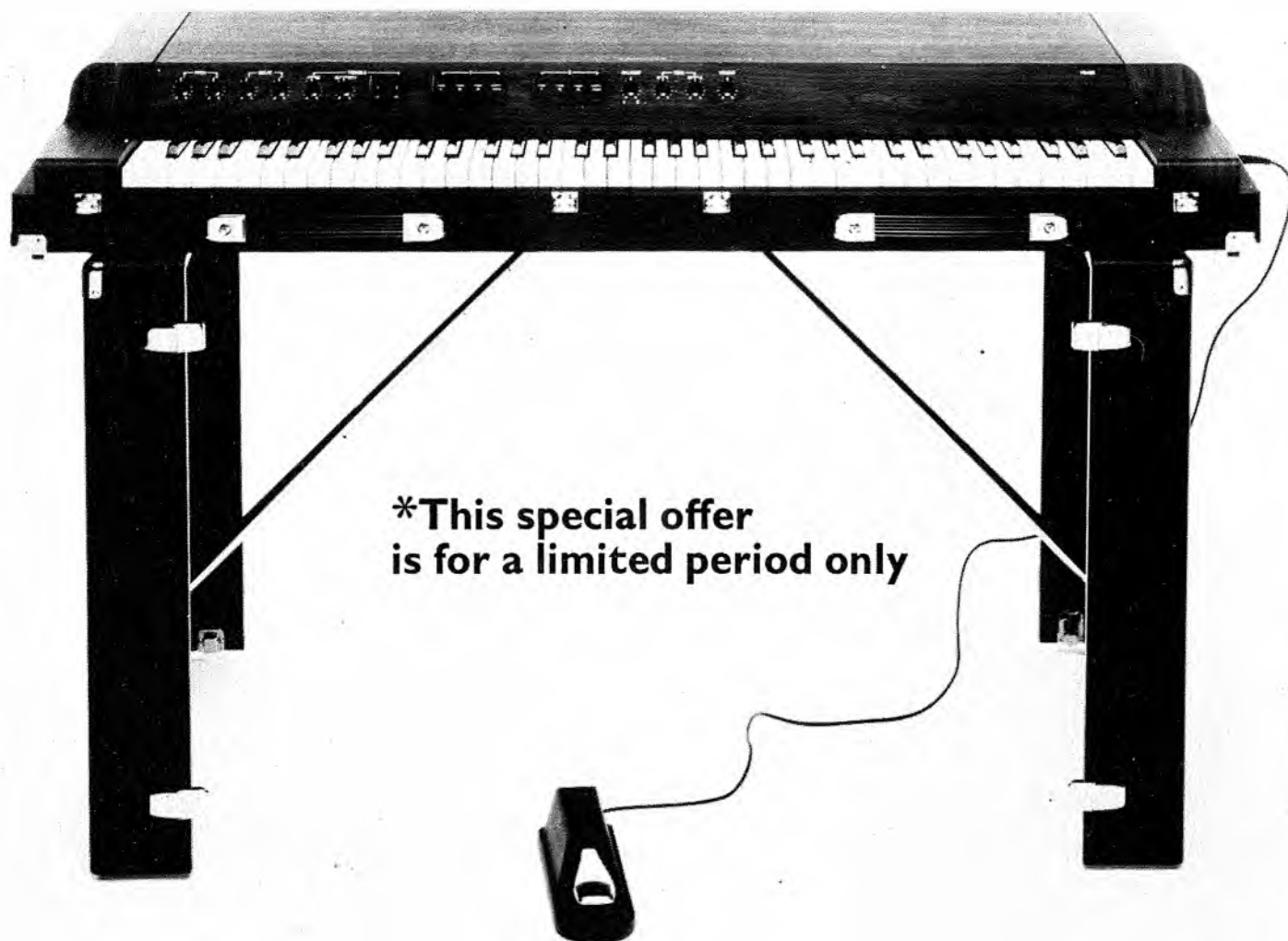


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# 5 THE PRODUCERS



Nigel Pegrum is best known as the ex-drummer with Steeleye Span but for more than nine years he has also been involved in production. Since 1976 he has been a producer with Plant Life Records, a label specialising in folk artists and groups, and currently enlarging its interests to include jazz.

Nigel's musical career goes back a long way. Back to when, at the age of seven, he was given a ukelele. The instrument that made George Formby the Clapton

## Nigel Pegrum

of the Forties was eventually ditched when the young Pegrum found he could make more noise on drums. During his early teens, he played in school groups and, at 16, joined a band playing fairly advanced Georgie Fame-style blues/jazz material. Another of Nigel's early bands later teamed up with Steve Marriott to become the Small Faces, and yet another, called Spice, were later to become Uriah Heep.

"During my time with these bands," Nigel recalls, "I was already becoming interested in the control room side of the studio. Let's face it, most bands make demos at a certain point in their life and that in itself is an introduction to producing because the band itself usually end up producing their demos. I was taking more of an interest in how they were getting the sound in the control room and onto tape. Like most drummers, I suppose, I have a fairly practical mind and I was more interested in learning what to plug in where to get certain noises, rather than trying to understand the technical reason why. I have a fairly good technical knowledge now, though. You have to talk to engineers sometimes in semi-technical terms. Rather than say, 'It sounds a bit woolly,' I'd say, 'Cut 300K' or something."

Nigel's first real production job was about nine years ago when he played with a Blood, Sweat and Tears-style outfit who had a Number Two hit in Spain and stayed in the charts for about three months.

"I produced the single and I also took a large part in the arrangement which again is another important part of being a producer. You have to be good at expressing yourself. You have to be able to explain things to musicians in their terms."

Before joining Steeleye Span, Nigel played with an adventurous band called Gnidrolog, who released two albums. The first was produced by John Schroeder and the second by the band. For various reasons the group split after completing their second album and, soon afterwards, Nigel was approached to join Span. All of Steeleye's albums were band-produced, except for the two made under Mike Batt's production.

"Mike Batt really had such an influence on me in the way he worked," says Nigel. "It was all total concentration from the start and he always kept his mind on the job. I like to work that way — I really think it's the only way for a producer. I'd rather stay and get something exactly right than go down the pub."

"Being a producer is really like being Dr. Kissinger: You have to know how to get what you want from people without

offending them, you really have to be a diplomat. You have to find the best time of day to get out of people what you want, you've got to know when they're getting tired. And that's something you learn over a period of years."

Although Nigel produces a wide variety of music, his work with Plant Life Records has mainly been with folk artists. What are the differences between producing rock and folk acts?

"The main difference is the basic experience of the artists. Most folk acts don't go through that background of rehearsing in church halls with bands before going out on the road. Most of them, because of the vast number of folk clubs, will go out and start playing immediately. Many of them won't have had much experience in recording, if any, and a folk band can find it a harrowing experience to go into a studio for the first time. The producer and engineers will be used to it so it's almost like coming into the office for them, but it's the group's first time and they're going to be nervous.

"When a mike's put in front of them, they'll be scared out of their wits. You have to say the right thing at the right time to put them at ease. You might put a folk band in a smart London studio with subdued lighting, with supercool engineers sitting around and Paul McCartney in the next studio — that's not the way to record them. There's also the fact that some people in a studio for the first time really hear their voice for the first time and that can be quite a revelation. As the producer, I have to overcome all that.

"The next difference is obviously the basic instrumentation. You're dealing with mainly acoustic instruments rather than the usual guitar, bass, drums, keyboards line-ups and that takes a whole different approach in laying down the backtracks. For instance, you can't put down a really good guitar track with a really good vocal track because, apart from the fact that they might make a slip, there will be too much leakage. You have to teach the artist to play the song without singing. All this is absolutely basic stuff but it's very important. Sometimes you get weird instruments like harmonium, autoharps and even bagpipes."

Bearing in mind Nigel's deep interest in sound, it isn't surprising to find he enjoys producing.

"It can be hard work, but it's very satisfying. When I was working with Span, we became very successful and tended, like many bands in a similar position, not to work as much. With the time on my hands, I started to look around for other things to do. The



obvious thing was to get involved in the business side of things. The Plant Life label was started to give unknown artists in the folk field a chance to record. Bands like The Rockin' Berries and The Barron Knights all record their own albums and sell them at gigs and they sell thousands like that. Many folk acts don't really get a fair deal recordingwise, and it now gives them a chance.

"In just two years we've had 14 albums released and that stems from my philosophy of recording. You're capturing a moment when you record and what the public hears on record is going to end up as one particular performance. I don't really know how much difference it makes to the public between an album that was recorded in a week and an album that's taken six months to do. Obviously, there's got to be a certain standard — we've got to feel satisfied and the artists have to feel satisfied that it's a good record.

"A lot of people think folk music is a long-haired girl sitting on a stool with an acoustic guitar and singing wet words. That's *not* folk music! That's a small percentage of the folk club floor singers that people see, but there's more to it than that. At Plant Life, we hope to catch the up-and-coming artists who perhaps have gone as far as they can in the folk clubs. I don't just produce folk, either. I recently produced a new wave band called the Pork Dukes and we've just done the first in a series of jazz albums for Plant Life."

Nigel isn't a nine-to-five producer who sits around drinking coffee waiting for the session to finish. He likes to see a thing through from beginning to end.

"I put a great deal of myself into the organisational aspect of producing, and in drawing a good performance from the artist. I see whether the songs fit into the concept of the album and have to find out if the artist's concept is the same as mine. The main thing is to concentrate 100 per cent, never letting anything slip by. If something slips, the engineer isn't going to say anything, the artist may not notice and I have to spot it. I don't smoke and I rarely drink during a session because you have to concentrate.

"Many musicians get so carried away with their alcoholic, or otherwise, state in the studio . . . and that often brings out the best. Of course, sometimes it doesn't and it's up to me to judge their best state. I wouldn't stop anyone drinking — what I'd do is catch them halfway through when they're in the best frame of mind to record the particular piece I wanted them to record. Then they can go on drinking all night."

Regarding studios, Nigel prefers to

record out of London, for several reasons: "Initially, because they're cheaper and they're usually as good as most London studios. Also, the atmosphere in the out-of-town places is usually more conducive to the artists I tend to deal with. I like using Bray Sound Studios and Millstream in Cheltenham. For demos, I use Fairview in Hull or Quest in Luton. In London, it's usually Freerange Studios but I find the hassle of coming to London is too wearing.

"Most of these places are 16-track affairs. My theory is that unless you're Mike Oldfield or someone like that doing it all on his own, 16 tracks are plenty. With a bit of thought and forward planning, you can do it on 16, especially nowadays with time modulators and things, you can double and triple-track all at once and that means you're saving tracks."

Despite most people's misconception, a folk group is not usually recorded in one-take "live" sessions: "We always record in bits because of the quality. With acoustic instruments, it's much more difficult to get the right separation and you're working on much higher tolerances. With an electric guitar playing fuzz chords, it's not as important how you record it, compared to an acoustic guitar. The range of an acoustic guitar in fact is as much as the human ear can hear so we give it the best possible chance. Things like autoharp are so quiet that it's easy for things to overcrowd the mike with leakage so we do a fair amount of overdubbing. Quite often we'll just do a guide vocal with guitar and then build up over that. Then, at the end, we'll lose the guide vocal and record it again, which is the way a lot of rock tracks are done anyway.

"My job is to work it all out and give them the best plan of doing it so they still get the right feel, with the best combination of instruments to give the best separation. They need to get the right combination of instruments so they can still feel they're making enough of a complete sound. What I'm trying to do with folk music is to give folk musicians the same chance in the studio that rock bands have. Not just sticking a folk band in front of a mike in somebody's sitting room with a Revox, which is how a lot of folk recordings have been done in the past. I don't want that. American folk musicians, for instance, get an amazing acoustic guitar sound and people always say, 'Wow, how do they get that sound?' The reason is that they spend the time in the studio getting it right. That's where folk has had a bad deal up to now in England, because the sales of folk albums aren't enough to warrant that

## 5 THE PRODUCERS

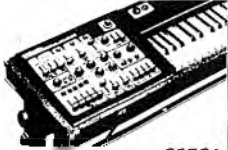


amount of money being spent on recording. The people who have dealt with folk music haven't appreciated its potential. The thing is, with folk and jazz, it is relatively easy to record. It can be done in a relatively short period of time. The other thing is that folk and jazz can be appreciated by the mums and dads as well as the kids. I like to think that, in a way, we're gradually breaking down the barriers."

**Eamonn Percival**

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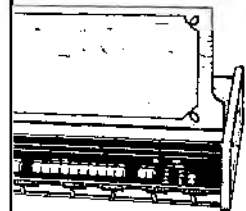
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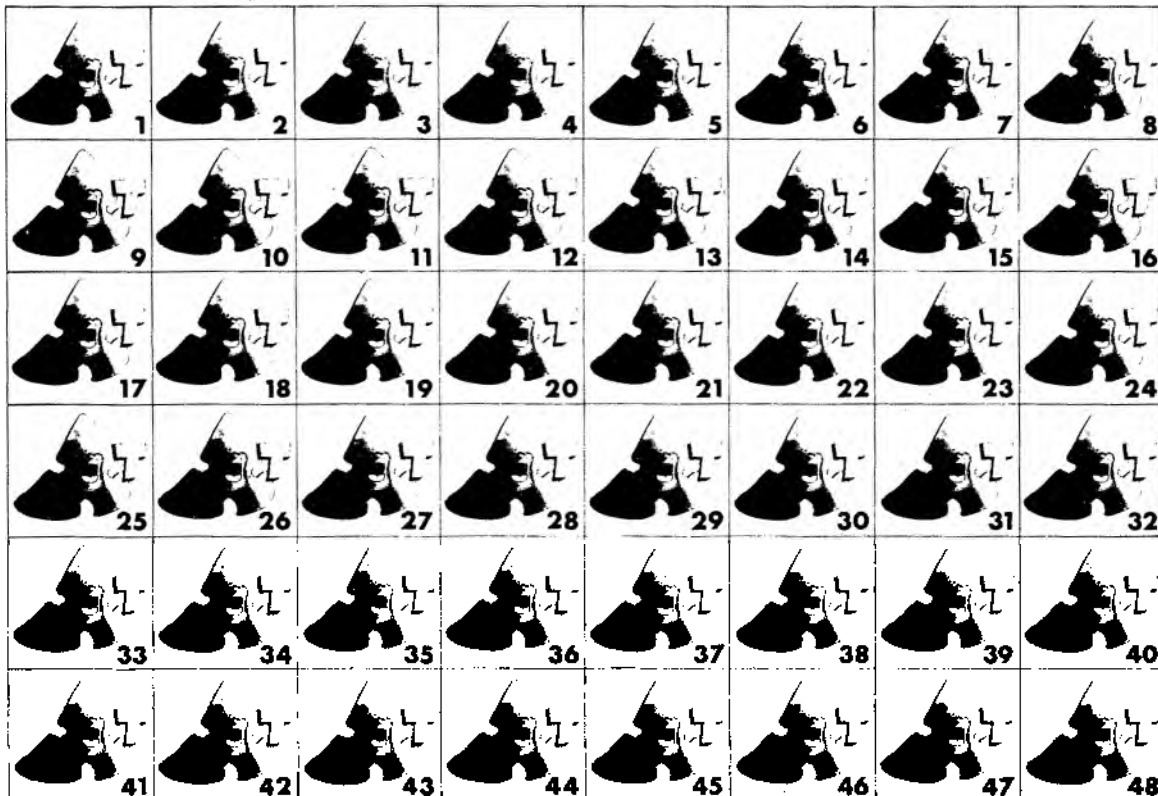
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# MEET YOUR ENGINEER

## Mike Andreasen, Roc Studios, Copenhagen

Mike Andreasen is Studio Manager of Copenhagen's Roc Studios. A guitarist as well as an engineer, he played with a band called Cyanide and made records under his own name. He was also involved in importing amplification and other musical equipment for a Danish music chain.

Roc is the only studio in Denmark with a complete DBX noise reduction system, and it also has a lot of specially built equipment. This includes, in particular, a 32-channel desk. A Lyric 24-track machine has been fitted, along with Tannoy and JBL monitoring. Neumann, AKG, Shure and Beyer supplied the microphones.

Roc has been extremely busy in its two and a half year history, and customers have come from Italy, Norway and Sweden. An English band, Fix, have recorded there, and an Elvis impersonator called Rupert recently completed an album at the studios.



## Jean-Claude de la Place, Laurent Thibault, Pierre Calamel, Le Chateau Herouville, near Paris.

Opening 10 years ago, Le Chateau was taken over by the present team in 1973. Among the numerous famous albums recorded there have been David Bowie's "Pin-Ups" and "Low", Elton John's "Honky Chateau" and "Goodbye Yellow Brick Road" and Iggy Pop's "The Idiot". The Bee Gees, after recording no less a work than "Saturday Night Fever" at the studios, also decided to leave the mixing of their live album to the teams at Le Chateau.

The acoustic design is by Westlake Audio. The console is the MCI JH 628/28, and Le Chateau also has a Studer 24-track, and MCI four- and two-track machines. Dolby noise reduction is used throughout.

Plans are afoot to build a second studio at Le Chateau. Currently, the French band Magma are recording their new album at the studio, entitled "Attahk".

## Neil Ross, Radio Edinburgh

Neil Ross is a musician who plays both violin and guitar, and has also studied elec-

tronics. Initially a two-track studio when he opened it five years ago, Radio Edinburgh is now 16-track. Neil intends to move up to 24-track shortly.

Neil handled much of the studio's engineering work in its early days, but is now assisted by Doug Bogie and Roy Ashby. Doug is in fact the chief engineer now, and he has worked at both RG Jones and De Lane Lea studios.

Equipment at Radio Edinburgh currently includes Ampex MM 1100 machines. Monitoring, powered by Amcron amplification, may be via either Lockwood speakers or Tannoy HPDs in custom-built enclosures. The Tweed Audio desk is an 18-into-eight model with 16-track monitoring capability, and the studio's large range of microphones includes Neumann U87s, Beyer M69s, AKG and Shure models. Compressing, limiting and expanding equipment by Audio Design has been fitted, as well as Eventide flanging and a wide variety of MXR pedals.

## Rogel Skog, Vox Studios, Stockholm, Sweden

Rogel Skog recently joined Vox from Stockholm's AW Electronicmak studios. Vox, which opened in 1970, closed in 1976 for redesigning and reopened this spring. Rogel and the other members of Vox are now waiting to see how the newly designed studio will fare with musicians.

A 24-channel Ampex recorder is at the heart of the studio, and the mixing desk is a Neve. Microphones include Neumann, Calrec, AKG, Beyer and ElectroVoice, so Vox is equipped to handle any recording problems. Monitoring at Vox is by JBL.

Swedish punk bands have been much in evidence at the studio. A large amount of music for theatre use has been recorded there, and an English band, Scafell Pike, have found it worthwhile to make the trip to Stockholm to work there.

## David Vorhaus, Kaleidophon, London

Kaleidophon is no ordinary recording studio. Its founder, David Vorhaus, is an electronics expert with several degrees who has designed and built much of Kaleidophon's equipment himself.

The equipment at the studio includes a highly sophisticated machine whereby six synthesizers can be played simultaneously. David also designed the studio's 16-track recorder, which is unusual in its use of one-inch tape. The effects and noise-gate machinery at Kaleidophon were also designed by David, although he makes use of Dolby noise reduction for recording vocals.

David Vorhaus spends a lot of time at the studio working on his own projects. He was the guiding light behind the "White Noise" albums, which he describes as an ongoing project. He has made soundtracks for both film and theatre use, including the current production of "The Passion of Dracula". David has also worked with the National Theatre's Marc Wilkinson.

Apart from David's own projects, the studio has been used by a number of well known artists. These include guitarist John Williams, Eno and Kevin Ayers.

## Ray Buckley, Pluto, Manchester

Pluto studios started nine years ago in Stockport, and moved to new premises in central Manchester in April of this year. Ray Buckley, who joined Pluto five years ago, designed the studio's new premises in conjunction with his fellow engineer Joan O'Connor.

Ray came into contact with Pluto as a session keyboard player, and joined the studio after recording there. Joan O'Connor came to the studio after being the mixing engineer for a Manchester band. Pluto has two separate studios, one of which is used for radio commercials and audio-visual work, the other being a music studio.

The music studio uses microphones by Neumann, Beyer, AKG, Sennheiser and Calrec and has acoustic traps for a high degree of natural separation. A JBL bi-amp system is used for monitoring, with Crown and HH amplification. Monitor equalisation is by Dolby.

The current MCI and Sound Techniques equipment is soon to be replaced by a 3M24-track recorder and a brand new MCI 600 series automated desk. Artists who have used the studio include the Rich Kids and the Hermits, while the studio has just earned its first gold disc for the recent hit, "Matchstalk Men".

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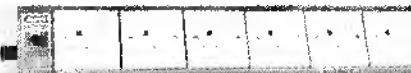
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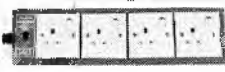
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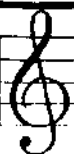


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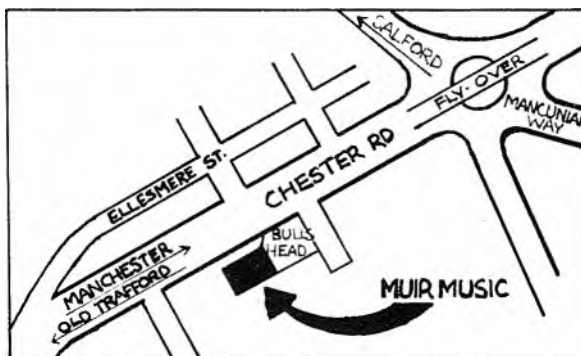
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# “When I’m with Kustom, I have no problems.”

Mixing it up  
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“Midnight Special”.

**When did you start with Midnight Special?**

I was in on it from the beginning. I’m the only original engineer left on the show.

**In fact you and producer Burt Sugarman are the only originals still with the show. What keeps it going on?**

Burt’s a down-to-earth cat who’s got a whale of a TV show. I guess you could call it a success because there’s a lot more people who care, from our end of it, than they do on other shows. People seem to pump out more. We do a lot together and we kinda keep each other loose.

**The music ties all of you together?**

Music is a helluva outlet. I really get pumped up on the show. It’s cookin’ on the natch, it really is.

**Cookin’ on the natch??**

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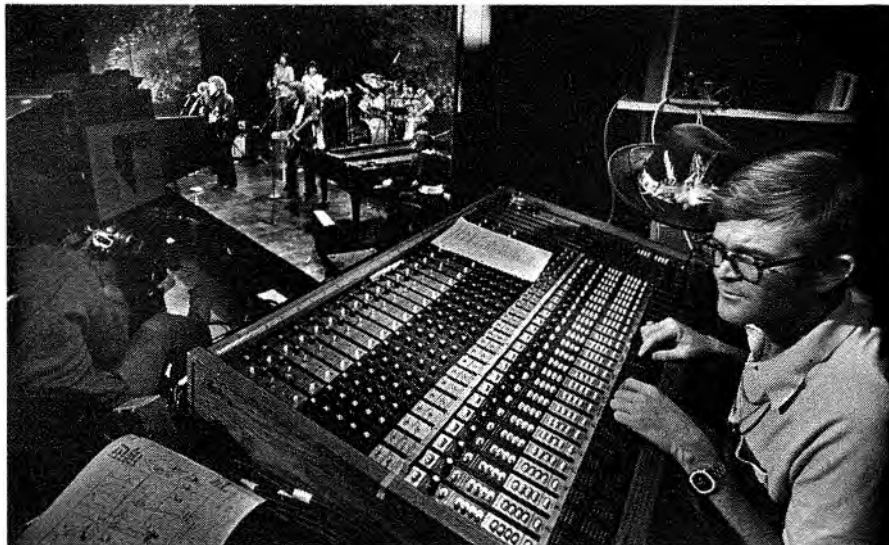
**You’ve been using Kustom PA and mixing equipment on Midnight Special for three or four years now.**

**Any problems?**

Technical problems? No. As a matter of fact, I’m a firm believer that Kustom does kick. It’s good. And when it’s good, you don’t have to worry about it.



Red mixes sound for the Midnight Special with a Kustom SRM XX 24 in, 8 out. Stage set-up includes 8 each MF 1212 cabinets and MF 1012 horns, 4 XII Bi-Amp Slaves, and 8 sets of III Monitor Systems.



**How about your Kustom mixer?**

This is one helluva board. As a matter of fact, it’s a better board than the main mixer on the show. That mixer was made for television and this board is made for music. It gives me what I need.

**Did you ever use Kustom equipment before you came to the Midnight Special?**

Oh yeah . . . in Texas . . . Oklahoma . . . back when I was a roadie . . . a go-fer in several of the PA houses in some of the towns I worked in.

**Back in Kustom’s roll and pleat days?**

Yeah, Tijuana tuck ‘n roll!

**Are there any features you especially like about Kustom?**

Sure, all of them . . . and that’s the truth.

**Is the music on Midnight Special your own kind of music?**

I just like music. I love all kinds. Music speaks the language of the heart. All music does, but to me I understand country music more than I would understand Prokofiev or Tchaikovsky. I don’t feel out of place listening to the Juilliard String Quartet or the Oklahoma Symphony or any of that jazz. It’s just that I’d rather kick back with a cup of coffee and listen to a country western group any day.

**You have to deal with a lot of different personalities on the show — the groups, the hosts, and so forth. How do you manage it?**

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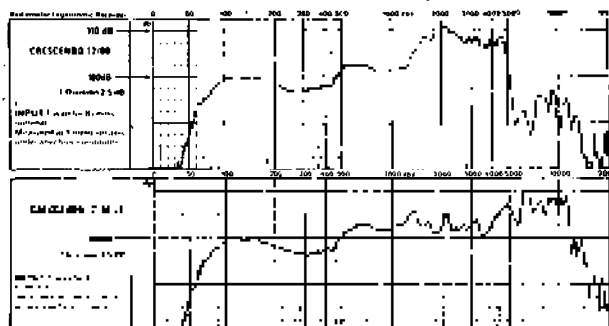
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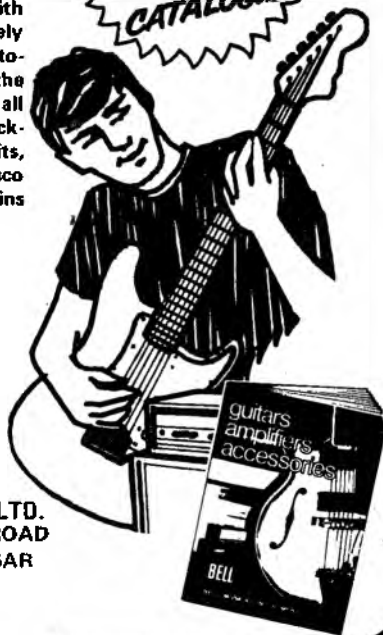
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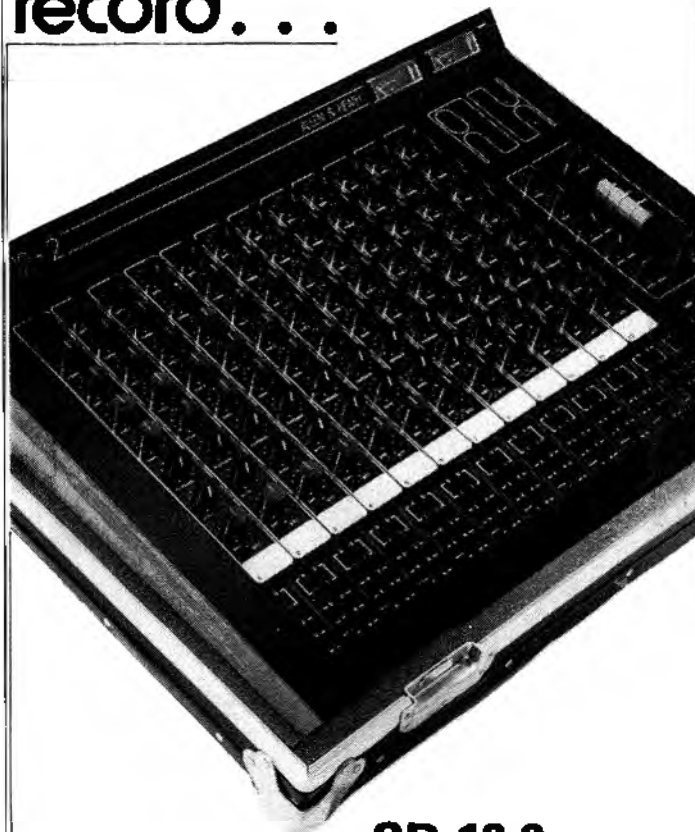
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# SPEAKERCHECK

BY KEN DIBBLE

Since we published our first reviews of 12" loudspeaker units in the February and March 1978 issues, the manufacturers at the upper end of the market have been faced with a major dilemma which, unless some compromise solution can be found, is going to send the prices of the more expensive loudspeakers right out of range of all but the well breached professional musician. One major manufacturer has already withdrawn his professional 12" and 15" units from the market in the belief that the market will not be prepared to pay the dramatic price increases necessary to maintain production as a viable proposition, and it can only be a matter of time before similar decisions are made by other manufacturers.

This dilemma stems from the fighting and political problems in a number of African states, Zaire in particular, whose mineral mines are responsible for a large proportion of the world's supply of Cobalt. The cessation of mining activities due to the mass exodus of white engineers and mine managers has meant an acute shortage of this already valuable mineral, with the result that prices have escalated. By way of an example, the free market price of Cobalt some six months ago was £7,250/Tonne, whereas today, if free market supplies can be obtained, a price of around £21,000 is the going rate. In many cases however, the shortage of free market supplies necessitates buying from alternative sources at producer prices of up to £50,000/Tonne.

Practically all the magnets fitted to the high power musical instrument type of loudspeaker are fitted with magnets of the Alcomax or Alnico variety. These basically consist of an Alnico or Alcomax slug enclosed by an iron 'pot', the magnetic circuit being completed by means of a faceplate. Cobalt represents approximately 24% by weight and 90% by cost of the raw material in producing such a magnet and after the manufacturing process is taken into account, it accounts for about 60% of the total cost of the finished product. It can therefore be appreciated that such a vast increase in the raw material costs is bound to send the cost of such a magnet soaring, and this is exactly what has happened.

As an example of the seriousness of the problem manufacturers are facing, the magnet fitted to the new ATC 15" loudspeaker — the PA/100, was costing the manufacturer about £9 back in the spring of this year. Now, they are having to pay almost £30 for the same magnet. Similarly, the magnets fitted to the Goodmans Audiomax 12AX and Audiomax 15AX, both of which we reviewed earlier in the year, have increased from around £7 to £27 nett. manufacturers buying price. As a result of this, Goodmans have withdrawn both models from the market pending either a return to normal magnet prices or research into new magnet materials to use as an alternative to Cobalt. Of course, research into alternative materials is a time consuming business and until such time as alternatives are found, the escalating price of Cobalt can be expected to be reflected in substantial price increases applied to all loudspeakers fitted with the Alnico or Alcomax type magnets.

Although as a standard practice we do not dwell on magnet details in the Speakercheck tests — we consider that such factors are of concern only to loudspeaker designers and of little interest to the user, we shall for the time being vary this and mention the magnetic materials

used for each model tested in order that the likelihood of price increases and/or continued availability can be assessed. Also, we have included in the review, one of the few up-market units at present fitted with a ceramic magnet assembly, and which should therefore be immune to the effects of the crisis. An identifying feature of such a loudspeaker is usually that of a very large diameter, flat magnet consisting of a ferrite ring sandwiched between two flat plates, as opposed to the deeper cast iron 'pot' usually found on this type of loudspeaker.

To get back to this month's tests, there would seem to have been quite a lot of activity on the speaker front since we first asked manufacturers for samples about twelve months ago. Several makers have introduced new models, one or two new names have come onto the market, and several more manufacturers seemed anxious that we should review more models from their catalogue than those we were able to include for our February and March issues. We have a fairly varied collection of 12" units in this issue, and these cover both the 'standard' and 'special' categories, with prices between about £25 and almost £100.

All tests were carried out in our standard 50ltr. infinite baffle enclosure at the GEC-Hirst Research Centre, and the actual test procedures remain as set out in the February issue. One small change is that we are now publishing the sine wave plot, measured at an input power of one watt and at a distance of one meter instead of the pink noise plot published previously. This has the advantage that the reader can assess for himself, not only the unit's frequency response, but also its sensitivity from the published curve. Although it can be said that this is a single frequency measurement — as opposed to the noise plot where the unit under test is being driven at a wide band of frequencies simultaneously, comparisons have shown that there is little significant difference between the two plots. In fact, several peaks and dips in response that can be readily seen on the sine wave plot are often obscured by the sampling methods employed in taking a noise plot.

There are one or two peculiarities in the way in which certain of our measurements are taken and it is probably as well to briefly mention these. Because loudspeakers are always used in an enclosure, and most are used in a comparatively small infinite baffle enclosure, all our measurements are taken with the unit mounted in a suitable enclosure of this type.

Whilst it is realised that this approach does not suit all types of drive unit, it does provide a standard form of loading and establishes known conditions. Where a given unit is obviously not happy with its enclosure, we say so and usually try to explain why. The use of this enclosure has a marked effect on such parameters as the resonant frequency, which in our results tables, is always considerably different from the makers free air figure, but is a figure that we feel has more relation to the actual resonant frequency likely to be encountered with the unit in service. Because of the acoustic loading thus presented to the cone, the electrical impedance is to some extent affected as well. The low-end frequency response is almost entirely dependant upon the cabinet loading conditions and will be totally different from our published curves in this respect if the unit were to be mounted in a tuned or reflexed, or horn loaded type of enclosure, but it would be impossible to design a separate, ideal enclosure to suit each individual

unit submitted for test and so a reasonable standard must be adopted. Also, it is likely that the sensitivity will be different from measurements made in free air. The use of a smallish enclosure does have the effect of producing a large second-harmonic distortion peak at around the system resonance, but this is not taken into account in assessing the distortion figure published for each unit.

The major departure from standard practice is in our method of confirming the makers power ratings. This is not based on the ability of the unit to handle a stated amount of power without blowing, but on the amount of distortion generated in the process of converting the electrical input signal into sound output. Unless a loudspeaker has inherently high distortion characteristics at any power level, any sudden increase in distortion, disproportionate to increased power input will indicate that the cone movement is non-linear with respect to the motive force and has therefore been driven beyond its useful limits. The restricting factors are more often than not, mechanical and it is not unusual to find a unit running well within its electrical power handling capability, yet not reaching our requirements for confirmation of the makers ratings. A distortion figure of up to 5% gets a pass, at 6%, it just scrapes through, above 6%, it fails. It is as simple as that, and from the passes and failures so far recorded, it would seem that these figures are probably about right.

What of this month's results? We have two brand new Crescendo units from Fane, a new 12" musical instrument loudspeaker from Richard Allan, a rather nice Spanish unit that is new to the U.K., an oft requested test on the long-coil version of the ATC 12" unit tested last March, a somewhat unusual looking 12" unit from Isophon in Germany and a test on an RCF unit fitted with a very large ferrite type magnet as an alternative to the Cobalt based materials normally used at this end of the market. With prices ranging from £25 to £100, there can be no league tables, but there is certainly much to comment on. To start with, there is not a bad unit among the whole collection — all the units submitted have their own individual weaknesses and strengths.

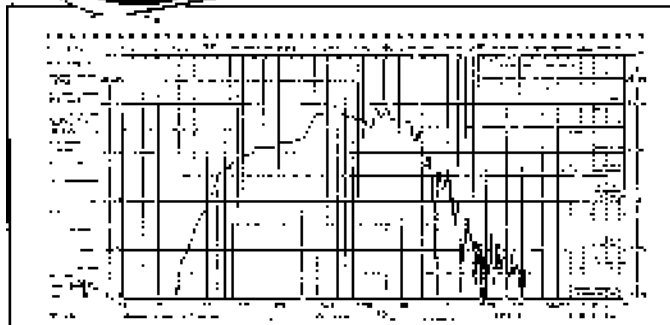
As I expected, the ATC long coil unit suffered from cabinet restrictions, and is a special unit anyway and therefore should not be compared directly with the more general purpose units tested. Similarly, the RCF would benefit considerably from a larger, or tuned enclosure, but the rest of the field seemed quite happy. The Richard Allan and Isophon units came up with good overall performances at their prices, while the two new Fane Crescendos showed an amazingly high sensitivity for a cone loudspeaker, although this was unfortunately at the expense of a high distortion figure. I particularly liked the RCF L12/24, and the Spanish made DAS was rather nicely made and gave a good account of itself, although at almost £90, it is not cheap.

Next month we shall have another mixed bag, this time of 15" units. Included in this is the new, long awaited ATC 15" unit, the legendary JBL K140, a superb new high power unit from Isophon and several other interesting units. Also, we now have a new high power amplifier and will be able to really drive some of these higher powered units to their limits to find out just what they are made of and sort the men from the boys as it were.

## DAS MI-300

RRP incl VAT £88.51

Parameter	Manufacturers Rating	Test Result
Power	110w pink noise 30Hz-1KHz	110w RMS sine wave
Distortion	Not stated	3% at 110w as above
Sensitivity	98db @ 1w @ 1m on band limited pink noise 30Hz-1KHz	98db @ 1w @ 1m averaged between 300Hz and 3KHz
Resonance	Not stated	75Hz in 50ltr I.B. enclosure
Impedance	8 ohms	5.5-23.5 ohms
Useful Freq. Response	45Hz-8KHz unqualified	50Hz-5KHz @ -20db see graph



DAS loudspeakers are manufactured by DS Acoustics SA of Valencia, Spain, and are now appearing on the U.K. market for the first time. The range aroused considerable interest at the recent musical trades fair in London. The MI-300 is a very nicely made 12" musical instrument transducer at the upper end of the market and as with so many loudspeakers of type, has noticeable similarity with JBL in terms of design features and presentation. A rather nice cast alloy chassis of a particularly open design carries a large and weighty magnet assembly, its front rim being cropped at the sides to give an unusual 'square' aspect. The whole assembly is nicely finished in black crackle stove enamel and natural machined aluminium, and a pair of colour-coded, plastic terminals of the spring retaining variety are fitted. A medium weight, ribbed cone is carried by an unusually coarse treated linen suspension of medium compliance and is fitted with a large dural centre dome. A cork gasket is fitted for conventional mounting from within the enclosure, and although a recess, obviously intended to accommodate a second gasket for front loading is machined into the underside of the faceplate, a gasket ring for the purpose is not supplied. Ventilation is to the usual JBL pattern, by means of a vent through the centre of the magnet pole piece, with a mesh grill at the rear. Particularly short, thick and very

flexible feed wires are employed — a practice I very much approve of. Included in the delivery is a large brown envelope marked 'Important Instructions Inside', in English, and which upon opening, was found to include a wealth of no doubt valuable information of application, installation and using the loudspeaker, but unfortunately, it was all written in Spanish!

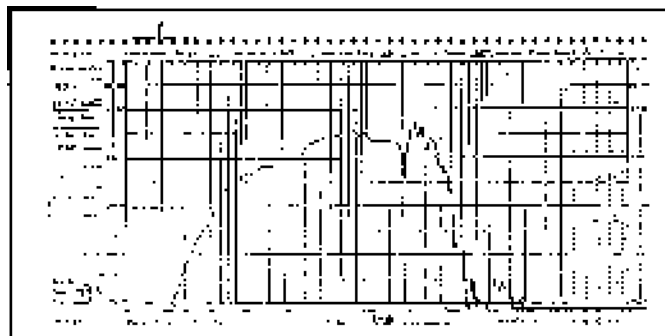
From a performance aspect, the unit returned a reasonably good set of figures, except that in this price bracket, one could justifiably expect a better sensitivity figure, which at 98db is just below the average for this type of loudspeaker. In all other respects, the figures are good, with a low distortion at rated power and a low in-cabinet resonance.

I must however admit to some uncertainty over the makers qualifications over the published power and sensitivity figures, which have apparently been measured using a pink noise source over an unusual band limited range. Although totally different from our own procedures, it is interesting to note the similarity of the results obtained. Altogether, I quite liked this unit. It is well made, nicely presented, and generally performed well, and at this price, should soon find its niche in the U.K. marketplace.

## ATC PA/75 Bass Long Coil

RRP incl VAT £97.20

Parameter	Manufacturers Rating	Test Result
Power	75w nominal 150w max.	Confirmed at 75w RMS sine wave
Distortion	Not stated	5% at 75w as above
Sensitivity	Not stated	95db @ 1w @ 1m averaged between 300Hz, and 5KHz
Resonance	35Hz free air	70Hz in 50 ltr I.B. enclosure
Impedance	8 ohms	9.5-40 ohms upper value estimated
Useful Freq. Response	Up to 6KHz	50Hz-5KHz @ -20db see graph



This loudspeaker, from a small, specialist British manufacturer, is built on the same superbly robust, cast aluminium chassis as the PA/75 Std. reviewed in the March 1978 issue. In fact, ATC produce a whole range of 12" units based on this chassis, with differing cone assemblies, different magnets and totally different cone suspensions to suit a variety of special applications. The unit reviewed here is the long-coil bass unit, intended for use as the low frequency reproducer in a two or three way crossed over PA system, or to provide precision reproduction of the very low frequencies of a bass instrument. It is fitted with a fairly heavy cone, with a specially treated paper composition centre dome and carried on a very compliant rubber (or could be neoprene) roll surround. Apart from the massive proportions of the whole unit, the cone assembly is not unlike the low-frequency reproducer of a good quality Hi-fi or studio monitor loudspeaker system to look at. The main significance of the long coil is simply to ensure that the voice coil windings stay in the magnetic field under extreme drive conditions, as with such a soft cone suspension, a conventional coil could (and frequently does) get driven out of the air gap and consequently catch fire in extreme circumstances, or at best run into a non-linear condition and distort the waveform.

We accepted this loudspeaker for test as a result of several requests to do so, but it must be realised that our 50ltr. standard enclosure is not

really suitable for a loudspeaker of this type, and therefore its best performance capability cannot be realised. This is especially evident in the distortion figure measured, most of which occurred at the lower frequencies where the enclosure shortcomings are most in evidence. Even so, it can be seen that the low-frequency response and in-cabinet resonance is considerably lower than other units tested. The sensitivity figure is some 6db lower than was measured on the PA/75/std. in the March review, and this is due to the heavier cone assembly and to the intentionally lower flux density in the air gap. This is a special loudspeaker intended to fulfil a special need, and its performance cannot reasonably be compared to other units tested in this category.

From the results obtained, the indications are that it will adequately meet its design objectives, and it certainly enjoys a market reputation to this effect. It is superbly made, if somewhat utilitarian in finish and presentation, but on a value for money basis, such a criticism can only be taken as a compliment. I for one, certainly have no time for elaborate and decorative finishes on what should be a functional piece of engineering — not an ornament for the mantleshelf!

It is unfortunate that ATC have found themselves among the first to feel the impact of the Cobalt crisis, and as a result, the prices of the whole PA/75 range have been dramatically increased, from £81 when we reviewed the Std version in March, to £97.20 as of September.

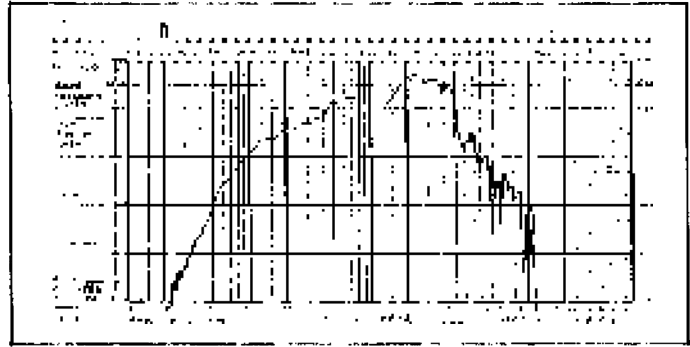
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# SPEAKERCHECK

## FANE Crescendo 12/80

RRP incl VAT £45.95

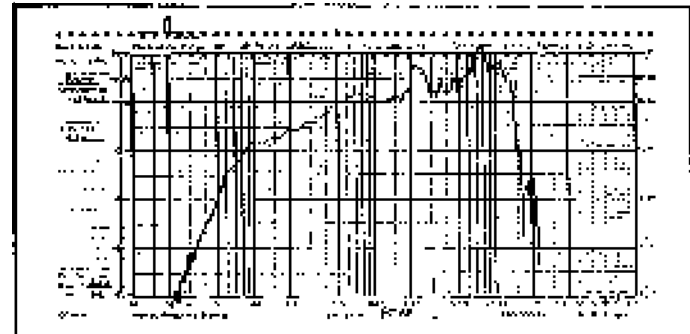
Parameter	Manufacturers Rating	Test Result
Power	80w RMS	Not confirmed
Distortion	Not stated	10% at 80w RMS sine wave
Sensitivity	105db @ 1w @ 1m	104db. @ 1w @ 1m averaged between 500Hz and 5KHz
Resonance	Not stated	110Hz in 50ltr I.R. enclosure
Impedance	8 ohms nominal	6-13.5 ohms
Useful Freq. Response	60Hz-14KHz graph given	70Hz-10KHz @ -20db see graph



## FANE Crescendo 12/8OLT

RRP incl VAT £49.95

Parameter	Manufacturers Rating	Test Result
Power	80w RMS	Just confirmed
Distortion	Not stated	6% average, rising to 10% between 7KHz & 10KHz at 80w RMS sine wave
Sensitivity	105db @ 1w @ 1m implied	103db @ 1w @ 1m averaged between 500Hz and 15KHz
Resonance	Not stated	85Hz in 50ltr I.B. enclosure
Impedance	8 ohms nominal	6.5-12 ohms
Useful Freq. Response	'up to 20KHz' graph given	80Hz-15KHz @ -20db see graph



These two units are Fane's latest additions to the well established 'Crescendo' range and represent quite a change in direction for this manufacturer. Both units are built on a new version of the familiar Fane 12" chassis. The whole assembly has been stiffened up to carry the large magnets fitted to the Crescendo range, the front rim has been redesigned to permit front or rear mounting, and gaskets are fitted to both inner and outer faces to facilitate this. A more substantial back-plate of larger diameter is also incorporated and the substantial magnet assembly now looks an integral part of the unit instead of something stuck on the back as an afterthought. As a further improvement, the usual solder tag termination has been replaced with a nice pair of colour coded plastic, spring retaining terminals. The chassis is finished in the usual Fane hammer finish grey stove enamel with a chromed cap over the back of the magnet, which carries the makers label. A deep, ribbed cone of exceptionally light weight is fitted to both units and a doped paper front suspension is employed. The 12/8OLT is additionally fitted with a large parasitic centre cone and both units are fitted with a silver painted linen dust cover. The magnets fitted are of the ferrite variety and should therefore not be affected by the Cobalt situation.

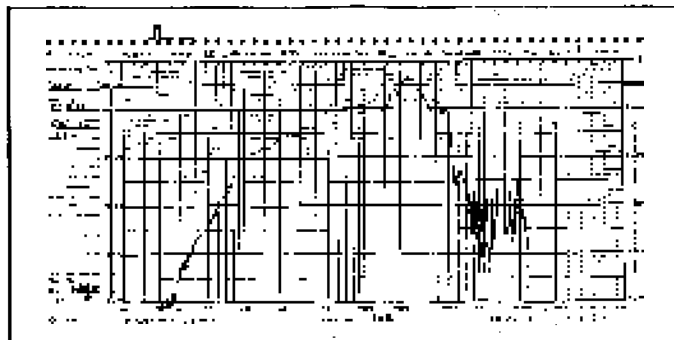
In all but one respect, both units returned an excellent set of test results. It can be seen that the makers staggering sensitivity figure of 105db is more or less confirmed in both units, the small differences being probably due to different interpretations of the sine wave

response curves and unless I am mistaken, these are the highest sensitivity figures yet measured on a cone transducer in the whole Speakercheck project! Although not quite confirming the makers figures, both units showed a respectable frequency response and also, a virtually linear impedance characteristic over a range of values that one should reasonably expect for an eight ohm nominal rating. It is unfortunate that we are not also able to confirm the makers 80w power rating, but it must be remembered that our test is based on distortion content, and not on the units ability to handle the input power without blowing. Both units exceeded our 5% maximum permissible distortion criteria, but this could very well be due to break-up of the very lightweight cones fitted to these units, and not to any inability to handle the power in electrical terms. In fact, from Fane's track record with the Crescendo range, I would expect to find that this is the case, but we just do not have the time in the Lab. to carry out protracted testing at high power levels that would be necessary to verify this assessment.

These are a pair of very nicely made, nicely finished loudspeakers and in all but one respect, are capable of outstanding performance — especially so at these prices. I would like to think that these will be the forerunners of a new generation of quality units from this British manufacturer. Another change for the better is the introduction of colour coded plastic spring retaining terminals in place of the solder tags hitherto employed.

## RCF L12P/24

Retail Price, around £60 incl VAT

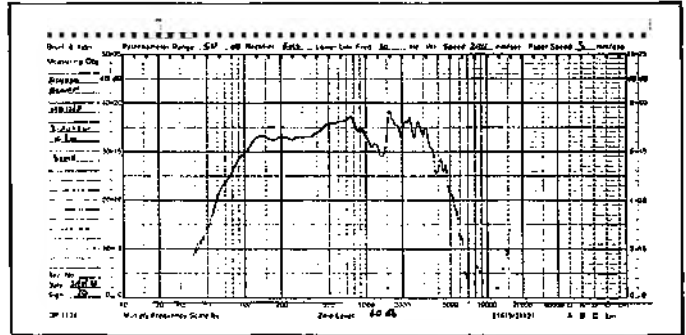


Parameter	Manufacturers Rating	Test Result
Power	100w unqualified	Confirmed at 100w RMS sine wave
Distortion	Not stated	3% at 100w as above
Sensitivity	Not stated	101db @ 1w @ 1m averaged between 500Hz and 5KHz
Resonance	55Hz free air	80Hz in 50ltr I.B. enclosure
Impedance	8 ohms nominal	8-25 ohms
Useful Freq. Response	55Hz-9KHz unqualified	90Hz-5.5KHz at -20db see graph



## RICHARD ALLAN HD12/P RRP incl. VAT £26.72.

Parameter	Manufacturers Rating	Test Result
Power	100w RMS	Confirmed at 100w RMS sine wave
Distortion	Not stated	4% at 100w as above
Sensitivity	99db @ 1w @ 1m	95db @ 1w @ 1m averaged between 300Hz and 3KHz
Resonance	95Hz free air	110Hz in 50ltr I.B. enclosure
Impedance	8 ohms nominal	7.5-40 ohms estimated upper value
Useful Freq. Response	Graph given	50Hz-5.5KHz @ -20db see graph



This is a new loudspeaker from an old established family concern in the north of England, better known for its extensive range of Hi-Fi products than for musical instrument loudspeakers. Hitherto, Richard Allan chassis have always been suitable only for mounting in the conventional mode, but here we find a new cast alloy chassis of a particularly open design and of adequate strength and rigidity to carry the moderately heavy, ceramic magnet assembly. The whole unit is nicely finished in a black stove enamel and is readily identified by the four mounting flanges protruding from the front rim, and by a bright red front gasket. A small roll of gasket strip is included in the delivery to facilitate front loading, and the voice coil is terminated at a pair of colour coded plastic terminals. A particularly smooth, lightweight, deep cone is carried by an exceptionally stiff, doped paper suspension, and is

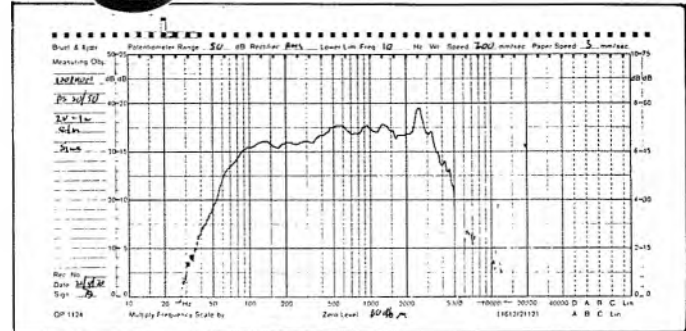
fitted with a linen dust cover over the 51mm diameter voice coil.

It is unusual to find a loudspeaker in the 'standard' category with a genuine 100w power rating, but the HD12/P has proved to be the exception, and showed a distortion of only 4% at full sine wave power. In fact, the makers tell me that the unit is subjected to full sine wave power for 30 minutes in their own testing schedules. The sensitivity is not high, and is not in agreement with the makers figure, but is nevertheless about average for this type of unit and in this price bracket. Altogether, I rather liked this loudspeaker. It has a light, unfussy feel about it, is nicely made and presented, and gave a good account of itself under test. It is a good, general purpose unit and should successfully spearhead Richard Allan's efforts to break into the music business after some 30 years experience in the manufacture of loudspeakers.

## ISOPHON PS30/50

RRP excl VAT £31.20

Parameter	Manufacturers Rating	Test Result
Power	70w Music 50w DIN	Confirmed at 50w RMS sine wave
Distortion	Not stated	3% at 50w as above
Sensitivity	Not stated	95db @ 1w @ 1m averaged between 300Hz and 3KHz
Resonance	45Hz free air	90Hz in 50ltr I.B. enclosure
Impedance	4 ohms	3.5-14 ohms
Useful Freq. Response	30Hz-6KHz graph given	50Hz-5KHz @ -20db see graph



This rather unusual looking loudspeaker is built on a chassis fabricated from a number of pressed steel sections and has an overall aspect that is not dissimilar from the chassis used for the Celestion G12 range. A small, ceramic magnet is fitted. Termination is unusually by means of a tag-strip at the rear of the unit, the insulated feed wires being brought out through grommets in the back plate of the chassis. No mounting gaskets are fitted at all, but the unit looks as though it is intended to be mounted from the front of the baffle panel, and a set of special clamps are supplied to facilitate this. When delivered, these clamps were held to the side of the magnet in a neat arrangement by the magnetic field and looked like an unusual retaining clip arrangement for the magnet assembly. It was quite by accident that I discovered that these were the mounting clamps for the loudspeaker itself, so beware! A deep, smooth, lightweight cone is carried by a stiff, doped paper suspension. A dural

centre dome is fitted, beneath which is a series of ventilation holes punched through the sides of the cone, just above where the voice coil former is joined to the cone.

As the results table above shows, the unit gave a creditable performance indeed at this price. It would seem that the somewhat unclear power rating can be safely interpreted as a 50w RMS rating, and the measured distortion was just 3% at this level. Even at 100w, distortion did not rise above 6%, although some heating of the voice coil was in evidence after this admittedly severe test on a unit in the standard category. Note also that the unit is only available in a 4 ohm impedance. An unusual loudspeaker in many ways, cheaply made as reflected by the presentation and finish, but it gave a surprisingly good account of itself under test — after all, once the back is screwed onto the cabinet, no-one can see the unit anyway, and you have only the sound by which to judge the loudspeaker, and this unit should sound good!



This loudspeaker is built on the deep version of the standard RCF 12" cast chassis that has been described so many times in previous reviews that ringing the verbal changes yet again will serve no useful purpose. However, in all other respects, this is an individual and interesting product, slotting in at the lower end of the 'special' category in terms of price and intended market. It is unusual in that it is fitted with an exceptionally large ceramic magnet assembly instead of the Alnico V magnet normally found on units at this end of the market and

will therefore not be affected by the price fluctuations discussed in the introductory article. A deep, medium weight, textured cone is carried by a comparatively soft 'concertina' linen suspension and is fitted with a dural centre dome — again, an unusual arrangement for musical instrument and similar applications. Under-dome venting is achieved by the usual year passage and grill at the back of the magnet structure. The whole unit is very nicely presented and has a nice, substantial feel to it.

From a performance aspect there are more surprises. Whereas we have come to expect an almost linear impedance curve from this maker, here we find the normal, rising curve that is characteristic of most loudspeakers of this type. Conversely, RCF's strong point has never been low distortion, but in the case of the L12P/24, we find a figure right down at just 3% at full sine wave power, and this only increased to 5% on a re-test at 150w. There are however no surprises in the sensitivity figures. Somehow, RCF always manage to extract the last ounce of acoustic output from their loudspeakers, and the unit now under review is no exception, returning a figure of 101db, which is up among the very best achieved in this 'Speakercheck' series. This is without doubt, an excellent loudspeaker and is certain to come into its own once the market starts to search for alternatives when the Cobalt shortage really starts to take its toll of the Alnico type magnets, and prices rocket up. At this price, it is a good buy in any event, but seems to have been largely overlooked by the market.



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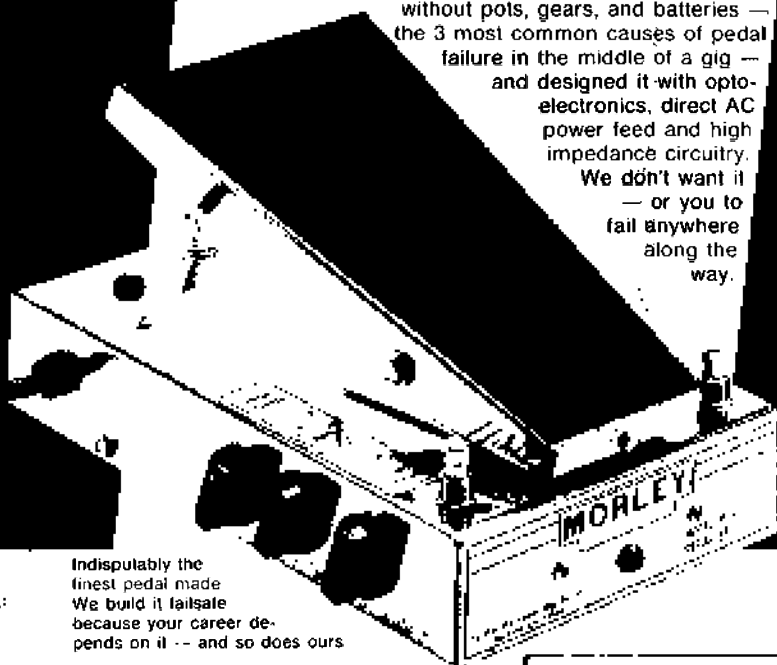
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CROWN DC300A	155 Watts/ch.	NO FTC RATING 16	Passive airflow only	None provided	Rear panel fuse only	Hard-wired, non-modular	None	Quasi- complimentary	Not specified*	\$ 919	1974
YAMAHA P2200	200 Watts/ch.	NO FTC RATING 12	Passive airflow only	None provided	Rear panel fuse only	Hard-wired, non-modular	None	Full complimentary	Not specified*	\$1095	1976

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\*\*BGW 750B/C FTC Specification: 225 watts minimum sine wave continuous average power output per channel with both channels driving 8 ohm loads over a power band from 20Hz to 20kHz. The maximum Total Harmonic Distortion at any power level from 250 milliwatts to 225 watts shall be no more than 0.1%.



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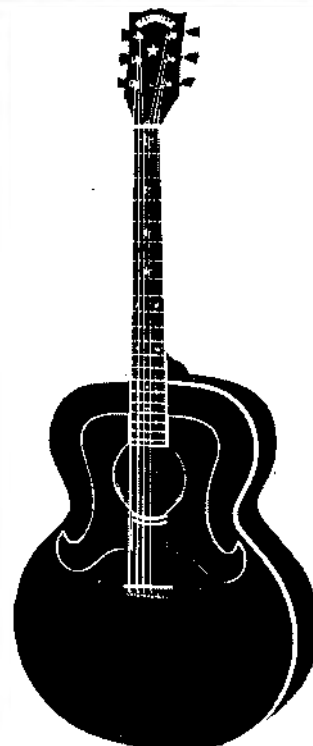


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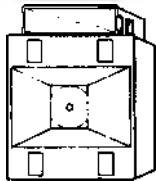
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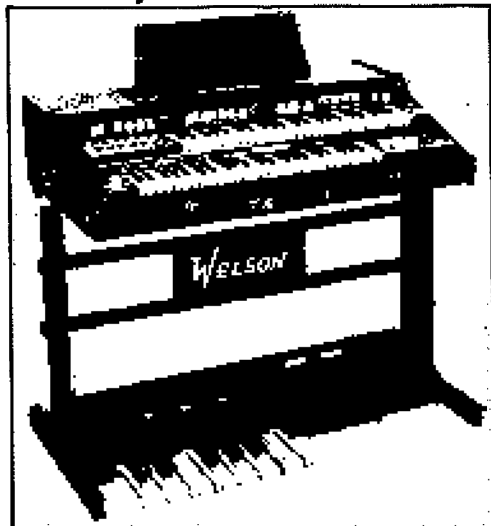
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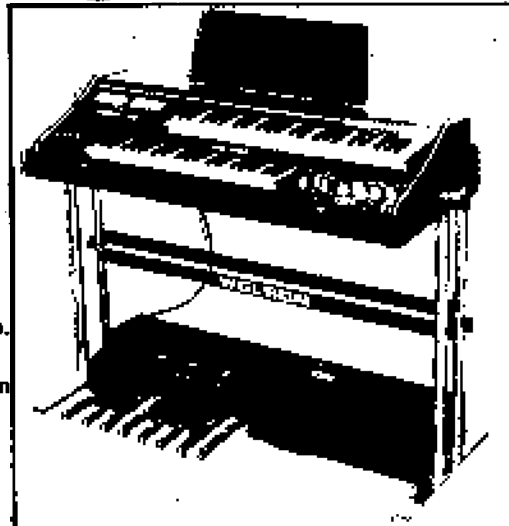
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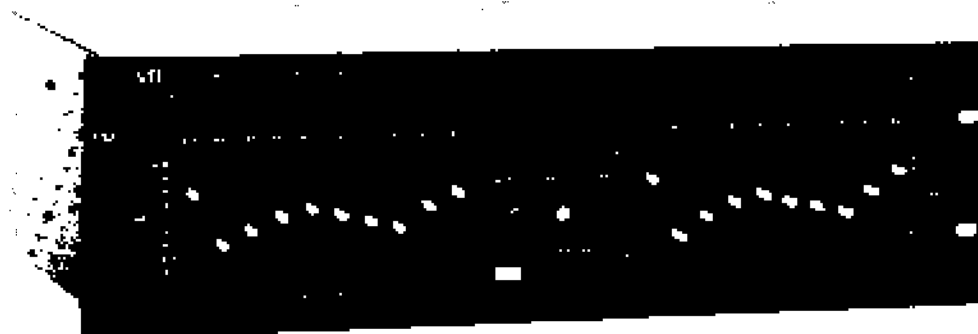
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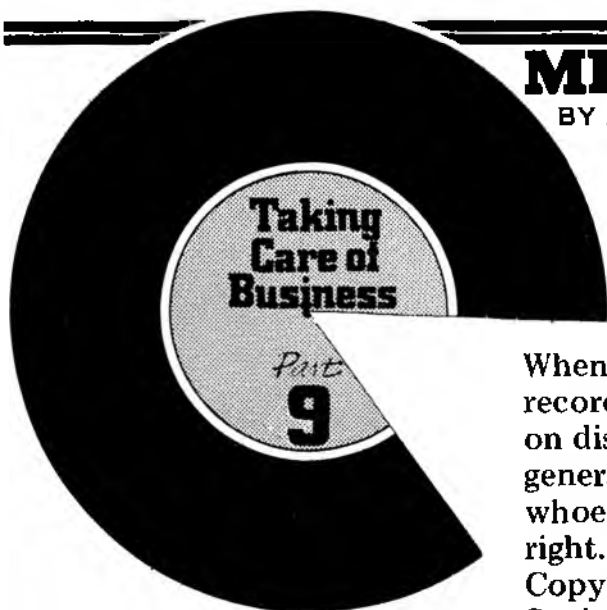
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# MECHANICAL COPYRIGHT

BY ALAN HOLMES



Whenever music is recorded mechanically, on disc, tape or film, it generates royalties for whoever owns the copyright. The Mechanical-Copyright Protection Society Ltd. is the body responsible for collecting them on behalf of its members. The Society represents both writers and publishers, and there are more than one and a half million tune titles on its index. A representative of the Society explains how the MPCS began and how it works today.

body was formed called the Mechanical Copyright Licenses Co. Ltd. In 1924, it merged with a similar organisation, the Copyright Protection Society, and adopted the present title, the Mechanical-Copyright Protection Society Ltd.

Anyone can join the society as long as he is a copyright owner. That means he's either a writer — of lyrics or of music — or an arranger, and he has not assigned ownership of his written material to anybody else. Alternatively, it is a music publisher who has, in fact, received assignments from the writers directly in relation to their mechanical ownership. He is collecting royalties directly from the source.

When the publisher has received certain monies he then distributes it in accordance with contractual obligations he has with the writers. Some writers choose not to assign their mechanical rights and so reserve the right to hold them themselves and become direct members of the society. There is no charge to join other than the commission that the society takes for the job it does.

**DOES THE SONG HAVE TO HAVE BEEN RECORDED BEFORE THE PERSON CAN BECOME A MEMBER OF THE SOCIETY?**

No, the song might never get recorded, but it might get broadcast on the radio. Now two fees are generally generated when a broadcast is made. The broadcasting companies often do not broadcast a piece of music directly live, they pre-record it onto a tape before broadcasting. The moment that they put it onto a tape a mechanical fee is generated.

This society has blanket agreements with the broadcasting organisations, that is the BBC for radio and television, the Independent Television Companies, who are encompassed under a group called the ITCA and the local radio stations, who are encompassed in a group called the AIRC. With all of those bodies we negotiated a blanket license agreement.

**HOW DOES THE ACT APPLY TO RECORDS?**

In Britain the statutory copyright royalty is 6¼ per cent of the recommended retail selling price of the record, exclusive of VAT. So if an album is selling for £4.25, the royalty is 6¼ per cent of £4.01, which is the price exclusive of VAT.

This does not mean that the MCPS collects 6¼ per cent from every album that is sold. Historically, the music publishers in the United Kingdom have always been able to collect their mechanical royalties directly from the record manufacturers if they so choose, and they can ask the society to collect for them from certain specified companies. Up until November of this year they have been free to choose whom they collect from directly and whom they ask us to

Back in 1910, before there was a copyright act in the United Kingdom, several publishers and copyright owners got wind that there was going to be copyright legislation and all their money

wouldn't necessarily emanate from sheet music and from performance royalties. So they decided to form a society to collect whatever income they were going to be given under the auspices of that Act. A



collect from on their behalf.

From December 1st of this year, we have now limited the exclusions in our new membership agreement to the 10 major record manufacturers, which encompasses over 200 labels. We have said to them that if you want to exclude any of these companies that's fine, but if you want to exclude any over and above that list then we will have to charge you at the existing rate. Our commission rate up until December has been 15 per cent across the board. From December 1, we are reducing it in specified areas. Collections from record companies which we classify as commercial records collections has been reduced from 15 per cent to 8 per cent for those that adhere to the A Tariff. For overseas collections, where it has been 15 per cent, those that come in on Tariff A will have it at 10 per cent. For special TV promoted record companies the commission rate charged will be 5 per cent.

#### **HOW ABOUT JUKE BOXES AND DISCOS?**

For juke boxes, it is not in fact a mechanical license, because the record will have been sold to the juke box owner and therefore the royalty will have been generated at the time of the sale to the juke box. When the juke box then plays it, that generates a performance fee. Fees in that area are collected by the Performing Rights Society.

The majority of discos are purely playing records, so they are licensed again by the PRS. For those discos that pre-record, and there are very few of them, they have to acquire a license from us to do so.

#### **WHAT IS THE SITUATION REGARDING HOME TAPING OF MUSIC FROM RECORDS AND RADIO?**

A report has been instigated on behalf of the British Phonographic Industry, the Mechanical Rights Society and the Mechanical Copyright Protection Society.

The Mechanical Rights Society is a separate organisation controlled by a council consisting of music publishers, representatives from the Songwriters' Guild and representatives from the Composers' Guild. It is a body set up in the 1950s to negotiate blanket agreements on behalf of the industry. The results of the negotiations are administered by the MCPS. For example, the blanket agreements with the broadcasting authorities, while negotiated by the MRS, are administered by the MCPS. We are simply an agency. A report was prepared looking at the problem because a lot of figures have been bandied about recently concerning the amount of lost revenue. A figure has been mentioned of approximately 75 to 80 million pounds lost, at retail prices. That's not all money due to copyright owners, that also involves artists and revenue lost to other rights owners.

In Germany a few years ago, they instituted a system whereby a levy was

placed on the hardware, not on the software -- on the actual recording equipment itself. They are now considering enlarging that to cover software as well -- a levy on cassettes. It hasn't actually started yet but it will probably come soon. The Society here is certainly aware of the problems and has tried for the last 20 years to alleviate them slightly by offering the general public what is known as an amateur recording license, costing £1.50 plus VAT. This gives the purchaser the facility to tape in his own home for his own use musical works owned by members of MCPS which have previously been issued on gramophone records under labels owned or controlled by members of the British Phonographic Industry. It certainly does not give him permission to tape from other people's records or to sell or hire the tapes that he has recorded. It is certainly not a final solution.

It is difficult to talk about this subject because representations have already been made to the Board of Trade to examine the whole problem. It will require a change in the Copyright Act as a whole, which therefore requires Government intervention. Other things within the Copyright Act need looking at too. The last Copyright Act was 1956, and since then there have been great advances in recording techniques, with new processes such as video, which is another enormous problem. There is no license at all on video at the moment, but negotiations are taking place with the relevant bodies.

#### **WHAT HAPPENS IN THE CASE OF TELEVISION SHOWS?**

That is encompassed within the blanket agreement that we have with the television stations. They pay us a lump sum annually. We receive from television stations, as we do from the BBC in terms of radio, a log of every programme that goes out. We analyse that log and award it a points value, so that every piece of music that is recorded by the stations and played on TV receives its equivalent points value. Once a year we add up the points that each copyright has gained and then divide it into the total sum available. So a song that is Number One in the charts, which is probably played more on radio and television than a song that isn't in the charts, will, as a consequence, receive a lot more money.

But of course there are many other fees that are generated too. It could be that the song is needed for an advertisement for some reason or another. Somebody might decide to do a radio jingle or a TV commercial. They would have to enquire of the copyright owner (a) that they can use it and (b) how much money they want. We negotiate that right on behalf of the members who wish us to do so. There could be other fees generated in the case of background music, music in supermarkets, in lifts or hotels, etc.

#### **IN THE CASE OF SOMEONE WHO HAS**

#### **WRITTEN A JINGLE WHICH IS SHOWN ON THE TELEVISION, HOW DOES HE GET PAID?**

Let's assume that it's not a specially composed jingle. Let's assume that an advertising agency wants to use a musical work that is owned by one of our members. The agency will call our Licensing Department and tell them what the use is, how long it is going to be for, whether it's networked, whether it's international -- all the details of it. Our Licensing Department will then call the copyright owner and will either invite him to suggest a fee that he thinks his copyright is worth or will suggest to him a value that we think it's worth, knowing the market reasonably well. Between them they will arrive at a figure, they will report back to the advertising agency and say, yes, they need so much for the soundtrack and an offer of license will be made to the agency, who will either accept it or reject it. If they accept it, they return the form, pay the money and we give them a license.

#### **WHAT IS THE SITUATION REGARDING FILMS?**

Again there is no blanket agreement on films. Negotiations take place, when requested, between our Licensing Department and individual film producers.

#### **WHAT HAPPENS IN THE CASE OF THE LARGE NUMBER OF RECORDS IMPORTED INTO BRITAIN FROM THE USA?**

In North America, our sister societies license recordings for sale as we do. The difference there is that when they are licensed in America they are licensed purely for sale in the USA and Canada. An awful lot of records leave North America for other destinations in quite large volumes -- quite a lot come to Britain. So when they arrive here they have not been licensed for sale in this country which therefore means that royalties have not been generated for sales in the UK. We have a responsibility to collect the royalties for their sale in Britain. We have to rely on the good offices of the importer or the record shop directly to tell us when they're bringing in consignments and we then authorise their sale by selling to the importer or the retailer stamps that they fix to the cover of the record, where it's an LP, or to the label of the record, where it's a single. Those stamps are three different prices: 5p for a single, 10p for a cut-out or deleted record, that is a record that has been withdrawn from direct sale in the original market and is therefore a secondary sale, and 25p for a full-price existing catalogue item, that is a record which is still available directly from the American record manufacturer in the USA.

We have a responsibility, on behalf of all the copyright owners that we represent, to check when records are coming in from America and to make sure that they are accordingly licensed. We're probably dealing with the tip of the

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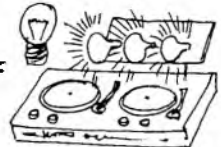


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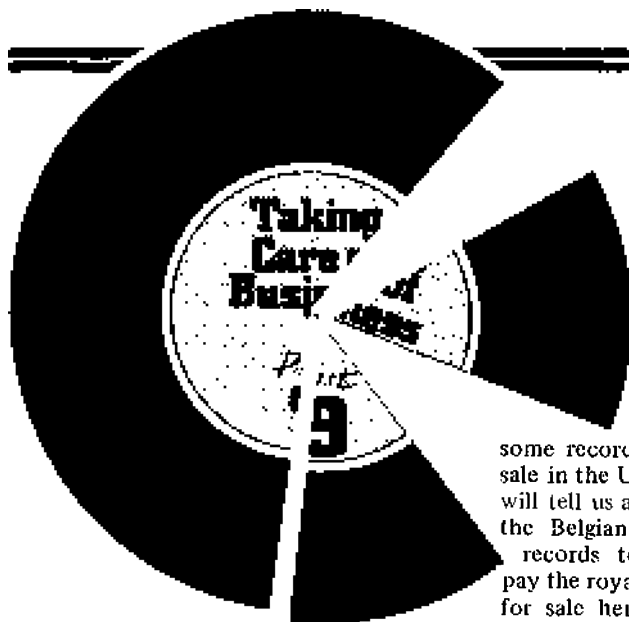


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of manufacture but applicable to the territory of sale. Let's say, for example, that a record company decides to press some records in Belgium. If they are for sale in the United Kingdom, the company will tell us and we will communicate with the Belgian society. We will allow the records to come into this country and pay the royalties here if they are intended for sale here.

There are different royalty rates applicable in Europe to those that exist in the United Kingdom. If a company is manufacturing here for sale in Germany, we would collect the royalties here at the German rate based on the German price but would send the royalties we collected to Germany to our sister society who then pass them on to the copyright owners in the territory. However, when the actual matrix is exported for pressing and sale overseas, the royalties will be paid directly to the relevant overseas society and distributed accordingly, with the knowledge and co-operation of the MCPS.

The same thing happens overseas and royalties are flown both ways so that our sister societies are collecting royalties on our members' behalf and we are collecting royalties on their members' behalf. They receive a royalty statement exactly the same as our members will receive a royalty statement.

#### HOW ABOUT LOCAL LANGUAGE VERSIONS?

It is the copyright owner's responsibility to ensure that where he has a sub-publisher and has granted the license in that territory for a local language version to be made, the song is registered with the local society and everybody is aware of any other titles by which that song is known.

#### WHAT ABOUT BACKGROUND MUSIC?

Again, we have blanket agreements with the background music operators. They pre-record the music on tape and supply tapes to establishments on a fairly regular basis. The blanket agreement is based on the number of outlets they have and the amount of music they use. Again, we collect royalties that are due from such usage and distribute them to the appropriate members.

#### HOW DO YOU KEEP TRACK OF A MILLION AND A HALF SONGS AND THE SOURCES OF REVENUE?

At the moment we are working on a manual card index and of course we rely on being notified. The most important thing that any of our members can do is to tell us what he owns, because we can only act on the information that we are given. We do rely to a great extent on a copyright owner telling us what he's

got. As soon as he tells us, it gets put onto our card index. We hope to convert our index to computer soon. We are just about to set up a data base. It will take between three and five years before it's functioning. It's an enormous task to actually feed the information on to it and certainly to verify the information that we have.

At the moment, as soon as the copyright holder has told us, the information goes onto a card index and we actually have a physical check. That card index lists the title, the composers and any relevant information that would be needed to control that song and to protect its interests throughout the world. Each member has a unique member code. Our royalties are computerised, which means that the appropriate tune code and member code are punched in and the computer provides the necessary information.

#### WHAT ABOUT BOOTLEGGING AND PIRACY?

We work very closely in conjunction with the BPI (the British Phonographic Industry) because it's an escalating problem. Nobody can actually stop people making illicit recordings of concerts unless there are actually physical checks made on everybody going in to a concert hall. But you can try to stop the unauthorised manufacture of records. We have a very good relationship with the pressing plants who are aware of their legal responsibilities because they are equally liable if they are pressing up an infringing article -- and a bootleg or pirate is an infringing article. As they want to protect their own interests, they keep close touch with us as to anything that they think is of a suspicious nature. The biggest problem these days is counterfeiting because the standard of reproduction has improved dramatically. A counterfeit is something which is an exact replica -- a replica of the tape or record, a replica of the artwork, even a replica of the company's facsimile or the company's logo. Everything's the same. Of course they are quite difficult to spot. However, the BPI have their own methods of spotting these things and we do work closely with them. A month ago we set up for the first time a team of representatives who are out in the field around the country. One of the things they are looking for is infringements of this sort.

They are also out there to be of help and assistance to our members and also to all user bodies. They are there to advise and give guidance wherever necessary. They're dealing with record companies, pressing plants, local radio stations, television companies, the advertising agencies, the importers and the exporters.

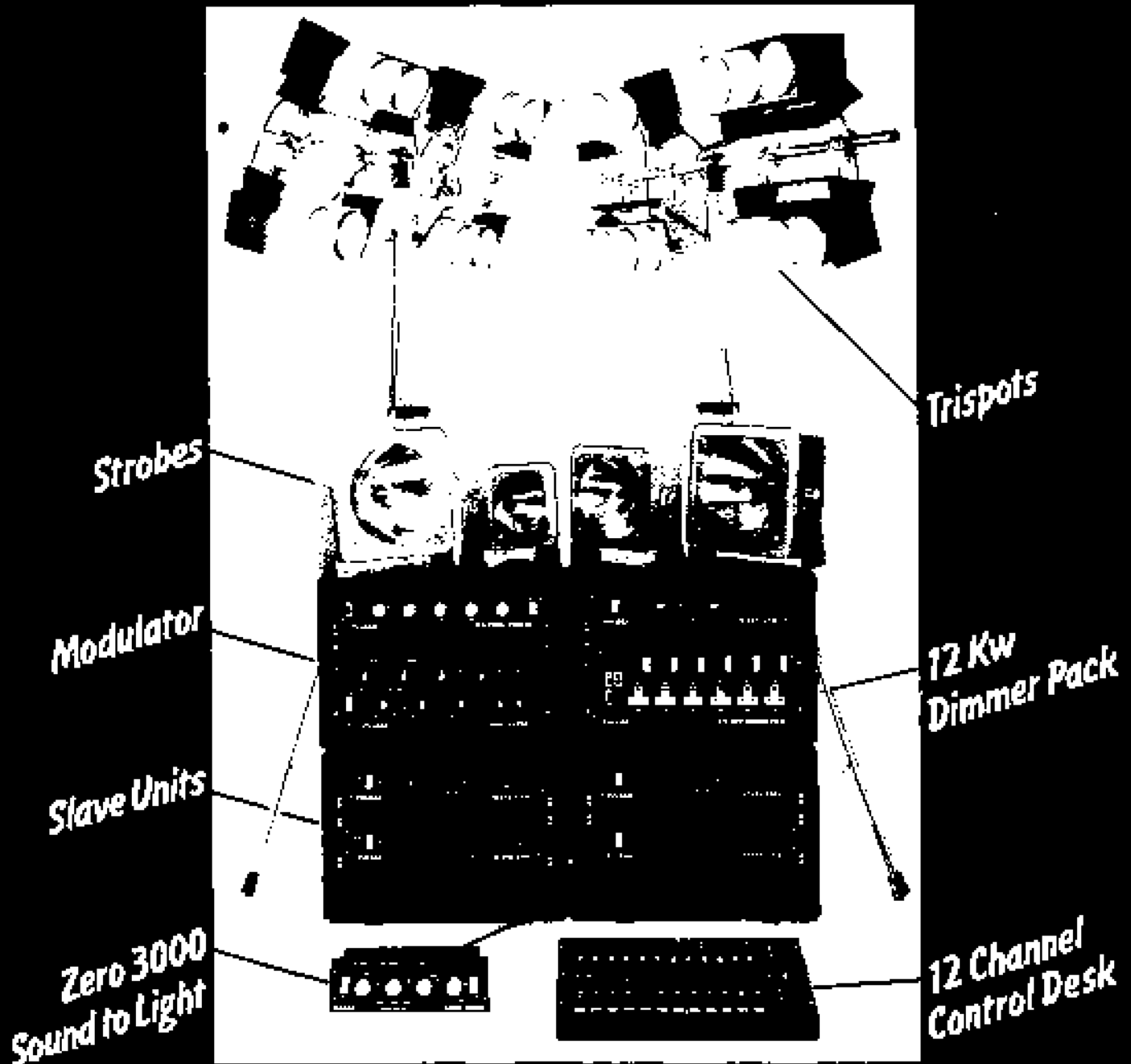


iceberg. The one or two tenths that we control probably amount to about £100,000 a year in terms of royalties. We are taking steps to stop others slipping through the net.

#### WHAT HAPPENS WHEN COMPANIES PRESS RECORDS OVERSEAS TO MEET DEMAND IN THE UK AND IMPORT THEM?

The general procedure in terms of royalty collections, excluding America, is that the record generates a mechanical royalty, which is collected in the territory

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A view of The Gibson Guitar area at the Norlin Exhibit.

Testing out a new Roland Synthesizer at the Great West Exhibit.

Part of the Rogers Drum display at the CBS Exhibit.

N.A.M.E. Staffer demonstrating the new "GIG RIG" electronic back-up percussion device. Distributed by N.A.M.E.



Renowned percussionist and Pearl Clinician Peter Magadini (left) and Randy May (inventor of the Pearl Vari-Pitch Drum) from Los Angeles.

Patrick Brochu (l) and Guy Gaudreault (r) of Signature Musicale Importation Inc. Quebec City with their full line of Tapco Products.

Saul Pinchuck of Whaley Royce behind a huge Ludwig marching drum on display.

Electronic Synare drum creator Randy Hess giving a demonstration of his Synare drums.



Russell Heintz beside the new H-H 16 Channel Board. The Geo. Heintz & Sons Company distribute HH in Canada as well as other fine merchandise.

The front line-up of the Canadian Shure Sound Team.

George Mancini, the exclusive Hohner clinician from New York demonstrating the new Hohner Clavinet Piano Duo.

Left to right: Fred Kalisky (President EFKAY Music, Montreal) Ken Saito (Nanyo Boeki, Japan) and Amrik Singh (EFKAY Music, Montreal, Sales Manager).

Great West's Peavey Display featuring the new Peavey guitars, amps and mixing boards.

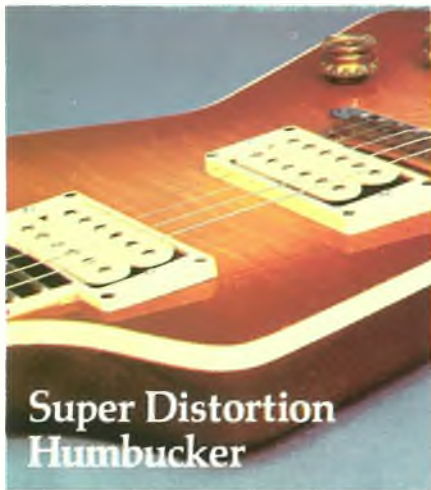
# The 1978 MIAC Trade Show

The Skyline Hotel in Toronto was the scene of the MIAC trade fair from August 20 to 23, when over 50 companies associated with the Music Industries Association of Canada exhibited a wide variety of instruments and equipment.

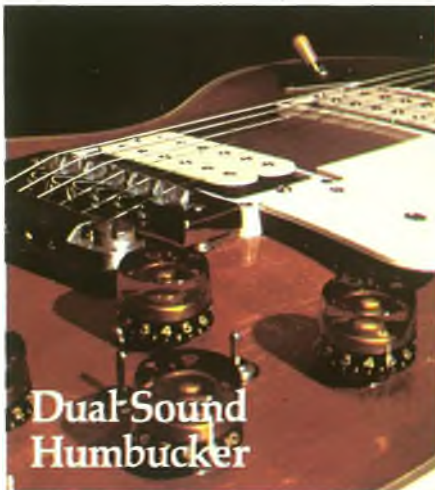
Fewer US manufacturers and suppliers than usual were represented (an impending air strike was blamed for that) but the exhibitors generally agreed that the attendance was satisfactory both in numbers and quality.

Among the interesting new products on display were Garnet's "Enforcer" amp, which boasts a full 75 watts rms into a single 12" speaker, a unique Canadian-designed Butterfly Horn from RMS and from Great West Music, the Roland Jupiter 4 polyphonic synthesizer.

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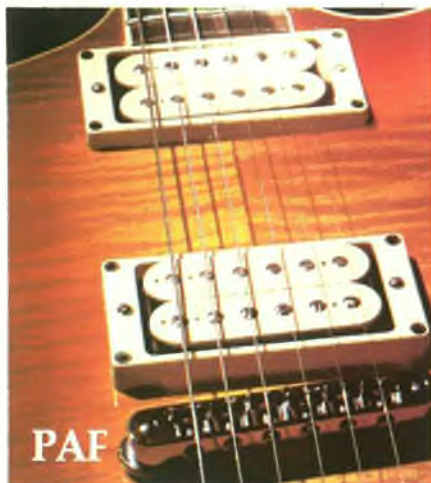
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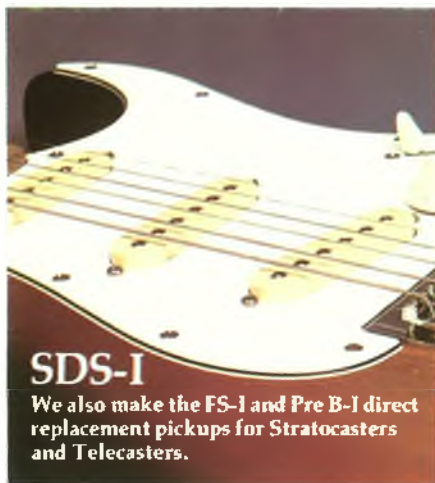
Dual-Sound  
Humbucker



Super II

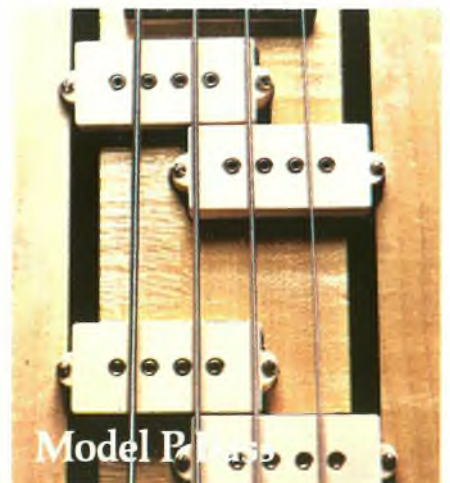


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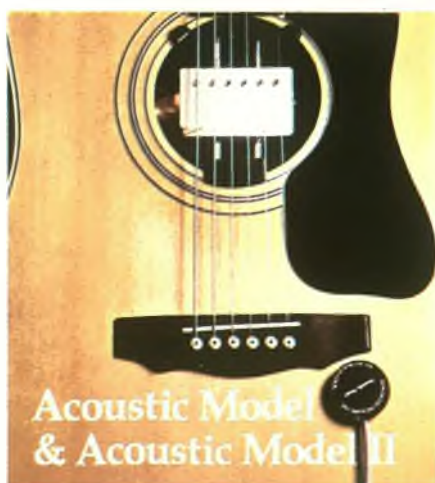
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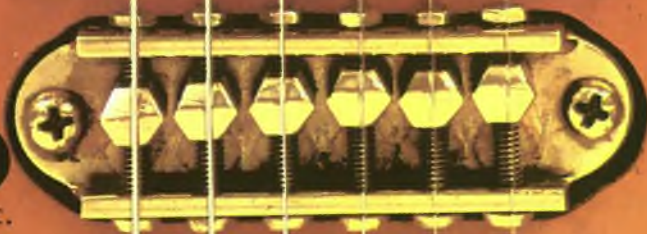
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# Musex 78 Preview

**You'll find your free ticket to Musex 78 elsewhere in this magazine**

*This certainly seems to be the year for music exhibitions and, after the Summer's surfeit of shows, Hessys Music Centre of Liverpool have organised Musex 78, to be held later this month.*

*Musex 78 is an important show for the North of England in that it will give many people the chance to see new lines of equipment from major manufacturers for the first time.*

*The show takes place on November 19th and 20th at the Holiday Inn, Paradise Street, Liverpool and looks sure to be a roaring success. Last year's Musex 77 show was attended by over 17,000 people and this year's event looks like being even bigger.*

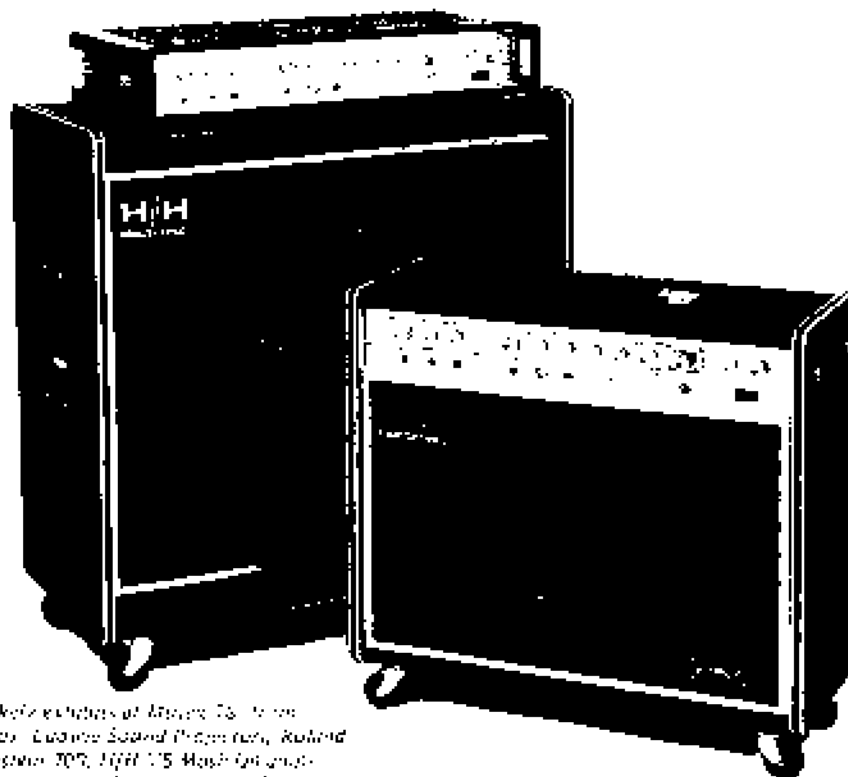
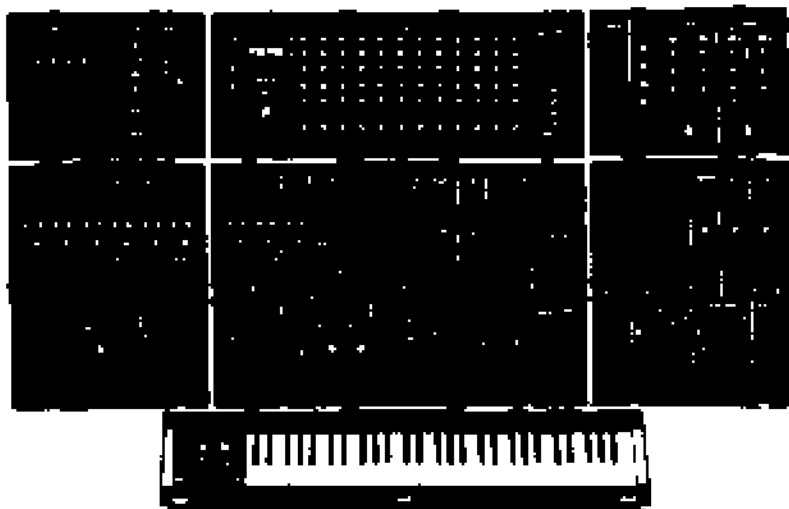
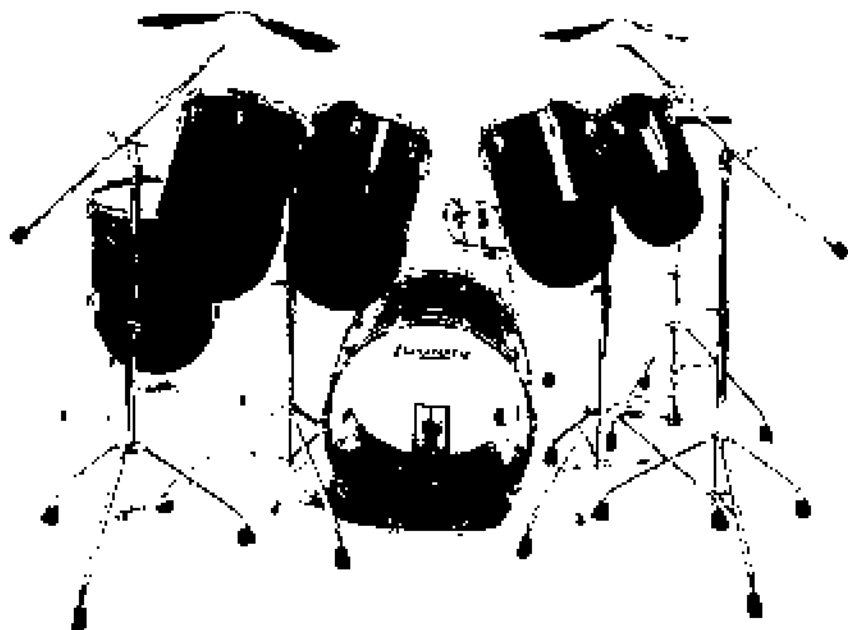
*In addition to the regular exhibition stands from many leading manufacturers, there will be continuous demonstrations throughout the two-day event, giving visitors a chance not only to see the gear, but to hear it and try it.*

*There will also be special show offers on instruments and equipment purchased from the HESSY stand, plus free-to-enter competitions and giveaways throughout the show. For instance, visitors will have the chance to win a Hagstrom guitar worth over £500 and hundreds of pounds' worth of other prizes will also be offered.*

*The good news for musicians is that the bars will be open and, for the road crews, there is parking for thousands of vehicles.*

*Some of the major exhibitors include CBS Arbiter who will have a large range of goods on display. The new Fender guitar finishes are bound to attract attention, as will the new Fender Studio Bass amp. Under percussion, Autotune and Rogers drums will be shown, along with the recently-introduced MA6 and MA8S PA systems from Fender.*

*On the Premier front, the new Soundwave and Resonator kits will be on show, plus the Premier multi-tom kit with extra 6", 8" and 12" concert toms. Marching bands will be well catered for with Premier's modified S81 marching drums in the new Premier colours. Premier now have distribution of Natal congas and bongos so we can expect a good display of this range, along with cymbals from Zildjian, Ufip and Super Zyn.*



*Like's exhibits at Musex 78 include: 1201 - Ludwig Speed Drummer, Roland System 707, Hifit 115 Music Generator (facing page), Electro Harmonix Baseballs unit, Yamaha B212 combo.*



Brodr Jorgensen will be out force with their fabulous range of Roland instruments and equipment like the JP4 synth, RS505 string synth, MP600 piano and the new range of GA and GB combos. A representative range of Kramer guitars will also be on show, including the DMZ series with DiMarzio pickups.

H/H Electronics are expected to show a good range of their amplification equipment with completely re-styled cabinets. Their new Pro PA system will also be on display plus a new 200 watt

mixer with a built-in effects module.

Doubtless many musicians will welcome the chance to see and try out the Music Man range of guitars and amps which will be on show at Musex 78. In addition to the successful Stingray and Sabre guitars, their range of amps will include two new combos 65 and 100 watt versions with optional phase or distortion.

One stand that is sure to be packed throughout the show is Yamaha. With their excellent range of amplifiers, drums, key-

boards and guitars, they're sure to be a winner.

Rose-Morris will have a selection of equipment from Ludwig drums, through Korg keyboards, MXR effects and Zildjian cymbals to the world-famous Marshall amplification. Of particular interest should be the new Ludwig Sound Projectors and the new jazz/country combo from Marshall.

Big names like Crumar, Logan, JHS and Kasuga can all be seen on the John Hornby Skewes stand plus, of course, the new Honda

guitars with special DiMarzio pickups.

Other exhibitors will include Soundout, who will be showing their lines of disco and PA equipment, Bose UK Ltd. with their innovative speakers and amplifiers, Electro Harmonix with a wide range of effects pedals, Music Sales' range of sheet music, songbooks and tutors, Leech speaker cabinets, Buffet-Crampon's wide range of educational instruments and, last but by no means least, John Birch guitars.

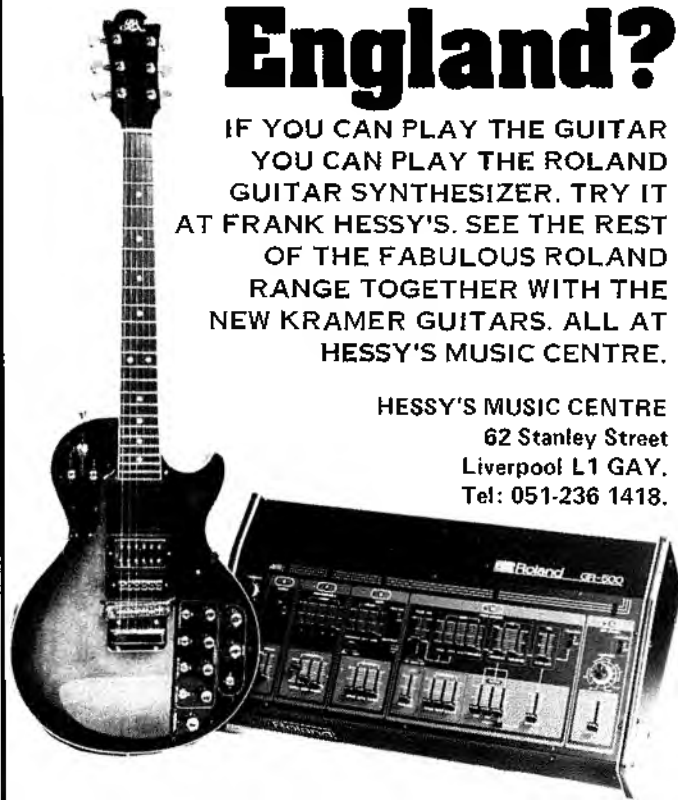


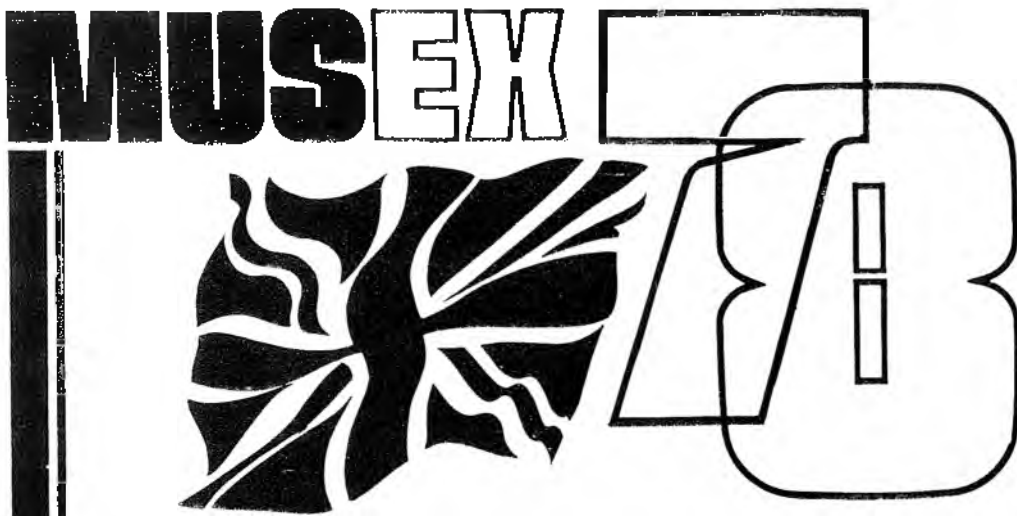
**MARTIN STRINGS  
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## A guitar synth in North-West England?

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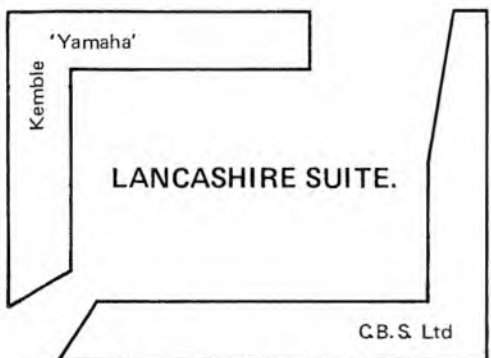
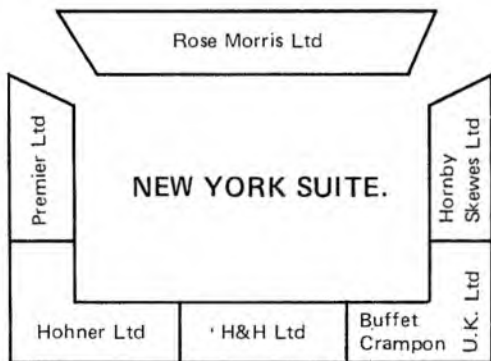
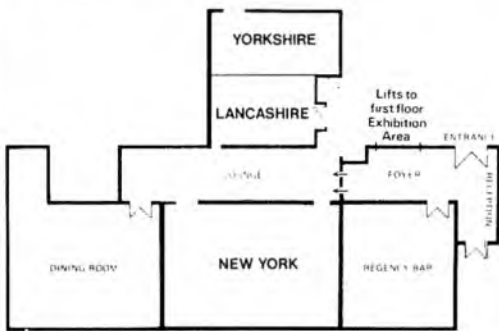


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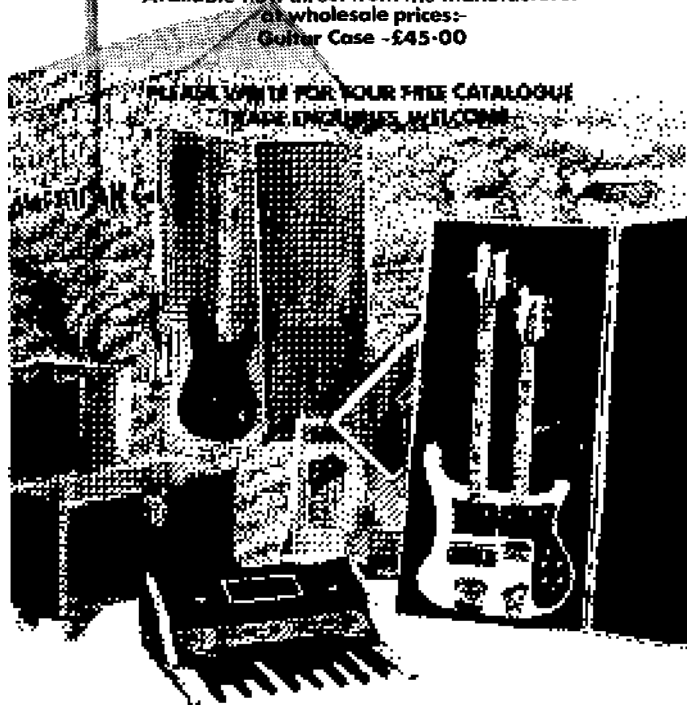
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# Synthesiser Centre leads the way

**S**ynthesiser marketing took another leap forward in Britain recently when Norlin and Kemble-Yamaha co-promoted synthesiser promotion evenings in London with the London Synthesiser Centre. Demonstrating the importance of the event, directors from both companies visited on their respective evenings and helped ensure the success of the marketing push.

The evenings were organised by Amrik Luther, boss of the London Synthesiser Centre. He's one of the most talked-about men in the British music instrument industry, pioneering the mass sale of synthesizers in a previously "dead" marketplace.

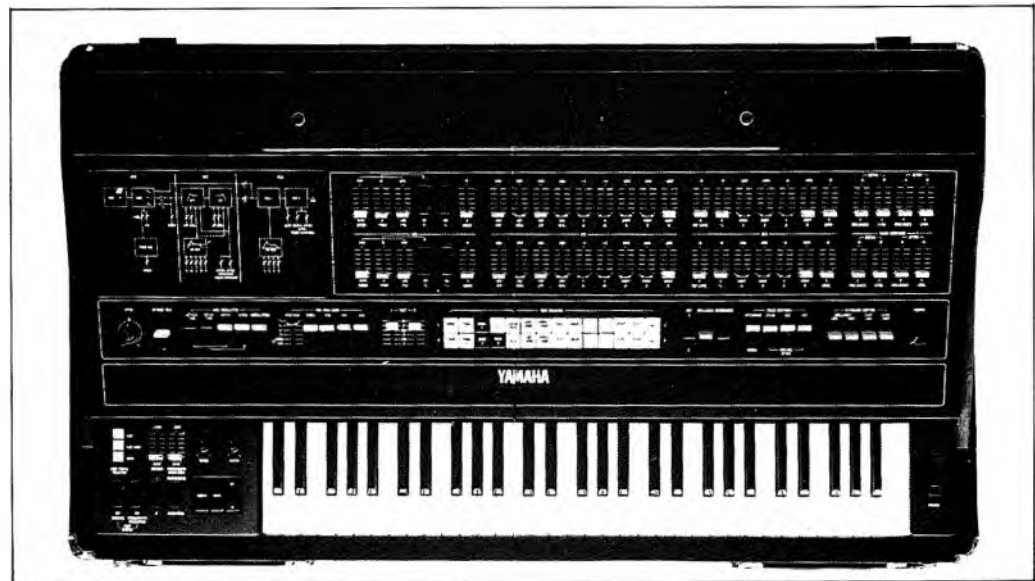
The Synthesiser Centre operates from unprepossessing premises off the Euston Road in London, but in two years it has become one of the major keyboard centres in London. The Centre is no longer the only "keyboards only" shop in the city, but it was certainly the first and clever marketing is continually employed to maintain that position.

Well over 100 synth players turned up to the Royal Ambassador Hotel in London to see the new range of Yamaha synthesizers. Sales Director Dennis Holloway and demonstrator Dave Bristow took trouble to explain the details of the instruments and Amrik Luther reported a total of 12 units sold following the show.

Norlin Music — the distributors of Moog — also had several new instruments on show at their evening which was held at the same venue. Approximately the same number of consumers arrived to listen to the show and Managing Director Ivan Steele took the opportunity to talk with many of the visitors. Also available on the evening from Norlin were Doug Ellis, Roger Haines and Geoff Long



*The Minimoog was a star turn at Norlin's display*



*The Yamaha CS80: cemented the trend in Britain*

and following the promotion Amrik reported a large number of Mini and Micro Moogs sold.

The synthesiser market in Britain now seems set to emulate the marketing course revealed in the USA. In Britain 60 per cent of music instrument sales are still guitars, with keyboards accounting for only 35 per cent of the market. In the USA keyboards take more than 50 per cent of the sales with the share still climbing.

For some years American and Japanese manufacturers despaired of the British market, considering the popu-

lation too poor to afford the increasingly expensive synth related instruments. The advent of the Polymoog transformed the synthesizer into a full-blooded "on stage" market and further innovations from Yamaha — the CS80 — cemented this trend. It was Roland, however, that really started the synth ball rolling in Britain. Under the direction of Brian Nunney, Brodr-Jorgensen UK Ltd. marketed inexpensive synthesizers aggressively and broke down the reluctance on the part of British music store owners to the "complicated" products. Now the final step

is being taken and the public and the distributor are being put into direct contact.

In the last 12 months a rash of "public" music shows has been held across the British countryside — usually promoted by a local music store in a Town Hall — and manufacturers and distributors have placed their wares on public display.

The evenings held this autumn by the London Synthesiser Centre are the first "synth only" shows and it seems certain that the rest of the British retail music trade will be forced to follow suit.

# This year, a lot of big amplifier companies are finally making small amps.

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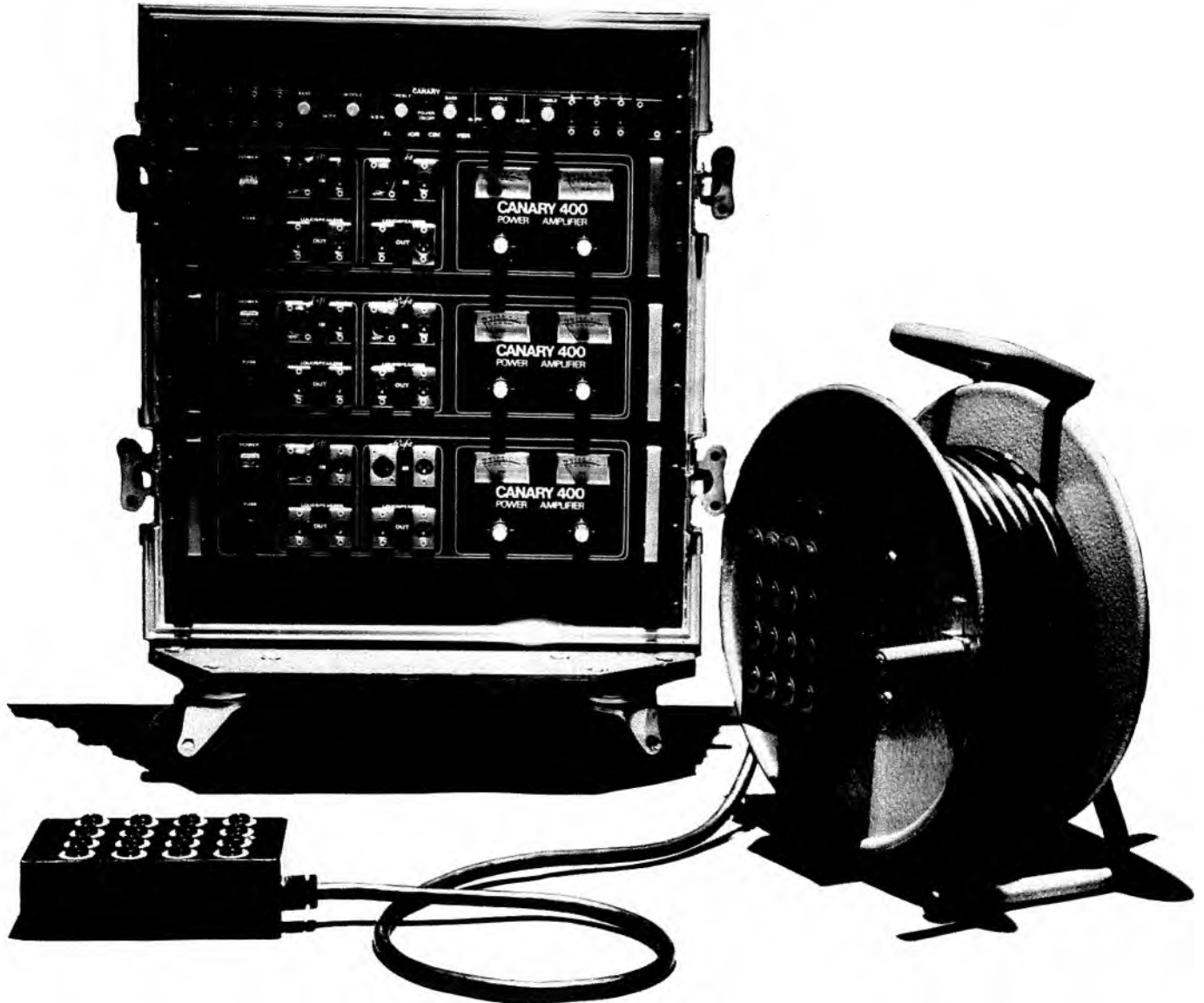
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several cheap monophonic synthesizers available over the last year, including the Korg Micro-preset, the EMS Synthi-E and now the new Yamaha CS-10 as well as the Elka Solist and, out of all these, the Elka is the most straightforward and therefore will suit a certain type of musician.

Your reviewer has misunderstood the basic function of the instrument, i.e. it provides pre-sets that can be modified by the variations section. He also does not seem to appreciate that this was not designed as a studio instrument but as an extra keyboard for the home organist or gigging musician. In the paragraph headed "Layout", a steel bar handle is mentioned and I must admit that, although Elka supplied me with a plastic flexible handle on my instrument, I have had a previous machine with a metal handle that was very awkward for carrying.

It is very easy to discredit pre-set tonal qualities if one feels like it, but the reviewer himself finishes by saying that "no preset synthesizers can actually be expected to deliver an accurate rendition, soundwise, of the labels on their buttons." The next paragraph points to the reviewer's misunderstanding of the instrument's controls. The actual layout of the instrument is one that would not be criticised by most musicians using this on top of an organ and a review of this nature should always consider the type of consumer market at which an instrument is aimed.

Mike Beecher,  
Wickford Music School,  
Essex.

## Fret work

*Dear Sir:* I have recently bought a Fender Strat which is perfect in every way apart from the neck. I suspect the neck is manufactured to Fender specifications and is not at fault in any way but my problem is that I can't lower the action as much as I would like. My style of playing involves bending the string with a deep finger vibrato, thus the strings catch the frets. The only answer would be to raise the action but this would obviously make the guitar harder and more uncomfortable to play.

I am no expert in guitar design but I suspect the camber of the neck is causing this problem. I've tried adjusting the truss rod and body to neck alignment, and have even thought of needle-filing the centre of the fret to reduce the camber but was a bit apprehensive. Anyway, Fender fret wire is too thin to make a noticeable difference.

I've decided to get another guitar in the hope that I can find a suitable neck. My questions are as follows: Do all necks on Fender models have the same degree of

camber or do they differ slightly with the individual craftsmen? Do Gibson necks have a different camber from Fender necks? If I were to buy a new guitar, which model would you recommend to suit my playing? Do Gibsons or any of the well-known manufacturers make a solid-body guitar with an almost flat fingerboard?

I hope you can look into this problem or I suspect I and many other guitarists with similar hangups will remain frustrated and give up playing the damn things.

Stephen Lamb,  
Washington,  
Tyne & Wear.

*Stephen Delft replies:* Assuming the frets on your guitar are perfect, I would suspect "camber" is the most significant factor in your case. (It also exaggerates the effect of imperfect frets.) A possible solution would be to have the frets stoned lower in their centres, if enough metal remains. I believe Music Man guitars are "Fender-ish" in style, with an option of two different cambers. Also, you may like the Peavey guitar which we shall be reviewing in the next issue. Otherwise, you could try one or other of our better British "one-off" makers.

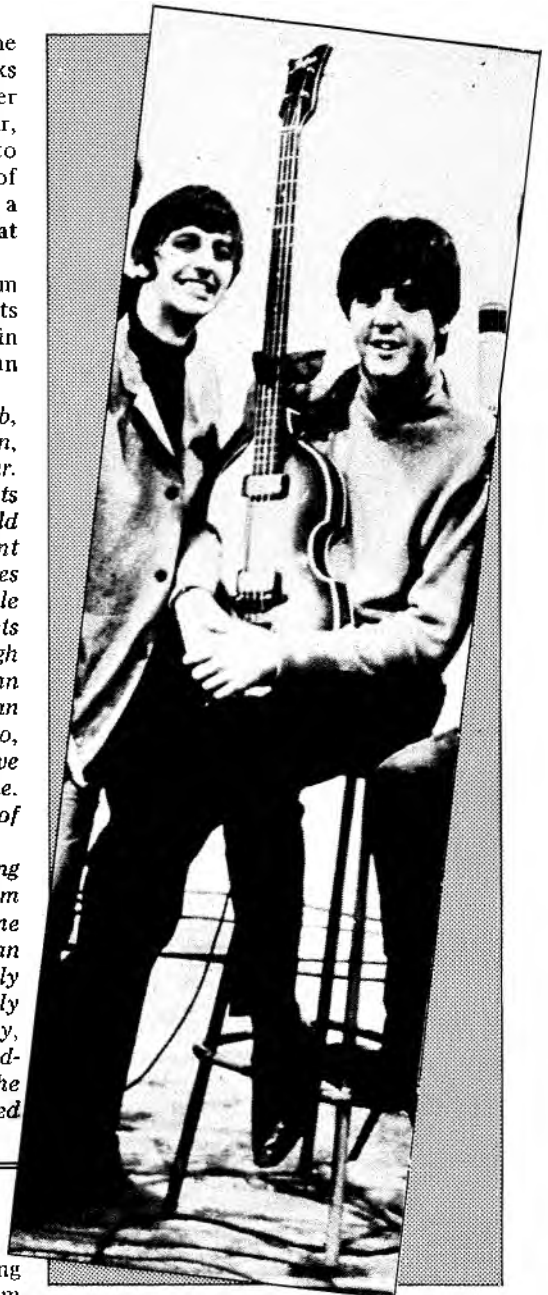
You are quite right in thinking Gibsons have different cambers from Fenders and there are also some variations within each make. Travis Bean used to (and may still) have a virtually flat fingerboard and claim almost exactly the advantages you seek. Alternatively, you may be able to get a good second-hand guitar in need of a re-fret. If the rosewood is thick, it can be skimmed flatter during a re-fret job.

## Bin building

*Dear Sir:* I am seeking advice on building cabinets to house 15" bass speakers. I am at present using a Powercell 15" unit rated at 125 watts, although I see they are now claiming to handle 250 watts. I have this fitted in a rear-facing bin with two MH1000 horns for HF response. Have you any suggestions on dimensions, design, etc. for (a) a cabinet to carry two 15" Powercell speakers or (b) a pair of cabinets to carry one 15" Powercell in each. I intend then to add the MH1000s as the situation arises.

Brendan O'Kane,  
Co. Armagh,  
N. Ireland.

*Ken Dibble replies:* Your problem was almost exactly covered in a series I did called "Build A Loudspeaker Cabinet". This was published in the September, October and November 1976 issues of I.M. and the Celestion units you intend using were among those recommended for the project. Back issues are available.



## Beatle basses

*Dear Sir:* On reading your magazine, I was interested in a letter concerning Hofner guitars. I am particularly interested in the Hofner Violin bass, as used by Paul McCartney, but have been unable to obtain any information as to where they are available. I gather from the letter that they are once again available in England, as you have said previously in earlier issues.

Andrew Bennett,  
Carlisle,  
Cumbria.

Hofner Violin bass guitars, or "Beatle basses", as they are popularly known, are available from Barratts of Manchester, 652 Chester Road, Old Trafford, Manchester M16 0RX at a retail price of £186.04 including VAT.

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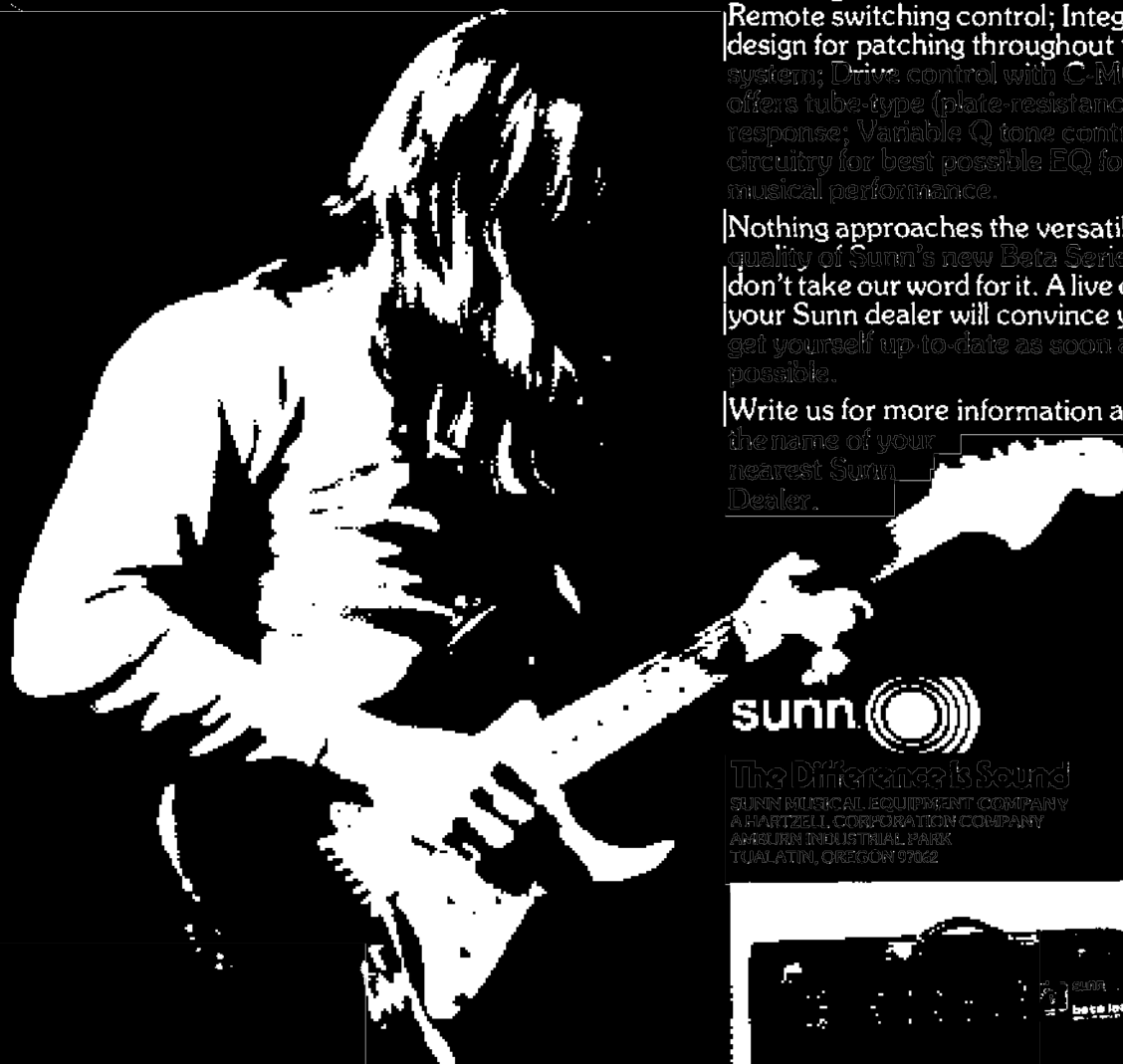
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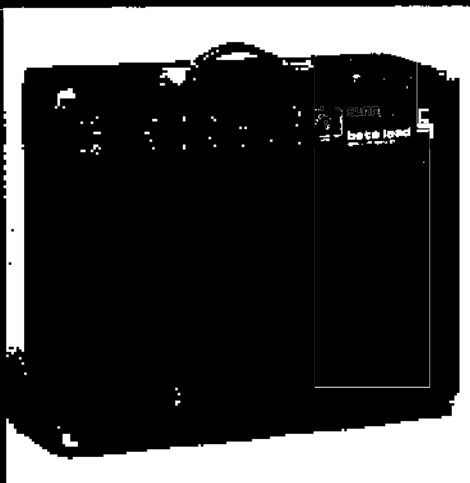
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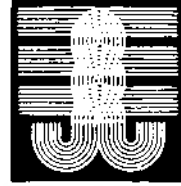
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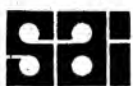
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Studio 1 16T Cap 35, £27 p/h  
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If, R-R, CP, Ka, RC, DC, d-t, M.S, fcd, SM.

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M, H, RC, PA.

## KEY FOR DEALER GUIDE

EC	Echo Chamber
RCn	Re-Coring
O	Organs
IR	Instrument Rental
SYN.	Synthesizers
G	Guitars
A	Amplifiers
D	Drums
S	Strings
S/Hnd	Second Hand
MA	Main Agents
RS	Repair Service
Spec.	Specialists
ERS	Electronic Repairs
EK	Electric Keyboards
K	Keyboards
B	Brass
W	Woodwind
L	Lighting
H	Hire
Ac	Accordions
SFI	Special Fretted Inst.
T	Tuition
M	Mikes
RC	Reconditioning
SM	Sheet Music
PA	Public Address
PSG	Pedal Steel Guitars
CB	Custom Building
Di	Disco

# STUDIOGUIDE

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0582 805875/27195/26693  
8T £8 p/h, 16T 10 p/h incl. tape Cap 10 R-R  
C, D, DBX, Comps/Lms Sm, if, CP, Ac/ba, I  
A, Ampex Mastering Echo Plates, TV.

**QUEST STUDIO**  
721 Windmill Road, Luton, Bedfordshire  
0582 414297/36950  
8T Cap B, from £6.00 p/h, p/d ba, D, if, R-R,  
CP, R-C, DC, Ba, d-t, Piano, M.S., Ac, ba, SM,  
Eventide effects

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Studio 2 16T Cap 35, £34 p/h  
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Sundays £20 p/h (Cap 35, if, R-R, R-C, R-  
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9 Denmark Street, London WC2H 8LP  
01-836 6061  
24T Cap 20 £32 p/h D, if R-R, CP, Ka, R, C,  
d-t, OTC £5 p/h, M, S, Ac/BA, SM

### CHALK FARM STUDIOS

1A Belmont Street, London NW1  
01 485 5798  
16T, Cap 15, £18 p/h, D, TF, R-R, CP, Ka,  
R-C, DC, D-T, OTC £3 p/h, M, S, SM

### DECIBEL STUDIOS

19 Stamford Hill, London N16  
01 802-7868  
24T £27 p/h p/d neg. Cap 20 D, if (1  
Ampex 1 Studer) R-R, CP, Ka (Yamaha  
Grand and Synth), R-C, d-t, Q, OTC, £2,  
M, S, lcf, Ac, ba, SM

### ELEPHANT RECORDING STUDIOS

181A Long Lane, London SE1  
01 403-3505  
8T £6 + £5 1" Tape hire. £30 per 6 hours  
Cap 8, if (Brenell) 8 track - Revox 2T, R-R,  
Cr, Ka (Piano, Organ), R-C, OTC (after  
11pm £2 00 p/h) M, S, SM, ba

### FOREST STUDIO

189 Hainault Road, Leytonstone, E11,  
01 558 3344  
24T £18 p/h, 16T £16 p/h, 8T £10 p/h,  
(Block Bookings more than 10hrs, neg.) if,  
R-R, R-C, Cap 25, CP, Ka (2 Organs,  
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ba, NO OTC, M, S, AC, SM

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01-836 7608  
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scale), 8T £13 p/h Cap 8 D, if R-R, CP, Ka  
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Rhodes) R-C, d-t, OTC, M, S, SM, ba

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p/h

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38 Hertford Street, W1  
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Studio 1 8T £14 p/h, Cap 8, D, if R-R, R-C,  
R-Cr, d-t, CP, Ka (Steinway grand, ARP  
2600 Synth), OTC, £4 p/h (6.00am -  
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Techniques Desk 18 x 16

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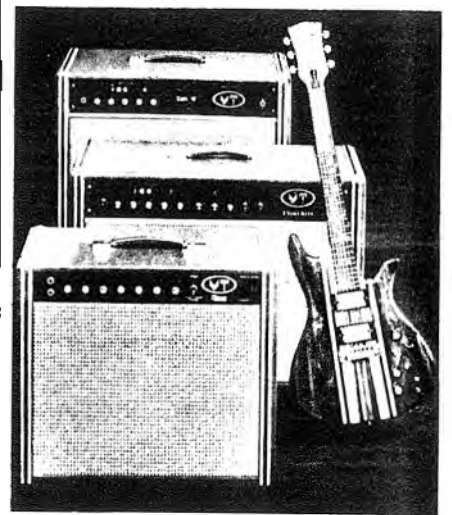
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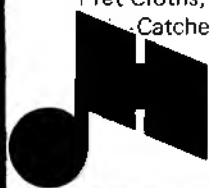
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Congratulations to the lucky winners of the Cleartone Musical Instruments Ltd. competitions in our August issue. The winners of Competition A, who each win a Park PA system, are: Andrew Flower, Crawley, Sussex; Paul Gilby, Houghton-le-Spring, Tyne and Wear; John Howard, West Lothian, Scotland; and David Leggett,

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The winner of Competition B, who earns himself a pair of Latin Percussion congas, is John Roger Shaw, of Shawlands, Glasgow.

A presentation ceremony is being arranged — report and pictures in next month's International Musician.

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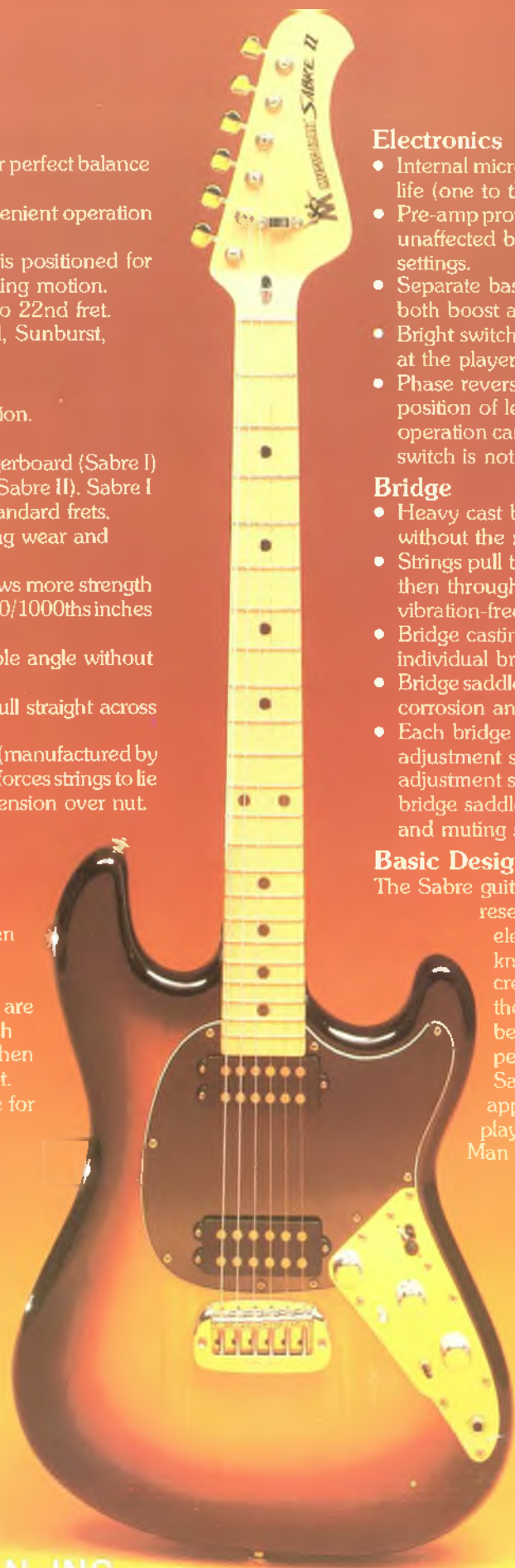
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