

INTERNATIONAL MUSICIAN AND RECORDING WORLD

FEBRUARY 1983

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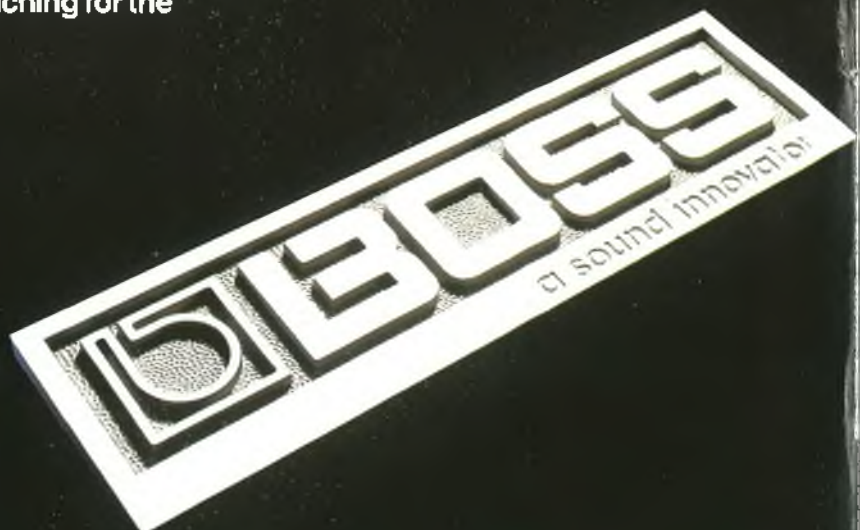
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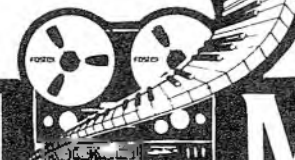
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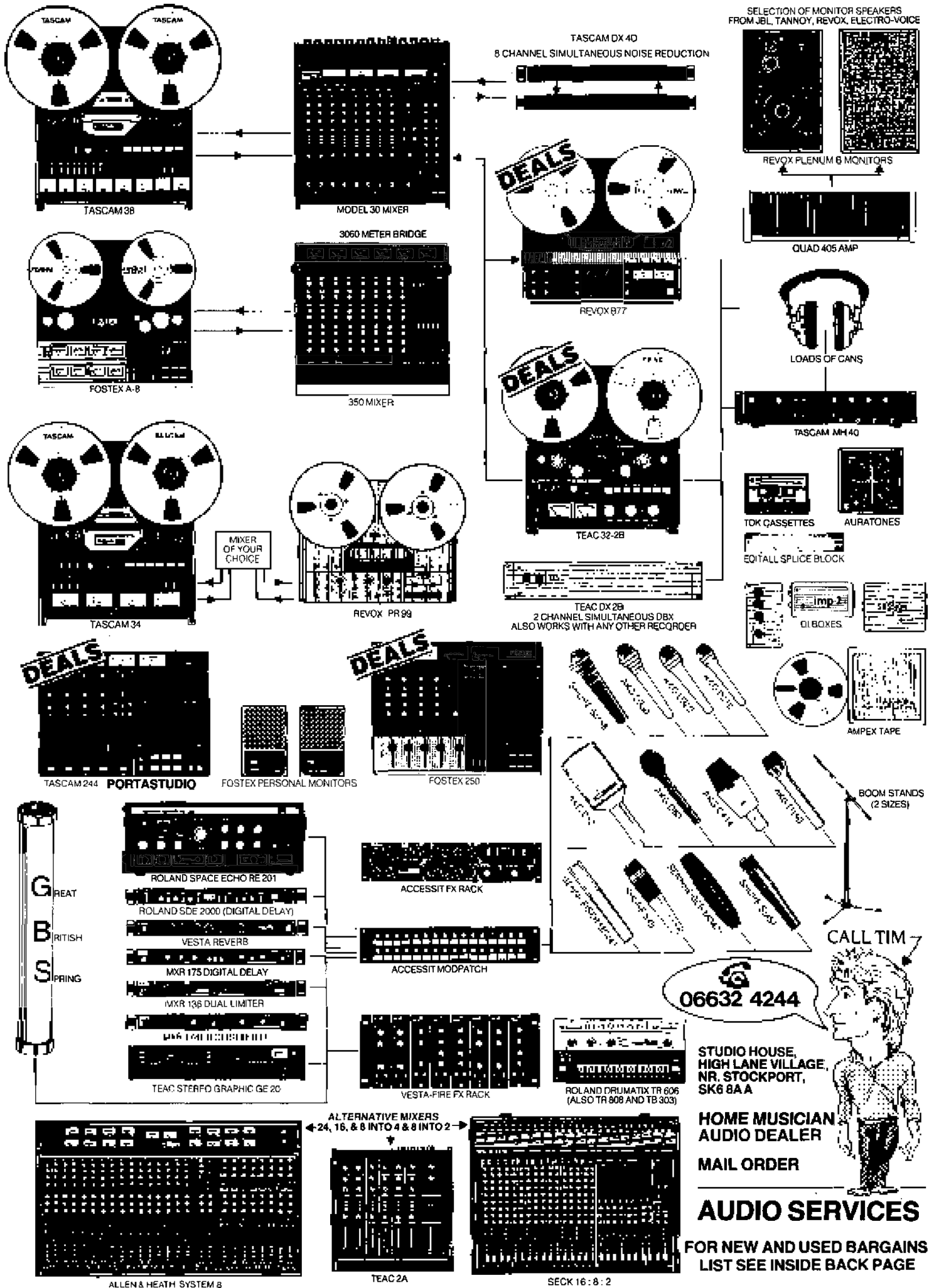
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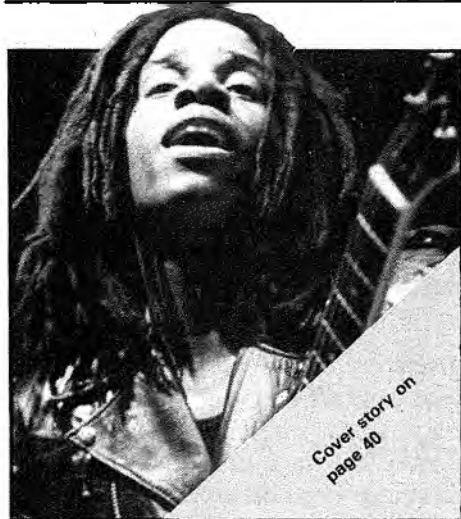
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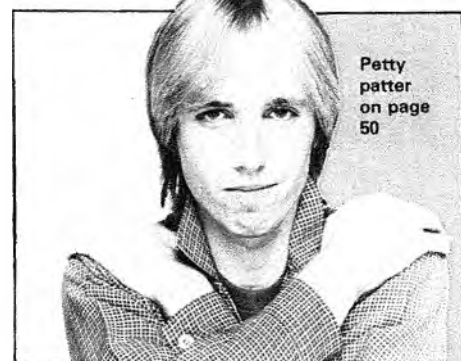
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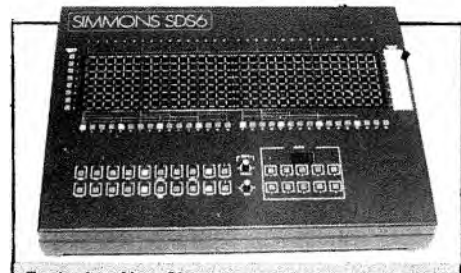
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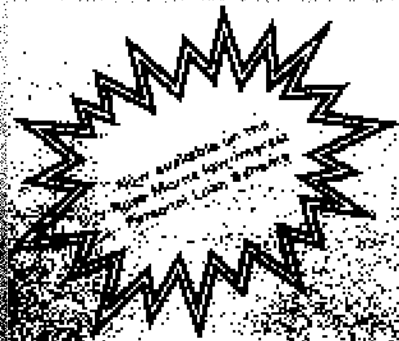
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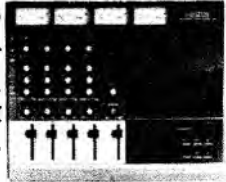
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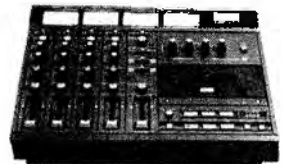
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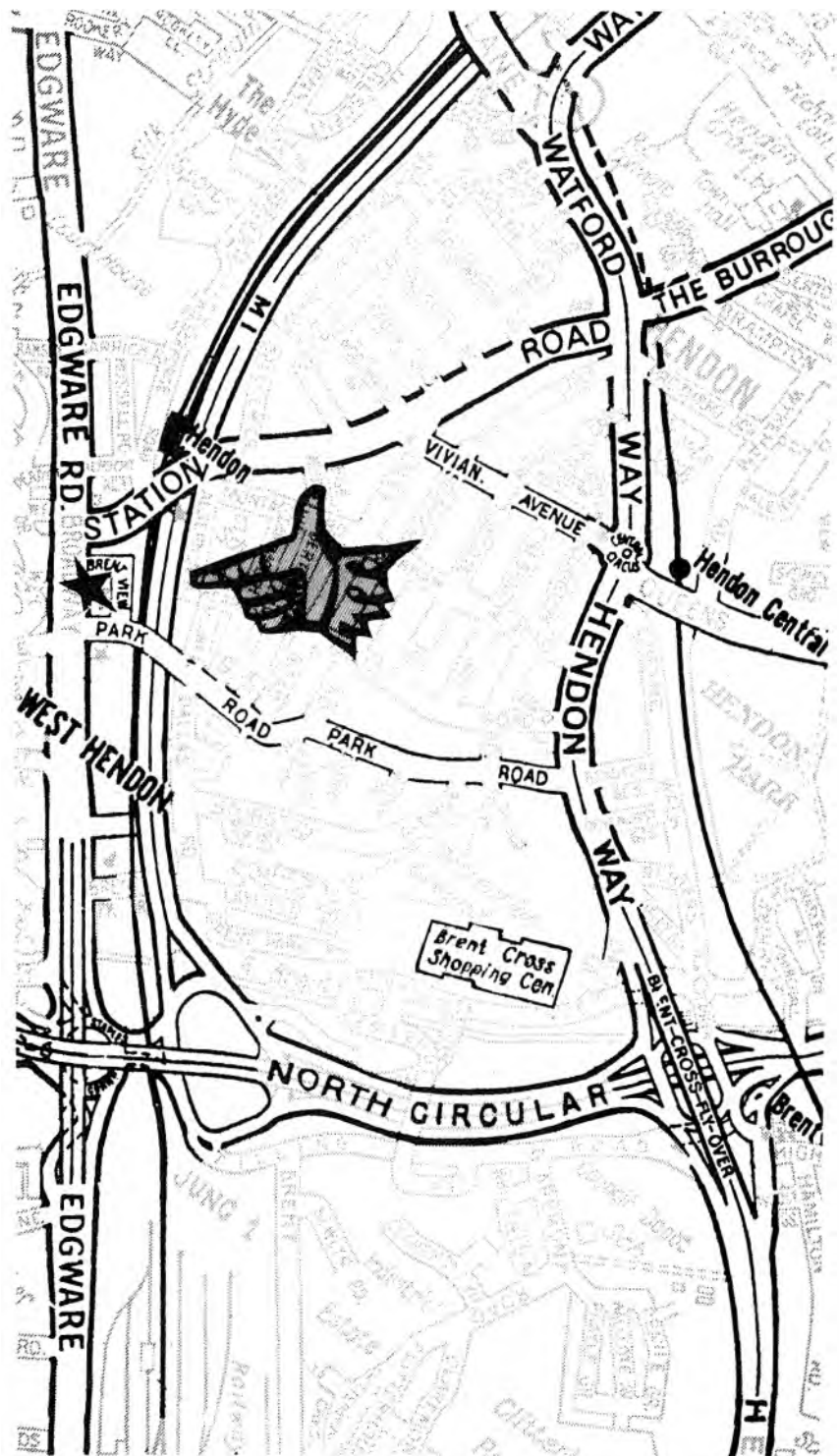
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EDITORIAL

WELL THERE'S ANOTHER 'R' IN THE MONTH so it must be time for a trade show. It seems like only a year since the last, but here it comes again — Frankfurt, The Musik Messe, February Trade Show. Call it what you will, but it's *the* fair to be seen at: be there or be square. As usual we've got a preview inside and we'll be following it up in an issue or two with the review, so prepare yourself for a host of new goodies.

This month's cover features the multi-talented Eddy Grant, interviewed at his hide-away home in the Caribbean. The lengths some people will go to for a front cover!

And if that don't take your fancy we've got Gary Kemp, songwriting talent with Spandau Ballet, Tom Petty, U2's The Edge and The Damned live in Brixton. The managers this month features that other man from the Spans, Steve Dagger, and Beatroute covers Dire Straits' live equipment set-up.

Equipment this month features an exclusive look at the latest development from those masters of the hexagonal drum, Simmons. See what the SDS6 has to offer inside. Also getting a critical ear is that tiny amp from Tom Scholz, The Rockman, the Korg SP80, Wal bass, Shure headphone mike and...oh, just take a look inside.

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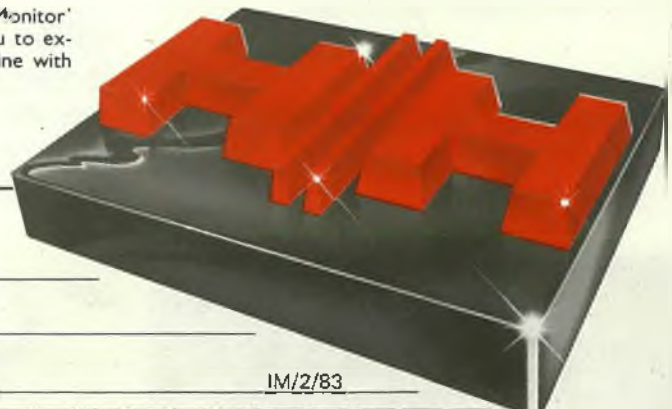
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FEEDBACK

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Complete customising

Dear Dave Burrluck,

I have been following your monthly series 'Guitar Surgery' with the utmost enthusiasm as guitar customising is a great hobby of mine. So far, I have only ventured onto calm waters, ie changing pickups, selector switches and the like.

However, I crave to embark upon rougher seas and fulfill the ambition of a lifetime — to build my own guitar. I have, however, not been fortunate enough to obtain the necessary literature to enable me to accomplish this feat of achievement and I would be immensely grateful if you present me with the address(es) of any establishment(s) where such information is obtainable.

I await your reply.

Robert M Leeder,
Mid Glamorgan

Guitar making can be quite an involved job and various establishments run courses in the subject ranging from a full time three year course at places like the London School of Furniture, to possibly a night class at your local evening school. To find out about these courses you'll need to contact either your local careers office or local library.

Now, if you're not in such a rush to make a guitar you can,

as many people have done, teach yourself. For this you'll need to become a detective to search out all the information. A good starting point, however, is Donald Brosnac's book 'The History and Construction of the Electric guitar' which is available from Music Sales Mail Order, Newmarket Rd., Bury St Edmunds, Suffolk. Priced at £3.95 plus 60p p&sp, cheques should be made out to Music Sales Ltd.

Also try to track down any local guitar makers or repairers who may be able to give you some valuable practical advice. I started making guitars many years ago from a very old article I had found in a

woodworking magazine. With the help of my father we constructed the 'guitar' which was hardly a sophisticated instrument, but I became hooked. The next guitar I made was a copy of a Fender Strat which I had seen in a local music store. I'm still learning and that is the great thing about making guitars — each one is an experiment, and hopefully better than the last. If anyone can help Robert why don't you drop him a line — two heads are always better than one, and you never know in a few years time we may be featuring you in IM as a new guitar maker. — Dave Burrluck

Back issue news

I understand that at some time during the past (1981/1982?) International Musician printed an interview with Jimmy Page. I was wondering if it would be possible to obtain a copy of the back issue in which this interview appeared?

I would be very grateful if you could let me know if a copy of the issue in question is available and how much you will require for payment?

Thanking you in anticipation,

C E Barrow,
Tilehurst, Reading

This is just one of many letters we get enquiring about back issues, so I'll take this opportunity to tell you all how to get them.

All you do is send a postal order or a cheque for £1 made payable to 'Cover Publications' to PO Box, Farndon Road, Market Harborough, Leicestershire. The £1 includes postage and packing but is subject to the particular issue being in stock.

As for the Jimmy Page interview, that was in the Jan '82 issue.

MXR overdrive

Referring to Mr Gillybrand's letter appearing on Page 15 of the December issue of International Musician, readers may be interested in the following comments: —

He is looking for the rather special sound which can be obtained by using a guitar in conjunction with a valve amplifier. Many frustrated guitar players have tried in vain to get this elusive sound wanted by Mr Gillybrand only to find it cannot be done with standard equipment. Likewise a special pre-amplifier can only very roughly simulate the effect. The reason is that the special sound is obtained from the combined functions of a suitable power output stage and the associated loud-speaker system. Standard equipment with abrupt overload characteristics cannot possibly fill the bill. Valve amplifiers with a limited amount of negative feedback get it right, but they are bulky, fragile, hot and expensive.

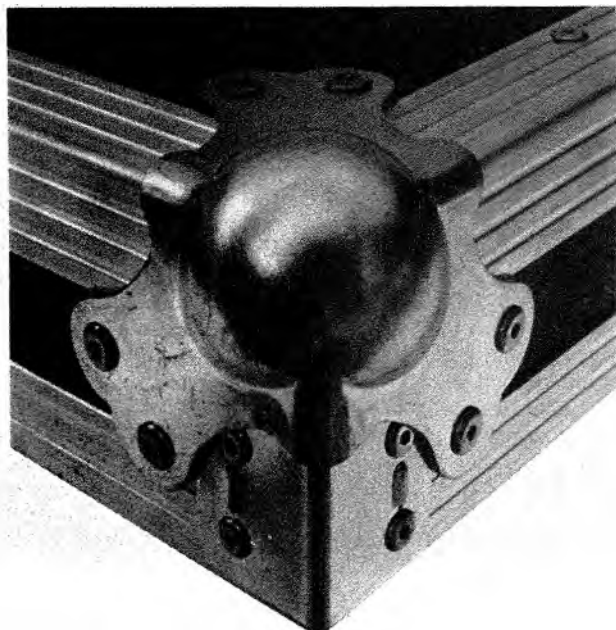
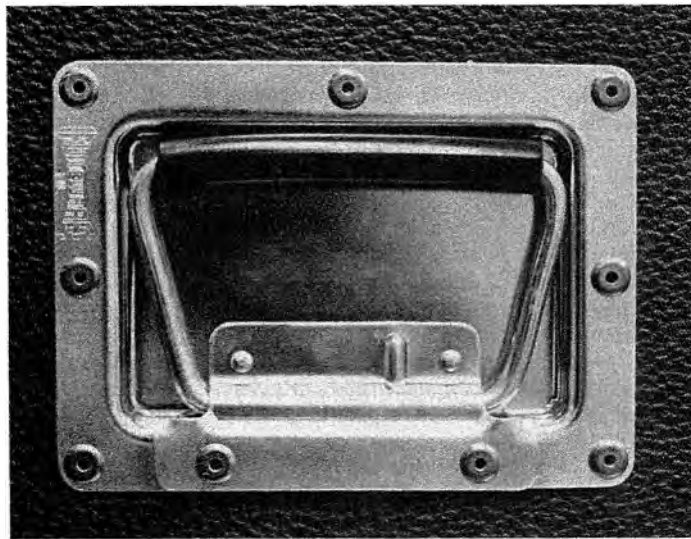
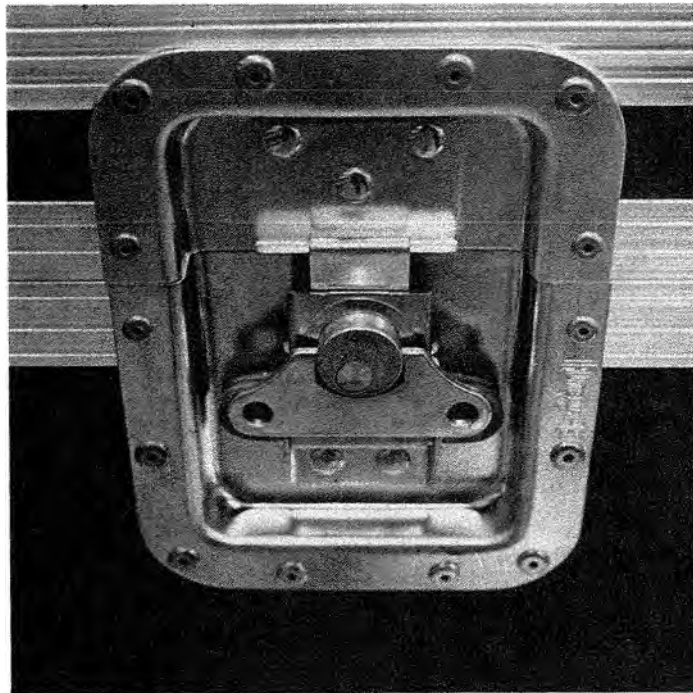
We have studied this problem very extensively and accordingly developed a modified solid state power amplifier and combined speakers which will produce the magic sound. It is expected that this unit will be on the market early in 1983.

Leslie J Bradley,
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I can honestly say the sounds are amazing

"The Vox 125 Climax Combo is one of the best amps you can buy if you're starting off."

That, ladies and gentlemen, is a totally unprompted statement from none other than Paul Chapman, ace axeman of high flying metal merchants, UFO.

"It's 125 watts of pure power growling out of a neat, compact case."

Thank you, Paul. But what sort of a sound does it give you?

"Well, it's kinda pokey but ballsy, just the way I like it. And if you add another speaker, the power's downright incredible."

The Vox Climax will deliver 125 RMS before distortion and incorporates many outstanding features including a unique sensitivity control to enable you to match any guitar to it. (In other words, from a Watkins to a Washburn, it'll deliver the goods.)

However, let's get back to the maestro.

"The 125 also gives you some really sweet effects. Being a valve amp, you can really overdrive it. What's more, it gives you a harmonic quality you just can't get with any other amp."

"I've been playing the 125 on our new album and, without blowing my own trumpet, I'm really knocked out with the solos on it. Especially on a track called 'Blinded by the Light' - I can honestly say the sounds amazing."

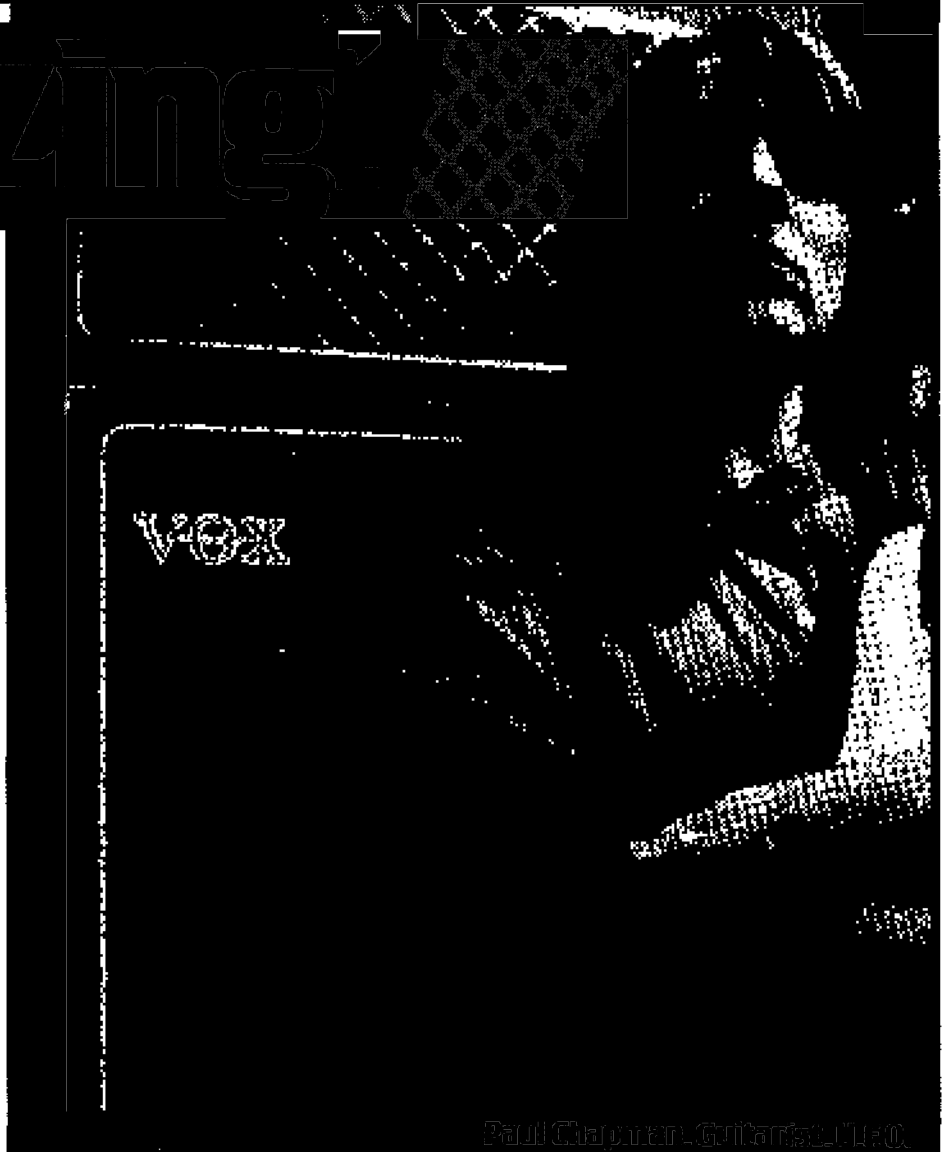
We undoubtedly could go on. And on. Unfortunately, however, we'd

run out of space. So if you'd like some more information on the Vox 125 Climax Combo, please complete the coupon.

But let's leave the last word to Mr. Chapman.

"The 125's a stonner and when we next play live, all I want behind me is a complete wall of Vox"

Thank you, Paul. You're a real brick



Paul Chapman, Guitars: UFO

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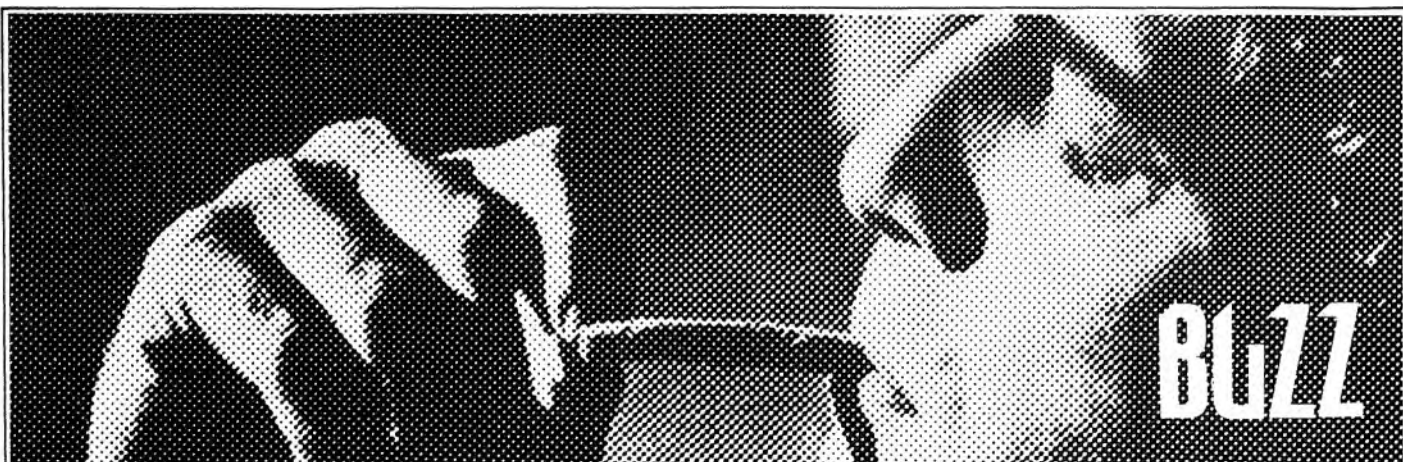
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VOX



Elka winner

AFTER FINALLY wading through the masses of entries we got for our 'Win An Elka X-50' competition in the November '82 issue we finally plucked out a winner.

Lucky Steve Gaddis, of Caldewood, Glasgow, was the man and he was presented with his prize just before Christmas by Reg Clark, Sales Manager of

Elka's pro keyboards division, and Richard Desmond, chairman of Cover Publications.

'Scottish Steve', as he's

now affectionately referred to in these quarters, is a medical student and is at the 'just forming a band' stage of his musical career.

For those still interested the answers to the four questions were Procal Harum, The Doors, The Stranglers, and Blondie. TH



Steve Gaddis gets his prize from Reg Clark (centre) and Richard Desmond

ARGUS Quartz Guitar Tuner Model KT-001

When pocket-sized guitar tuners became available in this country a few years ago (the 'Justina' was the first one that I can remember) the Japanese realised they were on to a good thing. Since then many different makes of tuner all remarkably similar in function, if not looks, have appeared all retailing around the £30 mark. The trouble is, apart from a couple of minor improvements, all the 'new' tuners that I have seen have the same problems, ie they are all remarkably flimsy in construction and frankly don't stand up to the average musician's abuse.

This Argus tuner isn't too bad, however. It's certainly well put together and surprisingly versatile. The function selector offers a battery check plus, when plugged into an amp, a 440Hz tone, which is very handy. Then it has a standard tuning mode, and also a sound mode-again when plugged into an amp - producing the correct note frequency so you can tune any instrument by ear that corresponds to the set frequencies.

The actual note selection is achieved by six push buttons

which is a vast improvement on the old slider switch method, as these switches seemed to wear very quickly.

The assist-indicator tells you if the selected note is approximately sharp or flat or nearly there, while final accurate tuning is achieved by the tuning meter. Visibility of the meter is aided by an optional lamp, again operated by a push switch.

Also included is a built-in microphone for tuning acoustics plus an output socket so that the tuner can be left in line while on stage. There is still no facility for switching off the signal to the amp (apart from unplugging the tuner) so that unheard tuning cannot be achieved on

stage. Still, the tuner has all the usual functions plus a couple of handy improvements, which must make it one of the best guitar tuners around at the moment.

However, I still doubt the

reliability and lasting strength of these units, this one included, but for the price we can't have everything. The Argus tuner works well and is attractively priced, say no more! DB

Gerry Cott on Home Taping

Songwriting at home or recording your band in rehearsals has come a long way from the days of the cassette recorder placed in the middle of the rehearsal studio. The rise and rise of the portastudio has given musicians and solo artists a whole new approach to recording at home and, more importantly, a head start

when it comes to getting your material up over the ramparts of that virtually impregnable fortress - the record company A&R department.

Gerry Cott, former lead guitarist with the Boomtown Rats, is more than satisfied with his personal set-up at his home in Surrey. From a hectic life on the road, Gerry

I'm beginning to adopt that pained, haunted expression normally worn by A&R men, when you begin to think that the whole world is one big C60 and you have to have your personal hi fi surgically removed every six months.

But yet again, I have emerged from the depths of my headphones to give my celebrated opinions of the underground sounds around. So stop your womanizin', drinkin', druggin' and general Rock'n'Rollin' and come with me to Demoland where trees are portastudios and the sun is one big LED. Yes, being cosmic is BACK so grow your hair, get your karma together and lose yourself in the vibes.

Although my philosophy has always been that wonderful production and 48 track sound isn't necessarily the be all and end all of making a demo, it still peeves me a little to hear actual talent being murdered by a completely naff recording. Unfortunately **Anhizer Busch** fall subject to this unsavoury syndrome, and although the boys apologise for poor quality, I feel that maybe they should have re-recorded the demo because some of the ideas are definitely strong. Simple, but strong. But the strength gets lost, the little touches sink into the mix and the tape subsequently dwindles into a poor imitation of a badly

recorded Doors bootleg. Definitely a case of starting out badly and slowly petering out.

Whiteraven sounds decidedly Metal, don't you think? Not that I disdain Heavy Metal, I'm a pretty broadminded sorta dude, I'll listen to anything and everything. . . So when I took it out of my HM bin, I was pleasantly surprised to find it was one of these 'modern atmospheric' affairs. Well, when I say pleasantly surprised, it was more of a relief than anything else. For although the tape does have some nice synth chunks, the melodies are too trite to be true. The drummer's too busy and the end product does for the attention what Hiroshima did for skin care.

The Seychelles come from Reading, but despite that they still manage to produce fresh, interesting Pop. Their combined use of a drum machine and a real flesh flavoured one works, as does the sparing use of the two guitars. My only qualm is the lack of character in the vocals which would distinguish them from the plethora of Pop bands abounding. I mean, it was only Peter Perrett's charismatic tones that set **The Only Ones** apart from their contemporaries. Or at least that's what it says here in my Peter Perrett

autobiography. Anyway, it's called **Glass Ideals** and if you want to know more about them phone them up.

Singer/songwriter/guitarist/juggler (OK I made that bit up) **David Marks** sent in his "three track offering that initially struck me as a manic Elvis Costello take off. But

DEMO CORNER

upon closer inspection, I found some intricate melodies, jumping rhythms and some deliciously maniacal guitar playing. The man hopes to get himself a band together and get out on the road as soon as possible (an affair that will probably go under the banner of **The Marxmen**). See 'em soon while you can still afford a ticket.

Liverpudlian people, **Some Detergents** . . . sent in such a well packaged demo I couldn't help but mention it. The whole shabang entitled *That's What Pop Is About* . . . included a comic with graphically explained lyrics and lots of pretty colours and symbolic diagrams. The music is a quasi-Simple Minds affair

with slightly more commercial overtones than the Glaswegian maestros. In true Liverpudlian style the lyrics are verging on the cosmic with a prevalent philosophy of 'If nobody can understand them nobody will argue with them', and with titles like *Just What Is It That Makes Today's Homes So Different, So Appealing?* who can argue?

But now kids, it's what you've all been itching for . . . it's . . . a cure for herpes (sigh — Ed.). No it's Deeeemo of the Month which comes from India and it really is far east!

India tell me that they come from Yeovil which goes to prove that they know where they're coming from, and the sound they produce is Penetration all over again. The demo was recorded at MONITOR studios, an 8-track in Somerset and the results are very impressive. The vocals are so like Pauline Murray it's hard to believe and the production does nothing else but enhance the songs. They say that they're trying to escape the 'Wessex scene' at present and when they do I think I might just go and see them. . . I'm just such a street guy.

Anyway that's all from me this month. Keep eating the muesli and remember it's the inner self that really matters. AD

has spent nearly two years since his departure from the band, writing and accumulating ideas, the first of which materialised in the form of his recent release: *Ballad of the Lone Ranger*.

"The thing that most people don't realise is that the portastudio can be used to produce acceptable demos", Gerry told us, when we chatted to him about his techniques. "Many musicians tend to regard the portastudio as expensive toys. If you take the time to get to know how to use them properly, it can save a lot of money in the long run. Apart from that, it can also give bands a lot of valuable experience, so that when they do find themselves in a large professional studio they'll have a far greater appreciation of the engineer's problems — and the ways to help solve them."

Gerry's own set-up is in a bedroom and he has mastered the technique of Close Field Monitoring which

is dependent upon accurate positioning of the equipment to produce a perfect stereo image. Among the equipment



Ex-Boomtown Rat Gerry Cott, not to be found in a small demo studio

he employs in his home studio are a Teac 144 Portastudio, Technics FL cassette deck, Revox A77, KLH 2-way monitors and two Fostex dynamic microphones.

"Another advantage of the portastudio is the fact that you can have constant access to a very sophisticated recording set-up. This way, you're not watching the clock and mentally counting up how much you're spending in studio time, which isn't cheap these days."

Portastudios always seem to be in the news and it's interesting to note that accomplished musicians of this calibre are regarding them as a serious alternative to the smaller demo studios. One thing is sure. Now that the day of the portastudio has arrived, home recording is never going to be quite the same again. CF



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The SM81 has been quite a shock to me, not only from when I first tried it out, liked it, and decided to buy a pair, but also a year later when I discovered from the brochure that the mic. was an electret.

Shure Brothers have always had a good name for robustness and reliability, and electrets are usually thought of as a low cost alternative to regular capacitor mics. with some sacrifice in sound quality.

With the SM81 Shure have produced an unique combination - together with a transparency of sound and freedom from coloration, distortion and noise comparable with other manufacturers' traditional condenser models costing a lot more. The switchable bass roll-offs and attenuator are helpful extras as well, and missing from my other favourite choice of cardioid costing around double the price.

Recording classical music is a tough test for microphones and my SM81s earn their keep successfully as very useful additions to my kit of mics., both for distant and close pickup if required.



Tony Faulkner
Audio Engineer

VAT No 225514681

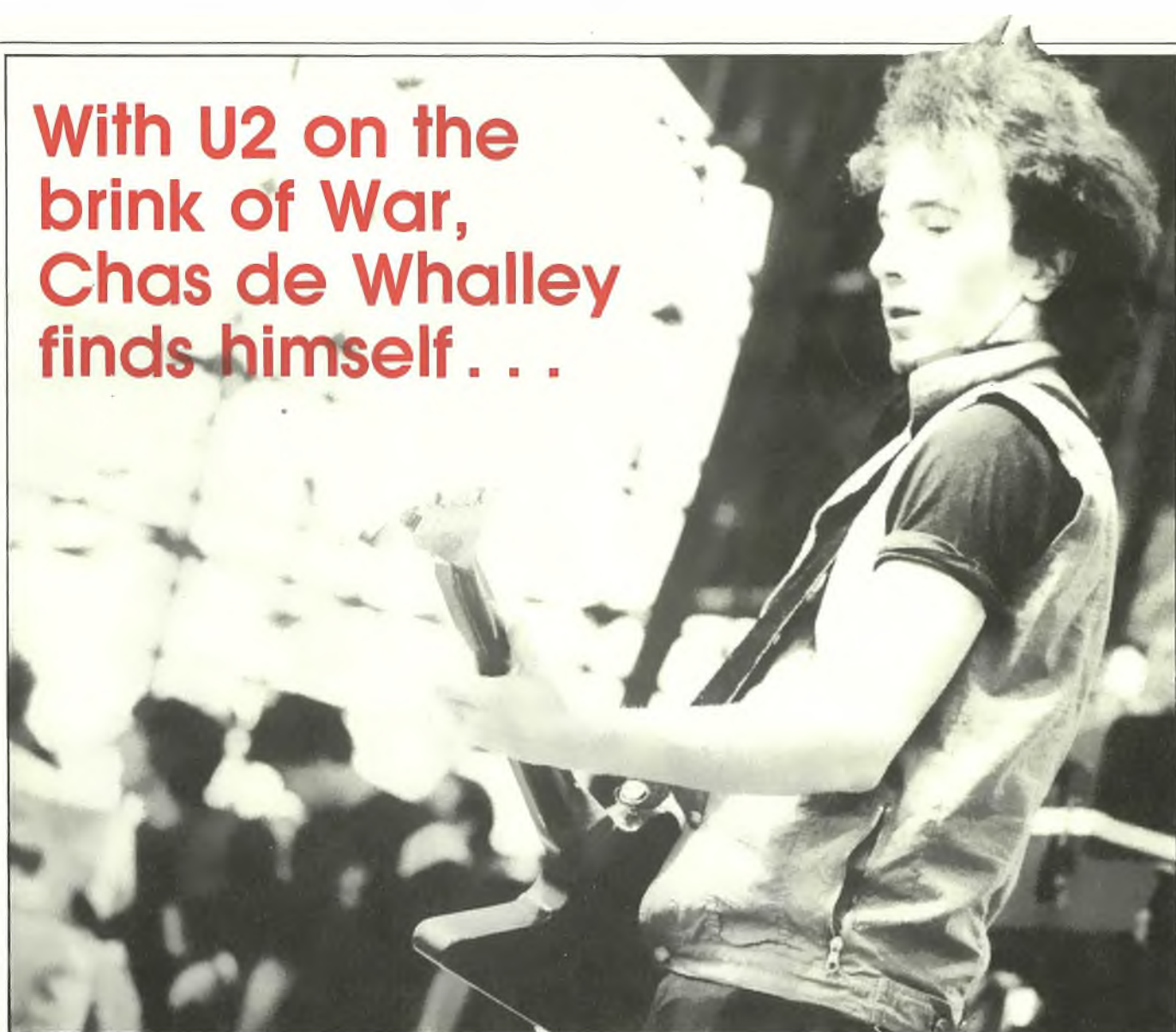


Tony Faulkner is a leading freelance independent recording engineer based in London who records around 50 classical music albums each year.

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With U2 on the
brink of War,
Chas de Whalley
finds himself . . .



Dave Evans 'Edges his bets

CLOSE TO THE EDGE

IF THE EDGE DIDN'T EXIST

then somebody would surely have invented him by now. And it would probably have taken an Irishman to do the job. After all, it was only a few short years ago that the very idea of a New Wave guitar star, let alone a New Wave Guitar Hero, would have been laughed out of court by the peroxide pundits in the punk cellars of Soho and Covent Garden. 'Leave all that to the BOFs — that's not what we're about!' But U2's The Edge soon knocked that notion flying.

Music is music, when all is said and done. And musicians are musicians. Styles and movements may come and go, you can accept what you like and reject the rest, but there's no way you can keep an audience from appreciating imagination, skill and technique when they hear it. Which is why The Edge and his unique echo-bound guitar sound was very soon singled out for praise

when U2 first came across the sea from Ireland late in 1979. Inevitably, since the heady explosive days when Sniffing Glue was simply a good read and not a grave social problem, a number of excellent guitar players have risen through the ranks ready to take their

places in the pantheon beside the old guard of Clapton, Page, Green, Townsend and their ilk. Hugh Cornwell, John McGeogh and Robert Smith spring instantly to mind and a little more thought would doubtless round the list off to a neat half dozen. But few can boast such a distinctive and readily identifiable sound, and fewer still can have spawned so many imitators as The Edge has done. You should hear the demos we get sent.

Yet should you meet the man himself you might find it difficult to equate his musical charisma with a personality which might suit any other walk of life, but is plainly out of step with the Rock business where strength of character is often gauged by the measure of the mouth and the height of the hairdo. The Edge is a quiet, serious young man, well-educated, polite, sensitive with a curious air of innocence which only serves to emphasise a real personal integrity. In fact, sitting behind a small Guinness in a pleasantly under-populated Dublin bar (which was where this interview took place a mere couple of weeks before U2 went back into Windmill Studios with producer Steve Lillywhite to record their third album *War*) this fresh-faced 25 year old looked hardly the man who has commanded

the respect of American football stadiums and the NME both. Nor, in fact, the guitarist who has done more to boost echobox sales than anybody since Queen's Brian May. But he wears all these accolades under his overcoat and if they don't qualify him to talk guitars and the plight of the lead guitarist in contemporary Rock, then nothing does.

"When people think of me they always get this image of me playing a Gibson Explorer. And it's true that's all I played for ages and ages because it was the only guitar I had. I bought it in New York years and years ago when I was on holiday with my parents and still at school. In those days I didn't know very much about guitars, and although I planned to buy one I didn't really have a clue what I wanted... although I had a pretty good idea of what I didn't want. I just went into the first shop I came to and started trying things out. I remember thinking that Rickenbackers sounded a bit limited and I wasn't overly impressed with Les Pauls either. Then I picked up the Explorer with its strange shape and there seemed to be so much more variety in the sounds I could get from it.

"The front pickup was really mellow for a start, almost jazzy in fact, while the back was nice and powerful but clear too. It had none of that rasping growling distortion you get from a Les Paul. The top strings sounded richer too, where all the Les Pauls I played were definitely on the thin side. I could play little chord shapes on the top three strings and they'd sound and feel really full. My style is based on a lot of broken chords and picking and the Explorer seems perfect for the job. But I don't use it all the time now because I've got a white Les Paul and a Fender Stratocaster too, both of which I play a lot when we're on tour.

"But when we went into the studio to record our first album *Boy* with Steve Lillywhite he couldn't believe how little gear we had. I owned one guitar — the Explorer — Adam had his bass, Larry his drums and there were a couple of amps between us. That was it. We've come on a long way since then, of course, but I still believe in keeping things relatively simple. I never modify my guitars if I can help it, for instance. I've changed the back pickup on my Strat for a DiMarzio to squeeze a little more power out of it, but that's about all. And, in hindsight, I'm not so sure that was such a good idea anyway. It works out very well on stage but in the studio it tends to overload and distort which is very frustrating when you're trying for a clean, clear sound. As for my Les Paul, that's been through some terrible times. I bought it secondhand, again in New York, because I don't believe in buying brand new guitars if you're going to take them on the road. They soon end up getting as beaten and battered as anything else. One fateful night in Glasgow I put the Les Paul down after playing it for a couple of numbers and a big crack simply opened



"I think the problem with the majority of young guitarists these days is they're all too anxious to emulate and copy somebody else's style rather than create one of their own"

up in the neck and the head snapped off under my eyes! I thought that would be the end of it but our roadie managed to find a guitar builder here in Dublin, named Derek Nelson, and he did the most marvellous job replacing the head and sticking it back together so you can't even see the join!"

So much for guitars then, but what about amplification? The Edge has always been a combo man. No 100 watt heads and 4 x 12s to be humped around here. But last year he ditched the Marshall 50 which had been his workhorse through the early years of U2's development, and turned instead to something even older and more arcane — at least by Modernist standards. Yes, you guessed it, the good ol' Vox AC30.

"I get a much fuller sound from the Vox than I ever got from the Marshall. At one time I had people out scouring

"I remember thinking that Rickenbackers sounded a bit limited and I wasn't overly impressed with Les Pauls either. Then I picked up the Explorer..."



Ireland for the things and I managed to get one from Dublin and one from Cork which, judging by the serial numbers, came off the production line only 15 apart. I now have three but I only use two on stage. They're not linked together at all. I have them set up individually with a different bank of effects pedals connected to each and a footswitch to control which one I'm actually playing through at any given time. As systems go it's a little unorthodox I suppose, but it's particularly useful if you need to change an echo effect in the middle of a song. Otherwise I try to be as tasteful as possible with the use of effects because it's so easy to go over the top and end up sounding like you're playing popcorn music.

"I use a lot of bottleneck live these



"Slide really interests me. I've always wanted to get into steel guitar too because, outside country music, I don't think anybody's really explored its potential"

days. I'm not sure how it will work on some of the songs from the new album because we won't have them properly sorted out until we've finished recording them. But the bottleneck sounds great on songs like *Gloria* and *I Threw A Brick Through a Window* from *October*. Slide really interests me. I've always wanted to get into steel guitar too because, outside country music, I don't think anybody's really explored its potential. Last time we were in the States I bought a lap steel and I've been using it a lot working out the ideas for this new album. It's a wonderful 1941 Epiphone, real Art Deco, and I got it for next to nothing from a shop in Nashville called Gruhns. They specialise in

instruments that are either vintage or decidedly unusual. But if you didn't know the shop was there you could miss it completely. From the outside it looks drab and ordinary, there's next to nothing in the window and the glass is covered with a thick wire mesh. It's only open for a couple of hours a day so when you go in you feel like you're walking into a speakeasy or something. But it's full of the most wonderful guitars I've ever seen.

"I must admit I haven't come to terms with my Epiphone yet. I'm just messing around with it at the moment and I haven't had the chance to try it out live. The tuning is tricky for a start. Originally it was set up in what they call Nashville tuning which is simply EDGEDG. But that's based on country music techniques which involve sliding different inversions of chords around. I've changed it into a minor mode with the added complication that both Adam and I tune half a tone flat to help preserve Bono's voice. But with the right kind of echoes it sounds quite incredible, although I daresay I'm not using it quite the way the maker intended.

"But that doesn't worry me in the least. I prefer the idea of trying to break new ground rather than mastering what's already been done. I think that's one of the problems with the majority of young guitarists these days. They're all too anxious to emulate and copy somebody else's style rather than create one of their own. It's particularly true of Heavy Metal bands, but a lot of New Wave guys are just as guilty. Of course, there's nothing wrong with listening to other players. I know I've been impressed and probably influenced by all sorts of people from the obvious ones like Jeff Beck, Eric Clapton, and Dave Gilmour to Tom Verlaine and that guy who used to play with Magazine and is now in the Banshees — John McGeogh. But I think it would be dreadful if I ended up sounding like any of them.

"They don't excite me any more, you see. They're great players who have all done great things with real depth to them. But once it's done then we've heard it. I'm much more stimulated by Mick down the road who has just bought his first guitar and the things he'll be doing with it when he finally forms a band. I've heard some fantastic guitarists lately who can't play properly but they have the right attitude and they're exploring all the time. It's like a kid eating a piece of coal who doesn't have the faintest idea what he's doing but he's inquisitive enough to want to find things out by himself. I reckon the older and more experienced you get as a player the more you lose your sense of adventure. Some people would argue that technique is a substitute for that sort of natural talent but I don't believe that guitar playing is a technical thing at all. It's really about raw creativity.

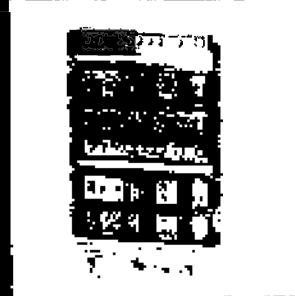
"Keith Richards is the prime example. Technically speaking he's not a great

guitarist at all but he's managed to develop his style so it really connects. Listen to something like *Start Me Up*. It's not very complicated, but then the art isn't in playing 50 notes a second, it's in communicating. Then again, style can evolve by accident. I'm known for my use of echo, especially after the *Boy* album came out. But it was really only luck that got me into it. I was growing tired of the same old sounds and I wanted some more colours for my palate. This was in our early days, when money was scarce and I knew that whatever effects unit I bought I'd be stuck with for months before I could afford another. I tried phasers and flangers and a Watkins Copy-Cat but I wasn't particularly thrilled with any of them until I stumbled onto the Electroharmonic Memory Man in a shop. There are dozens on the market now but three years ago they were pretty rare. I took it down to a rehearsal and something about the sound of the thing sparked us all off. It was like adding seasoning to the soup and suddenly we became aware of all these different flavours in our music we'd never known existed. The older songs took on a completely new life while, for about a month, we went through an intensely creative period when the echobox inspired us to write something like two new songs a day! I remember that *I Will Follow* fell together in under 15 minutes.

"Somehow or other the Memoryman prompted us to work together in a way we'd never done before and I'm sure that *Boy* would have been a totally different album without it. To begin with it helped us get close to that tough, loud sound which we had live but had always eluded us in the studio. But at a cost. Many of the guitar parts ended up a bit wishy washy and indistinct. So we quietened down a little when we recorded *October* and tried for something a little less hectic and a little more thoughtful. I'm glad we did because it got us all into the idea that U2 should keep progressing and broadening our base, rather than simply sticking with one style and milking it for all it was worth, which is a terrible temptation which lots of bands fall into. And with luck this new album will prove that we've taken the process further and grown up and out more than before. To my mind that's the way all bands should go."

The merest introductory spin of *New Years Day*, the debut single from the new *War* album, shows the Edge to be as good as his word. U2 are not a band to stand on their laurels but are obviously still well on the move. And unlike too many who hide their inability to write anything akin to a good song behind a smokescreen of ideology, U2 are still not afraid to temper cold contemporaneity with a touch of good old fashioned melody and heart-warming emotion. Or to feature the lead guitar loud in the mix.

Chas de Whalley



FOR the MUSICIAN WHO HAS EVERYTHING

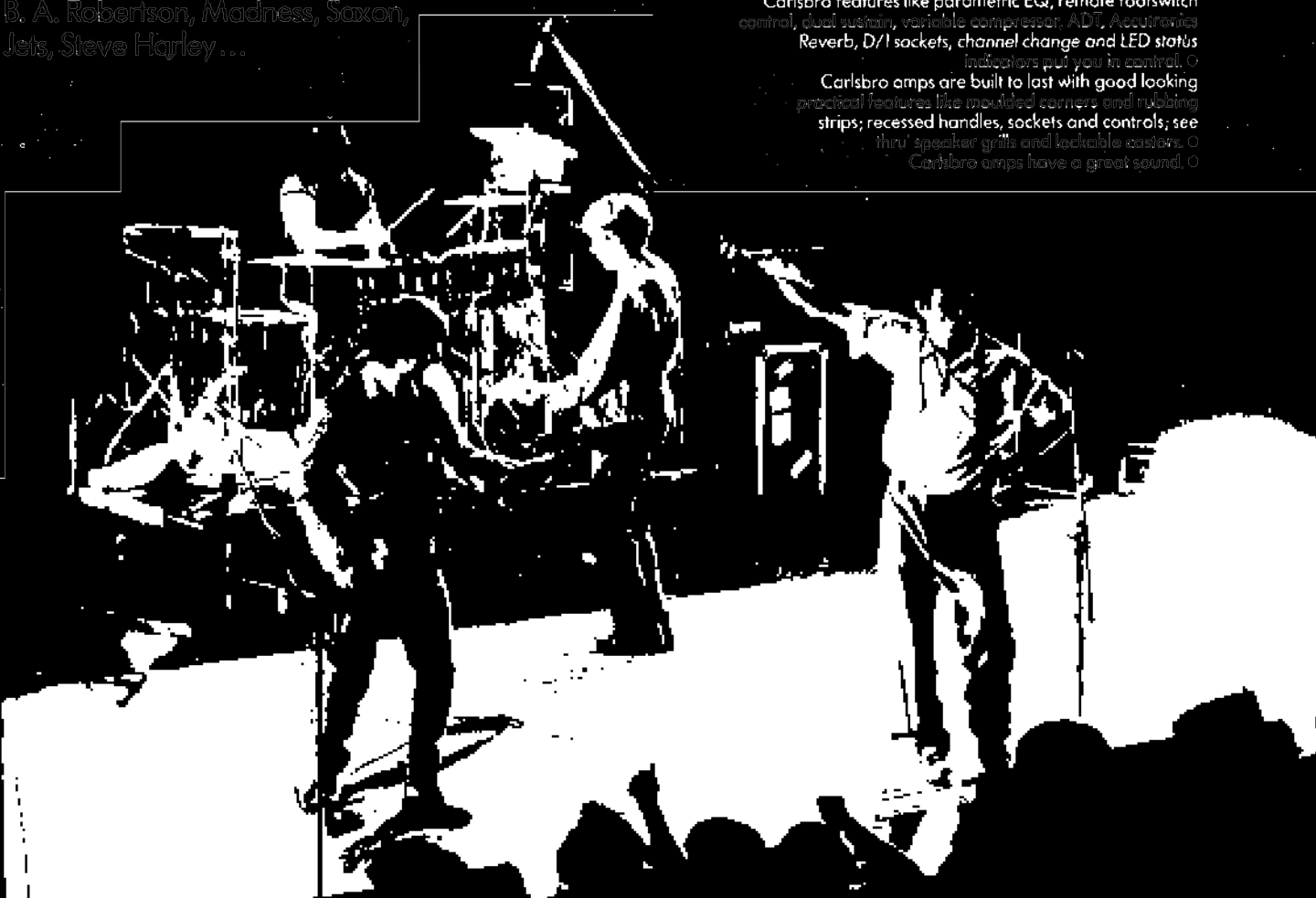
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I'M AFRAID I'M GOING TO

have to have a word with young Anthony: If I've told him once I've told him a thousand times, dodgy Barnets and over-active saliva glands don't cut the mustard with me; they exist in a separate dimension of reality which simply doesn't relate to mine. Okay, perhaps I was a little too esoteric in my explanation; next time I think I'll just go straight in with the head, and then he can always phone me later on at home if he has any questions. Tony appreciates the direct approach.

He had sadly found it necessary to interrupt my Christmas reprieve with a phone call suggesting that I might like to return to The Smoke in order that I should catch The Damned's act at The Ace in Brixton. At first I thought him to be delirious, and his suggestion merely feverish babble from the sickbed; but no, the extent of his insanity was no greater than usual, and save for a liberal sprinkling of the Yuletide grape, his mind was as keen and razor sharp as ever. His plan of action had seemed somewhat less than judicious to me at the time, but Tone had insisted that the band had changed since their early days and that he was sure that I would enjoy the gig. With pitiful, childlike innocence, I had agreed to take on the case, but now, as I stood uncertainly in the auditorium of The Ace watching the mob effect their occupation, nervously adjusting my crewneck jumper to make sure that both sides of my shirt collar were outside, a dark cloud of doubt settled upon my consciousness: I'd seen it all before.

I considered simply leaving there and then, giving the whole thing a miss and getting my mum to write a note saying that I'd been unexpectedly bitten on the leg by a rampant badger, and that there was nothing I could do about it. However, despite of the inspired nature of the ruse, I had given Ant' my word, and so I decided to stick it out and give it a whirl for a while. The gig that is.

The Venue

The Ace is yet another converted cinema/variety hall, and boasts, or should I say labours under, the same over-the-top cosmetic design that plagued the minds of certain architects during the early part of this century: Large expanses of plaster work in red covered with huge ornate mouldings mostly in gold. However, it is a good deal smaller than most other similarly styled venues, with a capacity of a little over a thousand, and it appeared to me to be wider than it was long. The balcony is relatively shallow, holding three hundred, and was thus less of a problem acoustically. The lack of overall length also decreases the delay time of directional sound bouncing off of the back wall to a point where I was not aware of any obtrusive echoes or repeats. It was a capacity audience, which helped significantly, but considering the band and the PA used, the sound, from the acoustic point of

view was very good, and the hall should cause relatively few problems for touring rigs.

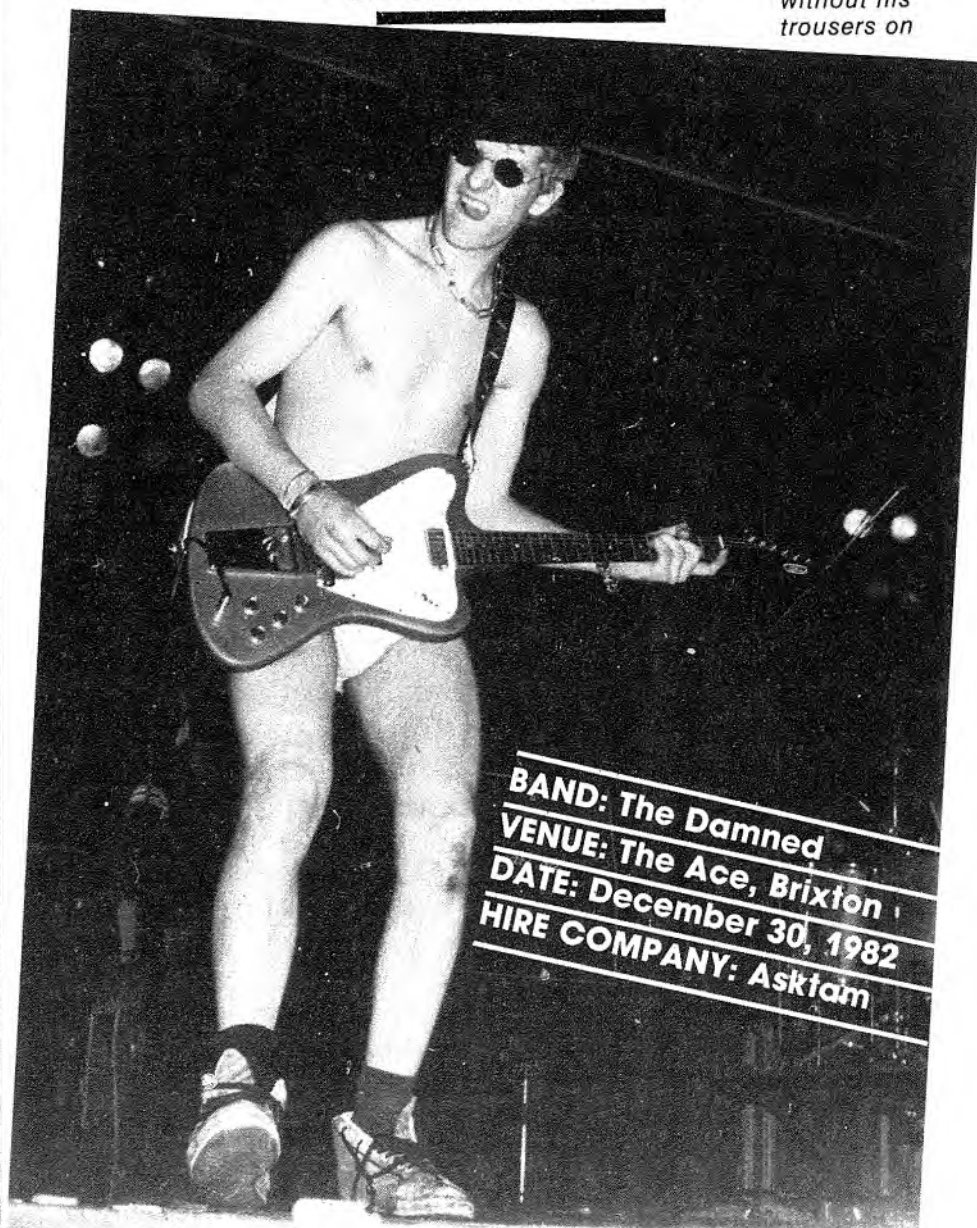
The partnership of David Style and Eddie Taubman bought the freehold from EMI in October '81, and although they are very much open for business, they are still some way from completing all the plans they have for the place. David used to run the Starlight Roller Disco in Hammersmith, and when the lease ran out on it he and partner Eddie started looking around for a new venue. Flexibility was very high on the list of requirements: the new place had to be capable of putting on Roller disco, normal disco and live bands. The Ace can handle all these things plus it also has what I am told is the largest cinema

screen in South London, measuring 36 feet across. Following the recent demise of The Fair Deal just across the road from them, the obvious question to ask was what they have got that the others hadn't. I hate being obvious, but it had to be asked. Flexibility was the basis of the answer, together with the fact that The Ace is about one-fifth the size of its dead brother, has a more effective heating system, and is therefore far cheaper to use. Unlike in the case of The Fair Deal, a promoter doesn't have to be sure of pulling a few thousand punters through the door to be able to balance his books. The sound is much better there too.

The seats have been cleared from the front stalls area and a four thousand

PA COLUMN

*Captain
Sensible
without his
trousers on*



BAND: The Damned
VENUE: The Ace, Brixton
DATE: December 30, 1982
HIRE COMPANY: Asktam

square foot Maple dance floor layed in their place in such a way that the grain of the wood is always facing the direction in which the skater should hopefully be skating.

The stage is fairly large considering the overall size of the venue, measuring 25 feet wide by 25 feet deep with a 20 foot high proscenium arch. By the time you get to read this article, there should be a comprehensive system of flying points with motorised winches, an in-house lighting rig plus a full range house PA system. There will also be a separate disco lighting rig suspended above the dance floor.

On Friday nights they intend to put on a couple of Kung-Fu films, between which the screen will be winched up giving the stage to what will probably be a lesser known Reggae band, who will run through a short set. If de soundz ain't crucial enough for ya, you can check out the refreshment situation, which is apparently Critical, ya kno? It's mostly West Indian food such as fried fish, curried chicken and rice, roast chicken and WI paté. On the other hand if you're not feeling all that ethnic you can always have a hamburger.

The weekend roller disco situation is soon to be, 10am-1.30pm: under 16's; 2pm-6pm: no age limit; evening sessions for over 18's only, which will include fully licensed bars upstairs and down.

One of the main reasons that The Ace opened before completion was that Channel 4 came to them in a state which somewhat approximated panic, stating that due to the closure of The Zig Zag Club, they were without a venue to stage their 'Whatever You Want' programme currently being shown on Monday nights. They needed to start shooting within ten days of the phone call and so The Ace management rather impetuously promised to be ready. At this stage the place was simply a rather untidy building site, but they simply couldn't turn down such a useful gig, and so the next ten days involved everybody working 240hrs to get it to the state of a fairly tidy building site — tidy enough for the first shoot to take place successfully.

When I visited The Fair Deal, I didn't get a good feeling about the place or those running it. The Ace has a completely different feel and from the purely practical point of view seems like it must be destined for some success. I hope so.

The PA System

The system was provided by Asktram PA Hire, but the engineer was Tig Lewis, a freelancer who has been responsible for The Damned's live sound since their last British tour which started last November.

Whilst Asktram are very capable of providing an excellent quality rig, this set-up wasn't all that impressive. It consisted basically of what was left in a seriously depleted store room at the time, and can't be taken as truly



Tig takes control

representative of the company's abilities.

Per side there were the following components:

Bass 4 Martin 2x5 bins
Mid 4 Martin Phillishave bins
Top 4 Gauss HF4000 drivers with various flares

4 JBL 075's (Bullets)

The rig was run via a BSS three-way crossover using Midass and HH amplification. The front of house desk was a Midas 32:8:2 with Pro4 modules, and unusually Tig had split the eight sub-groups into four stereo pairs:

1&2 Vocals
3&4 Keyboards
5&6 Guitar and bass
7&8 Kit

The auxiliary equipment rack was exactly the height of sophistication, containing a Roland Chorus Echo used to liven up the lead vocals, a Yamaha 1010 delay line which was used on all vocals for ADT, and three Klark Teknik DN27 graphic equalisers, one for lead vocals, the other two for overall system correction.

The foldback desk was a Midas 20:8 with an assortment of graphics on the outputs, driving into HH amplification which powered a pair of JBL 4560 sidefills with Gauss 15" drivers, a single 4560 drum fill and three Martin LE200 wedges.

The Band

Captain Sensible, complete with *Happy Talk* beret and circular shades plucked and strummed an SG with some considerable competence. He couldn't be further away from the standard punk guitarist image in terms of style or technique. For a start he plays through a Mesa Boogie with a Marshall 4x12 extension cabinet: It's a bit of a give-away. Here is a serious Rock guitarist pulling lots of 'Famous Guitarists of Our Time' licks out of the bag, whilst still maintaining an individual style and feel. At times his playing verged on Heavy Metal, and the guitar sound was generally powerful and raunchy, as you would expect from the combination of equipment. His only pedal apart from the Boogie's overdrive

in/out, was a wah-wah, and a Shure SM57 was put on the Boogie.

Rat Scabies is also a very competent Rock drummer, using a full kit and a very solid, driving aggressive style, which if anything, might sometimes have been a little busy. He used a Premier kit with four rack toms, two floor toms, and an assortment of Zildjian and Paiste cymbals. Sennheiser 421's were used on all the toms, an AKG d12 on the kick drum, an SM57 on the snare, a Calrec condenser on the hi hat, with a pair of AKG C451's for overheads. The sound was deep and full, but nothing unusual.

Paul Gray played a Rickenbacker bass through a pair of Marshall 4x12 stacks, which he often cranks up so high that Tig has to pull his DI feed completely out of the PA. The sound was very hard and punchy.

The keys set up consisted of a Yamaha CS80 poly synth and a Yamaha CP70 electric grand piano, both of which were put through a small Bose stereo mixer, which provided a stereo DI feed to the PA. For stage sound they were also put through four Cerwin Vega 2x12 plus horn bins. Roman Jugg depressed the keys competently enough, and demonstrating the band's new found musicalness, he came forward with some very solid rock/ballad piano work. It didn't stop the audience gobbling at him though.

Dave Vanian takes the lead vocals, and together with Rat and The Captain, fronts the band. He's a strong performer, and delivers the songs well, remaining relatively unaffected by the sea of saliva that flew up from the floor to cover him within the first few minutes of the gig. It may have been okay in the early days — it was hip then, but I've a feeling that the band are getting a bit pissed off with it now, especially Rat. Even so, they really did look as though they were having a good time, and although there was a great deal of aggression there was very little actual violence.

All through the performance, the bouncers were continually lobbing intruders off the stage in what I thought was an extremely reasonable manner. By the end of the encore, the stage was full of numerous avant garde dancers, a juggler with three balls and various animated hair dos. Every available crew member was on stage frantically lobbing the public about the place, and in the confusion I saw one bouncer wrestling with a second, both trying to throw each other off the stage.

At the end of the performance The Captain came forward to the mike and said in an earnest voice, 'Er I'd just like to say... bollocks!'

There's nothing I can really add to that except to give my sincere thanks to Trillions cameraman Barry and engineer Chris for their help, and to suggest you give the latest album *Strawberries* a listen: Without going into details — it's got some good bits.

James Betteridge

... AND THAT WAS WHEN GARY Kemp came in smiling and exuding confidence from every pore. He proffered an extended hand and a wholesome grin to the dishevelled journalist. The dishevelled journalist, obviously in desperate need of a good night's sleep and a tube of Clearasil, mumbled about 'Adrian' and 'International' something before nodding in the direction of a small tape recorder.

Kemp arranged himself between journalist and tape recorder with a look of pity, almost benevolence, adorning his youthful features. But what did he care... he was, after all, anchorman guitarist and songwriter of the ever-popular Spandau Ballet. It was *him* and not this tousled heap that, with the aid of Svengali Dagger, had taken the insular atmosphere of the Nightclub and injected it onto our TV screens and subsequently into our mundane lives. The *journalist* hadn't just completed his third album or had five top ten singles. But although he recognised that the scribe was in every sense of the word unkempt, he also realised that he was his vehicle for telling the world about Spandau Ballet's new album. The journalist leant forward, depressed the record button and against all the odds said, "Tell us about the new album then Gary".

Kemp reclined, simpered and drew a deep breath. The journalist had a strong feeling that the conversation would flow. He was right.

Questions questions

"Right, well it's called *True*, there is a track on it called *True* which is a slowie. It's the most melodic album we've made.

Spandau Ballet release *True*, their third album. Adrian Deevoy listens to Gary Kemp

a true story



It's more vocal than we've done before. All the tracks were written in one big spate at the beginning of last year, I just got very influenced all of a sudden and started writing. Lyrically a lot of the songs are more personal to me and tunelessly they're more honest, and more like the songs I used to write when I first started writing. I mean, years ago when my parent bought me my first guitar for a fiver, all the songs I wrote then were very tuneful and melodic, catchy things, and really I've always liked that style of writing.

"It's still very dancable stuff but it's not as heavily funky. You see, as far as I'm concerned, there's two ways of writing a song and that's song-outwards or feel-inwards. The last album was written feel-inwards; I'd get my musical feel and I'd tape them and then put tunes on top. Like I'd have an idea for a rhythm structure and then put the tune on top of that. But I think that was a mistake for me. Because that's musician's-type songwriting and I'm basically not a musician, I'm basically a songwriter. So this time I got my acoustic guitar and just wrote, very naturally, on that. Then I showed them to the band and they said that they were the best songs I'd written, and in my mind they were as well, so I just kept on writing and ended up with twelve songs, eight of which we used on the album."

Does the fact that your brother (Martin) is your bassist help when it comes to writing your songs?

"Yeah it's a great advantage, 'cos for a start I live with him and he is the only person out of everyone whose opinions really matter when it comes to songwriting. If he tells me that something in one of the songs is wrong then I probably know that already, and he's like my conscience saying 'Come on, be honest with yourself'."

Does he have a lot of say in writing his bass lines?

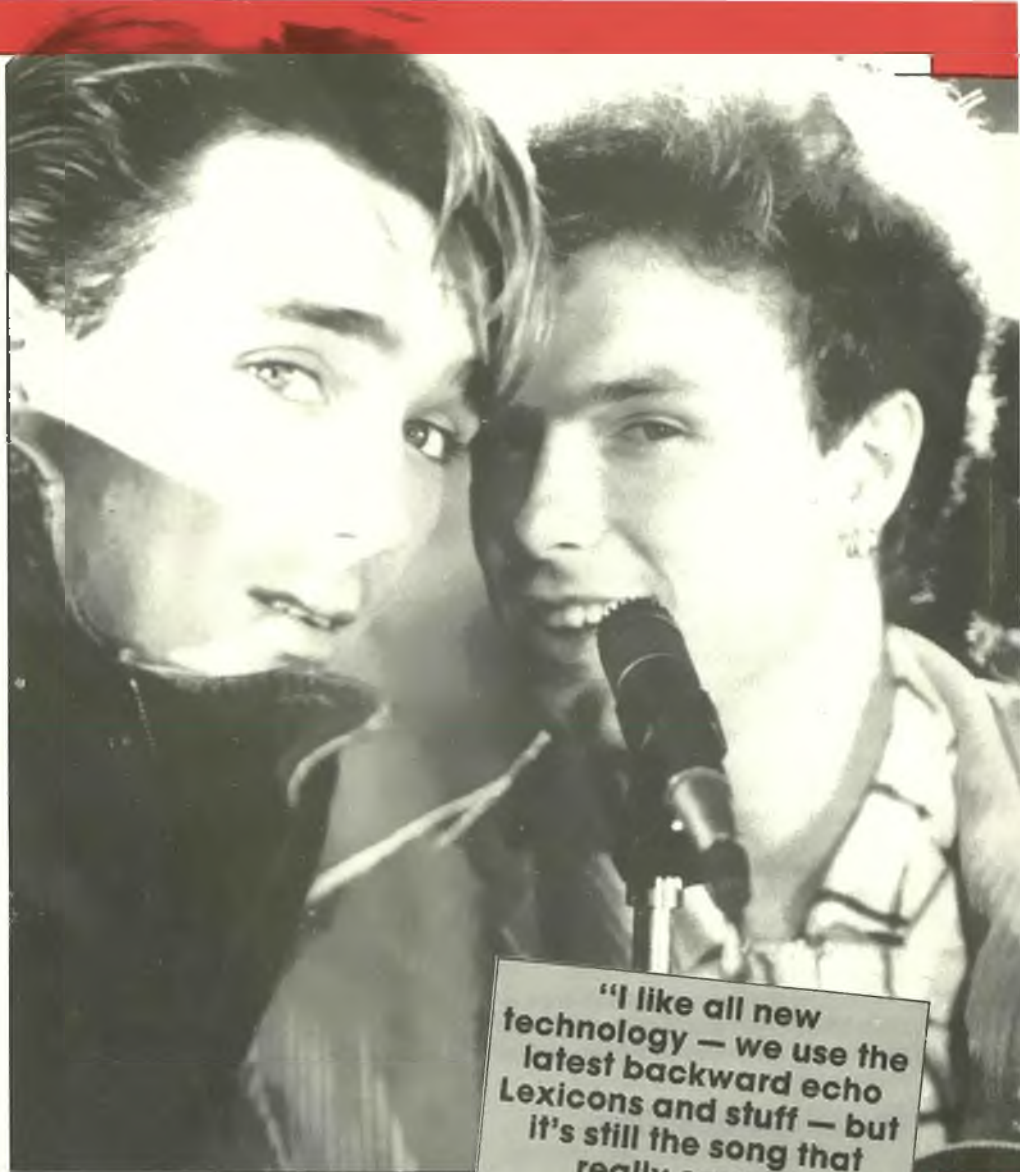
"When I've written a song I play it to them all (the band). Actually, I still find that really embarrassing. You'd think I wouldn't after all this time but it still really kills me"

"We normally do that together, it depends how important it is to the song. Like some of them like *Chant No. 1* and *Paint Me Down* are very bass line orientated, so obviously the bass line needs a lot of attention."

Has the new album still got a brassy, Funky feel about it?

"We didn't use any brass at all. I just felt we needed a change seeing as how everyone else is using brass now, so we used synths and even then we tried to steer away from a very brassy sound."

"Some of the tracks are by far the Funkiest we've ever been, 'cos I've always liked dance music."



The Brothers Kemp

"I like all new technology — we use the latest backward echo Lexicons and stuff — but it's still the song that really counts"

Do you think that songs suffer lyrically because they are just that — dance music. Are your lyrics important?

"Yeah. Definitely. More so now. I have a lot of puns in the lyrics too which nobody ever notices, I'm the only one that ever laughs. I think people writing about rooms in China and men in grey is not being clever. I mean you can write any crap you want and really it's just an excuse from being honest with yourself. I think you have to be a lot more honest and clever to an extent to write about relationships, things you know about."

But isn't that a very trite, tired subject?

"Yeah, that's why it's harder to write a personal song or a love song, because you've got to do it differently to make it interesting. Everyone's written about love so when you do it you have to approach it in a different way. Like there's a line on the new album on *True* (the title track), that's in a way a sort of nod to Marvin Gaye because it goes 'listening to Marvin all night long'. But it's also something that I think will be easy to relate to for a lot of people, 'cos I can remember going around my girlfriend's house when I was about 16, and when her parents had gone out taking the arm off the record player and just listening to Marvin Gaye albums over and over again."

Being the sole songwriter do you feel that the band find it difficult to convey the original feeling in their interpretation

of the songs?

"Well when I've written a song I play it to them all. Actually, I still find that really embarrassing. You'd think I wouldn't after all this time but it still really kills me."

Do you have to explain the lyrics to the whole band?

"Well I do with Tony (Hadley, foghorn). I explain exactly, line by line, how I felt at the time and go over and over them. But Tony's pretty good like that."

Getting back to the album. Did the fact that you recorded it all under one roof help?

"Absolutely. I mean with the last album we went all over the place to record it and we used all different engineers and the end result was patchy. This time we did it all at Compass Point in Nassau, which was great. You know, just in your shorts strolling from the house to the studio. Then we mixed it all at Red Bus. The other big thing that helped was the fact that we used Tony Swain and Steve Jolley and they were just fantastic. We had a brilliant time socially together, which is an advantage, and we worked together so well. I'd always liked the stuff they'd done with Imagination, they always get a great radio sound and you can hear every instrument clearly, which everybody liked when we got that sound, and the vocals and the vocal

arrangements are really good too."

Something you pioneered, as a white Funk group, was the 12" single, cutting short records long. How is it done?

"You can do it two ways. You can have your mix as 7" on the master and go back on the multitrack and find various sections and break it down — punch things out and in, put echo spins on... you might take out the snare or bass drum or take out both and just, say, use handclaps. Then you build up different arrangements by using 16 bars of that and two bars of that, and then you spend the majority of the time editing it all together into the way you want it. Or else you can just record a longer song in the studio and edit it down for the seven inch single."

Do you think that all this excessive mixing is getting out of hand, what with all the Scratchalonga/Malcolm thing?

"I think the thing is now everything has been done in that area, and now it's become very predictable. Technology is a good thing but now we're using the

are using small, quartz-lock desks and they lock in, say, a version on a flip and an A side, and they put one a beat behind the other to create an echo effect, or they set one whole verse behind the other. So that's like an instrument too.

"People are into that now, they're playing with sounds as opposed to just playing their guitars. But after saying that, I still like to just play acoustic guitar and write on that. I just like to know about and experiment with the new things that come out and not get lost within it."

Will we ever see Gary Kemp singing Folk songs?

"I'd like to get into doing more acoustic stuff on my own and a bit of singing too. I might do it with my brother not on record, but just a little surprise thing. I have written songs that I have considered to be too personal to give to the band and I'd like to do those on my own sometime."

Do you think the nightclub scene has changed the standard Rock format of

who were primarily only people with good ideas, and are now very good musicians. My brother is a prime example. Initially we only wanted him to join the band because of his attitude, and now he is a very, very good bass player. I mean I never wanted to be a great muso but I *did* want to become a part of Pop culture.

But all this aside, you've been writing TV themes on the side haven't you Gary?

"Oh yeah, Noel Edmunds."

How did all that happen?

"Well Michael Hurl who produces TOTP phoned up Chrysalis and said that he liked the stuff that I was doing and he asked me if I'd like to do this peak viewing Saturday night show. I shit myself and thought 'Oh my God', but the only way to do it was plunge straight in and do it. It's no use saying 'I want to do this and I want to do that' unless you actually do them when the chance arrives. Anyway, they gave me a little story board and said they wanted a 50 second long, up tempo thing and then a 25 second one with a fill going off into a fade, and then ten second stabs and six second and five second bursts."

Did they tell you how they wanted it to sound?

"They wanted a similar sort of thing to what I'd done on *Instinction*. Originally they wanted horns but they found out how much that cost, so I said I'd do it on synths. So I used a Prophet, but I actually wrote it on a piano, which was unusual, 'cos I never write on a piano. But I worked out horn lines and string lines and then Martin and I worked out a bass line. It was really weird 'cos it was 50 seconds and I was like sitting there with a stop watch showing myself how long 50 seconds actually is. So I finished this tune and it was too long, so I started to chop it around and the first thing I did was drop off a verse and it was exactly 50 seconds. I couldn't believe it. Then I took it to the group and just told them exactly how it had to be and we recorded it in an afternoon, and then we went back to the multitrack and did loads of versions off that.

"I wanted to put some thunder in, so I called the studio and said 'Can I have some thunder please'. So I ended up with a quarter inch tape of... what's that guitarist's name... Brian May that's it... yeah it was his thunder that he'd recorded in a storm in France. I messed about with it a bit, chopped it up and speeded it up and I used a timpani with backwards echo... so now you know where the thunder on the Late Late Breakfast Show comes from."

Are there other themes in the pipeline?

"I had a couple of offers but I was doing the album so I couldn't do them." Is that a more satisfactory method of immortalising your talent?

"No, eventually I want to go into a film and video direction..."

...and that's when Gary Kemp left the journalist to his good night's sleep and strode out into the heart of London smiling, exuding confidence from every pore.

Adrian Deevoy



Gary and Martin just playing their guitars

"People are playing with sounds as opposed to just playing their guitars"

technology that was used to go overboard with more calmly and subtly inside the tracks. Like, there's an instrument called the AMS which is a digital echo repeat system that samples up to about a second of a sound. Then you can loop that sound, or you can manually play it, so every time you press a button you'll get that sound, or you can trigger it with, say, a snare drum. You can have it with or without delay 'cos you can turn the tape over and play that through a delay before it sounds so that it'll sound at the same time as the snare. They're great gadgets.

"We've used an Emulator a fair bit too. Actually we bought a synth that we didn't particularly like, so we stored its best sounds on the Emulator and used it like that. I mean, I like all new technology — we use the latest backward echo Lexicons and stuff — but it's still the song that really counts.

"The desk is becoming more and more of an instrument now. I find using it is like being back at school in the artroom with all these colours and shapes. It's just the same except with faders, and you can splash a bit of this in or cut a bit of this out. Different sounds are just like new shapes. Even in clubs now a lot of DJs

gigging and making albums?

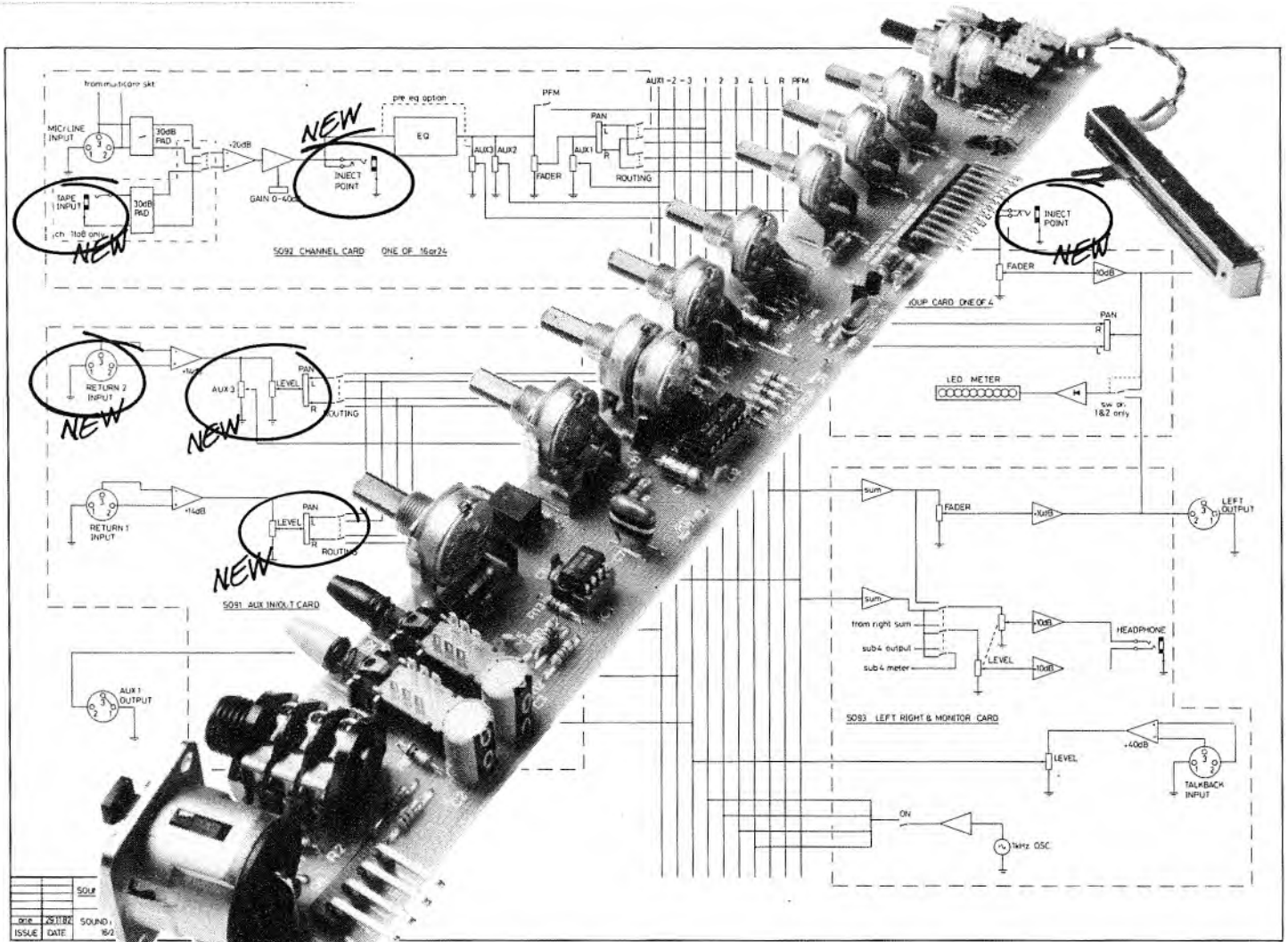
"Yeah, people make 12" singles and appear in nightclubs, to promote them as opposed to touring. People like to hear one first rate performance of a song that you get at clubs, they don't want a sub-standard live, loud affair 'cos they can get the atmosphere of a gig at a club. So they go where the music sounds its best."

Do you still feel a part of nightclub land?

"Not that we go as much as we did, but it's a big thing, it's where music ends up now. Kids actually go to clubs to hear particular songs just like kids used to go to gigs to do the same thing. A lot of people in bands these days spend a lot of time in clubs listening to ideas that are around."

Did you ever feel that the fashion of the band detracted from your ability to play and write songs?

"No, because if it wasn't for that side of it, a lot of the groups around today wouldn't exist. A lot of people in bands now are only in them because a different door opened two years ago to people



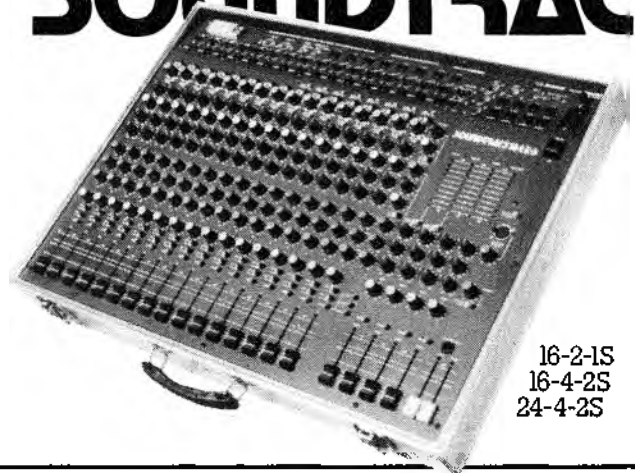
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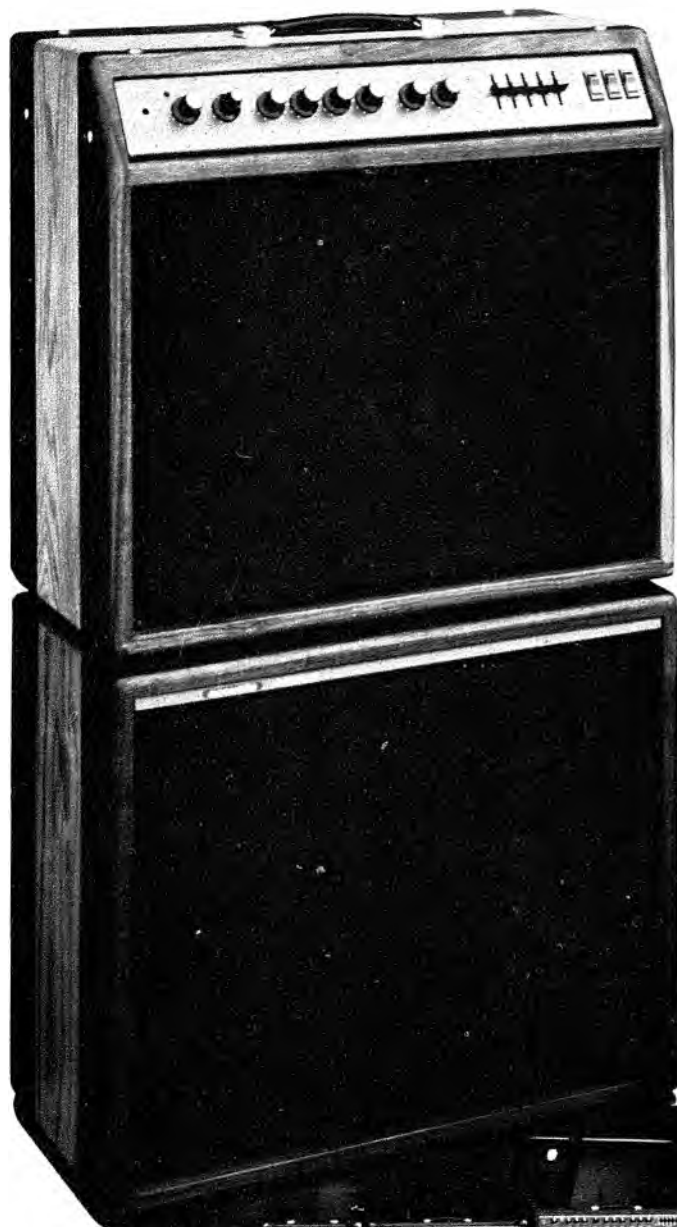
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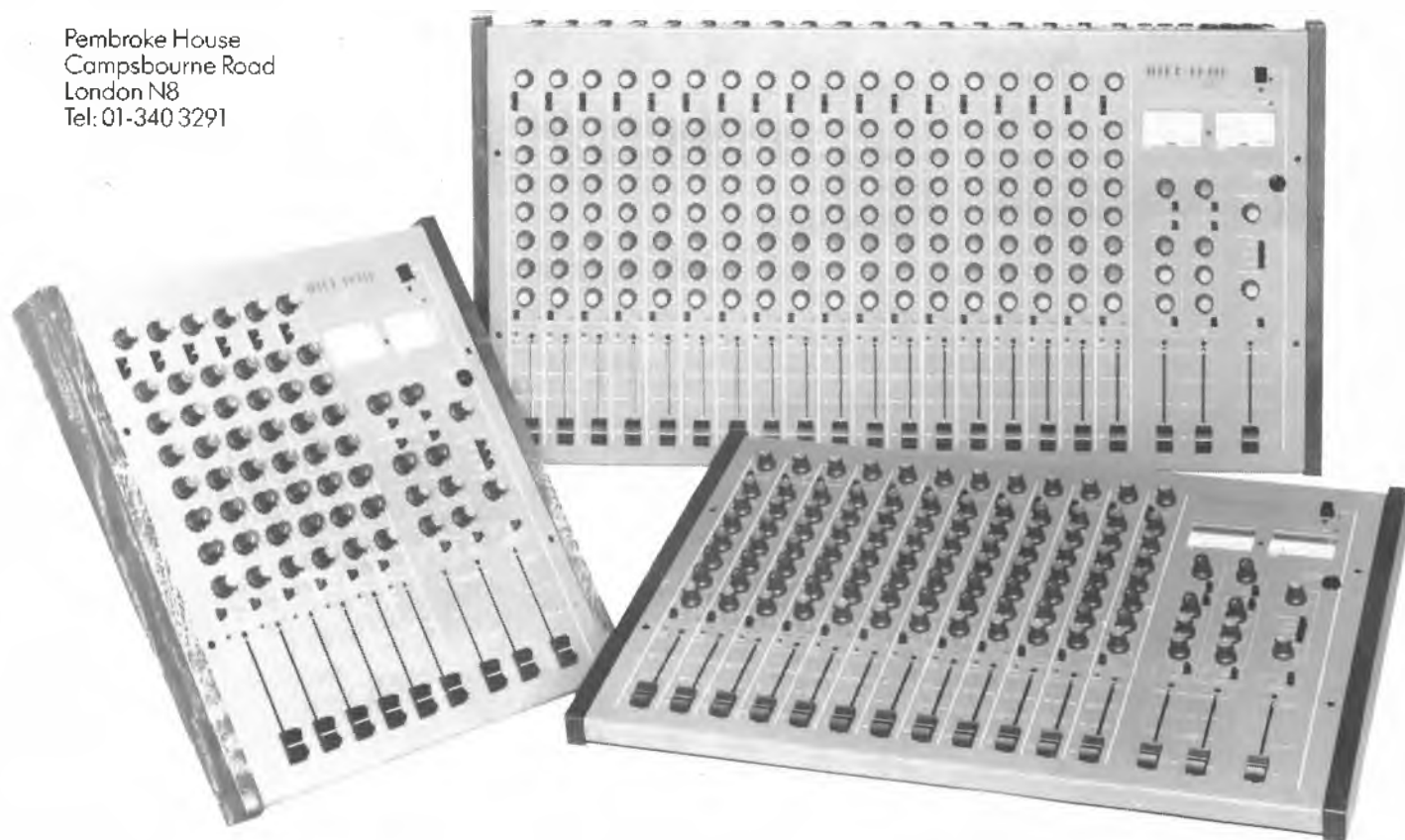
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Lloyd Ryan's DRUM CLINIC

Part 14: Para-Rock

IN THE LAST ISSUE WE MADE a start on Paradiddles in Rock music. See exercise 75.

The next stage is to transfer the right hand stick onto the closed hi hat, still keeping the accent on the second and fourth beat. See exercise 76.

Exercise 77 demonstrates the bass drum added at the same time as the hi hat.

And exercise 78 shows the added open hi hat.

Here are some exercises using the single paradiddle as a Rock beat. See exercise 79.

Another good rudiment for Rock playing is the inward paradiddle. See Exercise 80.

The same approach is used for the inward paradiddle as for the single paradiddle. See Exercise 81.

If you listen to drummers like Steve Gadd, Simon Phillips, Bernard Purdy and Billy Cobham you will hear the paradiddle used to its best. Exercise 82 demonstrates some exercises in their style.

In the next issue we will go back to snare drum techniques incorporating snare accents in singles and doubles.

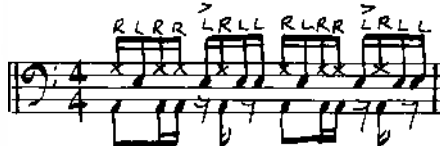
EXERCISE 75



EXERCISE 76



EXERCISE 77



EXERCISE 78



EXERCISE 79



EXERCISE 80



EXERCISE 81



EXERCISE 82





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STEVE GADD. HOT ON ZILDJIAN.

The man is hot! And he should be. No less than Chick Corea put it this way: "Every drummer wants to play like Steve Gadd because he plays great. He plays everything well. He could very well go on to become one of the greatest drummers the world has ever seen." As you can imagine, between his touring and recording, Steve's not the easiest guy in the world to pin down. But he did stop for a breather the other day and we got a chance to talk with him.

On Practice. "I've been playing since I was a kid. As long as I keep my muscles loose, I don't have to practice a lot every day. When I do practice, I just sort of let things happen naturally and then later on try to work it into my playing. Like on '50 Ways to Leave Your Lover...' I used my left hand on the high hat for the whole section - it was a little thing I'd been practicing and it just worked out."

On Control. "Sometimes I use light, medium and heavy sticks to do the same drills because the sticks affect my muscles in different ways. You have to use your hand and arm muscles differently to control your playing. It's a subtle thing but it helps me tremendously."

On Effects. "After I graduated from Eastman, I played in a rock 'n roll band. It was



Steve Gadd, one of the world's most innovative musicians, has paved the way toward new playing techniques for today's drummers.

keyboard, bass, drums and a lot of homemade stuff. I bought 6 big artillery shells, sawed them into different lengths and hung them on a rack that I built. I'd use them for the free sections in the music."

On K's. "Art Blakey gave me my first set of K. Zildjian's a long time ago. I love the feel of them. There's something about the way the stick reacts to the surface... it almost becomes part of the cymbal. They're not cold or edgy. They have a very warm and deep feeling. They've got real character. I use a 20" Ride and an 18" Crash Ride with 14" Hi Hats for recording and live sessions."

On A's. "I love to use A. Zildjian's when I play rock 'n roll. When I want to play louder, I add a 16" Thin Crash and an 18" Crash Ride for a full crash sound. The bells on the A's really project the sound in a clear natural tone."

On Zildjian. "Zildjian to me is the foundation. I play Zildjians because that's what's in my heart. I love the sound, the feel, the history... I love the quality and the status of a Zildjian."

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 Roland

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Sitting by the pool sipping Pina Colada, transfixed by the tropical splendours that stare calmly back at me, I understand completely why Eddy Grant packed his bags and moved to the paradise island of Barbados. The sun, the sea and the sandy beaches in reality are many more times beautiful than any holiday brochures would have us believe. And Eddy Grant himself personifies the wholesome successful Pop star more than any music paper report would tell us: the successful musician on his paradise recluse. If only you all could have seen it. . .

Success came as early as the late sixties for Eddy, who took his group The Equals to the top of the charts with hits like *Baby Come Back*. When the popularity of The Equals waned, he set about to become the first true black solo artist. By about 1978 his dreams were realised; he was totally independent (own label, own studio) and success came his way again with new songs like *Walking On Sunshine* and *Living On The Frontline*. 1981 saw more hits in the shape of *Do You Feel My Love* and *Can't Get Enough Of You* and late last year a three week stint at the number one spot with *I Don't Wanna Dance*, his first hit since the move to Barbados.

With the record still at number one, nine journalists and two photographers were jetted off for the fig of a lifetime. A week of sunshine on a Caribbean island. A week of bombing around the island in a mini moke. A week of cruising round the bleak night spots of

Bridgetown. A week of barbecues in beach houses. A week of heavy battle with the waves. Oh yes, and we had to interview Eddy Grant as well. . .

Eddy was the perfect host. Two by two we were driven to his palatial home a mere half an hour (if you knew the way) from the hotel. At the time I did my interview it had been a year to the day that he'd moved there, and there was still plenty of work to be done. The house itself was practically completed, but the 'slaves quarters' were still being converted into offices and guest accommodation for when his 24 track Blue Wave Studios opens its doors to the public. Soon, guest musicians will be able to come and record there, stay in the guest house, enjoy the luxurious surroundings of this tiny island, and never (if they don't want to) have to cross paths with Eddy.

Blue Wave was having a few problems with its roof at the time of our visit, and the rather overbearing smell of stagnant water that had seeped down the walls marred the obvious potential

of this excellent 24 track. Still it won't take long to sort things out, and the spacious control room sporting a Spectra Sonics desk should soon become a big pull for the big stars. \$125 an hour buys you the use of the Lyrec tape machines, Tannoy monitors, Dolby noise reduction units, Quad amplification and an array of FX on a Scamp rack that you'd expect to find in a studio of this quality. Equipment on hand, should you need it, includes a Yamaha baby grand, Hohner D6, Clavinet, Oberheim OBX, Rhodes 73, Hammond L100, Leslie, Gretsch drums and a Linn Drum II. For Eddy this studio is not a little side line, it's a major new business venture which should soon be competing with the Nassau and Montserrat studios of this world.

But perhaps I'm jumping ahead a few paces here. It's been a long slog for Eddy to get this far and taken a lot of hard work. He realised a long time ago

DESERT ISLAND



Eddy Grant takes the one man band theory to its logical extreme. He's pictured here in his own Blue Wave Studios on synthesiser, vocals, guitar, piano, mixing desk and drums.

ISSUES

With a new record, new studio, new home and new life, Eddy Grant has a lot to say. Tony Horkins is our man with the Ambré Solaire.



All pix taken by Erica Echenberg

that you've got to work for what you want and soon decided that if you really want things done, do them yourself. This attitude of independence even went as far back as his schooldays, when after learning to play the trumpet he decided a guitar would be more fun. But Eddy wasn't the type to sit back and wait for the money to fall his way, oh no. Eddy wanted a guitar, so he found himself a lump of wood and made one.

"At the time it was a question of necessity. I was a trumpet player and my father didn't want me to go much further with the whole thing, so he said if I want to play guitar I should make it and he'll buy the amplifier. So I went off and made one."

Eddy talks slowly and thinks carefully as he answers. He's been in this game long enough to know not to say anything stupid, but at the same time is remarkably honest. He sits relaxed, recapitulating his early days with a smile on his face and a glint in his eye.

"I was pretty good at woodwork at school, and I went to the woodwork master and said 'I want to make a guitar, otherwise I'm never going to be able to play it'. He said 'If you really want to make one, you've got the plans, I'll show you what you don't know, so go ahead'. So I started.

"I had to glue various bits together and form a sandwich of various types of wood. After that was done I had to leave it to cure for a while, then cut out the basic shape. This one the neck was integrated into the body so it was all one piece of wood for the middle and neck, and another piece for the outside, which is basically the design for most guitars. It was made in the sort of style

of the Les Paul but not with the blown out body; it was flat.

"Then I used some Vox ready made pickups with a scratchplate and a couple of holes on it, and it worked, man. It was a very good guitar. It must have been good because somebody stole it!"

So with his new guitar strapped firmly round his neck (or slung loosely round his shoulder, as he now seems to prefer), how did he learn to play it?

"Well I was already a musician and I could read, so I got myself a Bert Weedon tutor and looked up the chord of C and then I was away. My old man could play a few chords as well and he showed me, and some of his friends showed me, and gradually you pick it up."

After mastering the guitar, how did you progress bandwise?

"After I got into the guitar — I didn't master it, I still haven't mastered the bloody thing — I was at school, and I used to play trumpet and a little piano, and we had a Jazz group and somebody came and said he knew some guys that were jamming up in Highgate, Archway to be exact, and they need a good guitar player so why don't I join them. I said I didn't want no riff raff, 'cos the Archway mob were quite heavy at the time, and I didn't want to be involved with that kind of thing. But a few people mentioned it to me after that so I thought I'd go up and see. So I went up there with this guitar and everybody was jamming about and at the end of the night it all seemed a waste of time.

"So I spoke to the guy who was playing the drums and I said we can't go on like this forever, why don't we get rid of the jokers and form a group? He said 'Yeah, that's what I really wanted to do but the others just kept on coming'. They were coming because of his mother's cakes and sandwiches 'cos his mother made great cakes, you know? So eventually we rolled out all the mob — there must have been about 20 of them — and we started to put the word about that we were starting a group. Then a couple of guys came along, they stayed, and eventually we became The Equals."

Throughout Eddy's six year involvement with The Equals, he was always learning to play more and more instruments and was soon controlling the whole operation.

"I've always been aware that I can play just about everything. It's only a question of application."

By 1972 he'd left The Equals, and after recovering from the withdrawal symptoms of leaving a bunch of mates for a solo career, Eddy set about finding a location for what was to become Coach House Studios, the home of his first solo albums. Dave Robinson, now owner of Stiff Records, but then the owner of a bankrupt studio above London's Hope & Anchor, sold Eddy all his gear. It didn't take a very large van to carry the converted Decca 4 track desk, a couple of old limiters and speakers and an Ampex 351 stereo



valve recorder to his newly found Stanford Hill address, but it took Eddy and studio cohort Frank Agarrat quite a while to piece a decent enough place together. The Decca desk was just too archaic to use, so that was soon replaced with a Maximum Sound unit, and Coach House studios were born. Eddy knew right from the start that when he embarked on his solo career, *solo* was the operative word.

"From the time I left the group, even before I left the group, I didn't do too much playing with people. I've always been involved with playing with machines. It's only when I play live that I play with people. It takes less time for me to do it that way and I get exactly what I want. Other than that you've got another man's worries. He comes in, his wife's been treating him bad and he can't concentrate, and when he does he concentrates on the wrong things, so therefore you're always compromising your music. It's a situation, like I explained to somebody else, can you imagine having Picasso painting and somebody else telling him what colours to put in? It's wrong, it's not a complete picture. People have accepted a non-complete picture from the beginning of time in music, and they've accepted that as the norm. But the actual perfection is if a man can conceive an idea in his brain and bring it to fruition on tape. Then you get a complete picture."

There's another train of thought that says one of the things about creating music is working with others and collaborating your ideas.

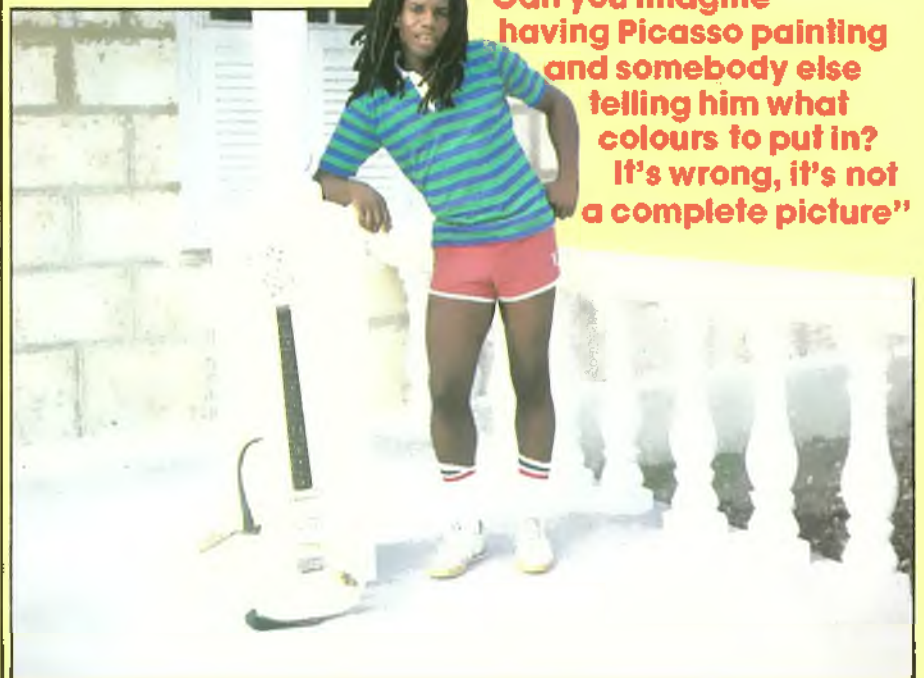
"Well, if you extend that argument to Picasso it would be terrible. Can you imagine having Picasso, Leonardo Da Vinci, Renoir all painting the same picture? It has to be madness. That is the extension of the argument. It's not logical, and it's not practical. If you took the argument for music along those lines you'd have to have at the end of it all, in any case, one dictator saying to all these mass of people like a symphony orchestra, 'You will not extemporize until I tell you'. If you have 50 musicians they can't put in their own feelings to Mozart. Mozart has written this music, and if Mozart could have sat down and played all the parts he would have done so because that is what he wanted. But instead he couldn't physically do it, so he has all these people standing around like great nurds and this fellow standing in front of them saying 'Okay, one two three, there you go, and don't play until I tell you'. You're suppressing something at the same time that you're trying to create something."

Weren't you working well with others when you were with The Equals?

"It was never that kind of band. If the truth has to be told, it was a situation that I dominated musically, as much as Pete Townshend dominates The Who. It can't be any other way. It's not the question of people playing along together because it wasn't that kind of band. No band is like that, you don't really play along with each other. Within The Equals... it's funny... we weren't musical equals."

So with The Equals no longer, or perhaps never, equipollent, Eddy began his single minded climb to solo stardom. While he was preparing his business activities he was never sure totally that he was going to succeed — "Nine out of ten don't" — but with his ego driving

"Can you imagine having Picasso painting and somebody else telling him what colours to put in? It's wrong, it's not a complete picture"



him on he went/came to the Caribbean and set up Ice Records.

"I wanted to build up credibility in one part of the world before attacking the rest."

Success came reasonably quickly for him in the Caribbean, and eventually broadened across Europe, and his career is now aided by the good people he's hired to work for him. Does he still feel it possible for a young ambitious musician today to accomplish what he has?

"It was a lot harder for me, much much harder. There was no precedent, and where there has been no precedent people are very reluctant to let there be one. It's always possible if a person has enough bottle, if you've got no one telling you negative things. If you don't have a wife that will stand with you, you're in serious trouble."

With his own career bubbling over nicely in the UK and abroad, Eddy packed up his equipment and moved lock, stock and barrel to this idyllic residence in Barbados. When did he finally decide to do it?

"Funny, it must have been a couple of months before I did it. I spent a fortune doing up my house in England — I couldn't foresee that I would move so fast. Then, I don't know, it must have been the winter, one day, my children were going to school, and it was really really cold that day, and I had to take them. I said 'No man, no!' and after taking them in I came back to my wife and said 'You know, we're going to have to move', I'd been looking, but then I *really* started looking."

After considering Guyana, his home country, and then Ibiza, he settled on Barbados, Coach House studios became Blue Wave Studios, and work began on the *Killer On The Rampage* album. The biggest single hit from the album so far is *I Don't Wanna Dance*. How, as a complete solo artist, did he make the record?

"That song was written to completion before it came into the studio. A lot of guys these days don't do that — they go into the studio and jam. This particular song, and as a matter of fact the whole album, was written before it came into the studio."

What do you mean by written?

"Everything was completely organised. All the songs were written, and I knew the melodies and every part of the songs before I came into the studio."

Do you write the parts down on manuscript paper?

"No, I don't need to do manuscript, it's in my head. I come in, and I know what tempo I want, so I go on the drums and I tap it out, and then I put on an acoustic guitar or something to sing a guide vocal to. Once the guide vocal is there, all the instruments are tuned and put on one after another. In my music there is always a lot more than you hear. If you had to break down my music into components you'd be surprised what is actually there. The way it is put together makes it sound



very very simple as if anyone could feel that they could go in and do that. The classic example is what these people, Roker's Revenge, did with *Walking on Sunshine*. When they stripped it down and heard all the things that were there — everything that's on there is what's going on in mind but you don't actually hear it, it doesn't confront you. You have to go looking for it."

So what is there on *I Don't Wanna Dance* that we can't actually hear?



Illustration by Jay Dee

"With The Equals . . . It's funny . . . we weren't musical equals"

"Oh, Jesus Christ, I mean . . . like, a simple example, if you listen just ordinarily to the record you would not hear that there is four tambourines playing all different things. To play four tambourines takes a lot of time! First of all you have to conceive of the parts to play and that could take hours, and then you may put it down and it's not quite right with the other one that's there, and then you have to find a place for them; one out front, the other a little bit behind, and so on. It's like creating a picture."

"The pianos, right. You hear that there is one piano in front of you, but there won't be one piano. There'll be one to the left, one to the right, and one to the middle. And they're all playing a different part which when put together sounds like one. The reason why the drums hit you in the stomach is because there are *plenty* of drums! Sometimes I have three hi hats, doubled with three cabassas playing the same thing. It's interesting because it adds different textures."

"Everybody, I presume, is made up of many different people, and you just draw on those people within yourself

and then you make the music."

One of the characteristics of Eddy's music, particularly some of his earlier solo stuff, is the synthesized bass lines, now being used by plenty of bands. How did he develop that idea?

"I don't like bass guitars. As a matter of fact, most times I almost forget bass. Unless a bass guitar is going to say a definite something you can do without it. Drums can speak where bass can't, but people are used to bass. Not all songs call for a bass guitar, you can just hear a wash of something going on, but it's not any particular instrument, and this is where synthesizers are very good. You can say 'I know it sounds like it's supposed to be a bass guitar, but it's not really', and you can spend the time looking for it, and the sound will be almost like a bass guitar, but will be something else."

One thing most of you must have noticed when hearing *I Don't Wanna Dance* on TOTP, or the radio, was the distant washy sort of sound when compared to the other chart hits, particularly the vocals. How do you create that feel?

"It's because there are *many* voices, and all you really hear is the voice that I want you to hear. But behind that voice there might be 20 more voices. Really, it can be as many as that, if that is the effect that I want. Sometimes the effect that I want is just one voice and not even a lot of echo, but with *I Don't Wanna Dance* there's a lot of echo and a lot of various types of echo on a lot of various kinds of voices, but you only hear one voice. Now the next time you listen to it listen to it carefully and then you'll hear more voices all slightly different, all singing the same thing until right back in the speaker there's about ten voices all singing, and it creates a happy effect. It makes people feel that they want to sing it too."

With such a fastidious approach to his music, getting the music translated live through a band must have been a nightmare. How does he do it? Does he tell them all exactly what to play?

"Just like the London Symphony Orchestra. I say 'Look, gentlemen, I know you are all great players, I know you can play 50,000 notes per second, BUT, hear now, the difference between my music and anybody else's music is that my music goes like this. No, while you have the right to extemporize, this at this stage is what you do, and that at that stage is what you do, and the rest is up to you. I can't actually tell you how to play your instrument, but the effect I want is this.' Then everybody goes away and says 'Oh, what a bastard', but after working with me for a while they get to understand my peculiarities."

And now, like thousands of people everywhere, are beginning to respect his successes. Eddy Grant, your original self made man, fullfiller of many roles, still finding time to walk on sunshine while so many others fall around him.

Tony Horkins

Studio sound ...on the road

If you're looking at your P.A. system, it could pay to check out the heart of the rig – the mixing console itself. You need a board that will let you be as creative as the music on stage, that'll survive in the back of the truck, and that won't break the bank.

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And if that sounds impressive, the 400B also comes configured in a Monitor format for the band which needs independent stage monitor mixing. The 400B Monitor gives you the facilities

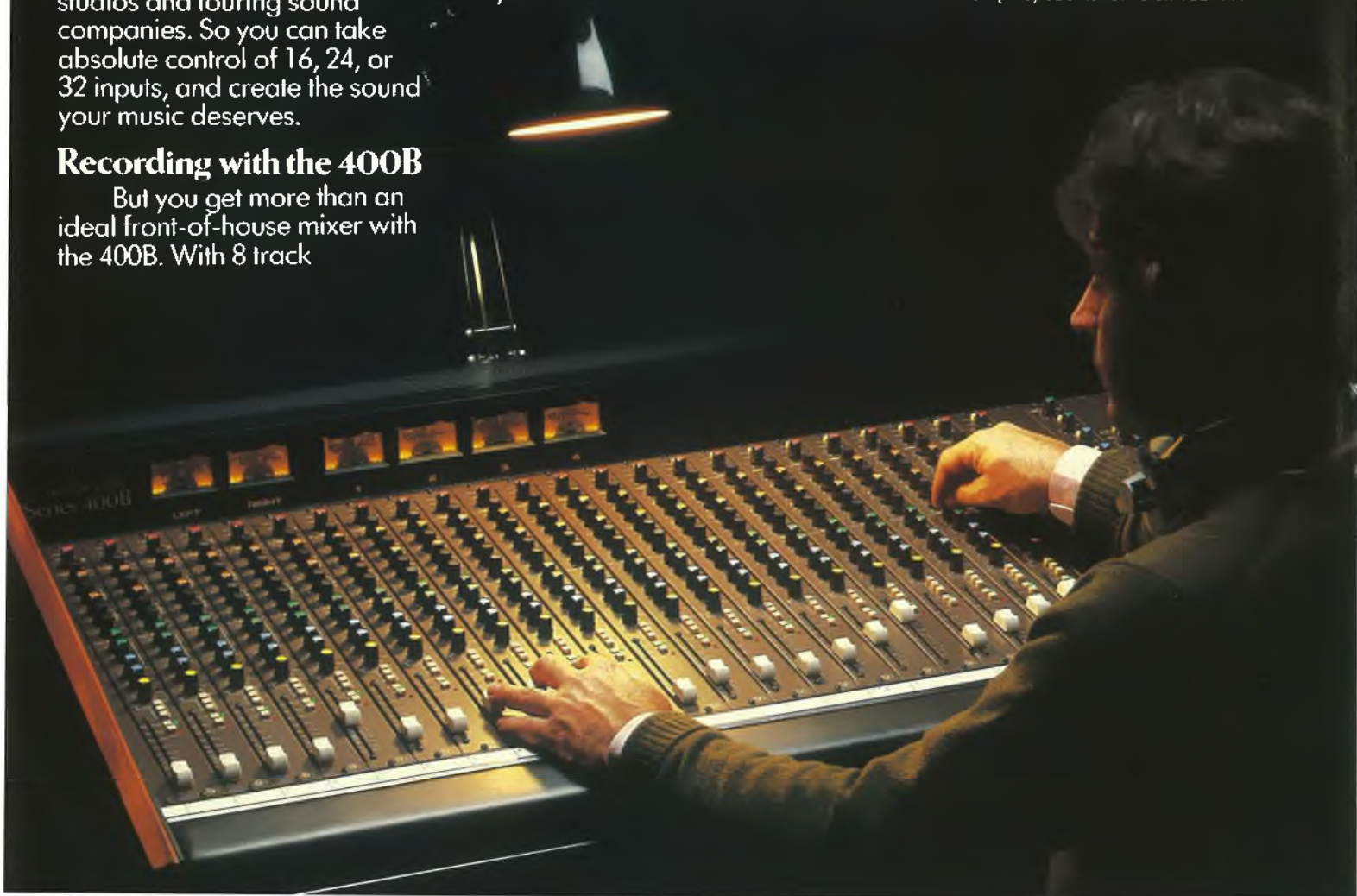
to create 8 separate mixes plus a stereo mix for side-fills, front-of-house or stereo recording. Available in 16/8+2 and 24/8+2 sizes, all 8 outputs can be mixed into the stereo output via level and pan controls.

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The Equipment Strikes Back

BY NOW (HOPEFULLY) THERE are thousands of musicians around the country who are the proud owners of a multimeter and, possibly, for the first time in musical history, a complete set of leads that work. The £8 or so spent on the multimeter would seem to be a pretty expensive way of fixing a few leads so let's see what else it can do. Our first port of call is the humble fuse.

Fuses — the weak link

In any electrical circuit Walsh's First Law of Electricity plays an active role. It can be summarised as follows:

"Anything that can go wrong will go wrong — usually at the worst possible moment. Anything that cannot possibly go wrong goes wrong with monotonous regularity". Fuses are the first line of defence against the First Law.

Any piece of electrical equipment has electric current flowing around it when it is operating normally. Under certain fault conditions the normal operating current rises dramatically. This can have all sorts of unpleasant side effects such as melting wires, destruction of electronic components, fire, flashes and bangs etc. In order to protect the equipment and its user against these hazards one or more fuses are included in the circuit. The fuse generally consists of a tube with metal end caps and a wire running through the centre. The wire is designed to melt and break when too high a current flows. This effectively switches off the power and stops the current flowing through the equipment. Most equipment that we musicians use is, in fact, fused twice — there is a fuse in the mains plug and usually a fuse on the back panel. From what I have said it should be apparent that having the wrong fuse fitted could end up costing you money. Luckily it is fairly simple to work out what size you

Fig. 1. Example of Electrical Data Plate

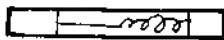
Voltage	240V AC 50/60 Hz
Power	115W (115 VA)
Current	0.5A

need. Most equipment has a plate or sticker on it giving basic electrical information (see figure 1). If the current consumption in AMPS (A) is not shown we can still work out the fuse from the Power rating. The Power rating is given in Watts (W) or Volt Amps (VA).

Dividing this number by 240 (the mains voltage) gives the current consumption. eg: Power rating = 200W.
Current = $200 \div 240$ = just less than 1 Amp.

200W is the electrical power — not to be confused with the output power of an amplifier.

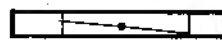
The correct fuse is one whose rating is slightly higher than this value.



ANTI SURGE



QUICK BLOW



SLOW BLOW
(semi delay)

Figure 2

As far as plug fuses are concerned there are only three sizes of fuse commonly available, namely 3A (blue), 5A (grey) and 13A (brown). For some mysterious reason plugs are supplied with a 13A fuse fitted — I say mysterious because the majority of group equipment and home appliances are more than happy with a 3A fuse. (In the above example we would choose a 3A fuse for the plug.) Before reading the rest of this article grab a screwdriver and check the plug fuses on your amp/synthesizer/keyboard/PA/echo chamber etc. Five minutes spent now may save you a lot of expensive repairs and might even save your life!

More complicated (but only slightly) is the situation with back panel fuses. There are three types available — quick blow, slow blow and anti surge. (See

figure 2.) You will notice that in the list of fuses I have omitted Polo wrappers jammed in the fuseholder (I think Polo's should carry a slogan "DANGER H.M. Govt. Health Dept.'s WARNING — POLO WRAPPERS CAN SERIOUSLY DAMAGE YOUR EQUIPMENT"), nails, silver toothpicks, cooking foil, wood screws and whatever else people stuff in their fuseholders in desperation. The only safe replacement for a blown fuse is a new fuse which means you should always carry a spare set — it's a lot faster than bodging it anyway. These fuses are available in two lengths — 20mm or 1 1/4" and a wide range of current values. For lower current drain equipment the rating is quoted in milliamps (mA).

There are 1,000 mA to the Amp (or 1mA is 1/1000th of an Amp if you prefer). This means that we could calculate the fuse for the equipment described in Figure 1.

$$\text{Current} = 115 \div 240 = 0.479\text{A}$$

or 479mA

We would need to rate our fuse slightly above this — say 600mA.

At this point we must be careful. Often when an amplifier is switched on it draws a surge of current which is higher than normal and our fuse must cope with this. Generally I would recommend the use of anti surge fuses which are designed to withstand this treatment.

We now have, in our example, a 600mA anti surge fuse in the back panel and a 3A fuse in the plug and all's right with the world.

Okay, so our equipment is now correctly fused, so what happens if a fuse blows and which fuse is it? Herald the triumphant entrance of — you guessed it — the multimeter.

Checking plug fuses

You can't see into a plug fuse so the quickest way of checking it is to use a multimeter. Set the multimeter to resistance check and connect the

probes to either end of the fuse. A full scale deflection shows a good fuse, no deflection shows a blown fuse (see figure 3). If the fuse is blown use the multimeter to make the following checks, ensuring that the equipment mains switch is on and that in the case of a detachable mains lead it is plugged into the equipment. (The equipment should, of course, be disconnected from the mains.)

1. Connect the multimeter between the mains plug neutral pin (blue wire) and the top of the fuse holder (brown wire).
 2. Connect the multimeter between the brown wire and the earth pin (green and yellow wire).
 3. Connect the multimeter between the neutral pin and the earth pin.
- These tests are summarised in figure 4.

If all is correct tests 2 and 3 will give no reading whilst test 1 will give a reading according to how much current the equipment normally draws. Typical results for test 1 are shown in figure 5.

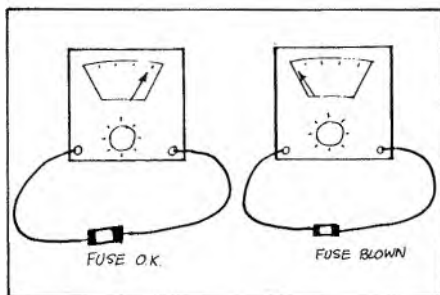
A reading which is considerably lower than expected shows that there is a fault in the equipment. Under these circumstances putting in a new fuse is a waste of time and money — it will blow again. Worse still, bridging the fuse gap with a nail etc. to get it going again will land you with a considerable repair bill. In the situation where the reading is very low (on the resistance scale of the meter this means the needle is further to the right than it should be) or even fsd, there is little you can do at the moment (you could always wait three or four months until this series is complete, by which time you should be able to fix it yourself). I said "little you can do" but it's not altogether hopeless. If the mains lead is detachable pull it out and repeat test 1, 2 and 3. If you get any reading at all on the meter the fault is almost certainly in the mains lead.

Following the techniques outlined in last month's article you should be able to track it down. If the mains lead is okay I would get your gear repaired professionally for the moment. (At the moment we're doing the equivalent of Nicholas Parsons' £1 questions — we're just getting used to playing the game.) The other possibility is that you get no meter reading on test 1 in the first place. The most likely cause of this is that the equipment back panel fuse has blown.

Checking panel fuses

Normally these are made with a glass tube so you can see if they are broken. Fuses blow for one of three reasons:

1. Old age — the wire can fail due to its being weakened by the surges that occur when equipment is switched on and off.

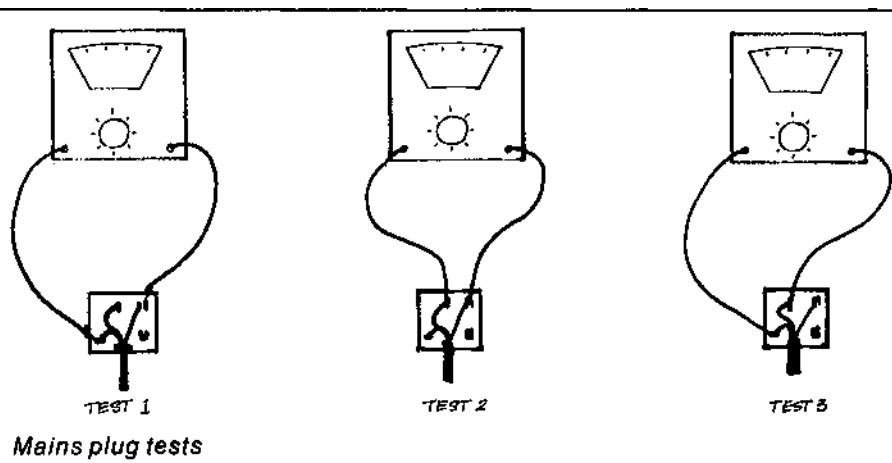


Checking a fuse with a multimeter

2. Mechanical damage — the wire can snap due to mechanical shock caused by the rigours of equipment being continually set up, broken down, and generally being knocked about in the back of a van — in other words, normal use.

3. High current — if a fault condition arises the resulting high current melts the fuse wire.

It is usually easy to spot the difference between a fuse which has broken due to old age or mechanical damage and a fuse which has died defending your amplifier. A fuse whose



Mains plug tests

Normal Current Consumption	Rating Electrical Power	Typical Resistance Reading
0.1A	24W	2,400Ω (2.4KΩ)
0.2A	48W	1,200Ω (1.2KΩ)
0.5A	120W	480Ω
1.0A	240W	240Ω
1.5A	360W	160Ω
2.0A	480W	120Ω
2.5A	600W	96Ω
3.0A	750W	80Ω

Typical results of mains plug test 1.

wire shows a clean break is almost certainly in the first two categories and can be replaced without further ado. However, if there is a blob on the end of the wire or evidence of molten metal in the glass tube this indicates that the wire has melted and that excessive current was flowing. As before, for the moment, you will have to rely on professional help.

There is one other category of fault which is quite common. Your amplifier has gone completely dead, the fuses check out okay and the mains socket works. Once again the multimeter can help. Unplug the amp from the mains and pull out all other connections to it (eg. guitar leads, speaker leads etc.). Carefully remove whatever screws you need to, to open up the amplifier. Look carefully at each screw location before undoing it — amplifiers have lots of bits and pieces bolted to the chassis and you don't want to undo a few wrong screws and have bits and pieces floating around. Remove the cover and STOP. Even though the amplifier is disconnected from the mains it can still pack a punch and an unpowered flight in a confined space can be painful. Look inside the amp for one or more large metal cylinders. These are the power supply capacitors and they can hold a hefty charge for quite some time. There should be two or three tags at one end. With an insulated handle screwdriver short the tags together by bridging the blade across them. If the capacitors are charged this will result in a few harmless flashes and sparks. Once the sparking stops the capacitors are discharged and safe. Now locate the fuseholder. A typical layout is shown in figure 6 and a close up of the mains supply is shown in figure 7.

Connect the multimeter probes between the live wire from the amplifier mains socket (labelled L on the diagram) and the tag X of the mains switch; fsd

means the wire is okay, no reading means the wire needs replacing. If it is okay switch the probe from tag X to tag Y. Flicking the switch on and off should cause the meter to swing to fsd and then give no reading. If not, the switch needs replacing. Switch the probe from tag Y to tag W. If the meter does not react as before the wire connecting Y and W is faulty. Now switch to tag V and switch on and off. If the meter does not react the fault is in the fuse holder. These are notorious for going wrong. The main problem is that tag W is spring loaded onto the fuse. The spring gets weak and contact with the fuse is lost. The only sensible solution is to replace the whole fuse holder. They are not particularly expensive — less than 50p — and attempting to repair them is usually more hassle than it is worth. Replacement is simple. Unsolder the two wires connected to the holder, unscrew the locking nut and pull the holder out. Fitting the new fuse holder is simply the reverse of this but you can improve the situation further.

The outcome of Walsh's First Law is that a fuse will blow or a fuse holder go faulty right in the middle of an important gig. If this happens it is obviously essential to get playing again asap. Luckily there is a quick way — the resettable fuse. The resettable fuse does not suffer from most of the foibles of a normal fuse in its holder and is reset in a matter of seconds. As the back panel fuse is usually of a lower rating than the plug fuse it blows first, and so the provision of a resettable fuse allows you to continue playing with barely an interruption (provided there is nothing seriously wrong with the amp in which case it will not reset) as it can be reset with the push of a button and with the mains still connected. This convenience far outweighs the cost.

For those of you interested in this little conversion, below we're reprinted the RS stock numbers of suitable

resettable fuses (or sub miniature circuit breakers to give them their posh name). Any radio or TV repair shop will have an RS Catalogue and should be able to order one for you — delivery is usually less than three days, which in this day and age is nothing short of miraculous.

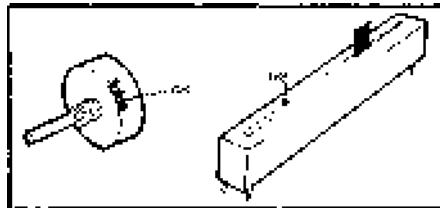
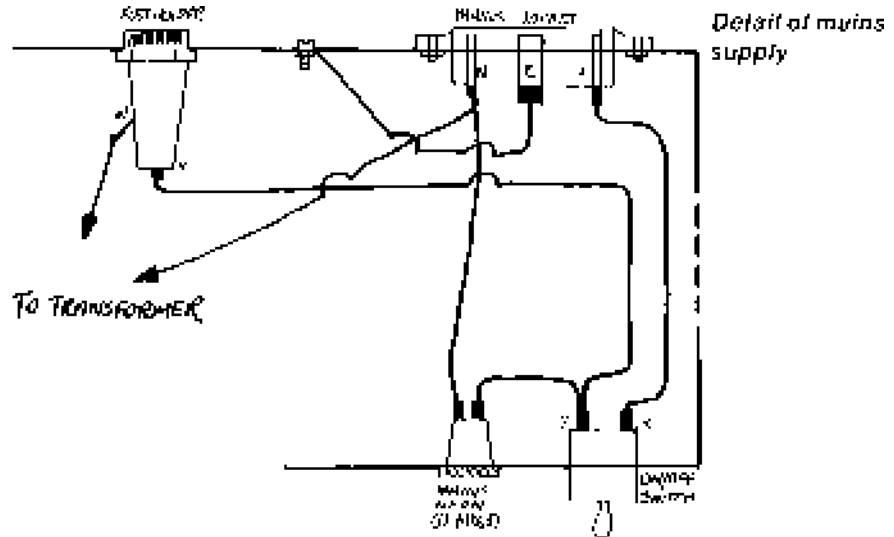
Current Rating	R. S. stock number	Trade price
0.5 A	336-028	}
1 A	336-012	
2 A	335-996	£2.08
3 A	335-980	}
4 A	335-974	
5 A	335-968)

The dealer will then add his profit + VAT which should bring them to about £3.50 each.

Fitting is simplicity itself. The circuit breaker will fit into the hole vacated by the fuse holder and the two wires are then soldered to its two tags — it doesn't matter which way round you wire it.

Snap, Crackle and Pop

Whilst the guts of the amplifier are open to public gaze it seems a worthwhile exercise to check out the controls. The volume and tone controls on an amplifier (or for that matter the rotary controls on any piece of equipment) and the sliders on a graphic equaliser or mixing desk all work in the same basic way. There are three terminals (double up for stereo) two of which are connected to either end of a carbon resistance track with the third connected to a sliding contact which sweeps from one end of the track to the other. When the amplifier, or whatever, is new this works fine, but as old age creeps up dirt, dust and beer etc tend to find their way into the works. The result is crackling, popping and fading of signal as the control is turned. If this is your problem, now is the time to do something about it. In most cases a good clean up will make the controls (they're called potentiometers or 'pots' for short) as good as new. You will need a suitable cleaning solvent, the best one I have found goes under several grand chemical names — Tetrachloromethane, carbon tetrachloride or CTC. This should be available from any good dispensing



Rotary and slider potentiometers

chemist. If you have trouble it can also be bought as spot and stain remover under the brand names Dabotoff or Thawpit, available from most hardware stores. You will also need a dropper pipette or the dropper from some eye drops.

The amplifier should be disconnected from the mains and the amplifier stood so that the slot in front of the three pot terminals is facing upwards (see figure 8). Drop six or so drops of solvent into the slot and then turn the control back and forth about 50 times. (Nobody said it was going to be easy!) Wait a couple of minutes for the solvent to evaporate, switch on the amp and try it. If it is still not perfect repeat the treatment. In 95% of cases the pot will run quiet. For sliders the technique is slightly different in that the amplifier does not need to be dismantled, simply drop the solvent along the slot and work the knob up and down (no Cedric, not that knob!).

Should you be unlucky and have a pot that does not respond to treatment it will need to be replaced. Once again your friendly radio repairman should be

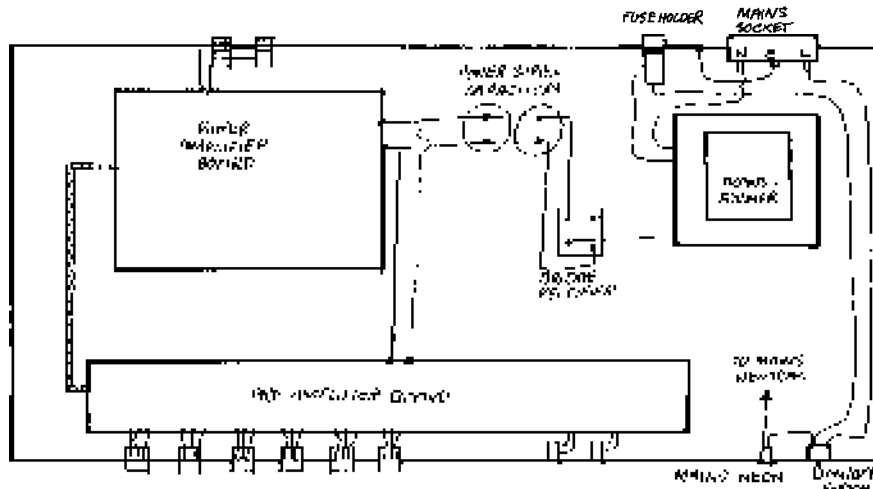
able to order one for you but he will need some details. Stamped or printed around the pot will be everything he needs to know — you have just got to spot it and write it down. Pots come in two basic varieties — those with logarithmic tracks and those with linear tracks. This is usually abbreviated to LOG or LG and LIN or LN. The other piece of information he will need is the resistance of the pot. This will appear as a number possibly followed by a letter or two, eg.

- 500
- 22K Ω or 22K
- 100K
- 1M Ω or 1MEG

The numbers may vary but look for the suffixes Ω , K or M.

A full description, therefore, might be: 470K Log pot. These cost about 50p a time.

Before you remove the wires from the old pot I strongly advise that you draw a good diagram showing which colour wires go to which terminal. Get your soldering iron good and hot and then grip a wire close to the terminal with a pair of pliers. Heat the terminal with the iron and gently pull the wire away. Resist the temptation to pull the wire with your fingers, you'll probably burn your fingers and melt the wire's plastic insulation into the bargain. Remove all the wires and then remove the pot's knob from the front panel (you may need a small screwdriver for this). Behind the knob there is usually a large nut which bolts the pot onto the front panel. Undo this with pliers and remove the pot. Some manufacturers do not bolt the pots onto the front panel, but mount them directly on a circuit board which is bolted to the panel. In this case all the knobs must be removed and the entire circuit board pulled backwards and out to gain access to the pot. Owners of the earlier style HH gear will need to pull off all the knobs, remove the perspex panel and swing out the electroluminescent panel to reveal the pots securing nuts. Replacement of the pot is the reverse procedure, remembering to flow fresh solder on the joints.



Example amplifier layout (Plan view)

Phil Walsh, BSc

TRI-FLEX™ SYSTEM

TRI-FLEX™ SYSTEM

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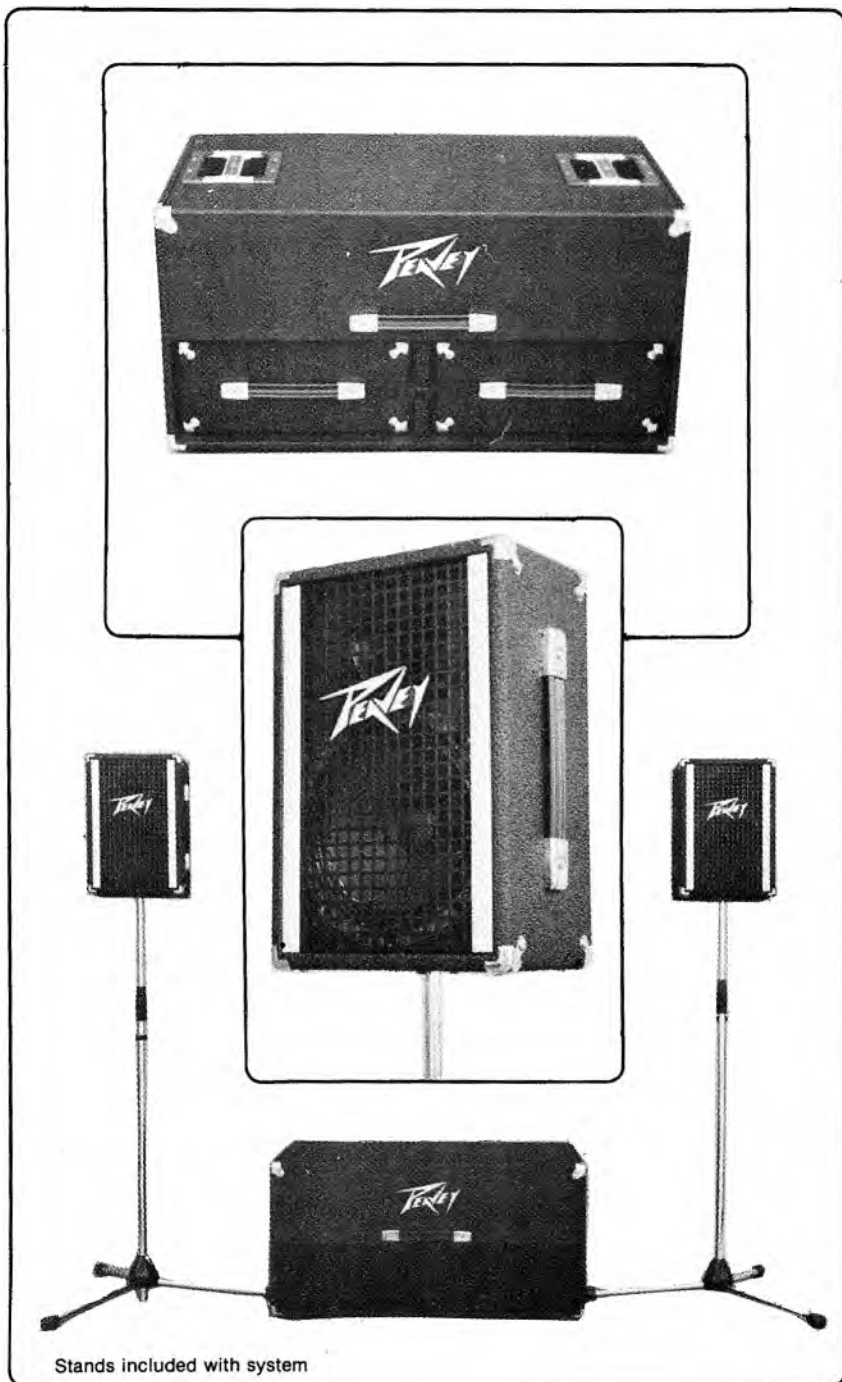
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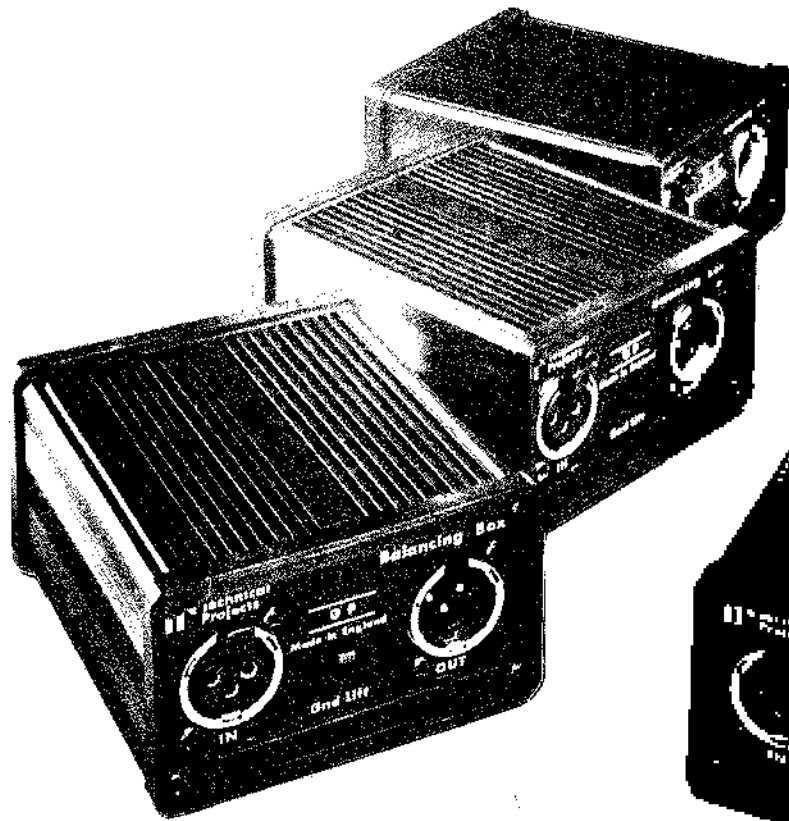
300 watts

SOUND PRESSURE LEVEL:

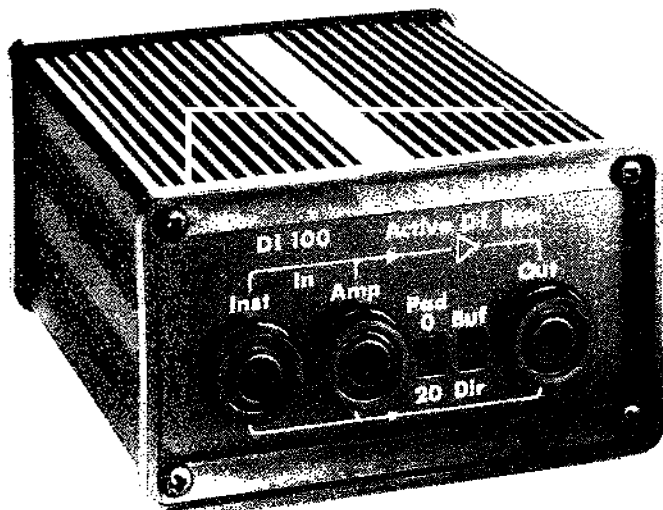
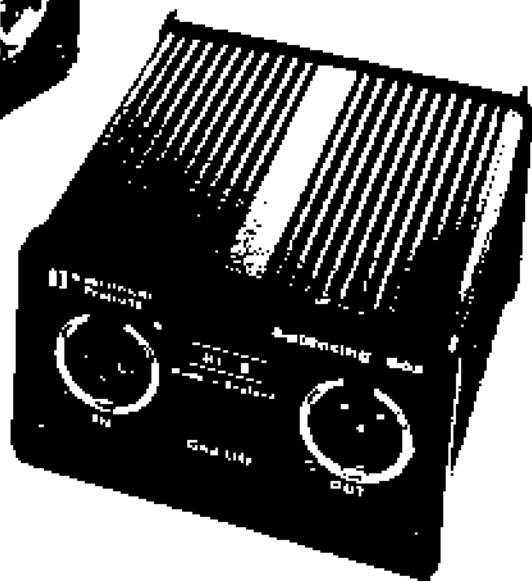
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SIX YEARS ON THE battlefield already and, personally or creatively, it looks (and sounds) to have done Tom Petty nothing but good: teeth gleam, eyes shine, his skin is clear and supple over that uniquely planed skull, and the flaxen hair is a shampoo salesman's dream. His thinness remains more athletic than anorexic, exaggerating a gawky angularity that makes him look a lot taller than he really is. So much for flesh — it's the noise that counts, and as far as music's concerned, both their latest waxing and their recent European tour were exhilarating reminders that Petty and his Heartbreakers are a Rock'n'Roll foundry par excellence, turning out endless nuggets of purest quality with breath-taking ease and agility. The riffs, the changes, even Petty's subject matter for the most part, are the same old bits and pieces the young Holly and Presley had to work with waybackwhen — Petty and his band are one of those rare combinations who just happen to be able to make even some of the oldest chestnuts sound like they just dropped off the tree.

Bull — *shit!* as the colourful but ever so to-the-point Mr Petty himself might put it. There's no 'just happen' about it; making it look and sound easy as pie may well be the hardest part of all. Tom Petty is a man of few words, both in life as in song.

"We're just a bunch of guys who play music together," his Florida drawl imparts. "That's about all there is to it: you get up and play or you put out a record and you do it all as well as you can, and if people like you they come back a second time. I was just the same when I was a kid; I'd hear a record on the radio and I'd get that little tickle up my spine — that's how you know when something's good, when it touches you. It's only music critics that have to keep dissecting everything all the time. But then that's their job, I guess," Petty adds charitably.

"But your average guy doesn't have to go through any of that — he either likes something or he don't, that's all there is to it."

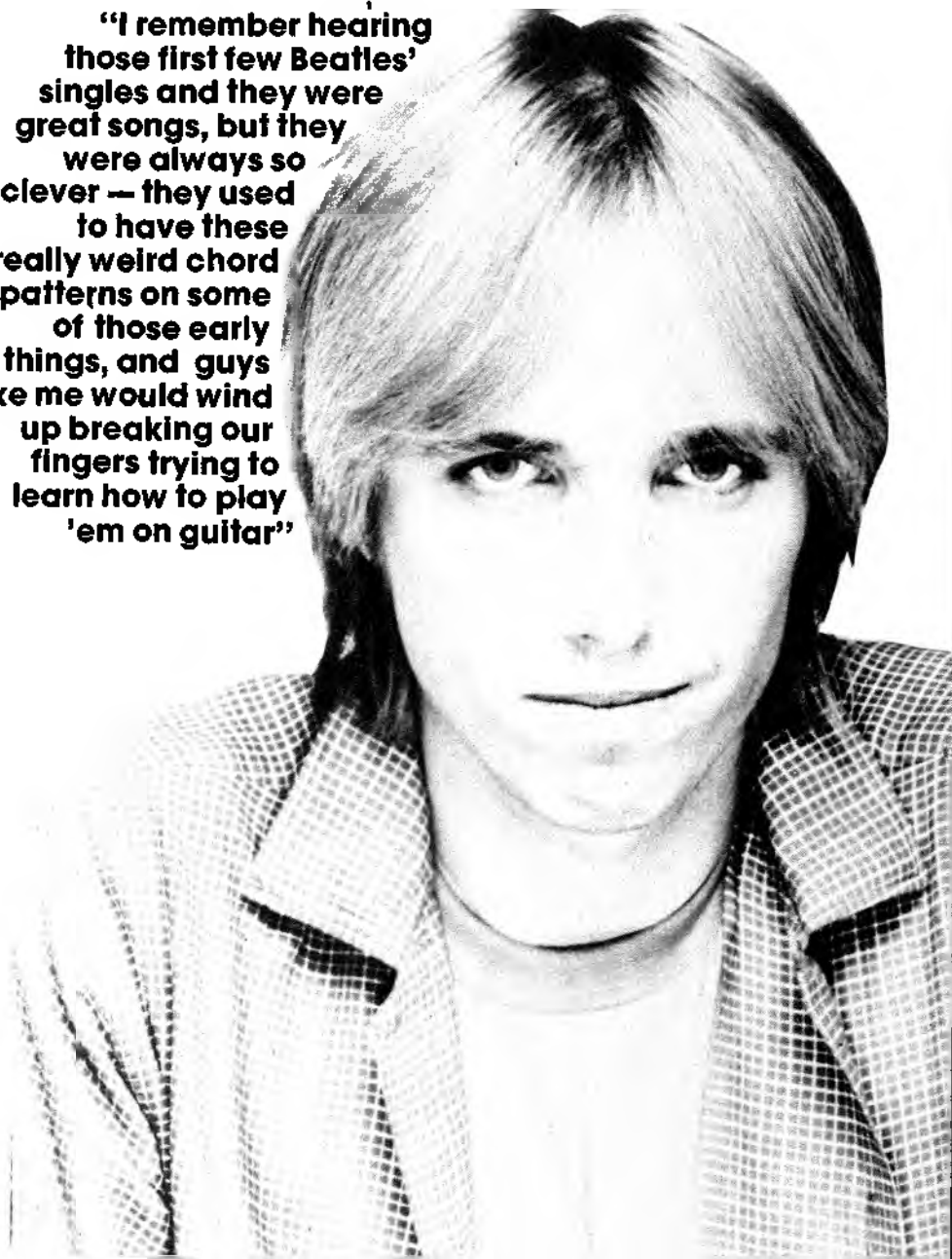
Luckily for Petty, Ms and Mr average get excited in large numbers when his music fills their ears; since 1979's aptly-named *Damn The Torpedoes* LP (short for the old battle cry 'Damn the torpedoes... and full speed ahead!' if anyone's in the dark), Petty & The Heartbreakers have been in the Platinum league as far as the US is concerned, the rest of the record-buying world jogging along not far behind.

No, indeed, it was far from an overnight success, even in America. Petty had the misfortune to have been born in the by no means world famous township of Gainesville in Florida, that south-eastern strip of the US where all the rich old people go in order to get a sun-tan so they'll look nice and brown when they finally creak to a halt. Petty's formative years coincided with the first 'British Invasion', a time when bouncy

PETTY'S PROGRESS

Giovanni D'Adamo finds Tom Petty keeping his promises

"I remember hearing those first few Beatles' singles and they were great songs, but they were always so clever — they used to have these really weird chord patterns on some of those early things, and guys like me would wind up breaking our fingers trying to learn how to play 'em on guitar"



young Englishmen like The Beatles, Animals, Rolling Stones etcetera were busily taking over the American charts with music that was raw, energetic, sexy and exciting. Like millions of other kids, Tom Petty started out buying records and wound up buying a guitar as well.

"You'd hear a record by one of these bands or see them on TV and — Bang! — somehow I just knew that it was what I wanted to be a part of," enthuses Petty.

Like most of his compatriots what he *wasn't* aware of to start with was that the new British bands were mostly modelled on an earlier generation of American musicians.

"The Rolling Stones introduced me to Chuck Berry," says Petty, clearly savouring the irony. "I remember going out and buying that first album — thought the whole damn thing was so great — and the funny part is that that's how I found out about the Blues; they were doing songs that we never even got to hear at home because the radio just ignored them."

"To me, a guitar is what I write songs with. Once I've got the basic framework down, then there's room for everyone else to add their bits"

Obviously Petty's main heroes were these self-same Rolling Stones, but other favourites included early singles from The Kinks, Who, Animals, Zombies, Searchers. Petty chuckles nostalgically as he sees his younger self in his mind's eye.

"The funny thing is, I used to think that all these groups really looked and sounded like their names! To me, The Animals really did sound like a lot of wild beasts... and you'd see The Zombies on TV and, wow, they really *did* look like a bunch of zombies! But the records were great! I remember hearing those first few Beatles' singles and they were great songs, but they were also always so clever — they used to have these really weird chord patterns on some of those early things, and guys like me would wind up breaking our fingers trying to learn how to play 'em on guitar!"

A succession of bar bands put Petty on stage in the various local clubs.

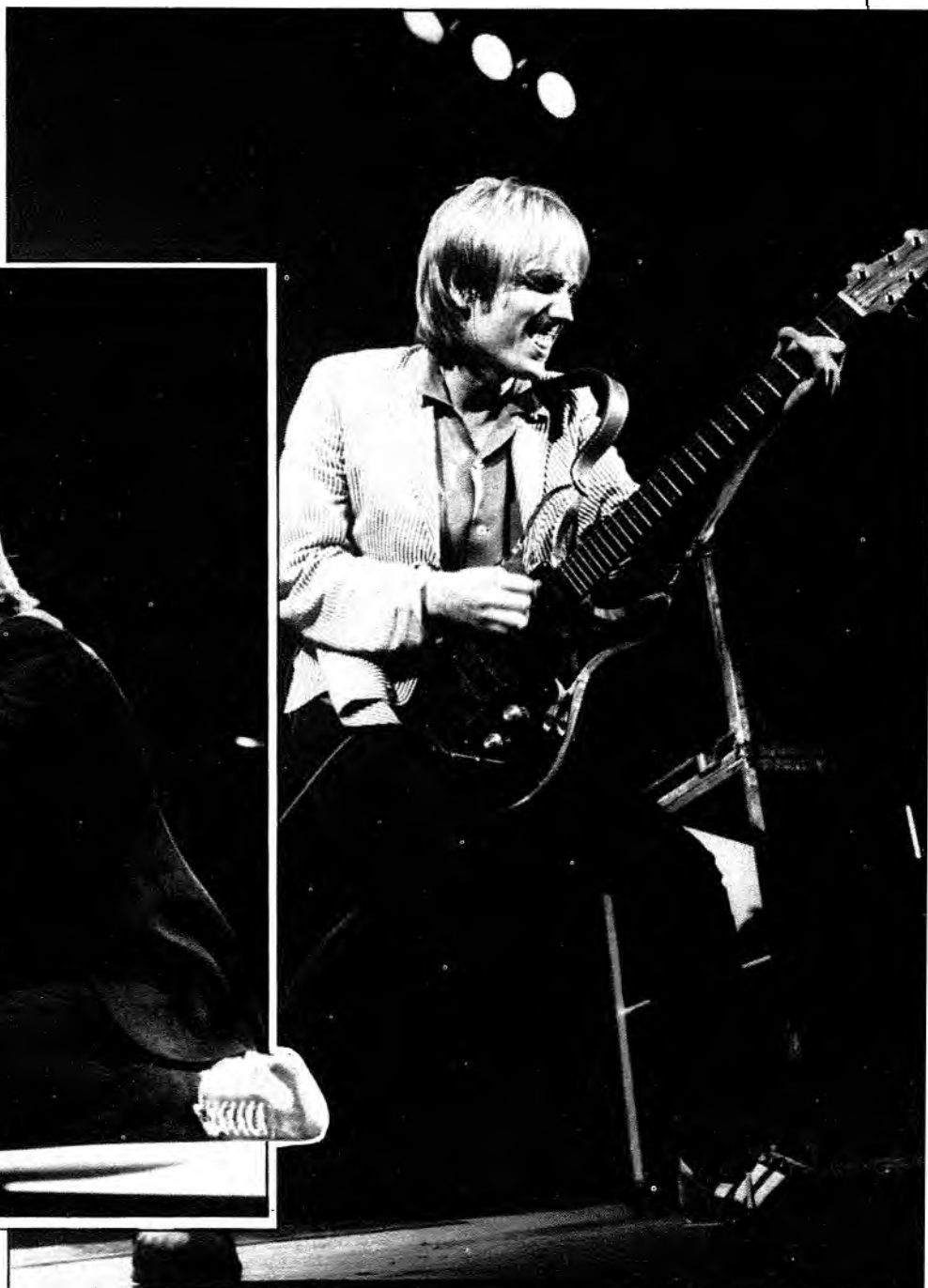
"For a long time I just played cover versions, I never even thought about writing anything myself — and anyway,

that's what people wanted to hear anyhow, so that's what you played."

Clearly Gainesville was no ideal launching pad for stardom of the Rock'n'Roll variety. Florida, overrun with geriatrics on their last legs, was no beach party either. Around '73 Petty finally migrated to LA as part of a group named Mudcrutch. Mudcrutch (a name perhaps subconsciously inspired by being forever surrounded by septuagenarians with bowel problems) went their separate ways, Petty being taken under the protective wing of a certain Denny Cordell, an Englishman who'd produced a string of hits for groups like The Move back home prior to moving shop to sunny California. DC was keen on TP's songs and singing, kind and patient enough to keep him fed and housed until the right time came.

"We kept doing things in his studio with this or that bunch of people, but it

Big Tom giving it plenty of that



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always got lost somewhere along the line," says Petty.

Finally along came The Heartbreakers, a group of buddies who'd been in various bands together back in their home state of... would you believe Florida?

"That was pretty weird, how it all worked out," Petty concurs.

What started out as a session band intended to showcase Petty's song-writing eventually gelled so well that they decided to go the whole hog and become a bona fide group. *Tom Petty And The Heartbreakers* was the album, released late in 1976 on Cordell's own Shelter label.

Despite several rave reviews, it took the better part of a year for the album to really begin selling in anything like significant quantities.

"It really happened bit by bit," Petty remembers, "we literally played right across the country night after night for a whole year as one state after another started to pick up on the record."

By November of 1977 the band's distinctive heart-pierced-by-Flying 'V' logo was flashing over New York's Times Square as the group drew rave reactions at key showcase clubs like The Bottom Line.

"For some reason everyone thought we were English," laughs TP. "We'd keep doing radio interviews where the guy would start off by asking what was happening in London... Shee-it, howder hale would ah know that?"

Petty laughs, his voice having broadened into a ludicrous Good Ole Boy parody. The other point of confusion was far less amusing and, as far as Petty was concerned, even downright insulting. Simply, the cover shot of the first LP featured a sulky looking Petty in a black leather 'biker' jacket. Only in 1977 leather jackets no longer meant that their owners were probably motorcycle maniacs — black leather meant you were a punk. A listen to the record, with its solid and fluent musicianship, its blatant R'n'B roots, not to mention the elegant and poetic way that Petty had revitalised the 12-string sound once synonymous with The Byrds — such music was a million miles away from The Damned, The Lurkers and the rest of the half-chord, 120mph sneering lyric crowd who were currently the toast of London. But Petty wore a black leather jacket — surely a Punk-Rocker was exactly what he was?

"Man, that was one big pain in the ass," says the usually relaxed Petty, clearly vexed even by the memory. "And it went on for years, believe it or not; it's only been in the last couple of years that people have finally stopped asking if I'm an anarchist."

The irony is that Petty's a real old-time Rock'n'Roller, someone whose roots are obviously in the classic mould of the Pop of the '50s and '60s. This and, just as obvious, the fact Petty and his band have always been proud of their musicianship, their technical skill and so on — who wouldn't be narked

to suddenly be lumped together with a bunch of braying kids who, true or not, were forever boasting about their deliberate *lack* of ability?

"It wasn't that I hated everything the punks stood for or anything," Petty explains. "But it had nothing to do with me or with what I was trying to do.



Here comes the mirror man

"One thing I agreed about was that too *much* musicianship could be just as boring as none at all," Petty adds.

"People like Cream or Hendrix really started all that. But they were actually doing something new and exciting; and they were good enough to get away with it and still make good music.

Trouble was, what happens after that is that everyone starts playing fifteen-minute numbers. And *that's* when I got bored and stopped listening. Maybe that's what gave me the confidence to start writing songs seriously myself in the first place" Petty reflects, "I had to do it for myself because it was the kind of music I wanted to hear."

What he wanted to hear, it turned out, was a glorious mix, everything from the McGuinn-ish reverberations of the surely classic *American Girl*, through to crowd-rousing stompers in the Stones' vein (*I Need To Know*, a dozen more) blistering slow songs like the narrative kick of *Breakdown*, or powerful melodic statements ranging from that debut LP's *Luna* straight down the rack to *One Story Town*, the majestic opener to the most recent Petty album *Long After Dark*.

By his own admission, Petty himself is no virtuoso as a guitarist.

"To me, a guitar is what I write songs with," he says candidly. "Once I've got the basic framework down, then there's room for everyone else to add their bits."

Most of the colouring is the work of the band's two principal soloists, Mike Campbell (guitars) and/or Ben Tench (keyboards).

"A song just isn't a song until we've all put something of ourselves in it. Anything from a tiny percussion part to a lead guitar solo can change the direction of a song when you're at the recording stage; that's when it can be

most exciting, when we're all playing off of one another."

Not surprising, considering his earlier reference to a guitar in terms that suggest a tool or appliance — in other words, a means to an end — Petty isn't one of those guys who keeps a zoo full of vintage or custom-built collector's items in the back room.

"That's something else the so-called punks and I agree on — if it sounds right, then it doesn't matter if the guitar cost fifty dollars or a thousand."

Even on this point, Petty, like most of us, makes the odd concession.

"I do love the look of those Flying V's — that always got a great reaction when we brought them out at the end. Now we don't do it as much because if we did it every single night it could end up turning into a circus," says Petty finally. He does think showmanship is important however. "People pay to come and see you, so you should give them something to look at. But that's just a part of it as far as I'm concerned; if the music's nowhere, then all the lasers and smoke bombs in the world won't save your ass for you."

Considering that The Heartbreakers have been on the road almost incessantly since their first album came out, it's almost surprising that they still get a kick out of playing live.

"That's the best part," says Petty. "It can be real hard work, it can be disastrous, but when everything goes right it's the best feeling in the world."

Indeed, probably the worst time in all of Petty's career so far was the long period when, following the break-up of Shelter, the band were virtually unable to work for the better part of a year while lawyers played legal tennis with their careers.

"That was really awful. I thought it'd never end," Petty hovers on the edge of a sigh. "In the end I had to almost become a lawyer myself to help sort the whole mess out. I should've been writing songs and playing and I was reading legal documents. Yech! But I do think if I hadn't joined in that it could easily have just gone on and on forever." Small wonder that he called his next (much-delayed) record *Damn The Torpedoes*.

The other major danger for a mainstream band like Petty's is the more creative problem of how far an artist is willing (or forced even, by this or that pressure) to go to actually please an audience's expectations. Tom Petty claims never to have tried to please anyone but himself. My own reservations largely concerned the penultimate album, *Hard Promises*, perhaps the band's one real relative weakling so far. Pandering to American AOR tastes? Petty says not. He does agree that *Long After Dark* has more bite to it.

"Maybe it's a better mix, it's not easy for me to say. I just try and do my best every time. What else can a poor boy do?"

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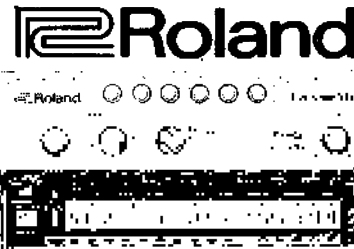
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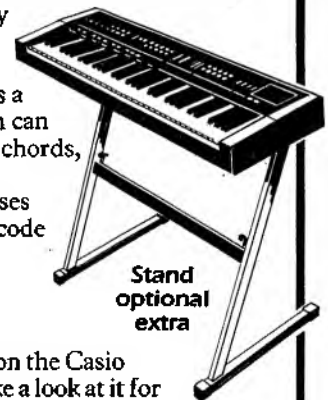
sound any of the 20 voicings, which don't have to be the same as that of the melody line 'so a nice split function here' (Music World).

The CT701 also features a Memory Play function which can store up to 345 notes and 201 chords, to play back along with you.

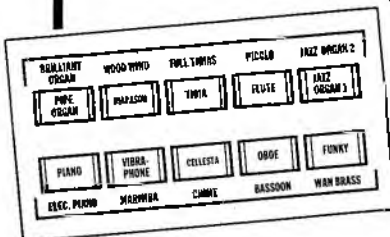
One more feature that uses the memory is the MS-1 bar code scanner which actually reads bar coded music and stores it in the memory to play whenever you want.

In fact, there's so much on the Casio CT701, that you'll have to take a look at it for yourself to discover just how much it can do. But for now, let's leave the last words to the music press. 'I can think of no better all round keyboard' Music World. 'A tremendous addition to the range of Casio Keyboards... it will lead the way' Organ Player.

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"WHEN SPANDAU BALLET FIRST signed a record deal I was by far and away the youngest manager in the business, I really didn't have any contemporaries. But now every new group that comes along invariably has a manager of the same generation as themselves. That would indicate that it has become increasingly important for a manager to understand what is actually happening out there amongst the people who are buying the records."

Steve Dagger was the first of a new breed of young managers who are basically an extra member of the band. The lead telephone player if you like. At the age of 22 he steered a bunch of ex-schoolmates powerfully into the public eye and straight into a watertight contract with Chrysalis records which involved what were then record figures in terms of advances and royalties.

He pulled the whole thing off with a flair which would have smacked of arrogance from a cigar chewing businessman of the old school. Spandau Ballet rarely played, and when they did it was in exotic venues such as the HMS Belfast, a battleship docked on the Thames. He never invited record companies and he even refused to supply them with a demo-tape of the band. Instead he visited all of them to find out which ones were good enough for his band.

"I didn't know anything about record companies, I'd never dealt with one before. So I just tried to be really pragmatic and sort out what these people could actually do for us, and who was best at doing it."

Now, three years later, Steve Dagger is a respected if still staunchly maverick figure in the music business. The band that he sprang from nowhere has gone on to consistent chart success throughout the world, and yet his relationship with them is still that of friend and confidante. His attitude to the daunting labyrinth that makes up the record industry is also unchanged. He still applies the same ruthless logic that he originally armed himself with.

"A successful band is inundated with all sorts of people talking all sorts of nonsense. But you've got to sift through all the jargon and all the bullshit that people inevitably talk at you, and sort out what they are offering to do for you. That applies to record companies, promoters publishers, agents, everybody. Why do you need those people? And are they any good at their jobs?"

In effect this has meant that Spandau Ballet have remained fiercely in control of their own destinies, handling their own publishing and promoting, never employing agents and making sure that the record company stick to what they're good at; the production and distribution of vinyl.

"This is a very fast moving industry and people's roles can very quickly become redundant. An awful lot of these people really aren't necessary and

THE MANAGERS



if they are they have to prove that they can do it better than we can ourselves."

This means that Steve Dagger is always a very busy man. His days are spent in his central London office actively directing the details of a Pop groups' existence, and just as importantly his nights are spent going out and actually sampling the culture that supports the band. Just about every evening you can find Steve Dagger in a club or concert hall observing the opposition, or just observing the scene.

"You've got to be aware and as close to the audience as possible. I go out really a lot in London and as much as possible outside of it. It's vital, but not just to see groups because there aren't that many that are worthwhile. The popularity of music is most manifest in clubs, that's where our marketplace really is, so that's where you've got to be."

"You've got to be aware and as close to the audience as possible. I go out really a lot in London and as much as possible outside of it"

The priority that Steve Dagger gives to going out "amongst the people" is the result of a deeply held conviction that trends in music work upwards from the street, and that it's the audience who actually dictate the sound and style of the music scene.

Spandau Ballet were an immediate success, their debut single reached number three in the charts with only minimal promotion because, as Dagger realised from the very start, there was a

demand for a sharp, stylish dance-oriented British band that was simply not being filled.

"If you're talking about really major acts they combine together and reflect the attitudes of their audience. The bands that are still with us from 20 years ago have all at one time totally captured the aspirations and feelings and look of a certain section of British youth. Heavy Metal bands do that really well which is why they're the one type of straight ahead Rock band that has survived the dance and style explosion. Spandau Ballet also do that, they express something that a lot of people feel, a whole lifestyle.

"People wanted to dance, they were getting more and more bored with going to see the same old groups for the sake of it. But you had to be out there in the clubs to see that coming, you had to know the way young people actually looked and felt. Groups came along playing in a certain style in response to a demand, and it's inevitable that a certain type of expertise or attitude in management was needed to service those groups."

All the while Steve Dagger is talking the phone is ringing with news of chart positions in Australia and plans for TV appearances in Germany. He plays me a tape of their superb new album and talks me through every track. He's totally committed to the band and says he can't imagine handling a group that he didn't have a real personal feeling for.

"I just wouldn't be qualified to do the job because you must entirely understand the band and its audience."

But he doesn't consider his 24 hour a day job to be a difficult one simply because "we're all in total agreement about what we're trying to achieve and we've got a songwriter who can actually write songs, that's the two most important things."

Dagger says that the biggest difficulties in management arise when the people concerned haven't really decided what they want to get out of it. Management and musicians end up pulling in different directions and people are forced into roles that they don't want to fill.

"Do you want to perform to lots of people? Do you want to make lots of money? Do you want to annoy everybody? Do you really want to be a Pop star? It's not a silly question. If you decide that you want to go for mass appeal then you've got to decide whether it's possible for people to like you playing the music that you do. A manager has got to play a part in that decision because it's so sad to see

record companies wasting money, artists wasting their lives and everybody wasting time putting out records that people are not interested in.

"There's constant talk of how bad record sales are, but so many records are put out that haven't got a hope in hell of selling simply because out of touch people fail to understand the public. They should tell these people to stop wasting their lives.

"I've got very little time for so-called non-commercial artists because what it normally means is they can't write songs. When people say 'I'm against conventional song structures', what they usually mean, of course, is they can't write them. But every now and then one of those people will stumble

across a melody and when they do it's hilarious to watch. Because it's quickly rush released in picture bags and they say it's now fashionable to be commercial."

Steve Dagger has never been afraid of upsetting people, particularly if they're part of the psuedo-riden Rock establishment. He's no respecter of reputations either, especially if they're last year's reputations which mean less than nothing in an industry that changes with lightning speed.

He may not be entirely enamoured with many aspects of the music business, and many of the people in the business who've been on the receiving end of his rigorous analysis are not entirely enamoured of him. But when I ask him about the corruption that has been in the news so often lately he said:

"I've got very little time for so-called non-commercial artists because what it normally means is they can't write songs"

"It's like any other capitalist industry. But because of its nature it affords so much more media interest than, say, immorality in the frozen food industry. I'm sure that equally dubious practices go on there. It's certainly there but I doubt if it's any more corrupt than any other business, it just appears so at times because of the names involved. It's bound to get more publicity than if somebody has cooked the books in an insurance firm."

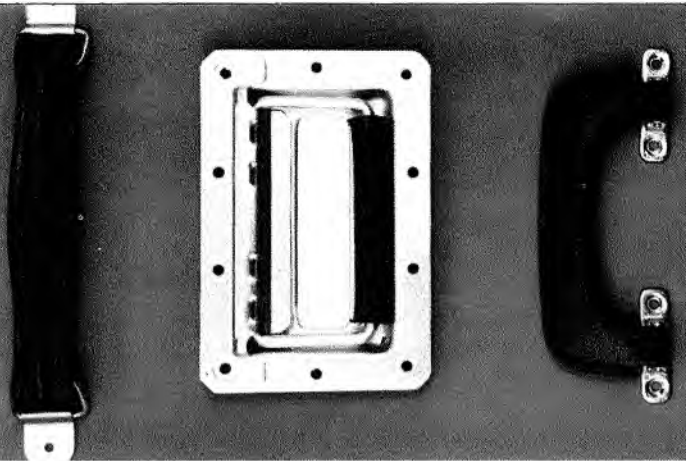
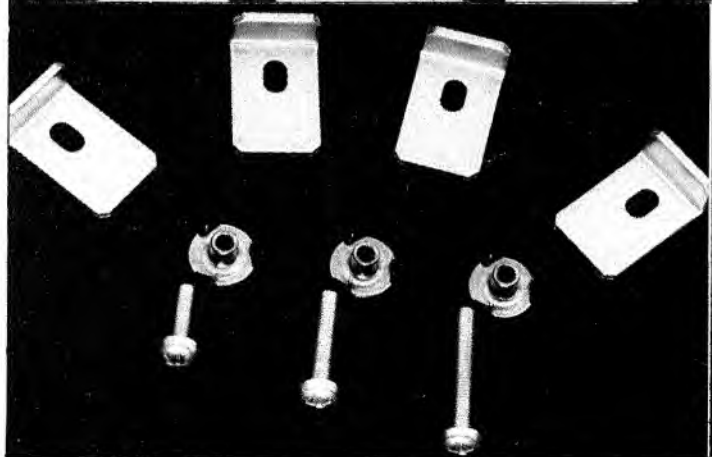
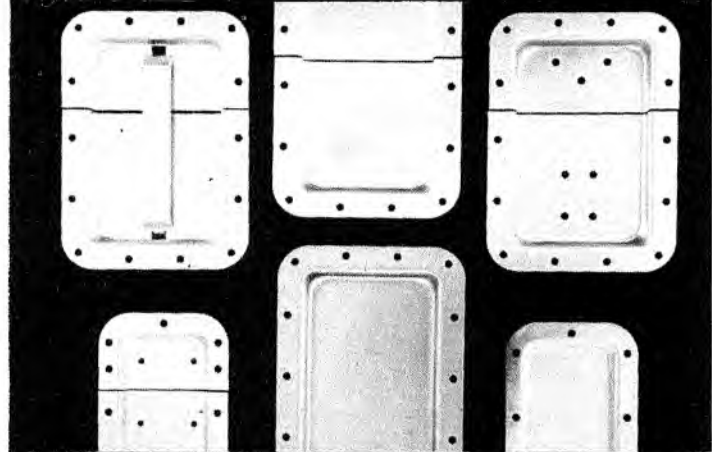
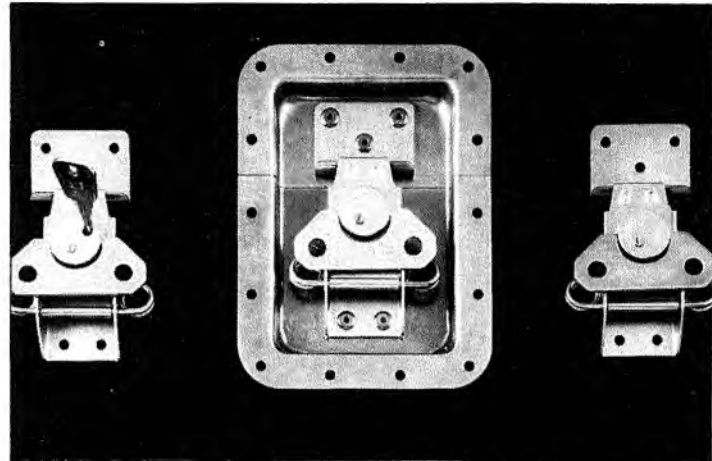
That kind of realism is typical when you're talking to Mr Dagger. He realised at the very outset that Spandau Ballet were interesting enough to make record companies come to them, "they had to, it's their job." And he's realised ever since that if you're going to be more than one hit wonders, then both musicians and management have got to work consistently hard to maintain their position. He sees one of a managers most important roles as ensuring that artists are constantly aware of the minute changes in the nuances of the youth culture that they make the music for.

"That's why all those old managers can't do it anymore. I've got nothing against age, but it's so embarrassing when you see some poor bunch of musicians looking ridiculous in three layers of make-up because some clueless manager has told them to wear it. That's why all those young managers have come along. It's a different world now and they're the only ones who can get it right.

"I've enjoyed it though, all these trendy young managers. It gives me someone to talk shop with when I'm in clubs every night."

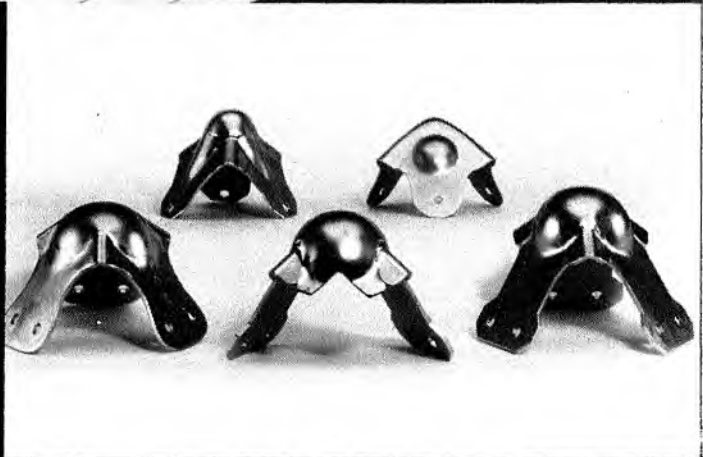
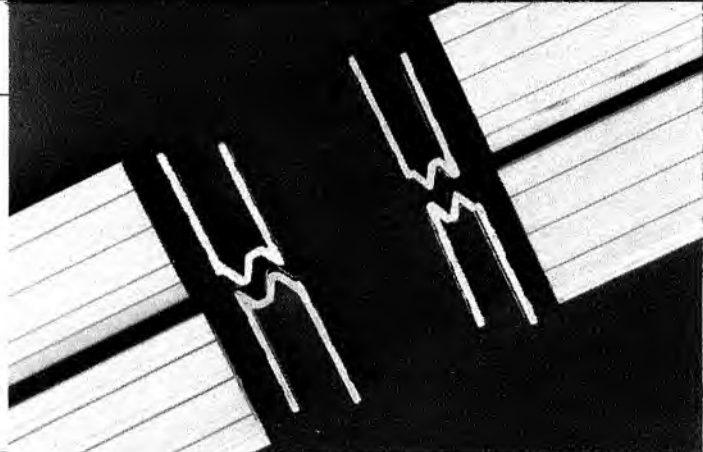
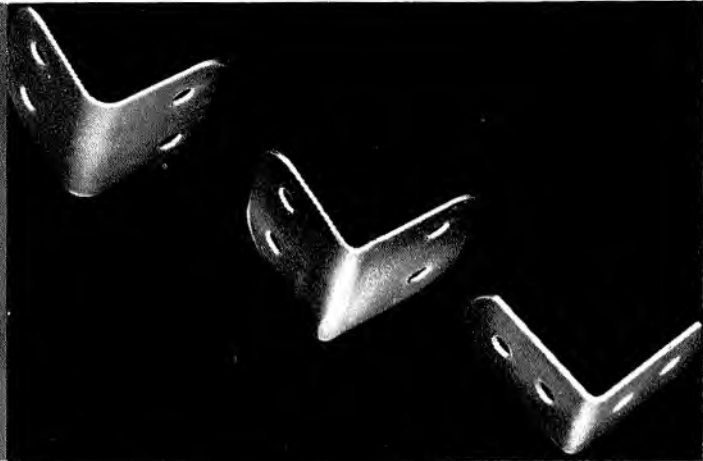
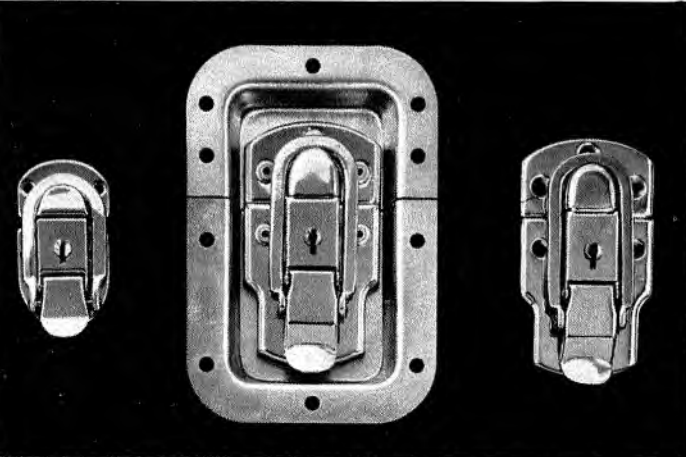
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BEFORE I BECAME A MAJOR force in the professional audio world (cough) I myself had a bit of a flirtation with stage lighting. I learnt how to call lights lanterns, bulbs bubbles and to tie the proper knots so nobody laughed at me. Secure in this technical knowledge, I applied my mind to cracking the artistic or aesthetic side of the game. I soon found that you can't really go wrong with reds and blues with a dash of amber and a few green specials to liven things up a bit. I learnt how to make a show look almost bearable, but limited facilities, in conjunction with limited interest (can I occasionally blag the gear to light my own band's gigs?) leads to stagnation, and my contribution to the world of international stage lighting could be said to be, not much.

My level of knowledge was, however, not all that different to any number of middle of the road lighting engineers, and if you decide to hire a lighting rig from a small local company in order to do a video promo, you may find that the person in charge of it is a little out of his depth when it comes to providing what you need to produce a high quality, colour television picture.

Neville Horsefield has worked in television for many years, he lectured in television lighting at The Royal College of Art for several years and is now a very active freelance lighting director. I went, once again, down to The Ace in Brixton, where he was busy directing the lighting for Channel 4's *What Ever You Want* which included a parody of a kind of talent contest, plus bands actually playing live. I spent most of the

afternoon trotting round the set after him asking questions, whilst he divided his time between me and telling various technicians where to point various lights — I mean luminaires. An evening meal break furnished me with my only chance to grab the chap's undivided attention, and so I set about tapping his brain with a few finely toned questions:

Requirements

What are the requirements for a good picture, and why are certain colours all

but taboo in TV lighting?

"Firstly you must understand how a broadcast quality picture is created; it is actually the combination of three separate pictures: A green, a red and a blue one. Added together at full strength, in the correct proportions, these three colours will give you white. The proportions for white are 59% green, 30% red and 11% blue. Different proportions will give you different colours or hues, but it is the strength of the signal or the brightness which gives the picture definition. Taking white to be the brightest thing in the picture, a quick look at the colour ratios for white will show that blue contributes very little brightness and therefore affords little clarity; for this reason we tend to steer clear of large expanses of blue. Red, although contributing 30%, actually produces a noisier or fuzzier and generally worse quality picture than blue, and so it too has to be used very carefully. Green, providing 59% obviously gives a greater level of brightness and clarity.

"These three colours are the primary colours, and different percentage combinations of them will give all the colours of the spectrum. This can be seen most conveniently by looking at a diagram of what is called the colour triangle where the three points of the triangle are given by the three colours in their white percentage combination. In this combination, decreasing and increasing the overall strength of the signal will take the picture from black, that is no signal, through all the various shades of grey, to white at full strength. Between the three primary points are all the various hues, and opposite each point is what's known as a colour's complimentary colour, and adding this to the original colour will produce white. Green's complimentary is magenta — a combination of red and blue; red's complimentary is cyan — a combination of blue and green, and



Examples of hard (top) and soft lamps

blue's complementary is yellow which is a combination of red and green. Every colour has its complementary which can be added to it to give white, and if you take, for example, green, which has been shown to contribute 59% to a white state, its complementary, magenta, can be seen to be contributing the missing 41% via its red/blue combination. In the same way red's complementary, cyan, contributes 70%, whilst yellow will add the missing 89% green and red components to blue to give white. As a general rule of thumb, any colours with a high percentage figure will be brighter and will therefore give the picture clarity: Greens, ambers and yellows are generally good.

"With lighting a Rock band many of the rules can be broken for effect if required, but generally speaking the viewer will relate most closely to the tone or colour of a person's flesh, especially his or her face. By all means use some reds and blues for background lighting if you want to, but try to get some brighter colours on the artiste's face if you want to maintain a degree of reality and/or clarity of detail."

Q. Most of the rigs used on the road consist mainly of overhead, back or side lighting with nothing coming from front of house, and if it's a live performance, it isn't generally possible to put lights out in the auditorium. How do you deal with this situation?

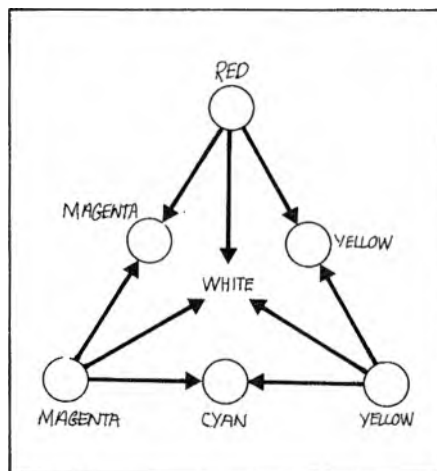
"Recording a live show is always a compromise. The ambient conditions, the atmosphere and the distance from which most of the audience will view the performance, together with various other factors, allow the stage lighting to be somewhat less critical as compared to the requirements of television. Apart from advising the lighting engineer concerning what colours are most useful, you should obviously try and get as many lights as possible positioned in front of the front line of the band. These lights should be bright colours — white, green, yellow etc, and should be focussed on the members of the band most significant as far as the video is concerned; ie the lead vocalist, so that on close-ups the face is reasonably clear. Again with Rock lighting, a certain amount of up-lighting can be used with footlights positioned along the front of the stage. However, the direction of the light reverses the usual direction of the shadows and, especially on the face, this has a very unreal effect. You must remember that under natural conditions almost all light comes from above, whether it's sunlight or electric light, and so we are very used to seeing facial shadows underneath the various features."

Contrast

Q. Could you say something about contrast ratio and brightness limits?

"Yes, the contrast ratio is the ratio between the brightest and the darkest object in the picture. It relates to the

reflected light level rather than the incident light level. For instance if you had a black and white chequered board, the contrast ratio would be high whilst the incident light would be the same all over the board. There is a limit to the contrast ratio that can be handled, and it is generally kept to somewhere around 5:1. As the brightness of the object increases the signal voltage generated in the camera increases linearly until, depending on the design of the camera, the signal starts to be compressed, and finally when it can increase no more, limited. This distortion will firstly be seen at the edge of objects by a black outline or halo effect. It is important to realise that you should never shine a strong light directly into a camera as it will almost certainly do permanent damage to the tubes. When using backlighting or effects lighting you must be very careful concerning the direction and/or the intensity of the lights to avoid such damage.



Colour triangle

"Bearing in mind that you normally have to maintain a monochrome compatibility in a picture, it is necessary to consider the relative brightness or 'luminance' of different colours, as it is only their luminance portion which differentiates them in a black and white picture. The Munsell system lists various different materials and colours giving their relative reflectivity or luminance value. It can only be used as a rough guide by designers, for example when choosing materials for a set, but as two completely different colours can look the same on a monochrome picture, you have to be careful that details don't start disappearing or captions start merging with their background."

Q. Could you outline the basic requirements for lighting a person's face?

"First of all you need a 'key light' which is a hard focussed light coming from one side to the front, and above the artiste. This will create a hard set of shadows as if perhaps the person is standing under a street lamp at night. Then, assuming you want a more

natural effect, you need a 'fill light' which consists of one or two soft focussed lights coming in from the opposite side to the key light. This light fills out the shadows, and the strength of it depends on the effect you want to achieve. Usually the ratio of key to fill will be around 1½:1, up to around 3:1. You then need some backlighting to light the hair and shoulders, giving the picture some depth. This is generally positioned diametrically opposite the key light and is of the same intensity and type. The keylight is usually somewhere between 30-40° high, and about the same off to one side. The exact angle depends on how deeply set the artiste's features are: The nose shadow shouldn't merge with the upper lip or with the side of the face shadow, otherwise an unnatural triangular shadow effect is created. The fill light is usually a little lower than the key light, at around 20-40°, and comes in from the opposite side, although there may be several fill lights to allow for movement of the head. The backlight is usually opposite the keylight but somewhat higher at around 60-75° to the head. As with sound, light obeys the inverse square law: That it drops of intensity according to the square of the distance, eg if you double the distance, you get one-third the light, if you triple the distance you get one-ninth the light. Therefore it is advisable to keep the lights as far away as is practically possible to allow the artiste to move freely without noticeable changes of light intensity: If the light's three feet away, he only has to move 18" to half the light level."

Q. Could you say something about using lights to create an illusion of depth in a picture?

"Warmer colours such as reds, oranges and yellows, tend to appear to come towards you on the screen, whilst cold colours like blues and greens tend to move away: Witness the effect of red letters on a green background — the letters seem to jump out at you. By lighting the background of a scene fractionally cold, and gradually increasing the background of a scene fractionally cold, and gradually increasing its warmth coming downstage, it is possible to heighten the effect of depth in a scene. The same principles can be used to make a person's face stand out from a background, but the colouring filters must be very subtle to maintain a naturalness if that's what you want. Using too strong a filter to warm a person's face up will destroy the flesh tone, and the final judgement as to whether the effect works or not has to be made via the colour monitor, as the sophistication of your eye's optic doesn't allow you to see things in the same way that a camera does."

My time was up, and Neville went back to telling people where to point lights. That's showbiz.

James Betteridge

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 Amplex MM1000 16 track 2" professional machine fitted with Soundcraft electronics, B.E.L. noise reduction and remote ref. M2 £5,500
 Amplex MM1000 16 track 2" with vari-speed, ref. M24 £6,500
 Brenell Mini 8.3 available all in good order. Price reduced to clear, sold as seen. ref. M3 ea. £2,000
 Brenell Mini 8 remote £350
 Brenell Series 19. 8 track 1" machine, ref. M4 £1,950
 Cadey 16 track 2" with remote, ref. M5 £2,900
 Itam 8 track 1/2" recorder very little used, ref. M21 £1,200
 MCI JH110A 8 track 1" V.G.C. ref. M7 £4,500
 Otari 7300 8 track 1" fitted into f/cases ref. M8 £2,500
 Studer A80 MK1. 16TR. 15/30ips. 400hrs. digital counter with zero locate, updated electronics, excellent condition, ref. M9 £9,000
 Studer A80 MK1.8TR. 1", ref. M20 £4,500
 Studer A80 MK1.16TR. 15/30ips. ref. M23 £8,000
 Scully 280 1" 8 track, ref. M11 £2,000
 Teac 3340 4 track 1/4", ref. M12 £400
 Teac 3440 4 track 1/4", ref. M14 £500
 3M M23 8 track 1", ref. M17 £1,800
 3M M56 16 track 2", ref. M18 £6,000
 3M M79 16 track pre-wired 24 track with XT24, ref. M26 £7,000
 MCI JH114 16 Track. New record & replay heads. Auto-locate 2, ref. 27 £7,000

MIXING CONSOLES USED

Audio Developments 308/2 P.A. console in f/case with multicore, ref. MC1 £3,250
 Allertrop Custom Console 24/16 built for John Paul Jones private use only. Beautiful mixer. Wrap around in very attractive hard wood frame ideal for a high class home studio situation, ref. MC2 £8,000
 Allen 22/16/16 large floor standing console, ref. MC4 £4,000
 API 16/16/16, ref. MC5 £6,000
 Allen & Heath 24/8 P.A. mixer, f/case, 8 comp/flms, little used, V.G.C., ref. MC8 £2,000
 Allen & Heath Special 28/12/4s/2. 16 tape returns. P&G's, ref. MC26 £3,000
 Chilton 20/8/16 16 channels para. E.Q. P&G's, ref. MC6 £4,800
 Cadac 24/24/24 Professional floor standing console, ref. MC7 £8,000
 Helios 32/24/24 quad mix, 2 stereo f/olback sends, 2 echo sends, 8 DC subgroups, complete Melquist VCA fader system (old July 1981) 1982 spec. Allison 65K programmer, independent track monitor section, quadraphonic facilities throughout, custom designed & built 1975. wrap around design to include 310 units of 19" rack mounting space within console, ref. MC35 P.O.A.
 Helios 28/16/24. Input channels have 4 band parametric eq. hi & low pass filters, 4 echo & 2 f/olback sends, quad panning & Allison VCA's. Monitor channels have echo select a/b & 2 f/olback sends. There are 4 master sends & returns with VCA's, 6 F760 compressors, 2 f/olback master sends with eq. 4 joy sticks for quad mix, 14 rows of 24 1/2" patch-bay, metering ATP peak stereo, phase meter, 24 peak moving coil meters, 4 VU echo meters. Large producers desk, all transformer balanced in & out. ref. MC38 MCI 500 series, 40 way frame 36 inputs, 6 echo returns, automation ready, 5 years old. ref. MC37 P.O.A.
 Midas SR Series 28/8/16 5 years old. ref. MC28 £5,000
 Neve PCM8 8/2 needs attention, ref. MC10 £2,000
 Raimdrik 18/4/8 with full patchbay, ref. MC13 P.O.A.
 Soundcraft 16/24, ref. MC14 £9,000
 Soundcraft Series 2 16/8/8 V.G.C. ref. MC15 £2,000
 Soundcraft Series 2 16/8/8, ref. MC36 £2,000
 Soundcraft Series 2 24/16/16 sweep E.Q., P&G's. PPM's. full patchbay, ref. MC16 £4,950
 Soundcraft Series 2 16/8 with 280 way patchbay & 7 Klark Technic graphic equalisers, ref. MC29 £2,600
 Soundcraft 1S 12/2 p&g's, phantom power, f/case, ref. MC30 £1,800
 Trident Serie 80 32/24/24 18 months. V.G.C. ref. MC17 £15,000
 Teac Model 15 24/8/16 V.G.C. ex demo, ref. MC18 £3,000
 Teac MX8 4/2 rack mounting audio mixer, ref. MC31 £75
 Trident Fleximix 20/4/2, ref. MC19 P.O.A.
 Trident Trimix 18/8/8 V.G.C. ex demo, ref. MC21 £4,500
 Trident Trimix 18/8/8 V.G.C. private use. With patchbay, ref. MC22 P.O.A.
 Trident B 24/16/16 Excellent condition, ref. MC23 £4,950
 Teac Model 2A 6/4 with meter bridge, ref. MC24 £175
 Teac Model 3 8/4/8, ref. MC40 £400
 TAC 10/2 in f/case unused, ref. MC32 £900
 Trident TSM 40x24x40 with new patchbay, recently reconditioned by Trident, ref. MC41 £25,000
 Neve BCM 10x2 with phantom power & PPM's, ref. MC42 £5,000

PACKAGES USED

Amplex MM1000 16 track 2" with full remote & Alice 18/8/16 with full patchbay, both very well looked after, ref. P1 £10,500
 Itam 8 track 1/2" recorder, Itam 10/8 mixer, 1 pr. JBL 4310 monitors, AKG BX20 and MXR DDL2, ref. P3 £3,500
 MCI 24 track package, 6 years old, ref. P4 P.O.A.
 Otari 7800 8 track 1" with timer, auto-locate & remote, plus Soundworkshop 12/8/8 with 352 way patchbay. Both in V.G.C. ref. P2 £7,000
 Studer A80 MK2 24 track wide version with spare 16 track h/block & Helios 28/24/24 & Dolby M24, ref. P5 P.O.A.
 Teac 80-8 with DBX & Vari-speed plus Seck 16/8/2, both only 30 hrs. use. V.G.C. ref. P6 OFFERS

OUTBOARD USED

Roland Phase Shifter, ref. 03 £199
 Roland SPV355 Guitar Synthesiser, ref. 05 £250
 Ashley SC50 Comp/Lim, ref. 06 £175
 Marshall 5002 time modulator, ref. 07 £600
 BEL BC3 8TX, ref. 011 £350
 BEL BA40 delay line/flanger, ref. 012 £300
 BEL BF20 stereo flanger, ref. 013 £300
 Master room B reverb, ref. 015 £300
 Teac C2 cassette deck, ref. 016 £250
 Sony-u-Matic record/replay, ref. 017 P.O.A.
 PSE spring reverb, ref. 018 £150
 Rebis RA402 parametric equaliser, ref. 019 £300
 Teac 19" rack, ref. 021 £55
 Klark Technic DN34, ref. 022 £600
 DBX 3BX stereo 3 band dynamic range expander, ref. 023 £350
 DBX 2BX stereo 2 band dynamic range expander, ref. 024 £300
 Audio & Design F600 comp/flms, 2 linkable units, ref. 025 £150
 Marlux DS200 stereo Dolby B unit, ref. 026 £50
 Dolby B AN80, ref. 027 £50
 Delta-lab DL1 DDL, ref. 029 £600
 Fender Tube reverb, ref. 031 £100
 Various assorted patchbays, ref. 033 £100
 Eventide H910 Harmoniser with extra delay output, ref. 034 £4,500
 Rebis RA301 stereo comp/flm, ref. 035 £300
 Phillips mono reverb, ref. 037 £175
 MXR Stereo compander, ref. 038 £100
 Dolby A M16, ref. 039 £100
 Rebis RA402 SL Para. Eq, ref. 040 £4,500
 Orban Parasound dual reverb with WQ, ref. 041 £300
 Lexicon PCM41 DDL, ref. 042 £350
 MXR DDL with 2 cards, ref. 043 £850
 Scamp rack & psu, various modules available, ref. 044 P.O.A.
 Ashley SC50 peak comp/flm, ref. 045 £150
 Audio & Design E00DR 4 band sweep EQ, ref. 046 £150
 Turner A500 amp, ref. 047 £350

Turner A350 amp 12 available, ref. 048 each £300
 Dolby flight case, will take 4 Dolby 361 units, ref. 050 £50
 Clark BS10M 5KVA single phase 240 volt generator fitted with Briggs & Stratton engine. Very little used, ref. 051 £700
 Master room XL121 reverb, ref. 052 P.P.O.A.
 Amity Shroeder stereo rec/replay cart machine V.G.C. ref. 053 £800
 Formula Sound S19GA dual 19 band graphic with built in analyser V.G.C. ref. 054 £700
 BEL BC3 2TJ stereo noise reduction unit, ref. 055 £100
 Crown D60 amp, ref. 056 £150
 Allen & Heath stereo ADT, ref. 057 £99
 Master room MR3 stereo reverb, ref. 058 £700
 Audio Kenetics XT24 interfaced for M79 2 available, ref. 059 £1,200
 Traynor PS600 pa Power Amp, new, ref. 060 £370
 Roland RE 301, ref. 061 £350
 Pioneer Stereo Tuner SX9000 100 watts per ch, ref. 062 £300
 NO Pioneer Quad Tuner QX 949-A 75 watts per ch, ref. 063 £375
 DBX 155 8 ch. Noise Reduction, ref. 064 £470
 Urie 565 filter set, ref. 065 £200
 Allison 65K programmer, ref. 067 £2,200
 Melquist VCA faders 41 available, ref. 068 £5,500
 Roland GE-810 21 band graphic equaliser, 2 available, ref. 069 each £115
 Roland SDD-320. Dimension D, ref. 070 £150
 Roland SIP-301. Bass guitar pre-amp, ref. 071 £105
 Q-Lock 210, ref. 072 £4,500
 3M M79 16 track head block very little use, as new, ref. 073 £1,500
 Dolby "A" 360 units 2 available, ref. 074 each £300

USED STEREO MACHINES

Amplex AG440C 4 track 1/4" head block, ref. S14 offers
 Ferrograph Studio 8, ref. S2 £800
 Bias 1000 professional mastering machine in console, 2 available, V.G.C. ref. S3 each £600
 Nagra IV D mono full track, ref. S12 £900 or offers
 Revox A77 3 3/4" 1/2 ips. 1/4 track, ref. S4 £450
 Revox B77 3 3/4" 1/2 ips. 1/4 track, ref. S5 £450
 Revox A700, ref. S6 P.O.A.
 Revox B77 7 1/2" 1/5 ips. 1/2 track, ref. S11 £450
 Revox A77 7 1/2" 1/5 ips. 1/2 track, ref. S7 £400
 Teac A6100 2 tr, ref. S9 £350
 Teac A7300 2 tr, ref. S10 £500

USED SPEAKERS

Cadac Power House monitors, ref. SP1 offers
 Empty Lockwood cabs. To take 10" Tannoy drivers, ref. SP2 pr. 150
 Electrovoice EV Century 3.3 way 150 watts V.G.C. ref. SP3 pr. £1,100
 Griffin Studio Electronic 85 studio monitors with internal 250 watt power amps, ref. SP4 £500
 Lockwood Cabs each with 2 X Tannoy 15" redds, ref. SP5 pr. £600
 Lockwood Majors fitted 15" Tannoy HPD, ref. SP6 pr. £500
 Lockwood Academies fitted 15 inch Tannoy Super Reds, ref. SP7 pr. £750
 Tannoy Buckinghamams, ref. SP8 pr. £1,000
 Tannoy 15" Golds in Custom Cabs, ref. SP9 pr. £350
 Tannoy Ardens, ref. SP9 pr. £425
 Tannoy Lancasters corner mounting, ref. SP10 pr. £250
 Tannoy Chevlets, ref. SP11 pr. £350
 JBL 4313, ref. SP12 pr. £400
 JBL 4311 2 pairs available, ref. SP13 pr. £450
 JBL E140, ref. SP23 pr. £160
 JDL 2482 Compression drivers with JBL horn & orinole plato, ref. SP21 OFFER
 Electrovoice EV15B, ref. SP22 pr. £140
 Eastlake Monitors each fitted 2xTad 15" bass drivers, JBL 2440 mid, JBL 2420 hi, ref. SP20 pr. £1,500
 Eastlake monitor system with 1pr White graphics & 2 Amcron DC300A amps, ref. SP14 £2,500
 JBL 4502, ref. SP15 P.O.A.
 Tannoy SRM12X, ref. SP16 £450
 Leak 3000 series, ref. SP17 £150
 Lockwood cabinets fitted with Tannoy Super Reds plus Tannoy active x/over and spare driver, very good condition an ideal monitoring system, ref. SP18 £1,800

USED INSTRUMENTS

Yamaha B100 Bass Amp, ref. I24 £195
 Yamaha CM40 synth with cassette memory, ref. II £700
 Mellotron withtapes, ref. I2 £600
 Arp Oddesey, ref. I3 P.O.A.
 Fender Jazz Bass 1959 good condition, ref. I4 £600
 Fender Rhodes, ref. I5 £500
 Fender Strat, ref. I22 £135
 Gibson J45 guitar V.G.C. ref. I6 £190
 Honna String Machine, ref. I7 £150
 Ludwig Drum Stool, at new, ref. I23 £35
 Martin Acoustic Guitar 20 years old V.G.C. interesting finish, ref. I8 OFFERS
 Moog Mod 2090, ref. 26 £190
 Peavey Classic Amp, mod 212, ref. 25 £145
 Sequential Circuits Sequencer, new, ref. I20 £575
 Steinman Baby Grand Piano, as new, ref. I21 £1,100
 Yamaha CS80 immaculate, ref. I9 £2,200

NEW INSTRUMENTS

Korg Poly 6 limited supply, ref. N11 £850
 Roland Juno 6 limited supply, ref. N12 £480
 Roland Juno 80 limited supply, ref. N13 £800

USED MICS

AKG C28 with psu & leads (3 available), ref. M11 each £100
 AKG D202, ref. M13 £60
 AKG C12A (3 available) with PSU & leads V.G.C. ref. M14 each £350
 AKG D109 Lavalier Mic, ref. M15 £30
 AKG D110 as above, ref. M16 £30
 AKG D2000E, ref. M17 £35
 AKG D222 (2 available), ref. M18 each £60
 AKG D900 Dynamic Shotgun Mic, ref. M19 £60
 AKG D224, ref. M110 £100
 Neumann KM54 (7 available) with PSU & leads, ref. M111 £100
 Sennheiser 110 with PSU & leads, instrumental mic for room E.Q. ref. M112 £80
 Sennheiser Shotgun Mic fitted with Neumann Capsule & PSU, ref. M113 £150
 Electrovoice RE20 with new capsule, ref. M114 £180

VIDEO USED

NEC u-matic replay deck, ref. V1 P.O.A.
 Stage Lighting Rig with 20 parblazers, rank strand control, unit & lighting mixer, all cable sockets, plugs, scaffolding and 30ft. of armoured cable, ref. V2 £1,500

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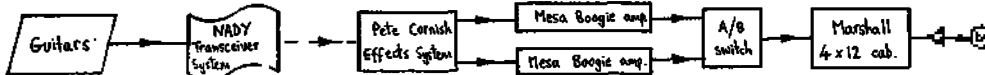
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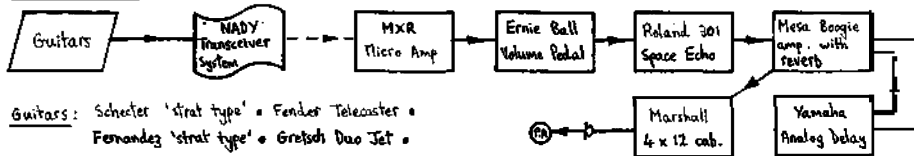
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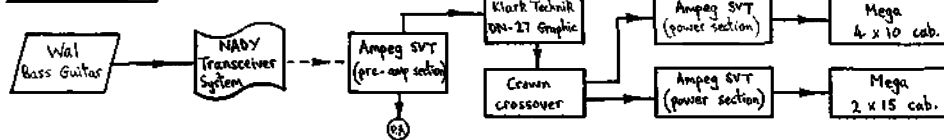
HAL LINDES



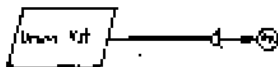
Guitars: Schecter 'strat type' • Fender Telecaster • Fernandez 'strat type' • Gretsch Duo Jet •



JOHN ILLSLEY



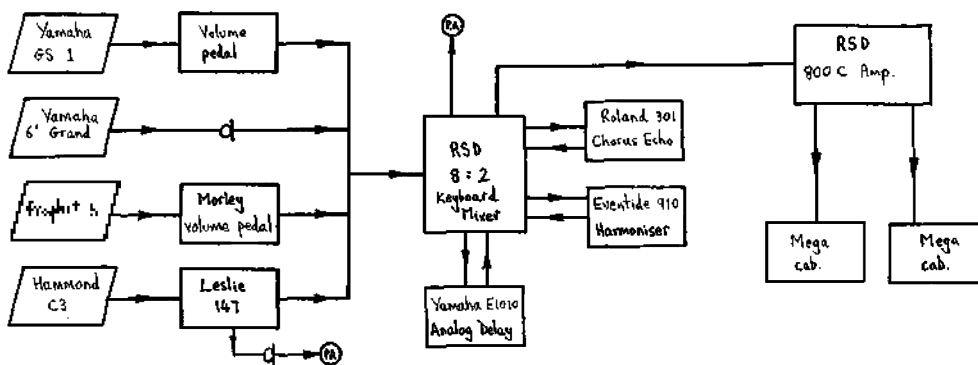
TERRY WILLIAMS



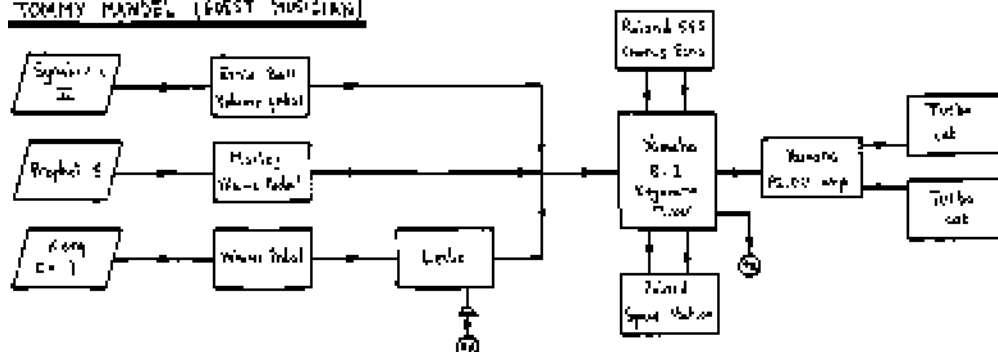
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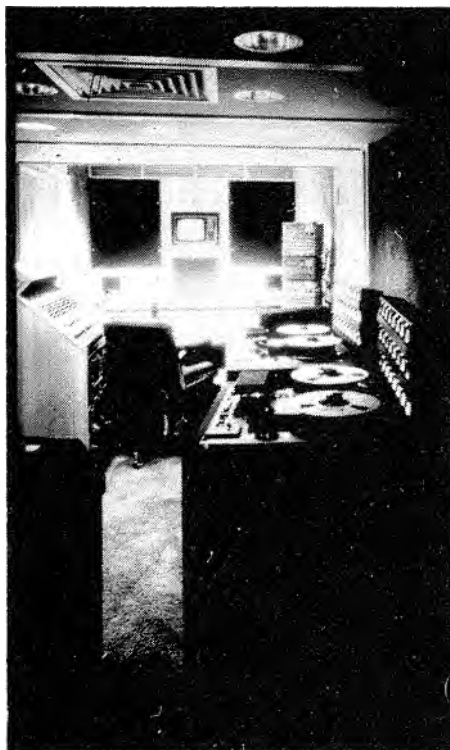


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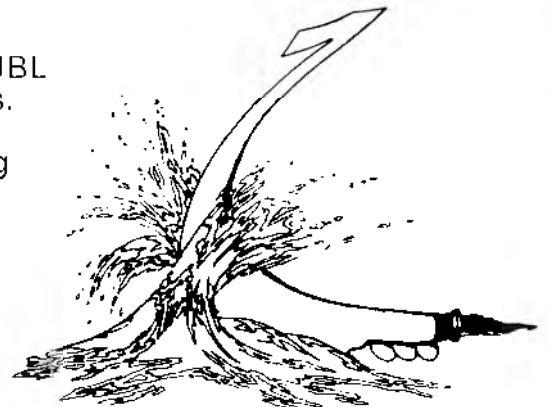
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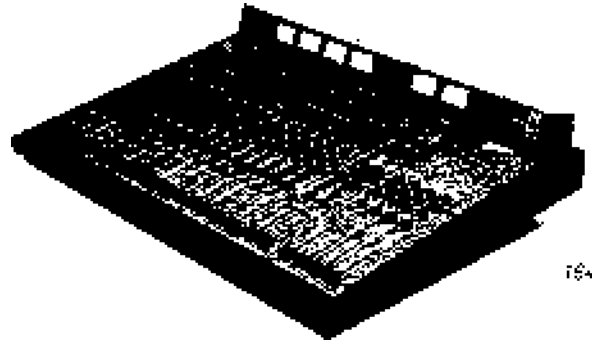
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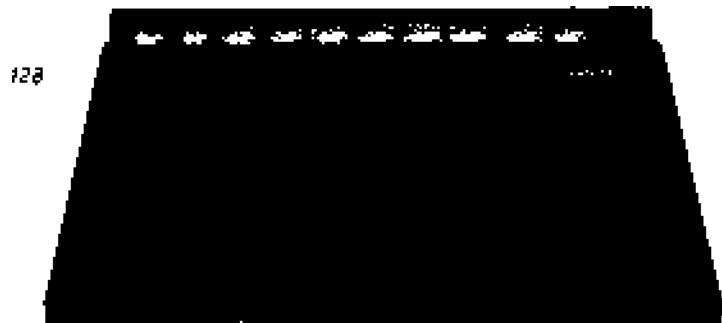
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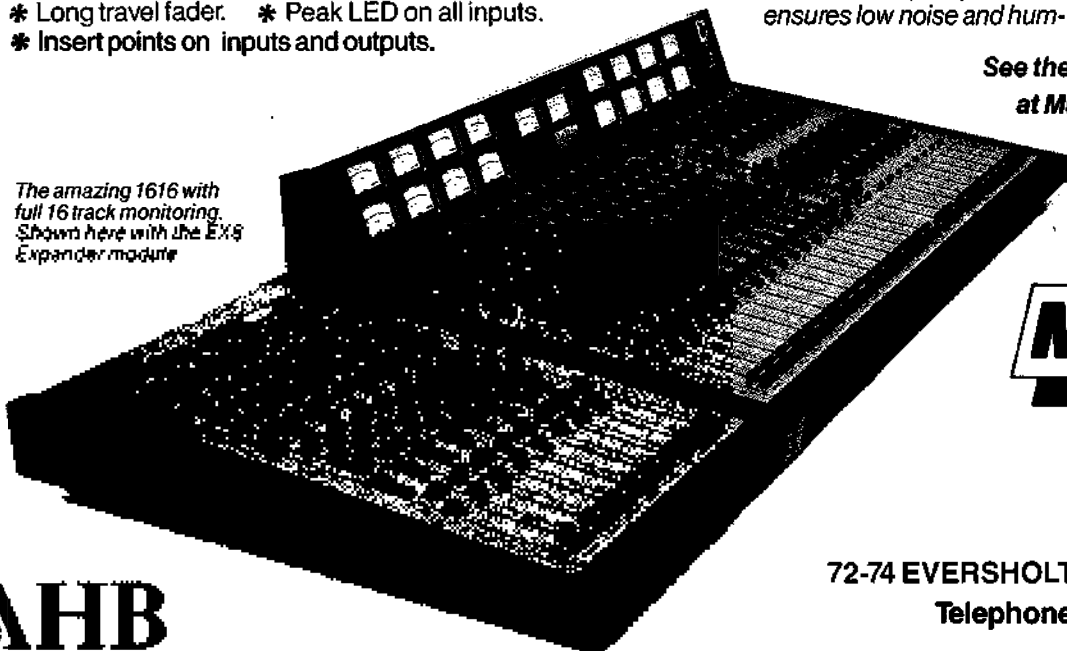
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and I lean on them like



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ected by Korg
old friends."

KEITH EMERSON

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ROSE MORRIS & CO. LTD., London W1
LONDON ROCK SHOP, London NW1
GIG SOUNDS, London SW16
FREEDMANS LTD., London E11
ROCK BOTTOM, Croydon
TUNE INN, London SE12
MELBOURNE PIANO - UNISOUND, London NW6
PASH MUSIC STORE, London W11
ROD ARGENTS KEYBOARDS, London W1
LONDON SOUND CENTRE, London W10
SESSION MUSIC, London SW17

HOME COUNTIES

ADDLESTONE, ABC Music
ASHFORD, Kennards & Sons Ltd
BANBURY, Glen Durges
BATH, Duck Son & Pinker
BIRMINGHAM, Jones & Crossland
BINGLEY, J.S.G. Musical Services
BLACKBURN, Blackburn Guitar Studios
BOLTON, Harker & Howarth
BOURNEMOUTH, Eddie Moors Music
BRIDLINGTON, Music Box
BRIGHTON, Tiger Music
BRISTOL, Freeway Musical
BURNLEY, Dawsons
BURY ST EDMUNDS, Sounds Plus
COLCHESTER, Hodges & Johnson
COVENTRY, Sound Centre
DAGENHAM, BAJ Music
DERBY, C. Foulds & Sons
DONCASTER, Music Ground
EASTBOURNE, Peter Bonner Musical
GRAVESEND, Music Unlimited
GREAT YARMOUTH, Allens Music
GUILDFORD, Andertons
HADLEIGH ESSEX, Honky Tonk Music
IPSWICH, Axe Music

ISLE OF WIGHT

Ryde Guitar Centre
LANCS., Lou-Andys Music
LEEDS, Alpha Music
LEICESTER, Carlsbro Sound Centre
LINCOLN, Rose Music
LIVERPOOL, Hesseys
LUTON, Seven Sounds
MACCLESFIELD, Jones Music Store
MAIDSTONE, Sharon Music Ltd.
MANCHESTER, A1 Music
NEWCASTLE, J.G. Windows Ltd
NORTHWICH, Douges Music
NOTTINGHAM, Carlsbro Sound Centre Ltd
SCARBOROUGH, Bernard Deen
SHEFFIELD, Musical Sounds
SHREWSBURY, Salop Music Centre
SOUTHAMPTON, Fret Music
STOCKPORT, New Rhythm House
STOKE-ON-TRENT, K. Baddeley Keyboard Centre
SUTTON-IN-ASHFIELD, Hardy Smith
SWINDON, John Holmes
WOLVERHAMPTON, One Way Music
WORTHING, Broadway Music
YORKSHIRE, Ace Music

WALES

CARDIFF, Peter Noble
NEWPORT, Gwent Music
SWANSEA, John Ham Sound Studio

SCOTLAND

GLASGOW, Thompsons Music Ltd.
McCormacks
STRATHCLYDE, Hamiltons Music
DUNFERMLINE, Sound Control
AYRSHIRE, B. McEwan Organ & Music Centre

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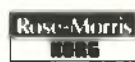
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WELL ANOTHER TRADE YEAR HAS passed, a year that has seen companies fold and companies form. Inevitably the recession has claimed its victims but it's good to see that a lot of traders have managed to turn out the goods regardless and maintained the high level of competition for which this business is renowned.

And another year, as we all know, means another Frankfurt Musik Messe, that Gargantuan showcase for the year's innovations.

This is the 19th Frankfurt since the show began as part of the Frankfurt Spring Fairs in 1964 and the fifth Musik Messe since the show went independent in 1979.

The show will be in the usual place, the exact address being Ludwig-Erhard-Anlage 6000, Frankfurt/Main 97, tel: 0611 7575 and will begin on Saturday February 5 and wind up on Wednesday

. The Wednesday is the only PUBLIC day (for which the admission fee will be 14 DM or £4 for our English viewers).

The remaining days will be TRADE ONLY and the show will be open from 9.00am-6.00pm for the TRADE days and the PUBLIC day.

Thirty-four countries will be exhibiting on some 750 stands, a display that will cover an estimated 60,000 square meters.

If you are travelling by train to the show the halls are a ten minute walk from the Frankfurt main station (or the hauptbahnhof if you're German). The organisers confidently predict that last year's attendance figure of some 36,000 will be comfortably surpassed.

The following is a list of the UK companies that were available or willing to divulge to us the details of what will be on their stands at the show within our deadlines. There are a veritable plethora of new pieces of equipment ranging from synths to guitars and from lights to amps. Something to interest everyone from the studio engineer right across the board to the amateur musician.

Limitations of space make it impossible to cover the whole range of developments in halls other than the British one although we have given details of some 'International' exhibitors who contacted us specifically. We will be giving details of the show as a whole in our review, next issue. Meanwhile here's something to whet the appetite.

MUSIK MESSE FRANKFURT

Music Fair February 1983

Premier intend to unveil their newest kit that goes under the name of Black Shadow. The kit is a super deluxe resonator and comes as a five, seven or nine piece, the latter of which will naturally be on display. As the name suggests, the kit comes in a very exclusive black finish that, by all accounts, could quite easily be mistaken for Mahogany. The kit is augmented by the addition of extra deep power toms which are also now part of the slightly older Resonator and Soundwave kits which will also be on show... As will the new modified Crown and Royale kits (the modification being the addition of an extra stand)... and as if that wasn't enough on the innovation front Premier will also be boasting a new pair of sticks... Casio will be there in force

with their full complement of keyboards including the new range that includes the brand new 405, an electronic four octave keyboard that is stepping into the shoes of the old 403... they'll also be exhibiting the new range that contains the PT30... A Casio spokesperson also promised a few surprises but would not elaborate any further.

MXR will unwrap their latest unit called the Omni which is a 19" rack mounting unit that contains compression, distortion, delay, chorus, flanger and a loop facility all of which are housed in one box. This retails for approximately £450... other newbies include a digital delay unit and a pitch shift doubler, both of which are stereo and a fully programmable drum machine



New range of mixers from Soundcraft and an updated Prophet 18 from Sequential Circuits

to compete with the Linn for around £2,000... the full range of MXR effects will also be on the stand... symbolic wizards Zildjian will show off their brand new range which goes under the banner of Amir. These are top range crashes, rides and hi hats which will retail for some 30% less than your average Zildjian... also on show will be the complete 'A' and 'K' ranges... **Cymbals and Percussion** will be going to Frankfurt for the first time this year and among their range of percussive goods will be some Viscount tuned percussion, the popular Tri-Sti (pack of three drum sticks), and a full range of drum heads ranging from 6"-28"... they'll also be exhibiting the complete range of Nomad drum cases... Although **C-Tape** innovators of those revolutionary strip mikes don't have anything new to exhibit at Frankfurt, we are assured that they'll be continuing their transducer revolution over there.

Laney Amplification will disclose three new combos in the form of two lead combos putting out 50 and 100 watts and a bass combo which puts out 50 watts. All three will be called Pro-Tube and all three are valve amps... staying on the amp side they'll also be showing their Pro-Bass range which entails a 300 watt with an II band graphic Eq and a 120 watt combo... Another new one for Laney and a first for Frankfurt is a rack mounting, 2-channel analogue delay unit called the Theatre ADX Echo which will retail for £129.95... New gear aside, Laney will have their full range on display with the emphasis on valve amps and bass gear... **Klark-Teknik** will unshroud a new graphic Eq which we were told is based on 'new' technology, they'll also have their full compliment of graphics including a 30-band spectrum analyser and a dual 30-band graphic.

The most interesting stand award has to go to **Zero 88 Lighting** who intend to have a mini mock up of a band on stage. There will be mini amps, mini guitars and a mini kit. The personnel of the band will be **Action Men** (courtesy of **Palitoy**). This set up is in order to promote their new modular micro processor-assisted lighting desk. The desk, named the Eclipse, combines the manual desks of old with a programmable memory... On a more street level they also have a 12 channel Rock desk, the Lightmaster 1200 which has 15 presets and retails for £295.

Soundwave will be exhibiting the entire **Trace Elliot** range, which has, on the whole, been revamped and been

added to. The additions are in the form of two new models the GP11 and the GP7... **Capelle** will be exhibiting the Turbo kit in new chromed red and blue finishes and a series of bongos going under the name of France Percussion... A new budget kit, a five drum affair called the Panterre will be brought to Frankfurt's attention, this with stands, will retail for under £300... Something from Cappelletti that could well be quite a show stopper is a revolutionary gadget that has 20 digital memories and operates on guitars and basses... this will be fitted to Cappelletti's Vigier guitar which retails for £850, and their new fretless bass... **McKenzie Acoustics** will exhibit their complete range of 10", 12" and 15" drivers with the addition of a new 300 watt rating 12" and 15". McKenzie tell us that several of their older models have also been improved... After their success with the KB500 this year, **JVC** will be at Frankfurt with a strengthened Spinnet range, plus their entire range of organs and keyboards.

The mighty **Roland** have certainly pulled out all the stops for Frankfurt this year... On the keyboards front there'll be the Jupiter 6, a six voice programmable poly synth with split keyboard. This will retail for £2,400... the JX-3P which is a polyphonic successor to the old SH-2000 includes a facility to cassette dump the 32 factory preset sounds and will retail for around £800. For an extra £400 (or thereabouts) you can also have the PG-200 which enables you to re-programme the JX-3P with sounds of your own choice... Roland will also raise the proverbial curtain on two new Cube amps — a 40 watt and a 60 watt both with built-in chorus. These will retail for approximately £250 and £290 respectively... also to be revealed is a new Boss chorus pedal, the CE-3. This has two different modes of chorus and will be going for £85... also on the Roland stand will be their new educational music tutor lab. This comprises of a master desk with facilities for 12 students. The Teaching Lab works on the same principle as language laboratories in schools whereby the teacher can either listen or play to one of the 12 students individually, or else play to the general populus through monitors. The whole system retails for around £1500 but components are available separately.

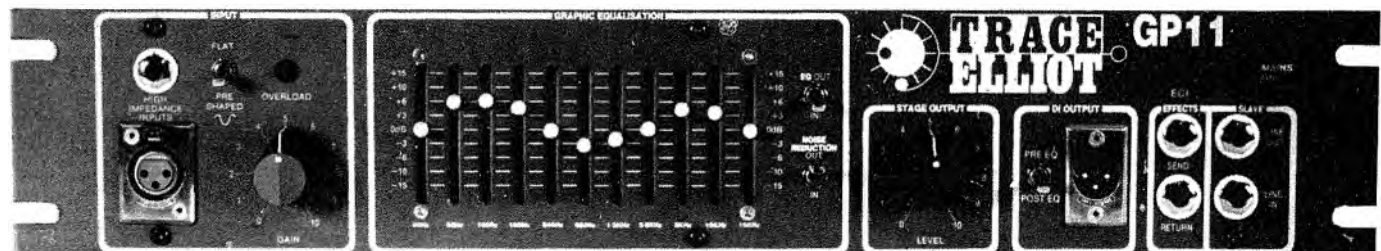
C.P. Cases will be flaunting their mini-compact PA system which was introduced at Frankfurt last year, plus a brand new 2-way passive monitor which

features a revolutionary high frequency device which is apparently capable of extended range response whilst remaining cost-effective... this doubles as a small cabaret PA or a double angled wedge monitor.

Colin Barratt Exports in Sound will be introducing a complete new range of SMS guitars and PA amps featuring lightweight combos from 12 watts to 100 watts (Eg, the 25 watt combo weighs only nine kilos)... Also on show will be a new Overwater axe, a new range of fibre instrument and drum cases plus some Royal Maple drum sticks... **Fane** (I'm gonna live forever) have plans to exhibit their range of studio speakers with the emphasis being placed on the 200 watt rating 10", 12" and 15" models. Fane also promise several exciting products with innovatory design features which they assure us are well worth waiting for, although details at present are under wraps. Fane will be on stand 50206 in hall five so pop along and have a gander... **Soundtracs** piece de resistance for the show is a modular mixer based on a 35mm unit allowing a range of mixers in 16/4/2 and 32/12/2 formats with 24 track monitoring facility... Soundtracs also intend to launch a new range of mixers based on the 16 series with several new and very interesting features.

Tyneside Leathercrafts will exhibit their wares which range from amp covers to guitar straps to guitar cases to belts. A spokesperson from Tyneside claimed, "If you've got it we'll make a case for it and a strap to carry it"... He then went on to confess that their goods are in fact 70% plastic but the company formed in 1937 and the name has just stuck.

C-Audio will present a new range of mixers to trade and public. The series will be called the Series I and it features 12, 18 and 24 into two and each have 20 segment LED ladders... they'll also be displaying their CA 2 and CA 4 power amps plus some stereo crossovers and "as many other new products as is humanly possible"... **Sabian** will be on stand 50515 and although they won't have any new products they will have their range on display... **Carlsbro** will be continuing their size/power ratio theory in Frankfurt. Proving the theory that 'big is not necessarily loud' will be the Hornet range and the Cobra range, which features a 90 watt bass combo and lead combo... other newies include the AD 1 analogue delay unit and a new Hornet with built-in compression... The



Two new models from Trace Elliot, including the GP11 shown above

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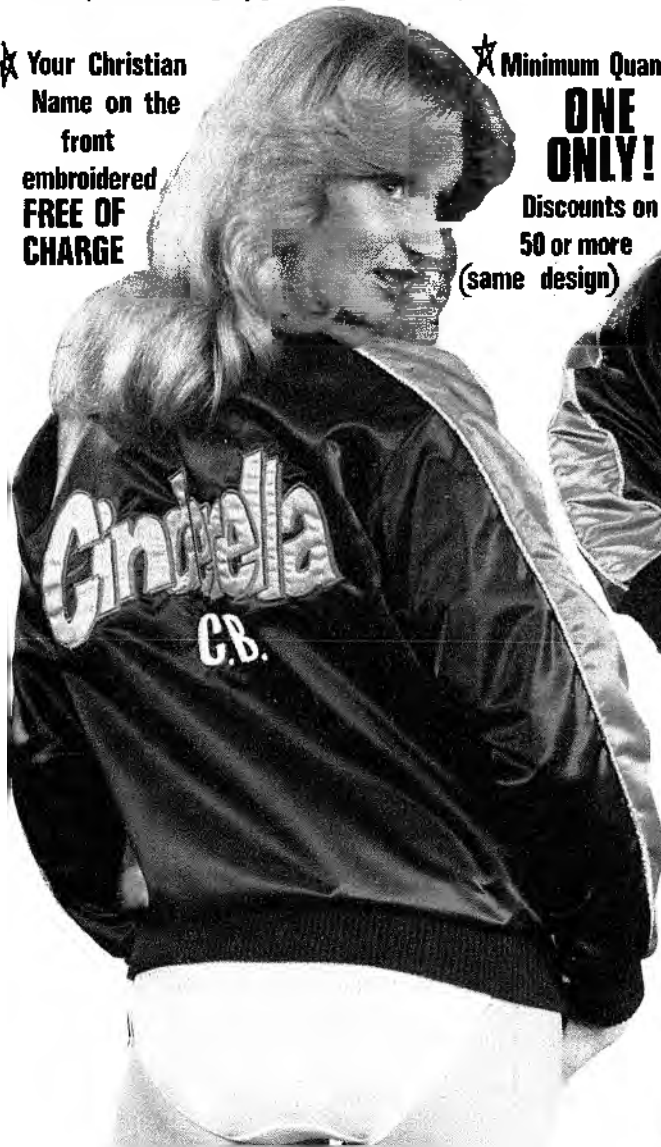
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Stingray bass combo has been revamped in as much as it's been reduced in size and increased in volume — it now puts out 150 watts and has a smaller cab. . . The **Musimex** stand will be 50 square feet this year and judging from the number of products that they'll be displaying they'll need to utilise every inch. . . **Accessit** effects made by **Bandive** will be on display, the series features noise gate, compressor, equaliser, reverb, power amp and all of the peripheral equipment necessary. **Alembic** will launch the Spoiler bass, **Burns** are launching four new models: Two new versions of the Steer in single and double cutaway plus a medium scale bass and a medium priced guitar. **Melody** guitars will have their own booth in hall five. **Session** will premier the Sessionette bass and keyboard combos. . . **Staccato** will be showing off their new Warrior toms plus some conventional (a rarity for Staccato) single and double headed toms. **Trace Elliot** will display new amp heads, combos and cabinets and **Supercussion** will show their extensive range of percussion accessories.

Vox, from the powerful **Rose Morris** stable, have announced an endorsement by mega fret melters **UFO** to coincide with Frankfurt and the promotion of their new **Vox Climax Combo** which will be given pride of place on stand 850108. . . the entire range of **Vox** guitars will also be there, as will the famous **Berg Larssen** mouthpieces for sax and clarinet. . . as if that wasn't enough they'll also be displaying **Dulcet Chime Bars**, **Limpet Drum Pads**, **James Galway Tin Whistles** and **Trombotine Slide Cream** (no comment) . . . **Recording Studio Design (RSD)** will be drawing the trade's attention to their 16/4/2 retailing for under a grand and a 16/8/2 which is a new expandable stage/studio desk with bargraph meters, stage biased Eq, very full rowing and connection facilities. . . another RSD product worth checking out is the new **Mosfet 1000 power amp** and/or combo, the latter of which could be yours for £650. . .

Sequential Circuits will have **Brand X** keyboardman **Robin Lumley** demonstrating their synths on hall 8 on stand 80315. **Sequential Circuits** have updated the **Prophet-T8** which will now be selling for £3,450. . . There will also be revealed another new addition to the **Prophet** family featuring the **MIDI interface**. . . **Pulsar Light of Cambridge** plus their **Rock Desk** — a control desk for bands with 12 presets and an 18 channel matrix — for £375 plus VAT. **Pulsar** also hope to be exhibiting the prototype of the new **Pulsar Modulator**.

Jim Marshall Products have two new bass combos in the form of a 60 watt and a 200 watt. We are assured that these are up to the normal standards of excellence that we have grown to expect from Marshall. The story follows for their two new 50 and 60 watt keyboard combos which we

believe are going to be very popular. The full Marshall range will be on show to boot. . . **DSN** will display their standard range of loudspeakers featuring the **S3 pressure driver**, the four cell dispersive horn and 15" speakers.

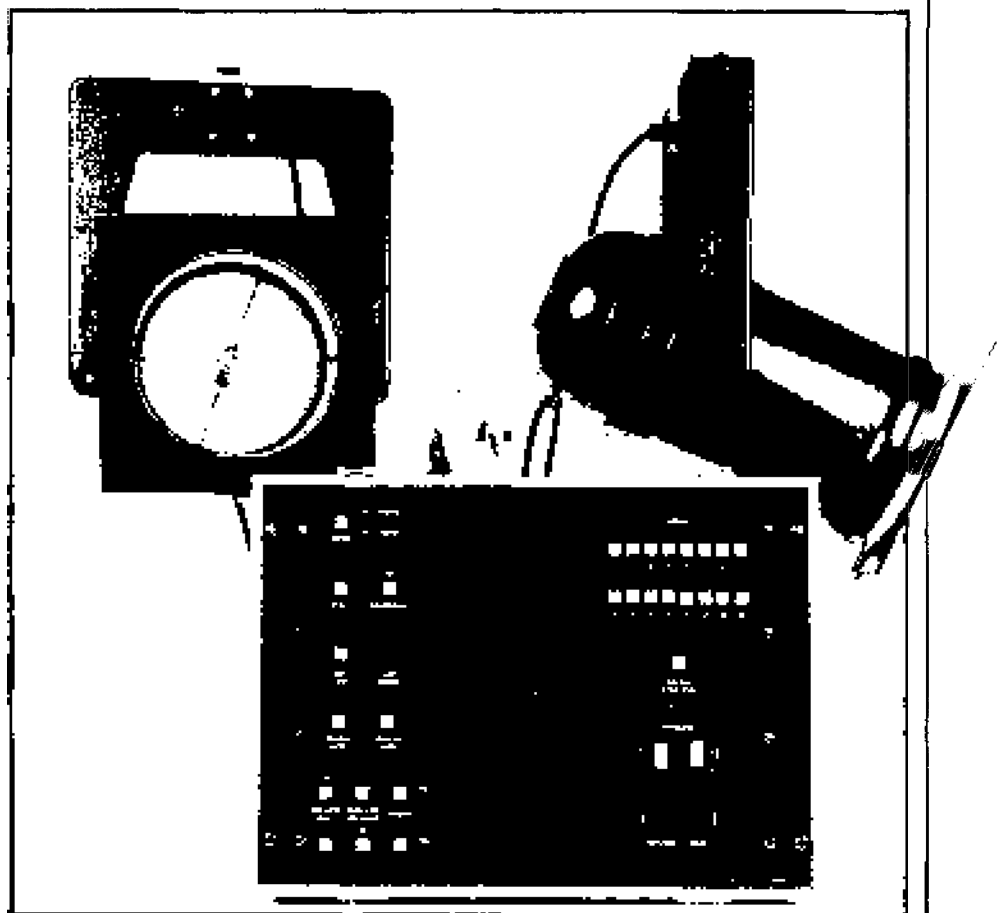
Cerebrum will give pride of place on their stand to the **Starblazer Autoscan**, which is a system of motorised stage spotlights which can be remote controlled to move to any point and in any direction within a 180 degree arc, so manually operated by a joystick. . . they'll also be exhibiting the **Gamma 300D**, **600DX** and the **Gamma 36** channel touring **Dimmer System**. . . on the smoke machine front, they'll be showing the **Minimist** — a portable affair, and the **Cloud Nine** which is an upper market more grandiose type of smoke machine. . . **Soundcraft** have a brand spanking series for the Musik Messe called the '200' mixers available in 8/4, 16/4, and 24/4. . . the 8/4 is rack mountable and costs under £1000. . . At the fair **Soundcraft** intend to recreate a 24 track set up utilising the series 2400 28/24 mixer plus (although this is still a maybe) an automated console. This will be done with the aid of **AKG**. . . they are also hoping to include the new **Stage Sound** series — a live console.

Ohm have no newbies but they'll have the full range on stand 50102. . . for the classical chaps amongst us **Novello and Co** will have several new works for

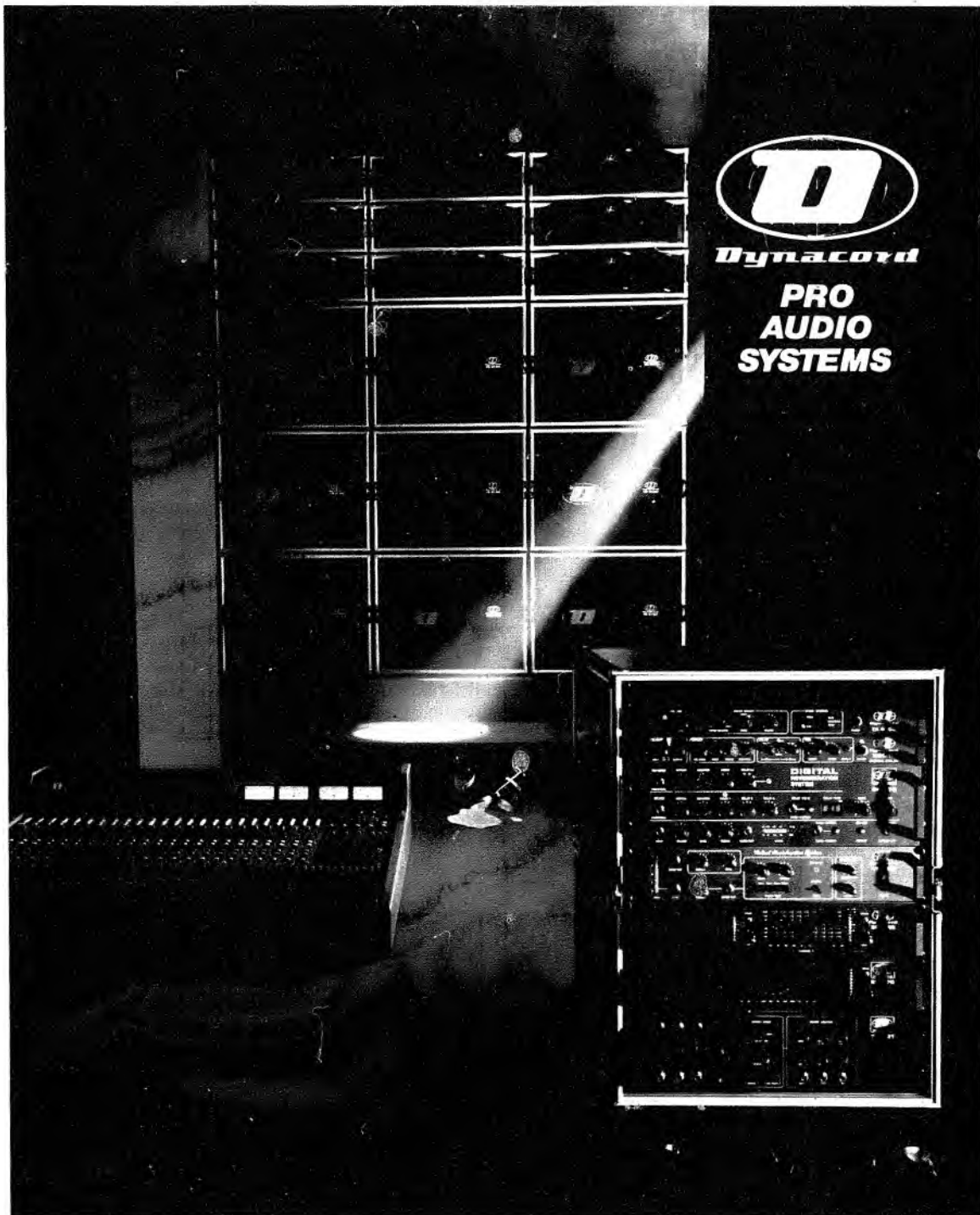
MUSIK MESSE FRANKFURT

piano and other choral works among their extensive range of sheet music. . . **Valley music** and **Nashville Strings** will be in attendance too with their stand sporting a wealth of strings for all instruments including **Nashville**, **Sounder** and **Smoothie**. The companies also specialise in the making of stands which go right across the board, from booms to keyboard stands to lighting and speaker stands.

The two **Dolmetch** companies have joined forces and the company is now called **Dolmetch Musical Instruments** who are famed for their recorder making. Frankfurt will see a new range of plastic recorders and a first in the recorder world — a treble copy — that's a copy of an old treble recorder originally made by **Bressann**. . . other things adorning the stand will be reproduction renaissance wind instruments made in the tradition of yesteryear. . . Keeping in the **Radio Three** vein **Faber Music**, publishers of sheet music and music books, have several contemporary works by **Knusser**



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and Britten and Handel's flute sonatas... Faber will be on stand 60539... Terry Gould International are wholesalers who will be of interest to the trade but unfortunately not the public. They'll be exhibiting a new range of brightly coloured guitar straps drum accessories (drum slings, cymbal bags) and the Universal guitar capo.

As the name suggests **General Music Strings** will be displaying a full range of strings namely Stacatto, Ambassadors, Monopole and Red Dragon. Accompanying the strings on the stand will be P and N mike, lighting and speaker stands... **Re-an Products** (which if you are French means nothing much at all) have a new foot switch for amp controls plus their full range of cab fittings and jack connectors... **Biacrown** (or hiwatt as they were formally known) have converted their 100 watt top so that it is now rack-mounting, but apart from that there aren't too many changes. A few switches have been changed to rockers but Biacrown will have their full range at Frankfurt including a couple of oldies and I'm sure that they'll be very glad to see you if you pop along to stand 50116.

Rotosound and **Superwound** will be on the **James Howe** stand. The latter will be exhibiting some new stainless steel strings with a linea finish, these are to be called Starfire, the double balled 505s used on Steinbergers (they're the basses without headstocks). **Superwound** are now producing strings who's windings stop ¼" before the guitar bridge which apparently gives the strings a longer life as they are less prone to breaking. This is called the Stop short concept (there's something to tell your grandchildren). They are now also producing Superia classical strings and Country Gold (with the old 'stop short' concept) steel strings... meanwhile **Rotosound** will be showing their very popular RS 66 Swingbass.

Simmons Electronics who are now expanding like there's no tomorrow will be there exhibiting the brand new SDS6 (which is exclusively reviewed elsewhere in this issue), plus the full range of their electronic drums that have changed the face of modern drumming... **Adam Hall Supplies**, who make flightcase fittings will be in evidence on stand 50107... As will **MTR** on stand 50208. They'll have the entire **McGregor** range that includes a new guitar and bass combo: The Radar 50 watt guitar combo will retail for £136 and the Radar 100 watt bass combo will retail for £174... They will also be launching two new mixer amps, the Solo Artiste and the Duo Artiste... Also for the trades delectation will be the complete Badger range and Aces range... **Nemesis Loudspeaker Technology** will be showing off their new Tramp 12 watt practise amp which contains a 60 watt Nemesis 10" speaker and was described by a Nemesis spokesperson as, "a real belter of an amp"... They have

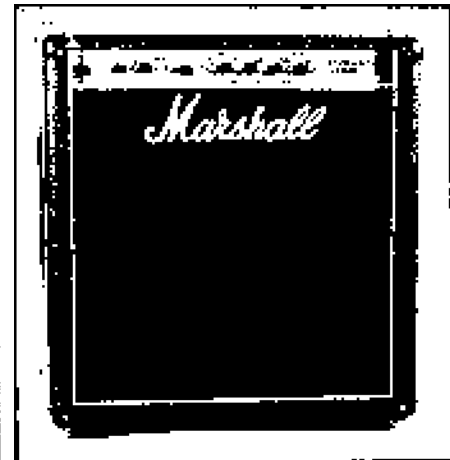
modified and subsequently improved their PA cabinets and have developed a 12 channel version of the MX8008 power mixer which will be on show and retailing at £799. Likewise another power amp will be on show which puts out 600 watts per channel and retails for £650.

Seasoned trade Fair campaigners **CBS/Fender** have a whole barrage of new equipment to display starting with a veritable abundance of new Fender combos... The Harvard Reverb II is a 20 watt combo with active Eq, high gain lead input and headphone jack. The Yale Reverb is a 50 watt with a 12" speaker. The Studio Lead has all the features of the Yale but also has a rhythm/lead function for all that lovely overdrive... The Stage Lead again has similar features but puts out 100 watts as does the Stage Lead 212, although this has 2 x 12" speakers... The Montreux is another 1 x 12", 100 watt combo with a 4 band graphic, FX loop and programmable lead/rhythm function. The London Reverb has all the features of the Montreux but with a programmable 5 band graphic (this also is available as a separate amp top)... The Twin Reverb II is an update of the classic valve 105 watt 2 x 12", and we are reliably informed that this has 'lots of new features'. All the new Fender amps have active tone controls... The Rhodes Chroma will be demonstrated with the Apple II computer and expander modules... and guitarists don't fret — the full range of axes will also be there... and to cap it all a CBS/Fender spokesperson promised "plenty of surprises".

Great West Lighting (Project Electronics) will flaunt a 24 channel Rock board with a new 30 kilowatt power rack... another newie is the flightcased LS600 lighting system which will retail for under £500... Project will also have their entire range of lanterns, stands and accessories on their stand (50214)... You may have noticed that the **Yamaha** organisation are conspicuous by their absence from this preview, but being a Japanese company they have opted to exhibit in the International section. Rest assured that they'll have many a surprise up their collective sleeve, (including Steve Gadd who will be there to demonstrate the drums, and a new machine in the Producer Series), and will be well worth a visit.

... Rosetti are taking the all-British and thoroughly impressive Pro-amp series to the show. The Viper (100 watts into 10" Celestions with I/C input stage and valve amplification) and the Venom (a lighter, lower cost combo but still very professional and based on and all-solid state design) should take a bite out of the market for upper middle price bracket amps. Both feature the comprehensive gain and Eq controls demanded today and the Viper in particular has an extremely satisfying performance... meanwhile H/H among

MUSIC FRANKFURT



New from Marshall

many other things intend to unveil their new series of keyboard combos that go under the name of the K Series. This entails the K80 and the K150. Also on display will be a comparatively new range of bass amps which are said to have a very favourable value in terms of watts per £. All this and more on stand 61140... **White Amplification** will be exhibiting their full range of transistor products including power amps, mixers, slaves etc. Included in the display will be their new Bass Chorus head as reviewed in December's IM. White will also be exhibiting a brand new range of keyboard amplification and the Little Rock range of valve amps which, again, includes some brand new products... **Deanvard** are exhibiting under the name of their international company MIM international and will show the usual V-amp range plus three new keyboard amps, the 60K, 30K and 10K. MIM will also exhibit the Emulator and the Drumulator, a real-sound drum synth that promises to be fascinating and not too price: they also have **Melanie Drums** and **Packhorse Cases**... while we're on the cases, so are **Penn Fabrications**, a British engineering company on which the flightcase industry apparently hinges...

Last and in no ways least **Cover Publications** will be there with our extensive array of publications from the UK, Germany, America and Japan — so come along and see us on stand 50306, we're looking forward to meeting you!

We apologise to those UK exhibitors who were unable to impart the relevant information before our press date. This, unfortunately, is unavoidable and merely emphasises the urgency with which this type of information needs to be relayed to the magazine.

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Since there are three studios in the complex (4, 8, 24 tracks) it is no problem to make live and/or Video recordings.

EDUCATION

The way to success is often achieved through knowledge, therefore, we will arrange courses on several items like stage lighting, sound, instruments and equipment in general etc. If you need any accessories, such as strings, sticks or skins, cables, connectors etc., the

Music Shop can assist you, however late the hour. We also arrange clinics where the latest equipment and instruments are demonstrated. If you want to sell or buy second-hand equipment, you can do it during our Swap Shop evenings.

REHEARSAL STUDIOS

25 rooms are available 24 hours a day. Every room has a lock up cage for storage. The rooms range from 15 to 50 sq metres. Bands utilising these facilities may do so on a yearly contract, automatically extended for another year. If not cancelled, you can also book by the evening or hour, it's up to you.

VIDEO

What the ears hear the eyes often like to see. To this end we offer our customers a complete audio-visual package including a complete master recording of two songs on video. They are filmed in two separate studios, each built specially

for the purpose. We use the Umatic-System with broadcasting quality cameras.

VIVALDI 4-8-24

Musicians and producers are offered a studio complex of three separate studios.

Studio A: 24-track studio for all round use. Live and warm, specially designed acoustics which cater for grand pianos, string, woodwind, and brass sections and other acoustic instruments. Studio B: 8-track studio, a really compact and light studio for rocksessions, dubbing, rehearsing etc.

Studio C: 4-track studio suitable for jingles,

dubbing and demo's.

These studios offer you the chance to work in a studio of the right size, on work ranging from the simplest to more complex recordings where all three studios are linked together, offering up to 60 inputs. Vivaldi Studios have experienced recording engineers at your disposal.

Studio C can also be hired without engineers for Do-It-Yourself recordings, in order to reduce costs.

MAJAMA RECORDS

Within the group we also have a record and distribution company with excellent connections in USA, UK, Germany, France and Italy.

MUSIKHUSET & VIVALDI STUDIOS

KVARNBYGATAN 10
431 34 MÖLNDAL
SWEDEN

Marshall

Marshall

AMPLIFIERS

For the past two decades, one name has been synonymous with the best in rock amplification. Marshall has now become a household name throughout the world as a symbol of precision acoustic engineering, to be relied on, not only for superlative sound quality, but for high performance night after night.

Each amplifier chassis is constructed from a minimum of 16 S.W.G. steel, precision cut, punched, bent and seam-welded to form a substantial, rigid foundation strong enough to take all the knocks of the road. Industrial grade

cadmium passivating ensures many years of rust-free operation.

All electronic components are selected and tested to outperform their required functions, and the electrical hardware, such as switches, selectors, etc., comply to most international safety standards to ensure the user is safe from the risk of electric shock. The same applies to both the mains and output transformer, that are designed and built to withstand full output for hour upon hour. To complete the electrical specification all valves are selected from the finest grades available.

Once assembled and wired, using

both hand and machine techniques, each chassis is fully tested by the team of electronic engineers. After testing and adjusting, each chassis is assembled into cabinets that are manufactured to an equal standard as the chassis.

Each cabinet is made from finest quality birch ply, corner locked and r.f. bonded for immense strength and longevity. After the protective and decorative P.V.C. covering is bonded and stretched onto the cabinet, A.B.S. corner protectors and air vents are riveted in position, and the heavy-duty strap handle and shock absorbing feet are screwed on.



2210/2205
REVERB SPLIT
CHANNEL HEADS

A process of constant development work and a keen awareness of the requirements of the market place, have resulted in the design and manufacture of a number of new amplifiers, beginning with the now famous 2000, 2001 professional series. The success of these models, with their twin channel formats and versatile facilities, led in turn, to the production of the equally successful 50w Combo model 4210. To complete this line of development, two new heads have been produced which, although based closely on the Combo 4210, have been modified to accommodate the requirements of high powered stage loudspeaker stacks.

The preamplifier section has a single input, which is then split between the normal channel and the boost channel, these are footswitch selectable, hence the terminology "Split Channel". The 'normal' channel has volume, treble and bass controls, offering a wide range of sounds and is aimed at being the clean or rhythm channel. The 'boost' channel has an L.E.D. indicator to show selection and features gain, volume, treble, middle and bass controls. This is aimed at being the 'dirty' or lead channel and, as such, offers the player the facility of long, controllable sustain with the sound quality that has made Marshall the big name in guitar amplification.

Both channels are fed into the 'master' section that contains the footswitch-controlled Hammond reverb, presence

control, effects send and return sockets, and the 'master volume' control that adjusts the apparent output power of the amplifier.

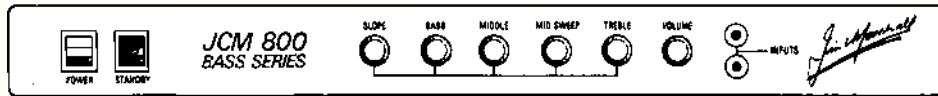
The output stage of each amplifier features either 50 watts or 100 watts of Marshall power and contains the usual Marshall items of selectable mains voltage and output impedance, fuse-holders etc., enabling the amplifier to be used world-wide with almost any loudspeaker configuration. Also on the output stage, is a frequency compensated D.I. socket and volume control to facilitate the ease of slaving or recording, yet maintaining the sound quality projected by Marshall loudspeaker systems.

Although attaching great importance to its development programs, Marshall are not in the business of planned obsolescence, and are

acutely aware of their reputation for longevity, in both product and model range. Thus, despite the success of recently developed equipment, the

original Marshall amplifiers are still available and are as popular as ever. Below are descriptions and diagrams of these amplifiers.

1986. VALVE BASS AMPLIFIER 50W & 1992. VALVE BASS AMPLIFIER 100W



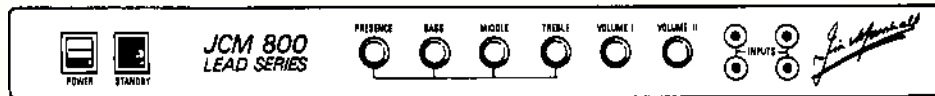
FRONT PANEL

These two amplifiers have undergone a major re-design programme to keep abreast of the requirements of modern bass playing trends. The amplifiers feature two mixable inputs with volume

control, active treble and bass controls and a middle circuitry sweepable from 400 HZ to 1 KHZ, plus a slope control that filters the low fundamental notes for that tight punchy sound when playing

loud. All this, plus an improvement of bass in the power amp, leads Marshall to believe that the 1992 is the finest 100 watt bass amplifier that they have ever produced.

1987. STANDARD LEAD 50W & 1959. STANDARD LEAD 100W



FRONT PANEL

This is the panel of the classic Marshall amps, so much favoured and featured by some of the world's greatest guitarists and bands.

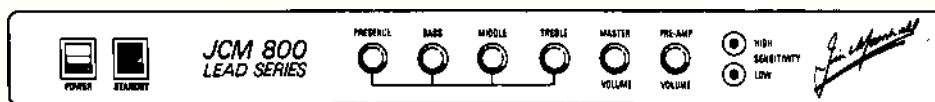
There are two models with this format— model 1987 standard lead 50 watt, the original and legendary Marshall

amplifier with its unique sweet overdriven valve sound and sustain, and model 1959 standard lead, with that incomparable 100 watt raunch.

Both amps feature the same controls and twin channels, one channel is normal (input II) and the other has a high treble

response. Each channel has its own volume control and is mixed into the tone network of treble, middle, bass and presence controls. Variable mains and output selectors enable both amps to be used around the world, with virtually any speaker system.

2204. MASTER VOLUME LEAD 50W & 2203. MASTER VOLUME LEAD 100W



FRONT PANEL

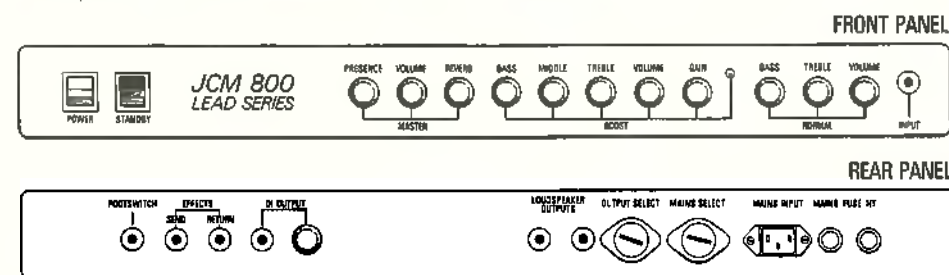
The amps were developed out of the original Marshall circuitry to enable the musician to reproduce the classic Marshall overdrive sound at any volume level. By varying the pre-amp volume, and master volume controls the sound

can be varied from a clean crisp sound to a rich overdrive sound at a controllable volume.

As with the standard amps, the master volume series have twin inputs, one having greatly increased gain. Both

channels mix into the usual Marshall tone circuitry of treble, middle, bass and presence control. This is an exceedingly versatile amp, and perfect for the discerning guitarist.

2210/2205 REVERB SPLIT CHANNEL HEADS



FRONT PANEL

REAR PANEL

The panels of the very latest Marshall heads, as described on the preceding page, show the vast range of facilities offered by these, the most versatile of the Marshall amplifier range.

Marshall AMPLIFIERS

Model 2000 LEAD AMPLIFIER 200W

2000

1982A

1982B



Model 2000 is shown in its recommended situation;— in a top-of-the-range concert hall system for the professional musician. It is coupled to two 1982 heavy duty 4 x 12 cabinets, together capable of handling the massive output from the amp, and converting it into ear-shattering volume.

The epitomy of Marshall achievement in technology and construction these two systems must represent the highest standard of development in instrument amplification. No expense has been spared to bring to the music world two amplifiers of stunning power and facilities. The Marshall factory gives thanks to all the guitarists who have helped with the design of these amps — they have literally been designed for musicians by musicians.

The model 2000 is a lead guitar valve amplifier rated at 200 watts, but giving a minimum of 250 watts before distortion, and much, much more after distortion sets in. It features two independent channels, a mix input, footswitch channel swapping and L.E.D. selection indication.

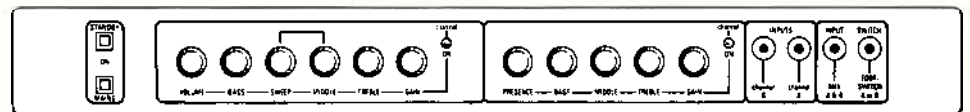
Channel A is designed to produce the sound readily associated with the Marshall 1959 type amps, but with lots more power and gain, giving a distinct bite right up to phenomenal volume levels.

Channel B has a master volume control and features a variable sweep middle control enabling the best sound to be achieved out of differing guitars.

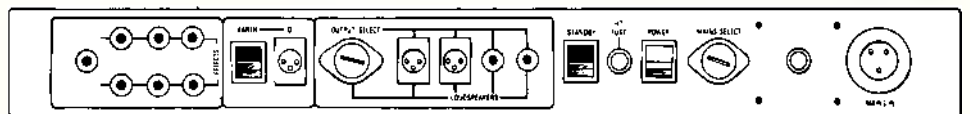
The valve pre-amps have impressive effects-circuitry with three variations. Effects can be patched into either channel independently or collectively, and the pre-amp jack socket will connect it to other systems.

The valve power amp features both jack and XLR loudspeaker connectors and is variable between 4 and 8 ohms. A further XLR connector carries a 600 ohm balanced D.I. signal complete with earth lift switch for connection to a mixer desk. Mains input is through a locking cannon connector.

FRONT PANEL



REAR PANEL



Model 2001 BASS AMPLIFIER 300W

This is another product designed especially for the professional bass guitarist of the 80's.

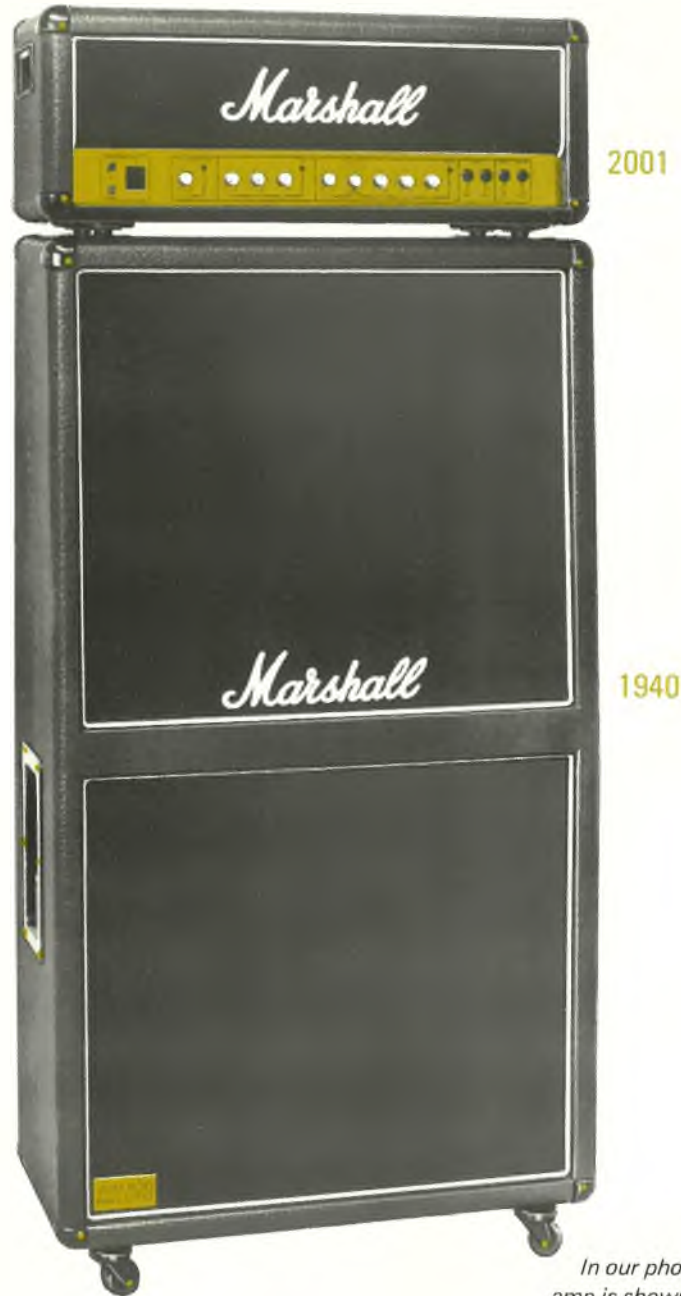
Full collaboration with top players and sound crews has produced an amp which the Marshall factory consider to be the finest that money can buy. The power output is massive; a nominal rating of 300 watts is very conservative, it actually clips at 375 watts and when overdriven is far in excess of even that figure.

In line with our model 2000 lead amplifier, this valve bass amp has two independent channels, with a linking facility. A foot-switch can be inserted which will switch from channel to channel, with L.E.D.'s on the front panel showing exactly which channel is in operation.

Although each channel has a different voice, all the controls are of the same centre flat type, and have a large swing. Channel 1 has an additional semi para-metric middle control with centre frequencies at 100, 200, 400, HZ and 1.3.6. KH7 which gives it great versatility and control over the final sound.

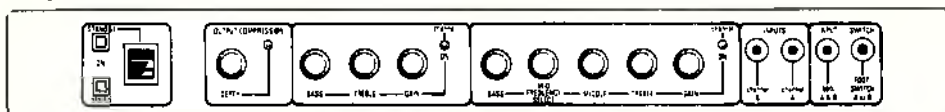
Each valve pre-amp has an individual effects send and return, whilst a third loop caters for both channels mixed; the valve power stage itself has a compression circuit incorporated with an adjustable threshold, and L.E.D. indication of its operation.

The rear panel features output connectors of either jack socket or XLR at 4 ohms or 8 ohms. A further XLR socket gives a balanced 600 ohm D.I. output and combined with an earth lift enables the amplifier to be connected directly into a mixing desk. The variable mains input is through a locking cannon connector.

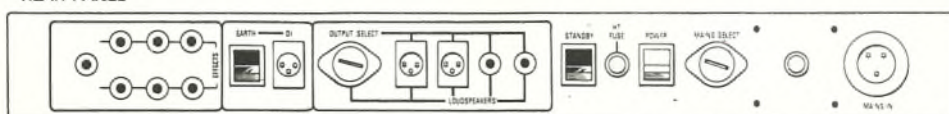


In our photograph the amp is shown on the 1940 400 watt 8 x 10 cabinet, a speaker unit specifically designed for use with this bass powerhouse and which produces a staggering, driving and penetrating bass sound.

FRONT PANEL



REAR PANEL



Marshall CABINETS

LEAD CABINETS

Every enclosure is constructed in high quality birch ply, all joints are corner locked by a special adhesive which is cured in a radio frequency press. The cabinets are then finished to a smooth surface and covered in top quality cotton-backed PVC. Additional protection is provided by corner pieces manufactured from virtually indestructible ABS plastic riveted into place. The same materials are utilised in the large and ergonomically designed inset handles.

Featuring very large in the history of the Marshall factory, and still occupying a large section of its production, the 4 x 12 cabinet as originally invented by Marshall is today's basic format for most instrument amplifier systems, where real projected power is required.



1960A (4x12) 260W

The original 4 x 12 had an angle front to enable the first Marshall amplifier, a 50 watt lead, to fit neatly on top. It was only when musicians were clamouring for more power and the factory produced a 100 watt amplifier that Marshall invented the classic stack, which consisted of yet another 4 x 12, this time straight fronted to enable the angle cabinet and amplifier to sit securely on top.

Model 1960A is today's version of the standard 4 x 12, though with modern speaker technology it is capable of handling a full 260 watts at 16 ohms.

Featuring an angle front, amplifier skid trays, and four castors it is the top cabinet of a stack sitting on a model 1960B, which is straight fronted and has castor



1960B (4x12) 260W

1982B (4x12) 320W

trays for use as a base. Both versions feature heavy duty side-handles, corner-protectors, castors, and contain Marshall Celestion speakers.

Model 1982 4 x 12 heavy duty cabinet; this heavy-duty version of the four by twelve has a power handling of 320 watts at 16 ohms and also has increased sensitivity and different sound characteristics suitable for better projection in large concert halls. The same format as the standard model is available, 1982A being the top cabinet and 1982B as the base. Both models feature heavy-duty side-handles, corner-protectors, castors and contain four specially produced Marshall Celestion speakers.

Also available is the newly reintroduced Model 1936 2 x 12 lead cabinet. This is an enclosure manufactured to the usual high standards of the Marshall factory, but is built with economy of space and transportation in mind. The two Celestion 12" 65 watt drivers give 130 watt operation at a nominal 8 ohms, and the sound is surprisingly loud, tight and punchy.

1936 (2x12) 130W



1933 (1x12) 65W

The model 1933 Cabinet is a ported unit containing a single Celestion 16 ohm, 65 watt, 12 inch loudspeaker. It is intended as a stackable option for use with models 4210 and 4010, 50 watt valve combo's. It is primarily designed to increase sound dispersion and, as such is provided with feet cups to aid stability when stacked. Of course, the cabinet can be used singly or in multiples with the majority of the Marshall range of amplifiers, wherever a compact, portable loudspeaker system is required with a reasonable bandwidth for musical instruments.

The cabinet is equipped in the usual Marshall rugged style, for a long, reliable life.

Marshall cabinets are constructed to an extremely high standard, the quality of workmanship is second to none. All Marshall personnel are highly trained in their specialities at the factory. The techniques and materials that they employ result in a cabinet of great strength and ruggedness.

BASS CABINETS

The Marshall bass cabinet range is constructed to the same extremely high standard as the lead units, and all general comments on standards of materials and construction apply to them. It is of even more importance with bass cabinets because they must be capable of withstanding extremely low frequency vibrations.

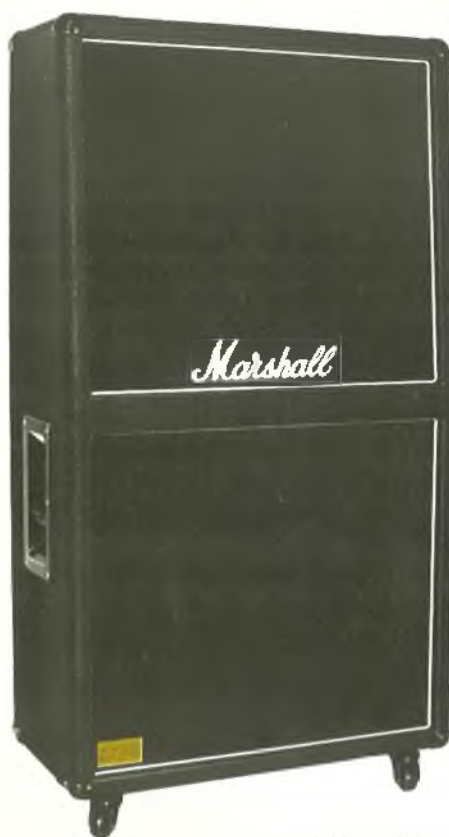


1935A (4x12) 260W

There are two sets of 4 x 12 cabinets available in the bass range:- The 1935A is the standard duty angle-front which has amplifier anti-skid trays on top and castors underneath which eases transportation to the gig, they also locate in the top of the 1935B bottom unit, which has castor trays to suit. This is straight fronted and has its own castors for ease of movement. Both these cabinets have the standard Marshall features of twin heavy duty side handles, ABS corner protectors, castors and contain four Marshall Celestion speakers.

The model 1984A 4 x 12. This is the specially uprated heavy duty cabinet with angled front and amplifier skid trays, designed to fit onto the 1984B 4 x 12 which has castor trays accordingly, and straight front. With the greater magnetic structure and increased voice coil

diameter, this cabinet will deliver a cleaner bass sound with more projection when driven to higher volume levels than the alternative standard cabinet, thus making it more suitable for the larger venue.



1940 (8x10) 400W

The 1940 8 x 10 bass cabinet; this newly released enclosure is the culmination of the Marshall company's research into the requirements of the top bass player. It is designed to complement the new 2001 300w bass amp, and has been developed in conjunction with some of the world's top bass players.

This cabinet provides a sound covering a very wide band width, with all the punch and attack associated with direct radiating loudspeakers, but with a directivity and projection not normally found amongst infinite baffle-designed cabinets.

It features extremely rugged cabinet construction, incorporating more than adequate bracing to ensure long, vibration-proof heavy-duty usage.

The speakers are 10" Marshall Celestion drivers mounted in carefully calculated internal enclosures, providing each pair of speakers with correct working conditions unaffected by the other speakers. The cabinet is conservatively rated at 400w RMS and two input connectors are provided for either 4 or 16 ohm operation. This enables the cabinet to be used in many amplifier and speaker combinations.



1937 (2x12) 130W

The 1937 2 x 12 bass cabinet; this recently introduced speaker enclosure is an economical, realistic answer to the bass player requiring good sound from a small easily portable cabinet. Featuring two 12" 65 watt bass Marshall Celestion speakers this cabinet will handle a full 130 watts at 8 ohms in a combo sized package.

It has a surprisingly loud and tight sound with lots of punch and is supplied with corner protectors, heavy duty top strap handle and domed feet.

To cater for the bass player all the speakers used are manufactured by Celestion for Marshall with an extended bass response and different middle characteristics from the speakers used in the lead cabinets.

Marshall SET-UPS

LEAD SET-UPS

The Marshall range of equipment does not just provide one or two models to do the job of many, but instead provides a vast range of valve amplifiers and speaker

enclosures, capable of interlocking to fulfil each and every specialist application. From the depth and flexibility of the new bass and split channel amps, through the control of

the master volume range, to the raw, raunching power of the classic Marshall standard range.

1959



Model 1987 50w standard lead ► amplifier is shown here on top of a model 1960A standard duty 4 x 12" cabinet.

This is a classic single cabinet set-up, providing excellent stage sound plus good projection.

In this instance the amplifier should be adjusted to the 16 ohm setting to match the impedance of the cabinet.

1960A

◀ The classic Marshall stack utilising a 1959 100 watt valve amplifier coupled with 1960A and 1960B standard cabinets – the original, much copied but never equalled Marshall sound.



1960B

2203

1982A

Each 100 watt lead amp has a variable output impedance selector making it possible to link every head with either 1, 2 or 4, 4 x 12 cabinets. These cabinets have a nominal impedance of 16 ohms: therefore, when only one cabinet is used the amp is set to 16 ohms, when two are used 8 ohms should be selected and four cabinets require 4 ohms.

▲ There are no problems in using one standard-duty 1960 4 x 12 with a 100 watt head, because, this speaker enclosure comfortably handles 260 watts but it is recommended that for the best performance with only one cabinet, a 1982 heavy duty cabinet be used, and this is shown in the photograph.

1987



1960A



2204

1936

▲ This photograph shows model 2204 50w master volume amplifier coupled to the recently reintroduced 2 x 12 cabinet, model 1936, it provides an economical, compact yet versatile stack, ideal where Marshall-type sound quality is required yet transportation is a prime consideration.

Stage projection and sound are quite different from that provided by the combo format, because of the pressurised speaker design. Amplifier impedance selection is at 8 ohms.

BASS SET-UPS

By selecting from the wide range of Marshall bass cabinets custom-made systems can be built up. These should be capable of fulfilling all players' needs within the restrictions imposed by finance or ease of trans-

portation, and yet without any compromise in sound quality or quantity.

All the amps and cabinets are interchangeable because of a variable output impedance selector on every head.

It is possible to increase the power by linking the inputs of two or more bass amps together. This not only gives a rise in output, but also considerably increases the versatility of the tone controls of the two amps.



1986

1935A

The newly redesigned 1986 50 watt valve bass head is the ideal amp for the club, recording or session bass player, who requires a medium powered light and versatile modern unit.



1986

1937

▲ Our recently introduced 1937 bass cabinet shown here contains two specially designed Marshall Celestion speakers in a pressurised cabinet to provide that essential punch often missing in other bass designs of similar size. The cabinet gives a rich warm bass sound at a surprisingly high volume, and with good projection.

The whole system is an economical, compact and easily transportable package.

◀ Shown in our photograph the 1986 valve amplifier is on a 1935A 4 x 12 bass cabinet. This provides plenty of good solid bass, with lots of top and gives a

proportionate increase in sound dispersion over the 2 x 12 cabinet offered as an alternative.



1992

1984A

1984B

▲ The definitive Marshall stack 'sound' is achieved by pushing the output through two 4 x 12 cabinets and as shown in the photograph these should be the 1984A and 1984B heavy duty versions, for that concert hall drive and penetration.

Now, the range of sounds needed by the modern bass player is obtainable in the one amplifier, and in combination

with the variety of bass cabinets available from Marshall, comprehensive systems can be built up to suit all individuals' taste.

Marshall

Marshall LEAD COMBO'S

VALVE COMBO'S

Master Volume Models

These models have been developed from the highly successful Marshall 2104 M.V. Combo, to provide two guitar valve Combo's of similar circuitry and facilities, but with differing speaker configurations, compactness and portability.

Apart from the sleek new J.C.M. 800 styling, which places the controls on the full width fascia panel, offering much improved use and vision, there have been other important developments. By using newly developed loudspeakers, these Combo's have been given a new depth of sound, without losing the smooth overload characteristics of the previous model. Also, treble and presence controls have been redesigned to give greater swing and less interaction with the rest of the tone network.



4010 (1x12) 50W



4104 (2x12) 50W

The Combo's feature the original Marshall Master Volume circuitry, to enable the musician to reproduce the classic valve overdrive sound at any volume level. By varying the preamp volume and master volume controls, the output can be varied from a clean crisp sound to a rich overdrive sound. Exactly as model 2104 featured two inputs of different gain, so too with the new 4010 and 4104, both these channels mix into the newly modified tone circuitry of treble, middle and bass.

Model 4010 features a single 65 watt high sensitivity speaker, and model 4104, though only slightly larger, has two of the same units to give greater projection of sound where required.

Split Channel Model

This brand new Combo, like the new 2000 range of amplifier heads, is the result of Marshall's years of experience in the field of sound engineering and must represent a high point in modern guitar amplification technology.

The preamp, featuring an entirely new design, offers split channel operation enabling the user to programme two entirely different sounds or tone variations into separate channels and then enables the guitarist to switch from one to the other by use of a footswitch, utilising a transistor logic circuit for click and noise free operation.

The first of the two channels designed primarily as a clean or rhythm channel, offers volume, treble and bass controls, with an optional overdrive facility when used in conjunction with the overall master volume.



4210 (1x12) 50W

The second channel – the boost channel – activated by the footswitch, and visually shown to be in operation by a red L.E.D., is designed as the lead channel, and offers the player an immense amount of overdrive and sustain, with a wide variation of tone colours.

Two more controls on the front panel are for: a) the reverb, used in conjunction with a footswitch ON/OFF function, and b) the master volume control. By using the boost channel controls flat out and varying the sound by this master output control, extremely long, rich sustain can be obtained. The inclusion of reverb at this stage will give even more sustain and hall-like spacial effects.

Again in line with the increased facilities of the 2000 series of amp heads, the back panel of this Combo offers a very comprehensive range of facilities. Mains input, voltage and output selectors, loud-speaker jacks, a frequency matched D.I. output with its own volume control, send and return sockets for effects units with properly matched circuitry for optimum performance without distortion, and a socket to connect the dual footswitch pedal.

The speaker used in this Combo, is a specially designed 80w 12 inch unit.

TRANSISTORISED COMBO'S

12w Master Volume

An outstanding Combo with a performance to suit beginners and professionals alike. It features two inputs, gain, volume, treble, middle and bass controls with a dual line out/headphone socket.

The low input connects the amplifier in its normal mode and, by using the gain and volume controls, a wide variety of guitar sounds can be achieved; from clean, country and jazz sounds to overdrive rock. When the 'high' input socket is selected, an additional sustain circuit is switched into operation, which gives an almost endless sustain.

Further utilisations of the three tone-controls, give a wide variety of individual tone colourings to the sound.

**TRANSISTORISED
COMBO'S**



5005 (1x10) 12W

The combo can be used with two guitars and, when both sockets are used in this manner, it reverts to the normal mode of operation and switches out the sustain circuit, but still gives the 'high' input socket greater sensitivity, so that rhythm and lead guitars can practise together.

The cabinet, chassis and electronics of the unit are built to the same exacting standards of the most expensive Marshall amps. The rugged, unstressed power amp drives into a 20 watt Celestion speaker, ensuring a long reliable life and, although this is an inexpensive Combo, it is well worthy of carrying the world famous Marshall nameplate.

30w Master Volume

This entirely new Combo, breaks new ground in Marshall transistor technology, with an output that belies its 30 watt rating. It follows the format laid down by its valve counterparts (models 4010 and 4104) and features exactly the same front panel controls and quality of construction.

By using the best of Marshall's production techniques and utilising sophisticated transistor technology, the cost of this unit has been kept down to an extremely realistic level to enable every musician to enjoy ownership of a Marshall unit.

In conjunction with the twin mixable inputs of high and low sensitivity, the preamp and master volume controls, enable any sound characteristic from ultra clean, to a rich, smooth overdrive of a quality rarely found in a transistor amplifier. A full complement of tone controls offers wide adjustment of treble,



5010 (1x12) 30W

middle, bass and presence, with each control carefully designed to give maximum usable swing, enabling the player to achieve a great sound, no matter what guitar, style of playing, or acoustic conditions the amplifier is confronted with.

The rugged cabinet construction and conservative rating of all components, characteristic of Marshall, have been maintained in order to ensure maximum reliability. Additionally, the 12 inch high-sensitivity speaker is of 70w power-handling and has been specially designed for this Combo, by one of Britain's leading speaker manufacturers.

50w Split Channel Model

This solid state equivalent of the new 4210 valve Combo, embodies all the advances shown in that very advanced unit, but because sophisticated transistor technology has been used in its design, the cost has been kept down to a level, to enable every guitarist to enjoy the ownership of one of Marshall's very latest and versatile Combo layouts.

With a front panel of full width, the appearance of the amp and its controls are exactly the same as the model 4210, except that the 5210 does not have a standby switch.

The preamp, featuring an entirely new design, offers split channel operation enabling the user to programme two entirely different sounds or tone variations into separate channels and then enables the guitarist to switch from one to the other by use of a footswitch



5210 (1x12) 50W

utilising a transistor logic circuit for click and noise free operation.

The first of the two channels, designed primarily as a clean or rhythm channel, offers volume, treble and bass controls, with an optional overdrive facility when used in conjunction with the overall master volume.

The second channel – the boost channel – activated by the footswitch, and visually shown to be in operation by a red L.E.D., is designed as the lead channel, and offers the player an immense amount of overdrive and sustain, with a wide variation of tone colours.

Two more controls on the front panel are for: a) the reverb, used in conjunction with a footswitch ON/OFF function, and b) the master volume control. By using the boost channel controls flat out and varying the sound by this master output control, extremely long, rich sustain can be obtained. The inclusion of reverb at this stage will give even more sustain and hall-like spacial effects.

Again in line with the 4210, the back panel facilities are extremely comprehensive, featuring:— Mains input, send and return sockets for effects units with properly matched circuitry for optimum performance, without distortion, and a socket to connect the dual footswitch pedal.

A specially selected 12" high sensitivity, 70 watt loudspeaker is fitted to this Combo.

Marshall BASS COMBO'S

BASS COMBO'S

5501 (1x10) 12W



12W Model

This is an ideal amplifier for the first time bass player and also a highly portable practice amp for the professional, because of its high reserve of fine sound quality.

The amp features high and low sensitivity mixable inputs to suit the varying outputs of different bass guitars and has a full complement of tone controls, with a wide range of treble, middle and bass to suit personal needs. It is also provided with a dual line out/headphone socket.

The extremely rugged, unstressed power amp delivers the sound to a loudspeaker with a power handling far in excess of its actual requirement. This ensures that the bass sounds will be delivered with a strength and quality rarely found in amplifiers of this size or price.

Although primarily designed for bass guitar, this amplifier is also suited to six-string guitarists who do not need the overdriving capabilities of the 12 watt lead (model 5005), but require a cleaner, more mellow sound.

30W Model

This bass combo is intended for those bass players (beginners and professionals alike), who require a

5503 (1x12) 30W



little more power and projection for practice purposes, but who still want a portable and inexpensive package.

This amplifier has enough performance for group rehearsal, or even live gigs, where high powered bass is not essential, e.g. with folk groups.

The amplifier is equipped with twin mixable input of high and low sensitivity, gain and volume controls to balance the output, and bass, middle, treble and presence controls as well as a line-out facility.

The rugged and reliable power stage delivers its sound into a 12" 70 watt loudspeaker designed for optimum bass performance, with an absence of undue stress. Built to the same exacting standard of all Marshall equipment, this combo will provide a performance that belies its competitive price and size.

60W Model

The model 5506 Bass Combo has been designed to suit the needs of many differing bass players, providing advanced electronics with a highly efficient yet compact loudspeaker section.

Being part of the totally active amplifier section, each control has a wide, and usable swing. The input itself has a very high impedance and wide dynamic

5506 (1x15) 60W



range to prevent any unintended coloration of the guitar output.

The tone section features four peaking and dipping filters of carefully considered centre frequencies and slopes, plus a variable contour control that acts similarly to the loudness control found on most high quality hi-fi amplifiers. This can be used to provide extra bass and treble lift when the amplifier is being used in quiet situations.

The design format provides a versatility of sound, ranging from an almost inaudible deep bass through a clicky hollow 'hole in the middle' sound, to a 'middy' driving rock-type bass sound.

On the preamp section are effects send and return jacks, and a line out jack socket for slaving or recording.

The 60 watt R.M.S. output stage, designed specifically for rugged reliability, feeds into a 15 inch 100 watt speaker specially designed in conjunction with Celestion for this combo, to produce the full range of the bass guitar sound spectrum as efficiently as possible.

The compact cabinet is built to the usual high Marshall standards, and is carefully ported to match the response of the loudspeaker.

BASS COMBO'S

160W/200W Model

This is a highly versatile Combo, designed as a top of the range package. On its own, it produces a full 160 watts into a specially designed 200 watt 15" loudspeaker but, used with the matching stackable extension cabinet (model 1934), the amplifier produces a powerful 200 watts, along with the extra dispersion potential of two highly efficient 15" loudspeakers.

The amplifier section can also be utilised to drive a remote speaker system of the player's choice, with or without its own speaker working.

The input stage of the preamp has a very high impedance and dynamic range, to prevent coloration and loading of the guitar's output. Matched to this stage is a dynamic range compression circuit, which has variable threshold and volume controls and has a footswitchable ON/OFF facility, with L.E.D. indications. This enables the compressor to be mixed in with the direct signal as and when required.

The preamp section is then split into two footswitchable sections, with the L.E.D.'s indicating which of the two channels is in operation.

Channel A, the most comprehensive of the two channels, features sensitivity and volume controls, to vary the sound character and match the input level to the guitar's output; four active peaking and dipping tone controls of very carefully chosen frequencies and slope characteristics, and a fully variable contour control to modify the tonality even further.

Channel B features a volume control that varies the gain and sensitivity of the channel to make fullest use of the high dynamic range of the amplifier, and three peaking and dipping tone controls of different characteristics to those of channel A.

5520 (1x15) 160W



The use of these two channels enables two totally different sounds to be programmed into the combo and to be accessed via the footswitch.

Further facilities include effects send and return, and line out jack sockets.

The 200 watt R.M.S. output stage is a specially designed bridge amplifier, not only ensuring that the transistors are working efficiently and in their safest regions, but to give tremendous definition and clarity.

Indeed the entire design concept, selection of components and standard of construction have been aimed at providing the professional bass player with a versatile and expandable system of advanced performance.

150W Extension Cabinet

Although designed primarily as the stackable extension cabinet to match model 5520 200 watt Bass Combo, it can be used singly or in multiples with any of the Marshall range of amplifiers.

The cabinet is of the ducted port principle and is designed to match the response of the specially made 15 inch Celestion loudspeaker and has a nominal impedance of 8 ohms.

5520 (1x15) & 1934 (1x15) 200W



Although the cabinet is rated at 150 watts R.M.S., to allow for an adequate safety margin when used singly, the loudspeaker will handle in excess of this figure; up to 200 watts.

The cabinet is built and equipped to the usual high Marshall standards and has an extremely wide bandwidth, making it suitable not only for bass guitar, but for keyboards as well, especially if used in conjunction with a high-frequency horn.

Marshall

KEYBOARD COMBO'S

KEYBOARD COMBO'S



5305
(1x12) 50W

Both models are constructed to the same high standards as the rest of the Marshall range and there is no doubt that these combos will develop the same reputation for reliability and quality in the keyboard market as Marshall enjoy in the world of guitar amplification.

50w and 60w Models

These two combos, newly designed for the keyboard market, are of identical facilities, but differing power outputs, speaker configurations and prices.

Because of the diverse nature of keyboard instruments, two channels have been provided of quite different voicing and characteristics.

Channel A is primarily designed for use with electric pianos, organs, string synthesizers and drum machines, having the brighter more attacking sound required by these instruments.

Channel B has more of a hi-fi approach to its voicing and is for use by normal monophonic or polyphonic synthesizers.

Both channels employ an input stage, which is of very high input impedance and dynamic range to minimise any unwelcome coloration of the incoming signal. It will also enable an instrument transducer to be used, i.e. from acoustic guitars, pianos, woodwind, brass, etc.

Each channel has treble, bass and volume, with the latter controlling the gain and hence the dynamic range to ensure clean operation.

An additional 'Master Volume', controls the output of the combos and



5306
(1x15) 60W

also the overall mix between the two channels. This section is placed after the effects send and return sockets, and the recording output; and allows the amplifier to be used as a keyboard recording mixer, whilst utilising the output stage as a monitor system.

Model 5305, the 50 watt version, is housed in a cabinet, which contains a 65 watt loudspeaker specially designed by Celestion and having an extended bass and flattened mid-range response. This is coupled with a high mid and treble horn,

which is a voltage driven device to prevent power being wasted on other forms of frequency attenuation.

Model 5306 gives 60 watt output into an 8 ohm 100 watt 15" Celestion speaker which is housed in a ducted port enclosure, again connected to the same treble horn as used in model 5305. In all, it is an efficient loudspeaker system of immensely wide frequency response, for use where performance is the only criterion.



The Best of British

The best of British, or the best and British. That's the way we've been introducing Marshall amplifiers to an ever-widening public for twenty years, and today it's as true as ever.

We can say this with such confidence because Marshall amplifiers were designed that way, right from the start.

When the first Marshall amps were produced, in the early sixties, they were made in response to the demands of top musicians who wanted something with more guts than contemporary amplification.

At first, the numbers produced were very restricted, because to make an amplifier to the standards required by these musicians called for time, skill and painstaking quality control. Later, the popularity of Marshall amplifiers grew so great that the manufacturing plant was vastly expanded, but in no way were the basic materials, skills, and manufacturing standards changed: Marshall amps have never been a production-line item!

The first Marshalls were sold to bands like 'The Jimi Hendrix Experience', 'The Who', and 'Cream' because of their unique sound, and because of their reliability.

The latest models sell to bands like 'AC DC' the 'Michael Schenker Group', 'Sky', and 'Gillan' for identical reasons, but that basic Marshall sound is also supplemented by a range of increased facilities and twin channel versatility.

Our sound has become the trademark of a certain kind of Rock, in fact I think wherever there's Rock there will always be Marshall.

But it certainly doesn't end with the super-distorted guitar sound and the stage-full of stacks, more and more musicians are discovering what some artists have always known: you don't have to be a 'heavy metal' player to benefit from Marshall performance and reliability.

The fact is that modern Marshalls offer a range of sounds comparable with any amplifier on the market – as well as that basic valve sound that so many others have tried unsuccessfully to copy.

Features like elaborate EQ and channel switching on the 200 watt amp head, similarly the 2205/2210 heads which also feature reverb, give the control you need. And the policy of giving a wide sound potential has been continued through the Combo's – a Master Volume

system is standard on all models, plus channel switching and reverb on valve and transistor models alike.

Today's Marshall amplifiers are an outstanding export success story for the same reason they're popular at home. They are designed around the needs of today's musician.

They are also sold at an extremely competitive price, due to the low overheads we achieve by manufacturing the majority of the product in our own factory, and by handling our own distribution network throughout the world.

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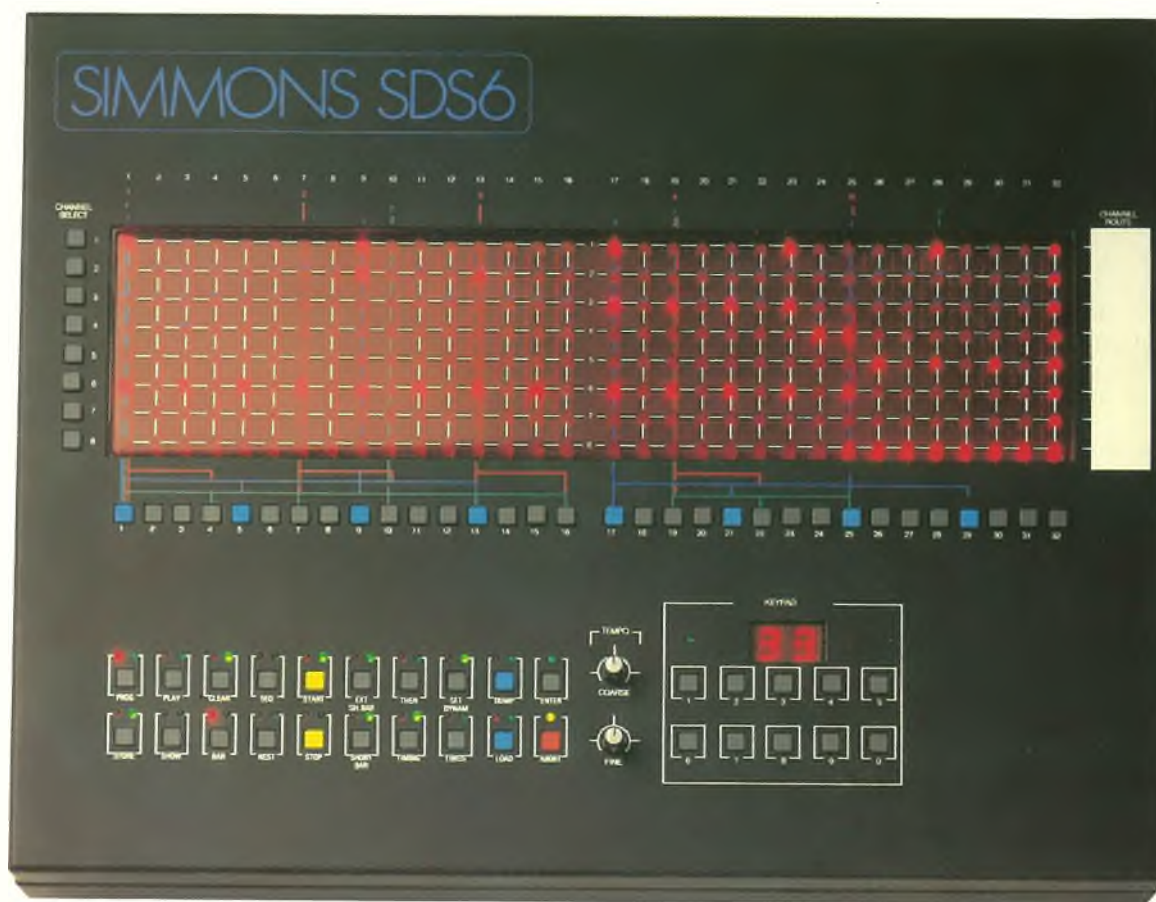
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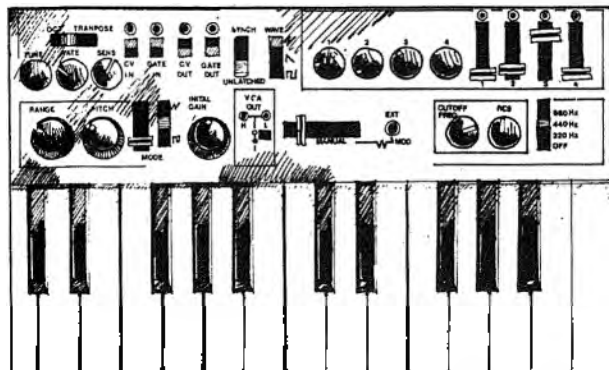


From Simmons Electronics, the company that revolutionised drums, comes the SDS 6. A computer sequencer dedicated specifically to triggering existing Simmons modules, it can boast some very impressive facilities. Such as the capacity to store 99 user programmed bars in any time signature which are displayed in "drum music" format as they are created and can be strung together to form complex rhythmic compositions.

And true to the Simmons philosophy of always maintaining the "human interface", every single drum beat can be assigned a "dynamic level" from 1 to 9, making the SDS6 a drum machine with a unique feel. Couple this truly creative composition tool with the incredible sounds of Simmons electronic drums and you have the worlds most complete electronic percussion system.

For further details contact

SIMMONS



SYNTH CHECK

SIMMONS SDS6

RRP: £1437

The Prologue

I'M BACK! YES, IT'S THE intrepid PF here, broadcasting to the nation and anybody else who cares to read my monthly rantings. Since February has the letter 'Y' in it, I decided that it would be rather good if I did something different in the way of reviews. So what could I do that would leave, as they say, all the others standing, totally amaze you and really show Jack Barren what it's all about? (Who?) Now you're talking!! — Well, I thought for a while, but no luck, so I decided to go to bed. That's always a great idea anyway. I awoke the following morning — not too early — and thought a bit more. Still no luck or inspiration, so I went back to bed. All that thinking had made me tired again. After a week of unfruitful thoughts, things were looking rather bleak and it had reached the point where I'd get up and not even attempt to think... and then I'd go back to bed. Finally, one morning, *it happened* — I managed to get up two hours before I'd even gone to bed, and whilst in this state of shock, I was hit by a series of potentially brilliant/complete and utter waste of time ideas.

The first was to do a 'rapping review'. You know, to write a whole review as a 'rap'. This definitely, I thought, had to be what they called 'in vogue'.

Unfortunately, I only got as far as —
 'A hip-a hop — a hip hop ho — I gotta digital synth with an LFO...'

When I realised that having the disadvantage of not being born black (my parents wouldn't let me), combined with the fact that this was a totally ridiculous idea, this particular brainwave was left to rest in peace in my dustbin.

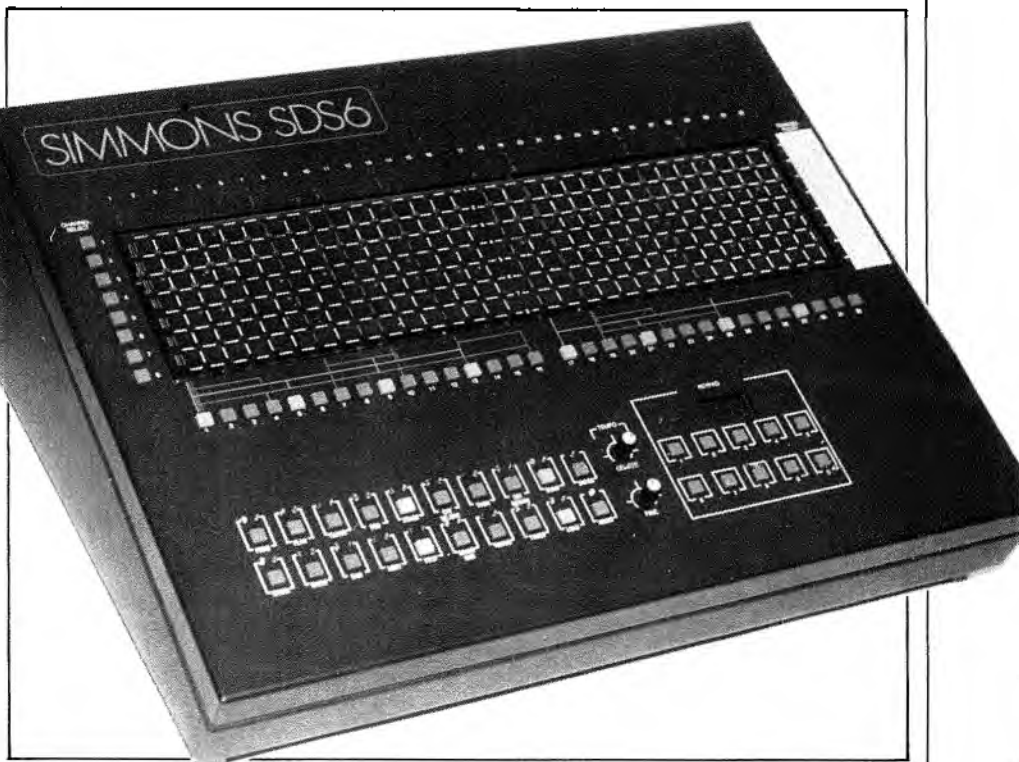
The second idea was to do a 'scratch and sniff' review. The problem with this was that synthesizers don't really smell that much, except, of course, when they are on fire. I soon came to the conclusion that very few manufacturers would allow me to set fire to their latest state-of-the-art instrument purely to enable you and I to sit around and debate about 'how good a pong it makes when it's burning'. Mind you, it's the ultimate test for heat stability. Do the oscillators stay in tune before they melt? I decided to put this gem of an idea aside for consideration in the April issue.

At last, after various other abortive attempts, I came up with the brainwave

which, for reasons I cannot disclose, became known as *the brainwave*. The plan was to go out and find A SCOOP!! Brilliant! — Brilliant! Since I've been writing for this magazine, I have really tried to get into the spirit of things. I went out and bought one of those peaked caps that all journalists are supposed to wear on their heads. I also managed to get hold of a waistcoat and a few biros to stuff in my top pocket. The next thing I did was to pick up some of the journalistic terminology that I'd heard in the office — such words like 'copy', 'deadline', 'paper', 'staples', 'fart', and 'bullshit'. (And 'Get Out' — Ed.) The word 'scoop' was also

Specimen 'A' — Dave Simmons

I first met Dave many moons ago when he was in charge of servicing for ARP who were then handled by Boosey and Hawkes. Our first meeting consisted of a mutual hurling of abuse (amongst many other things). Since then, for reasons that are totally beyond my comprehension, we have remained good friends and, hopefully, will continue to even after this article. But please don't get me wrong, there is no way that I would consider giving the SDS6 a wonderful review just because we are pals, nor would I accept bribery



A logical development for their electronic drum kit

amongst these, and this, within the context of this magazine, basically means 'getting hold of something before everybody else lays their thieving hands on it'. Well, this historic month I think I've come up with a real goody. I managed to track down (not so much 'track' as 'ring') Mr Dave Simmons regarding his latest device which he is launching at Frankfurt — the SDS6, he calls it, but more about that in a moment.

(though I'd be interested to learn to what extent he would be prepared to go). The fact that I'm writing this article in the Bahamas is purely coincidental.

Following his stint with ARP, young David went on to form his own company called Musicaid which, subsequently, developed into the current Simmons Electronics. Their initial main product was the SDS3, which is a 4-channel drum synthesizer similar to the Syndrum, except that it's much better, being far more versatile. This was pretty successful, particularly as it arrived at a time when all record

producers insisted that every song had to have a drum synth that either went 'Kishh' (as in *Cars* by Gary Numan), or 'Biddu' (as in *Love Don't Live Here Anymore* by Rose Royce.)

The next significant product to come from Simmons was the legendary 'Clap Trap'. Now I hate to think how many records have got Clap Traps featured on them, but needless to say, they have now become a standard piece of equipment in most recording studios. And, as for that spate of records which consisted of Clap Traps being augmented by orchestras or other combos, just blame it on Simmons. During this period of time, Dave was hard at it (?) developing the SDS5 Electronic Drum Kit. Most people know the '5' by its original-looking hexagonal-shaped pads. The concept of this instrument was something completely fresh, as far as drums go. It is probably the most important musical development since our ancestors fell over a hollow log and thought that it sounded good. Basically, the '5' is an instrument that produces, as accurately as possible, the sound of acoustic

percussion synthesizer. I am sure that initially, people will draw comparisons between already existing pieces of equipment, such as the Linn Drum and Roland's TR 808, but the '6' offers far more as it is capable of storing much more information, as well as being flexible, therefore you don't have to use it to trigger one particular sound. You simply create the sound, then create the rhythm — or vice versa. This freedom of versatility is one of the innumerable creative features it offers. It has eight independent channels which can be programmed to trigger up to eight individual outputs.

It is totally dynamically programmable. There are no 'loud or soft' buttons, each output can be set within a bar to give you up to nine different dynamic levels per beat. This enables you to create real crescendo and diminuendo — (Wop language for getting louder and softer.) This is a crucial feature as the dynamics of how hard you hit an acoustic drum are as important as whether you hit it all, if you see what I mean.

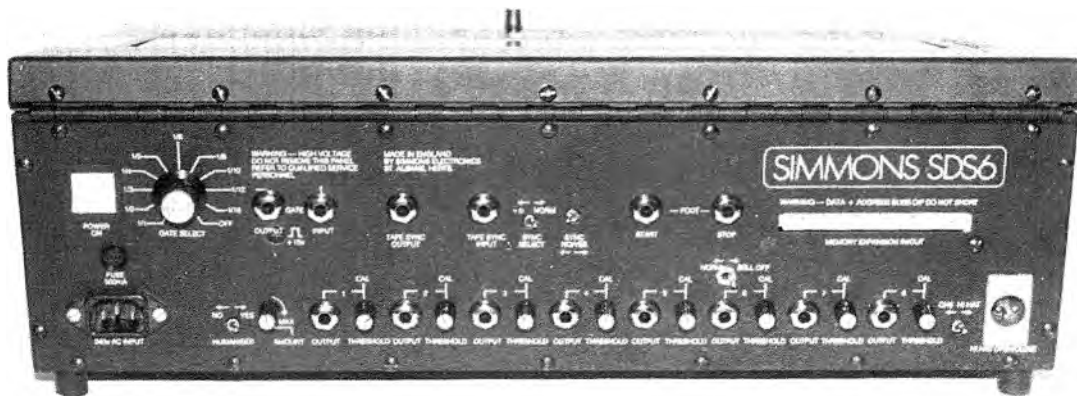
It will remember up to 99 different

steps, that is, one matrix panel. Because there are eight channels, you can have a maximum of eight different drum sounds being triggered at any one time.

A sequence is a group of patterns that are strung together to form a rhythm construction. For example, 'Sequence 1' could contain a chain of patterns that might make up a chorus of a song. You can have up to 250 different patterns in any one sequence.

A 'song', or a 'nest', is a group of sequences which, when linked, form the entire construction of a song, as in the normal musical sense. (I'm sorry if this terminology may be confusing, but unfortunately, language hasn't as yet caught up with technology.) When you have completed writing a series of Songs/Nests, you can then specify in which order you want them played back. For example, for live work you could programme a whole set in any variation of order.

To conclude this slice about memory, there is a total of 8K of user Ram (Random Access Memory) for storing information. There is another 8K of Rom



drums but at the same time offers all the advantages of modern electronics as applied to musical instruments. It can be used to create many other percussive sound effects, as well as some wonderful 'over the top' drum sounds — especially its famous 'Tom' sound. This instrument has gone on to become hugely successful around the world, and without a doubt, I'd say most people would agree that its success is well deserved.

What is significant about Simmons Electronics, is that it is the only company we have in this country that has made any real impression in the field of electronic instruments on both sides of the Atlantic. I find that rather amazing. There must be someone else here with good ideas suitable for the same field. I can't believe that we're all thick. At which point we come to...

Specimen B — The SDS 6

This is a logical development for their electronic drum kit. It is a sequencing/programming device that allows the user to put down the drum sticks and programme all the rhythms. It was primarily designed for users of SDSV, but can also be used to trigger other things, eg Clap Traps or any other

patterns, 99 sequences of patterns, and 99 groups of sequences. (All will be explained in a mo.)

The tempo can be stored for each sequence and it is therefore possible to have tempo changes within a song. It has been designed to give the user clear information about what is going on within a rhythm via the use of its 8 x 32 matrix display which takes up nearly a good third of the entire front panel. This little idea alone is going to stop a few people in their tracks. It really is a stunner. But first...

The Concept

(Man!) Getting one's 'ead around the concept of the SDS6 is the most crucial point to sort out. To do this it isn't necessary to bend one's legs behind one's neck or commence chanting mantras. All you need to understand is the thinking behind this creative tool and then the application of it is pretty straightforward. I have already mentioned a bit about the memory capacity of the instrument, but to expand on this, I should explain that all information is stored in either patterns, sequences or songs.

A pattern is a rhythm that, in this context, comprises one block of 32

Back panel includes a 'Humaniser' for added realism

(Read Only Memory) which is used for running the machine programme. Hopefully, by now, you are beginning to see the capabilities of this box. The next thing to tackle is the matrix display, and then we should be well on our way.

Oh, No, It's a Computer — But Don't Panic!

I think Dave has realised that many musicians don't really want to be computer programmers — especially most drummers. The problem, therefore, was to get people to stop being scared off by all the hi-tech terminology. The only answer was to enable them to easily understand how they could achieve what they want with the minimum amount of fuss, and that was a tricky one. The Simmons' solution was to come up with something that was not only blindingly obvious, but also highly creative, and this was achieved by the matrix panel.

The panel consists of eight rows of 32 LEDs. Each light, when lit, indicates a 'hit'/'beat'. In order to program a rhythm, all you do is hold down the corresponding channel — eg bass drum,

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and press any one of the 32 buttons along the bottom of the matrix. These then turn on the relative LEDs. As soon as you start doing this, a line begins to sweep across the matrix from left to right, and as it crosses the beats that are lit, they are heard. Simple, but effective. You can construct rhythms without having to hear a note. Patterns take on a totally visual presentation. (The speed at which the line moves relates to the current tempo setting and can be varied at any time.)

From an educational point of view, this is very useful. You can experiment and create rhythms simply by turning buttons on and off. You don't need to be a genius or a drummer to use the SDS6. It's a little like dealing with a new form of musical notation that doesn't employ funny squiggles or numbers, but has an obvious visual presentation of the rhythm it displays.

Modes of Operation

This is relatively straightforward once you've got to grips with what the various buttons do and what order they require pressing. The computer assists you with this by giving directions regarding which buttons should be pressed. Little LEDs above the buttons either light up red or green, depending upon which state you have reached. For example, when you first switch it on, the programme, play, clear, store and show buttons are indicated by green lights. You can select any of these. Once a button is pressed, its light changes from green to red, the red light signifying the mode that has been pressed. As soon as it turns to red, other green LEDs illuminate, informing you what to select next.

There are four basic modes of operation:

Programme — For when you want to start programming a pattern, sequence or song. To programme a pattern you can either go straight to the matrix and begin putting in whatever rhythms you desire, or you can select a particular pattern storage number via the use of the ten-digit keypad, therefore, either updating an existing pattern or evolving a completely new one. The key pad has its own LED window which shows the pattern you are employing. This also has a dual function as it displays the tempo too.

Show — uses the matrix panel to indicate which patterns, sequences or songs are stored where. This is a very simple method of clarifying available space within the computer.

Play — runs either a pattern, sequence or song, and displays them on the matrix.

Store — records whatever instructions you tell it, eg, pattern, sequence, Song, Tempo, dynamics and length of bar. (All information remains intact when the power is switched off.)

The Art of Dumping

For those who don't already know, 'dumping' is when you transfer

programmed information from the computer to another form of storage. In the past, this has generally been done by dumping to tape, or for the more flashier instruments, to a floppy disc system. The advantage of tape is that most people have some sort of tape recorder suitable for the job. The disadvantage is that it can be a complete and utter pain in the arse because audio tape was never designed to take the sort of density of information that some of the more recent computer instruments give. In addition, the greater the stored information, the longer it takes to record it onto tape. It's a vicious circle because the more tape you use, the greater the chances of having tape dropouts. The advantages of floppy disc systems are that they are quick and fairly reliable. The disadvantage is that they can do great damage to one's wallet.

When Dave Simmons first showed me the SDS6, one of my first questions was — 'Where's its tape dump system?'

He replied: 'It doesn't have one, and neither does it come with a floppy disc.' (You know we both enjoy a good conversation.)

My initial reaction was to hurl abuse at him until he explained the Ram pack system he'd developed. When fully loaded, the sequencer would have taken about 15 minutes to dump to tape, which is ridiculous, so the Ram pack was a terrific idea. The next question you might well ask is — 'What the hell is a Ram Pack when it's at home?' And that's a good question. Basically, it is a little memory board that has, in this particular case, 8K of memory space, with its own battery backup. What you do is connect it directly to the data multipin connector on the back panel. When either pressing dump or load, information is transferred in seconds. It's highly effective, fast, reliable and relatively cheap (and I feel that it's a major contribution to road safety). Owners can buy additional packs from Simmons if they wish to collect a whole library of different rhythms. The anticipated cost of these is approximately £25 each, which is pretty fair when you consider how much information they can store.

Additional features

The length button can be used to change the point at which a pattern ends. Normally it runs the entire length of the 32 steps within the matrix, but this can be altered to incorporate storing lots of crazy time signatures. If you take the 32 steps to be equivalent to one bar of 4/4, then changing the end point to say, step 24, will give you a 3/4 bar. After doing this, you can go a step further and stretch the existing pattern to play the full 32 steps, but in 3/4 time signature, which gives you triplets. This ability can be used to create some wonderfully weird rhythms, particularly when sequenced with other normal 4/4 patterns. Whilst experimenting with this I discovered a few rhythms that nearly

put my neck out of joint. Something else worth noting is that you can move the beginning of any pattern within the matrix, so that it can be rotated around taking any particular beat to be the starting point.

There are various methods that have been incorporated to speed up programming. One that proved very useful was the 'times' function. This is used when programming a sequence. What you can do is tell it how many times you wish it to repeat a specific pattern, thus saving you the effort of having to enter a million repeats of a pattern.

The Back Panel

Apart from the aforementioned multipin data terminal, there are eight channel inputs, each with its own variable sensitivity control. All channels are the same, except for number eight which can be employed to open and close the hi hat, and channel six which is for use with the newly available cymbal module. This can be switched to trigger the whole cymbal or just the bell. There is also a gate select output that is variable between every beat up to a maximum of 16 times per beat for when syncing to other equipment. And, by special request for Electronics and Music Maker, I thought I'd give you the good news that — 'Yes, it's also got a tape sync facility' for all those naughty little studio overdubs.

The end bit

There comes a time in every review when we have to pen the final words and tie up all the pros and cons of the instrument. Life would be so much easier if you could simply type 'great' or 'it's a load of rubbish', but people always want the padding. What I do want to say is that this instrument is thoroughly conceived and designed. The SDS6 is a very daring piece of equipment, because it is highly versatile, and usable without too many headaches. It does a wonderful job of communicating rhythms via the visual display, although I still have visions of certain drummers drumming away with a pair of sticks on its front panel.

Because I was privileged to see the first completed model there were still a whole load of software operating updates soon to be added before the instrument finally makes its debut in the stores. Dave was very willing to listen to any suggestions people might have, which makes a rare change from those type of manufacturers who don't really care what the user thinks.

So, for anyone who already has an SDSV kit, or if you're interested in getting a programmable rhythm device, go and check this one out. I'm sure you'll be impressed.

Final Conclusion

Simmons strikes again!

Paul Fishman

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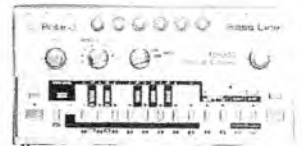
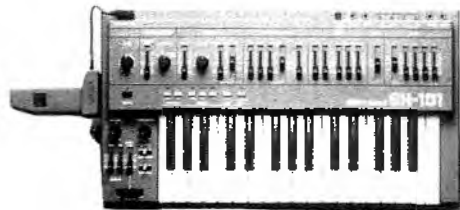


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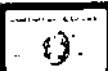
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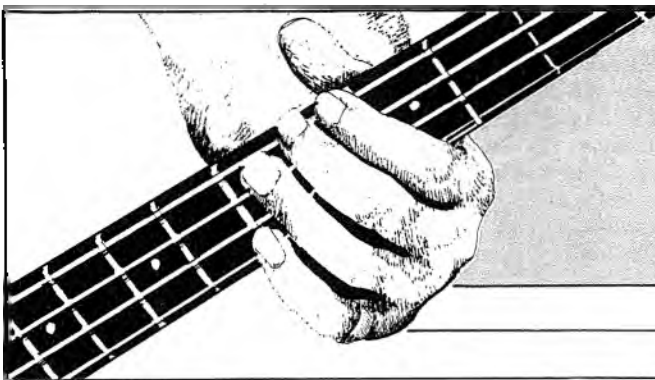
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WAL CUSTOM 2P BASS

RRP £620 (approx.)

IT'S A FUNNY LIFE REVIEWING guitars. More often than not there's some exciting new guitar which has just been launched and is a must for review. On other occasions we have to sit down and think of a guitar or company we may have overlooked for a review. The Ed told me to 'do' a bass this month, and it wasn't difficult to decide which one as I'd been trying to fit in a look at these Wal basses for almost a year. However, I could only get hold of one for a long weekend, which also coincided with a total lack of gigs or rehearsals, so I really wasn't able to give this bass the thorough going over I'd like to have done. Still, it really didn't take me very long to establish one thing — that these basses are certainly the Rolls Royces of all the British bass guitars that I've ever tried.

The guitars are made by a relatively small concern — Electric Wood — based in High Wycombe, Bucks, and the Custom 2P bass is the result of much playing and technical experience. The history of the company, although quite new, is quite long and involved — something more akin to a maker's profile than a guitar check — but the most significant points about it are that the company has tried mass production techniques but now prefers to revert to a small 'handmade' set-up with only a basic team of three people. Also, these basses have been designed gradually with more than the usual advice from professional players. The result is a very simple instrument to use but absolutely crammed with the latest technology and quality timbers, hardware and electronics.

If you're the kind of person that judges a guitar on its looks then your first impressions of this Wal would be very misleading. For a guitar selling around the £600 mark it looks very ordinary indeed. Each Wal is made from various (often exotic) timbers but on my sample the body was all Mahogany whereas usually they will have a Mahogany core but with a top and bottom facing of differing timbers like flame Maple, laminated to it. If you're a bit put off by all this natural timber bit don't despair: Electric wood don't mind spraying on an opaque colour for you. Apparently the bassist with the Undertones loved the guitars but wanted a bright pink finish (sounds good to me!). The end result was a little different to a normal Wal but the man,

If you've got the money, impress your friends



Quickcheck

(Marks out of 20)	16
Appearance and Finish	19
Tonal Quality and Variety	18
Playability	18
Value for Money	19
Construction & Design	90%
Total %	

so I'm told, loved it. A good illustration of Electric Wood's aim to please.

My sample was finished in a translucent deep red which was left 'open-grained' — a finish that certainly wouldn't be everyone's cup of tea but is certainly interesting and different. In general, the instruments are finished either with a cellulose paint with polyester laquer on top, or the bodies are oiled — to waterproof the timber and bring out the colour. Then thin coats of polyurethane varnish are added.

The shape of the guitar is very conventional, smaller and lighter than a Precision or Jazz bass, but it retains the body contours and uneven horns of these basses.

The bolt-on neck with its squarish headstock is also deceptively commonplace. It is, in fact, a six piece laminate — the two central pieces being of hornbeam, the darker Mahogany stripes are Mukulungu, while the outer two strips are Canadian Rock Maple. These timbers are chosen for their structure, not just to be different. Mukulungu, for example, is chosen as it has a very tight grain and is a hard and very stable wood. The shaping of the neck is a little different too — it has quite a 'V' profile to it. This is quite unusual if you're used to a Fender bass, but was developed to suit the type of player who rests the left thumb at the centre back of the neck.

Indian Rosewood is used for the fingerboard although Ebony is used on unfretted instruments. With 21 frets of medium gauge wire and nice dot mother of pearl markers the quality of construction was very high. The headstock, although featuring two-a-side Schaller M4S open-bodied machines, does not angle back from the fingerboard. It is instead parallel to the board in a similar style to a Fender. As with a Fender guitar a string retainer is used to clamp the strings down onto the nut; with this design it operates on the A and D strings only. The truss rod is adjustable from the body end where a small recess has been cut and fitted with a plastic cup so that an allen key can be used. In theory adjusting this rod is far simpler than with a Precision, although this method is employed on many modern basses. It is these small but important features of the Wal that make it so special. The guitar is even provided with two adjusting tools which will take care of rod and bridge adjustments plus setting up the pickup's pole pieces.

Apart from the machines that I've already mentioned, most of the hardware consists of a very well designed and tooled bridge. With four saddles, adjustable for string height and intonation individually, the principle is similar to the Fender design. But, as you would expect, there are a few slight changes which improve the bridge beyond doubt. Firstly, each chromed bronze saddle stands on a slider piece which takes the intonation adjustment screw. These chromed brass sliders are locked in place by the bridge casing made from Mazak (an aluminium alloy) with a black plasticised finish. Below

WAL CUSTOM

this is a stainless steel base plate which presumably aids sustain, and the complete assembly is held to the body with seven screws. The strings (Superwound) slot into the bridge casing meaning that string replacement is a doddle. In design and construction I can't fault this bridge. All I want to know is when they are planning to market them as individual items!

With a bass of this calibre it's obviously important that a couple of good strap buttons are included. I felt decidedly uneasy about having £600 of guitar suspended around my body but the large button on the strap holders does ensure that even the worst of straps will stay secured to the guitar..

To be honest if Wal basses were fitted with simple single coil pickups and passive circuitry I'm sure, judging by the quality shown so far, they'd still be one of the best. The fact that the pickups, circuitry and even output sockets are among the most sophisticated and effective you'll find on any basses around today, merely serve to illustrate the league in which this bass lies.

For those of you who can't handle the multitude of knobs and switches that are usually associated with this type of hi-tech active guitar don't worry, not only is this one of the most versatile basses around today it's possibly the simplest to operate. With only four knobs and not a switch in

sight, getting vastly different sounds from this is a cinch.

Laid out in a manner similar to a Les Paul the controls function as follows; the top knob nearest the strings takes care of the overall volume. It's also a pull pot. When pulled out the addition of an 'attack filter' is brought into the circuit. This serves to boost a small band of the high frequencies giving the sound a bright and percussive edge. Below this control is the balance control. It mixes the two pickup sounds and therefore eliminates the need for a selector switch or individual pickup volume controls. Below these controls are the tone knobs. These are again pull pots and both function in a similar manner. The bass pickup tone gives a low Q boost when pulled out while the treble tone control gives a higher Q boost in the same position. Obviously when the controls are set in differing positions the tones achieved by pulling out the pots will vary.

Two output sockets are provided. Firstly, a jack socket, interesting in that it is recessed into the guitar presumably to stop the jack plug from accidentally getting pulled out or worse. The jack socket also cuts off the battery when the plug is pulled out. (As a further precaution the volume control has an off position which does the same even with the guitar still plugged in.) The other output is a cannon socket specially for direct injection for

recording which has (so I'm told) a 600 Ohm balanced line output via an internal transformer which effectively does away with the need for a DI box. The accompanying blurb also states that 'both outputs are transformer isolated making the bass safe from dangers caused by external electrical faults'. Well now you know!

The pickups (of course) are not quite what they seem either. Each unit is nicely housed in a black plastic cover and surrounded and has eight coils — two for each string. This means that each string from each pickup can be electrically treated and balanced separately.

I don't feel that I've really done this complicated circuitry justice in these few paragraphs, but frankly I don't want to get lost in science. What is important, however, is the sound produced, and more particularly the ease of which variations can be achieved. What must be stressed is the quality of the components used: The pots for example cost individually more than all the components needed for a cheap passive circuit and they are exclusive to these Wal basses. The actual knobs are beautifully made from black anodised aluminium and have very clear and uncluttered calibration.

The whole circuit is powered by a single 9 volt battery hidden behind the control back plate. Its expected duration is between 1000 and 800 hours — I

THE BURMAN GX3 ALL VALVE

BURMAN...Renowned for their hand built professional valve amplifiers that are used world-wide by many famous musicians, have now developed a new concept in amplification by producing their highly acclaimed Three Gain Pre Amp Stage and Equalisation as a separate unit...The GX3 (patents pending).

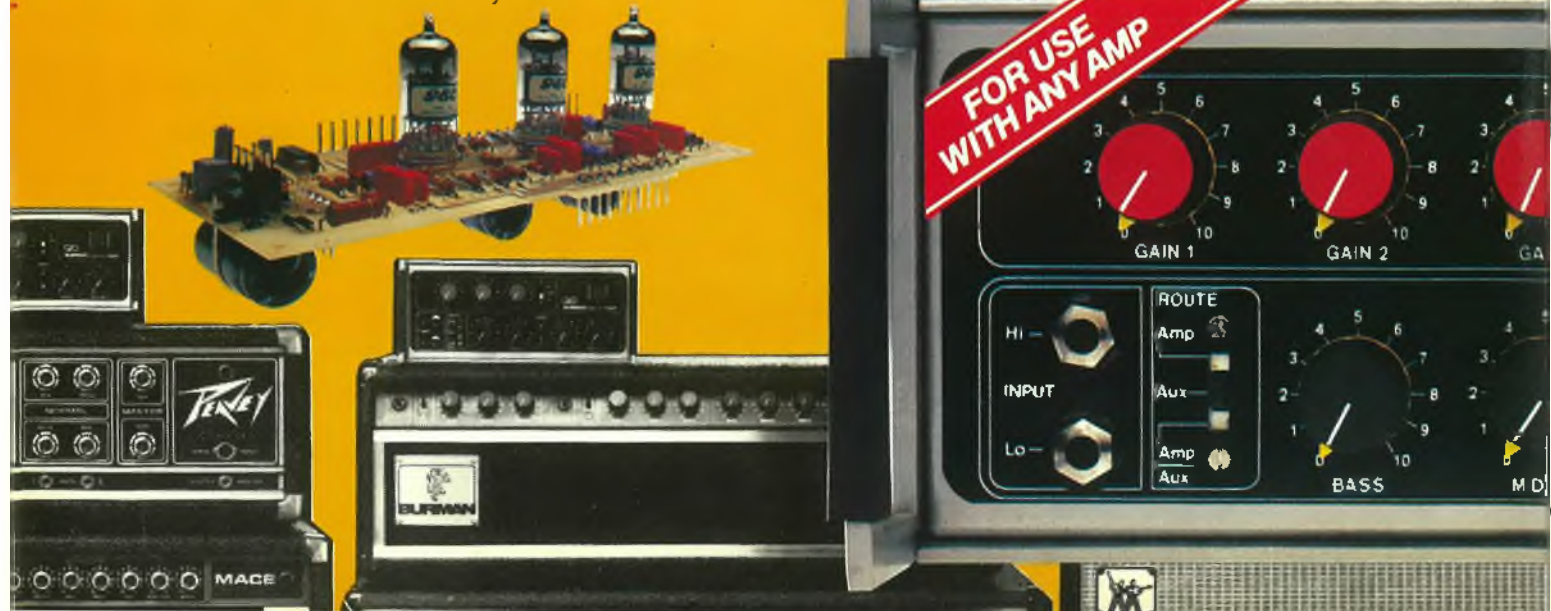
The GX3 can be plugged direct into any existing amplifier, mixing deck, tape deck, power amp, etc...from a 5 watt practise amp to the most demanding professional rig.

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couldn't put that to the test but surely there can be no moaning about the cost of replacement batteries here!

The basic aim of the circuitry in this bass was to provide a good basic guitar sound before any modification is needed either from an amp or mixing desk. I tried this guitar through my Sessionette (at low volume) and even with the same settings as I use for my six-string guitar I was able to get a deep and full bass sound quickly by simply adjusting the controls on the guitar. With a more suitable Polytone and Pearl bass combo the guitar performed really well. The Polytone belonged to a Jazz bassist friend who immediately got a beautiful full and deep sound. As a Fender Jazz man for many years it was love at first sight. In fact Nick, as he's known, went on playing the Wal throughout his Sunday sessions and his Fender Jazz stayed neglected in its tatty case. Nick didn't feel the Wal was quite as 'fast' as his Fender as the neck is very different in shape both in width and depth, but as a confirmed Jazz player and non-technical musician I was really surprised how quickly he found exactly the sound he wanted without any promoting from myself.

Preferring the slightly meatier feel of a Precision neck the Wal definitely improved my playing — it is such an easy instrument to get on with. Not only does the guitar feel really good — it really sticks to you — the tone

controls provide a vast range of sounds too. They work in a similar way to a parametric Eq in that you can select a frequency area then pull out the pot and it will boost exactly that frequency. With both pickups on evenly the range of sounds can be extreme. From a ridiculously tiny treble sound (with the help of the attack filter) to a gorgeous fat bass thud with the tones providing full bass boost.

There are many small features about this guitar's sound and functions which for me at least justify the high price tag. The pan pot is such a good idea — not really new — but certainly rather rare on production guitars, and that attack filter really is an advantage. You can quite easily achieve a sound similar to that of plucking the strings with a sixpence, except that you can do it with just your fingers. Neat? ... Without a doubt!

The action on the guitar was also fine — it wasn't set up for me — it was literally taken off the wall of the shop and put directly in a case. The biggest problem with this guitar was that I couldn't put it down to write the review hence when I actually blew the dust off my typewriter I had to decipher hastily scribbled notes. Not, I can assure you, the easiest or most logical way of writing a guitar check.

On a technical level there certainly isn't a lot wrong with this guitar. It certainly provides any bassist with a wide scope of sound. Whether or not

everyone wants such a versatile beast as this remains to be seen. On a visual level I certainly wouldn't call it a beautiful guitar. Overall the proportions are all a little too squarish but really I wonder how many musicians would hold that against it once they've actually played the guitar. £600 is a lot of money for most of us too, and ultimately one has to consider the need for such versatility. No one, for example, would buy a Porsche if they just wanted a car to nip to the shops in would they? On the other hand, if you've got the money why not impress your friends?

Oh, before I forget, the price shown at the top of this review does include a very tasty fibre glass fitted case alone worth about £65, so that softens the blow a little.

Definitely a professional's guitar, but you don't need to be a pro to play it and appreciate it. Electric Wood are presently producing on average three of these instruments a week and they are available from Guitar Grapevine in Denmark Place, London (among other small outlets) or direct from Electric Wood, Sandown Works, Chairborough Road, High Wycombe, Bucks HP12 3HH. Tel: (0494) 442925.

Thanks to Stu and Steve at Guitar Grapevine for the loan of this guitar and Pete 'the fish' from Electric Wood for taking the time to explain how it's made and works.

Dave Burrluck

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KEYBOARD CHECK

KORG SYMPHONIC PIANO 80-S

RRP: \$799

THIS ELECTRONIC PIANO FROM Korg marks their entry into the more domestic orientated part of the musical instrument market. With the exception of the LP-10, an instrument upon which it is best not to comment, none of Korg's other keyboards have been equipped with any form of monitor speakers, nor have they been styled to look acceptable in the home; so here we have a clear case of Korg trying to widen their product base. This is an intelligent move, especially with the relentless march forward of companies such as Casio with their low cost single manual ensemble instruments. The Symphonic Piano, however, as is reflected in the price, is a lot more than a low cost ensemble product; this is an instrument of professional quality tailored for use in the home, though of course it can be used in a studio or stage environment quite happily. Incidentally, Korg now produce the EPS-1 electronic piano, which exhibits many of the 80-S's features, but doesn't have the monitor amplifiers and speakers.

The casework of the 80-S almost had me fooled into thinking it was wood (it's been a long time since I've seen a tree!) but, on closer examination, it was found that just the chunky end cheeks originated from the ground (at least I think so), and that the main body of the instrument is moulded and merely camouflaged to look like wood. The actual styling of the instrument isn't going to set the world on fire, there's nothing revolutionary about the 80-S in terms of appearance at least; it is essentially long and thick, a necessity in order to accommodate the nice big keyboard. I'm glad to find that Korg still build their instruments with those cable hooks on the rear panel for fixing the mains lead when in transit — a nice touch, showing that the company isn't skimping with their products. Another thing I like about Korg's instruments is the way in which they always identify along the top edge of the front control panel where each of the rear panel sockets is and what it does. Consequently one can easily plug up the instrument from the front without having to perform various damaging contortions.

Aw mum...

Most parents want their children to learn a musical instrument — and, it's usually either the guitar or the piano.

Acoustic pianos are a problem, of that you can be sure; they are, first and foremost expensive, they are bulky, difficult to move around, and they need constant attention, ie tuning etc. Most homes are too small to accept an acoustic piano, but an electronic piano is a different matter — these instruments are small, can be easily stored away when not in use, and they can be played using headphones so as not to create a noise problem. The only trouble with electronic pianos is that they aren't the real thing! Well, the 80-S may not quite match up to its acoustic forefather in tone, but as electronic pianos go it is certainly one of the best available.

The electronic piano has somehow evolved out of the electronic organ rather than followed its own natural course through the various electro-mechanical stages, consequently it has rightly been criticised for failing to match the expressive qualities that the acoustic instrument exhibits. An instrument doesn't deserve to bear the 'piano' tag merely because it produces a sound, when a note is played, that dies away at a certain rate rather than sustaining for as long as that key is held, as does an organ. An electronic (or electric) piano should offer the player some degree of expressive control through the keyboard, rather than have keys that are no more than on/off switches. It is as a result of the non-expressive nature of many cheaper electronic pianos, that the product as a whole has received none too good a press. The Korg 80-S is really part of a new generation of electronic pianos that really offer the musician a valid alternative to the acoustic instrument.

The most important aspect of an electronic piano isn't necessarily the final sound. I believe that the keyboard itself is every bit as important; and in that department the Symphonic Piano 80-S scores very highly indeed. For a start here we have a 76 note E to G keyboard (that's over six octaves span). What other electronic piano can boast such a span? — perhaps you can tell me, because I don't know of one. This keyboard is velocity sensing — the harder you hit the key, the louder that note will sound; this isn't entirely due to the amplitude being increased proportionally, there is also an element of timbral modification which also tends to make the note seem more vociferous. The actual action of this keyboard is

just about right, it isn't too heavy, but there is sufficient resistance to take full advantage of the velocity sensing facility. The action is, in no way, the same as that of an acoustic piano, and anyone who learnt on this piano might have a little bit of difficulty to start with



An alternative to the 'upright in the corner'

if they later switch to an acoustic piano. Nevertheless, it does have one of the best keyboards that I've come across on an electronic keyboard.

Production centres

The 80-S has two main voice production centres — the Pianos and the Strings (hence 'symphonic'). This is a voice assignable instrument too, that is to say there are eight separate voices which are allocated to those notes currently played — if you play a ninth note the instrument's central controller (the circuitry that does all the work) robs the voice from the first note played

and gives it to the new one, so the situation whereby you play a key and nothing happens never occurs. Each of the 80-S's eight voices produce both the string and the piano voicings, but they are derived from the same basic frequency generator so it isn't possible to detune one section to beat against the other for those rich free phase sounds — a shame. It is also rather a pity that Korg didn't build in any provision for splitting the keyboard; with over six octaves to play with it would

spritely air to them. There are six of them altogether, selected by means of push button latch switches — rather unusual — with small LED indicators. Before looking more closely at each voicing, I should point out one flaw in the 80-S design (one which has been put right in the more recent EPS-1): It is a messy business trying to cancel the Piano voices if you just want to play the Strings. To do so, you have to press two of the buttons simultaneously, but lightly, in order to release the latch. You may not want to actually cancel the Pianos that often, but even so it is a design fault.

Piano I, as an electronic piano voicing, goes a fair way to capturing the feel of the acoustic piano; no mean feat, as the actual waveform produced by a single piano note is phenomenally

accent on the attack phase of the note that makes this a distinctive voicing. The Vibraphone simulation (if it is intended to be a simulation) is not that brilliant, although in the middle octaves it manages to convey the right sort of qualities. However, like the Electric Piano, the balancing for this preset does leave a bit to be desired — the level rolling off quite dramatically up in the higher octaves. Clavichord and Harpsichord, the final two presets, both enjoy a good overall balance, and a clarity and presence that make them very useful voices. They are, being very bright in timbre, useful to use as a contrast to the lush strings, so with both sections layered on top of one another, these Pianos act as the percussive phase of the composite sound.

To give added depth and presence to the Piano, a Chorus circuit is included, not only does this fill out the sound, but also it sets up a stereo picture for these voicings which adds a further dimension to the performance of the 80-S. Not content at stopping there, Korg have also incorporated a stereo vibrato network for the pianos, which can be used in attempts to recreate the image of a Fender Rhodes.

The String section is relatively simple — it is a monaural section, and doesn't employ the services of the Chorus, Vibrato, or the keyboard velocity sensing circuitry. It does, however, serve as a nice backdrop to the instrument's Piano voices, and the Strings can be used effectively in their own right — though they do sound best in ensemble playing not as solo voices. 'Strings I' has a fairly mellow character to its sound, but I prefer Strings II which is a much fuller frequency sound. Unlike the Pianos, you can mix these two together. Unfortunately the 80-S doesn't have fully variable envelope controls, but just preset buttons to give either Long or Short Attack times, and either fast or slow release times.

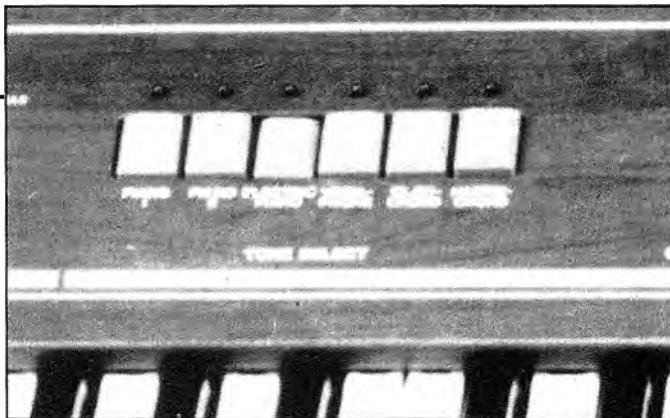
On the rear of the unit are the jack outputs — Left/mix and Right, Headphone, and a Damper pedal jack for the Pianos. One thing I'm not too keen on is the fact that you can't switch off the monitor speakers unless you insert a plug in the headphone socket. So if you are using the audio line outputs the speakers are still bellowing forth.

Anyway, that's about it for the 80-S, all I need to do now is sum up. Essentially this is a superb instrument, though it does have one or two little faults, ones which I've drawn attention to, and maybe overemphasised. There are a lot of good things to be said for this instrument, which more than compensate for these 'weaknesses'. This isn't a cheap keyboard, but for the home, as an alternative to the 'upright in the corner', the Korg Symphonic 80-S makes a lot of sense.

Quickcheck

(Marks out of 20)

Performance	17
Tonal Quality	18
Tonal Variation	16
Construction	18
Value for Money	16
Total %	85%



Keyboard offers six pre-set voices

have made sense to have been able to assign, say, the Strings to one half and the Pianos to the other. Never mind, you can't have everything.

The Piano voices themselves are extremely good — they might not give quite the sound of a Bechstein, in fact they might not even give a good imitation of a Zender, but they are good workable timbres that do have quite a

complex. The preset is rich and warm with a full harmonic structure. Piano II is somewhat less effective as the increased brightness of the timbre tends to reveal the fact that this is obviously an electronic instrument. The Electric Piano preset was most likeable, although I would have said it sounded more electronic again than electric, but Korg have given this preset a nice little

Jack Barren

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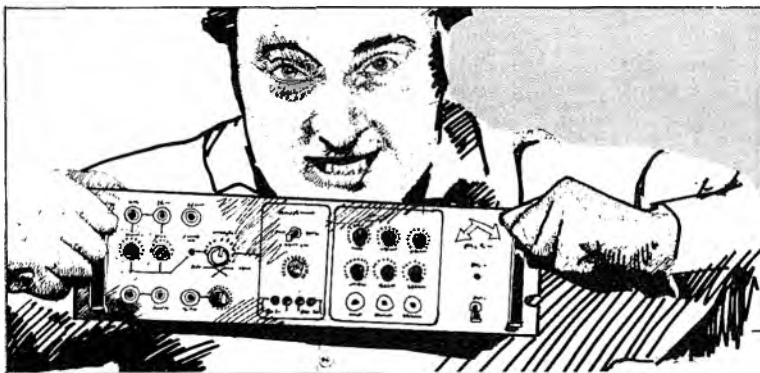
Larry Tolfrey
Joe Jackson Band

Ted McKenna
Michael Schenker

SABIAN



CANADA



SOUND CHECK

Fender Champ II and Deluxe Reverb II

RRP: £114.31 and £347.71

I MUST STATE BEFORE I GO any further that I am about to review two Fender products in this issue and that I am a confirmed Fender faviourer. I am, therefore, sort of declaring an interest — a bit like the politicians do — and if you start reading the following reviews just remember that you are reading honest and unbiased observations — but that they are being made by someone who has always loved all the products that bear the famous logo.

New Fender amplifier designs are probably not as common as underwater channel swimmers and most of the old favourites have remained pretty well the same for a good long while. Good old Leo really cracked it all those years ago and the longevity of his designs bear witness to his genius. We now have a new range of amps which are not merely re-vamped old stalwarts with new fascias and speaker material. These are very modern in their functions and facilities but retain all that is best and familiar in Fender amps.

The Champ II looks exactly the same as Fender amps always have done — with the exception of the newer style black fascia panel — and not a lot different from the previous Champ. The Champ II is a bit bigger than the old model. The proportions are slightly different in that the II is wider than the I and gives more of an impression of a scaled down twin, rather than the rather unique shape of the old Champ. The Champ II still has a single 10" speaker but it is now mounted slightly to one side off centre. The main differences are that the II has a master volume control, a pull-out midrange control and two 6V6 output valves giving a greatly increased 18 watts output. On the back we have a DI output and that's about it as far as the new bits go, as if that wasn't enough!

Everyone knows about the great Champ sound and more than one super hero has used the Champ for studio work. This new model has the added advantage of master volume, with the obvious benefit of a good dirty sound at low volume, and more power if you need it.

Right, well that's the theory of it all so let's have a go and see what it does. I'll stick it on a sensible volume level and have a go at the clean sounds first. For a start off I do like the pull out mid switch on the treble control. This is an unusual one really — if you have the



Quickcheck	
(Marks out of 20)	
Tonal quality	19
Tonal range	17
Construction	20
Performance	19
Value for Money	17
Total %	92%

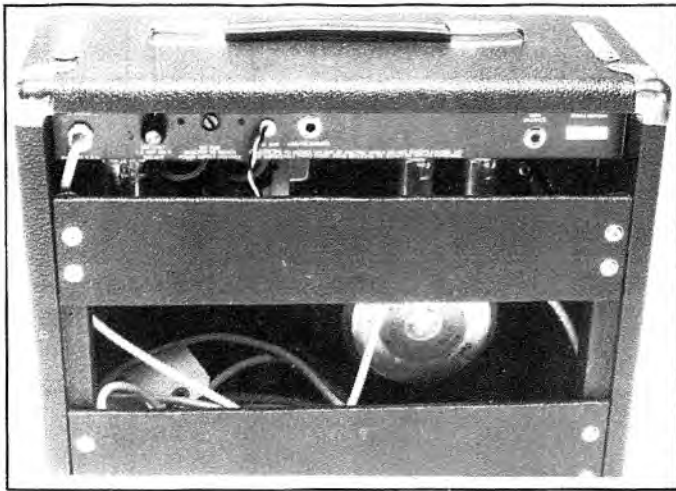
treble control turned down, then the mid switch doesn't have any effect, but wind on a bit of top and pull out the mid switch and a beautiful thick middly tone bursts out. The bass and treble controls lose none of their Fender characteristics and the midrange boost only serves to enhance the tone, whilst keeping it definitely Fender. It is my personal opinion that there is only one usable sound to be had from a Fender amp and that is the one that you get with all the tone controls turned up flat out. This seems the same to me whatever amp in the range you choose, with more or less volume available according to the model, but oh what a sound that is!

I suppose that last remark is a bit sweeping because different multiples of different sized speakers are used throughout the range and these will obviously affect the sound character, but I still maintain that the flat out tone is the one. There is, of course, a full range of control to enable you to find your sound.

Next function to try is the master volume. Nice — very nice. This amp

New Champ has added advantage of Master Volume

distorts more than, say, a twin reverb with the channel volume flat out, especially so with the mid switch out. A nice thick, fat distortion this. You seem to have a very full range of clean and dirty sounds on the Champ II. This brings me on to the final feature — the increase in volume. Christ is it loud! The paperwork says 18 watts but it sounds about double that in sound output terms. The speaker seems to handle it all quite effortlessly and the power combined with the distortion makes this little feller a real screamer. It seems incredible to say, but I reckon that you could quite easily do a gig with the II. There is plenty of volume available to give you a clean sound at a very suitable level as well. Overall then, the sound and power could be said to be very tasty. It's loud, it's versatile, it's everything that a Fender should be. If



More advantages with the DI output

amps go on developing like this it's difficult to envisage where it's all going to end up. In ten years time we'll be having implants or something!

The DI output means that you can have the sound and overdrive facilities as loud as you want by driving another amp with the Champ, or going out through the PA, using the Champ as a monitor. In the studio you shouldn't get any problems because the Champ is lovely and quiet. You come to expect that of Fender amps and you'll not be disappointed. Fender amps are nearly all valve affairs — and this one is no exception — and exceptionally quiet. I have come across many a solid state job that would have benefitted from being as quiet as a Fender valve amp, and again all the amps in the range exhibit the same degree of noise, ie practically none! I think that it is going to be a bit of a thankless task to try and find something to criticise in the construction department, but I'll have to have a look all the same.

Opened up, the Champ looks about as good on the inside as it does on the outside — but then so did the old model (and all the rest) and Fender have been doing it long enough to have everything just so. What do you say — construction is faultless? The Champ is made to the same standards and uses the same components as the 135watt twin reverb. The chassis is made from heavy gauge steel, plated and thick enough to withstand just about anything. I have said in other reviews that it is always difficult to find something to say about equipment that is a household name (to we musicians anyway). Suffice to say that this amp looks like all the other Fenders, is finished in the same material with the same fittings and with the same speaker material, and if you don't know what they are, where have you been for the past 30 years?

I will sum up by saying that the new Fender Champ II is a great little amp that thinks it is a big amp — and I think it's right.

As an afterthought, the new range of Fenders come with a plastic flash affixed to the speaker grille announcing that the product is new etc. This is a sort of wide polythene strip and is fixed

diagonally across the front. I don't suppose Fender realise it but if you want a really disgusting distortion sound — leave it on. The thing buzzes and rattles like the clappers and sounds a very close approximation to the horrendous distortion some people used to achieve by glueing strips of paper and drawing pins to their speaker cones. Fender patented super distortion labels no less!

SOUND CHECK

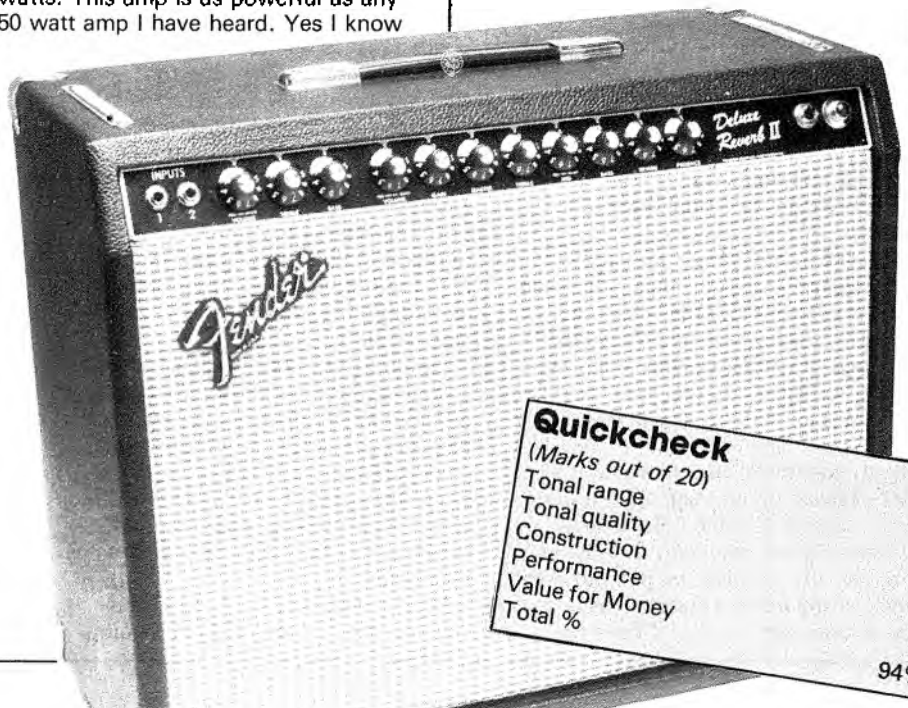
Fender Deluxe Reverb II

FAR BE IT FOR ME TO ACCUSE anybody at CBS of telling porkie pies, but there is no way that the Deluxe Reverb II can have a power output of 20 watts. This amp is as powerful as any 50 watt amp I have heard. Yes I know

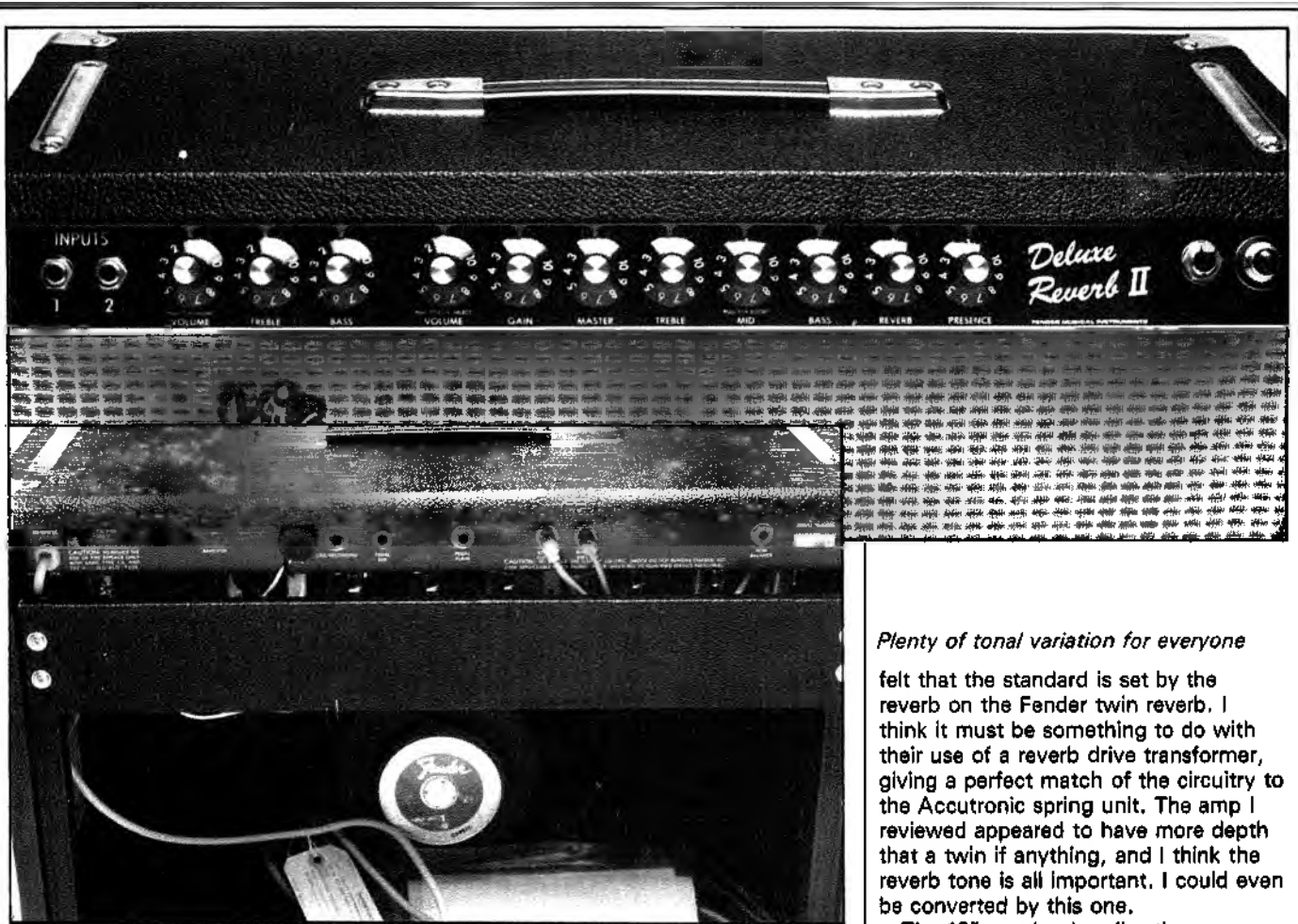
that it only uses two 6V6 output valves and a single 12" speaker, but the sound output from this entirely new amp is phenomenal. The tonal range makes me out to be a complete liar (something my associates have long since suspected anyway) since I have already gone into print as saying that there is only one sound to be had from a Fender amp — albeit a great sound. That is no longer my opinion as there must be at least 745,391 sound variations lurking about waiting to be called in this one! I could not believe my ears when I began checking this amp out, and a few others on hand were pretty mystified as well. One noisy bugger and valued customer of mine (creep creep) who shall remain nameless (sorry Chris, no namechecks) was convinced that he was hearing a pretty pokey 50 watter, and I won't harp on it but so will you be when you hear one.

The Deluxe reverb is one of the line-up of new Fender amps with features designed for the 80s. Always to the fore in amps that the professionals use, even they have found it necessary to bring out a new range of multi-purpose/multi-feature amps. Everything about the Deluxe is safely, reassuringly, Fender, but the variation of sounds and the versatility of functions is staggering. I am stating elsewhere in this issue that the cosmetics and hardware on Fender amps need no comment from me and I will not enlarge upon that with respect to this one. All Fenders look good. All Fenders look the same. All Fenders have the same knobs, corners, handles etc. All Fenders have the same speaker grillecloth and covering material. This amp is a Fender. Got it?

The Deluxe Reverb has a single 12" speaker, a stated power output of 20 watts, two channels with remote channel jumping facilities, various volume and tone boosts, a DI output and reverb. The first channel has a volume, treble and bass controls with a pull out switch on the volume for 'bright' and is essentially a clean



Quickcheck	
(Marks out of 20)	
Tonal range	19
Tonal quality	20
Construction	20
Performance	20
Value for Money	15
Total %	94%



channel. The second channel has three volume controls, treble, mid and bass controls. There is a pull out switch on the first volume control for changing the input between the two channels and a second pull out for boost on the mid control. There is a presence control and lastly, reverb.

Basically the first channel behaves in a pretty conventional manner and gives you a tone very much in keeping with the Fender sound, ie bright, ringy and clean. The first channel can now be dismissed as 'the clean channel'. The second channel is the 'bogeyman' channel. The three volume controls are combined in any configuration that you choose to give a virtually limitless variation of clean to distorted sound. The first volume drives the second and the third is a master volume to set the overall output of whatever filthy mess or crystal clear sound you have chosen, and you can get a really filthy sound if you want one. Pulling out the first volume control changes the input over to the second channel, and pushing it in selects the clean one. This function can also be switched remotely by means of a footswitch plugged into the socket provided on the back. (Footswitch not provided as standard). The pull out boost switch on the mid control boosts the midrange to the same kind of degree as on the new Champ I have reviewed, and fattens up the sound very nicely indeed thank you!

The tonal variations available on this amp are certainly enhanced by careful use of the three volume controls on the second channel, and you will find that

you can get some beautiful warm sustaining sounds and some biting screaming wailing ones. I have used one of the new range of Fender (as opposed to the old faithful Twin Reverbs, Quads and Deluxes etc) before now and thought it to be very versatile and comprehensive, but I have not had one to review before. The amp I am referring to is the Fender 30 and I considered that at the time to be pretty revolutionary for Fender, but I think that this baby adds new dimensions even to that one.

I see that the new range of amps have dispensed with the standby switches and now just carry mains on/off switches on the front. I think that this is a much better arrangement, and anyone who has fiddled about on the back for the standby switch on a Fender will probably agree. I don't think that I have ever found the right one yet. I always turn off the mains switch first, then on again, and then the standby and end up turning them both off. Fender amps are so quiet that I don't think that you need a standby switch, just unplug your instrument, or they only take a short while to come on from scratch anyway. I think that the idea of the musician switching to standby for a break and then rushing back to switch on for immediate blast off is a bit outmoded anyway. Everyone has time for an amp to warm up even in this day and age.

The reverb on this amp is about as good as you will get. Everyone knows my dislike of spring reverb but I would say that as far as it goes I have always

Plenty of tonal variation for everyone

felt that the standard is set by the reverb on the Fender twin reverb. I think it must be something to do with their use of a reverb drive transformer, giving a perfect match of the circuitry to the Accutronic spring unit. The amp I reviewed appeared to have more depth than a twin if anything, and I think the reverb tone is all important. I could even be converted by this one.

The 12" speaker handles the range and power without any problems and the all-Plywood cabinet doesn't rattle or anything. All the remarks made about the standard of construction in the Champ II review hold good for the Deluxe. You can't fault Fender on that. You have a DI socket on the back for all the benefits of recording etc, and the models we get over here all have voltage selector switches.

All in all then I must sum up by saying that the new Deluxe reverb II from Fender is an incredible sounding amp with an unbelievable output. I know that technically the output cannot be a lot more than the stated 20 watts (RMS) but you hear one and see what you think. It is a very expensive amp, and at £347.71 for a 20 watt amp I think that it is bordering on the downright stingy to make the reverb/channel changing footswitch an optional extra. After all, who is going to fly about all over the place pushing and pulling knobs to change the sound for solos? You apparently, unless you shell out for the pedal.

The value for money thing is a tricky one on this one because although it's a hell of a lot of money for a 20 watt amp the Deluxe behaves more like a 50 watt amp. Price has never put off the dedicated Fender man and nobody ever regretted paying more for the best, so I suppose that if you like the features offered then you will just have to get a few more gigs won't you? Personally, I don't think that it's very good value for money — but worth it, if you can figure out the fine difference.

Alan Kensley



WE MADE 20 WATTS
SOUND LIKE A MILLION.

Introducing the Princeton Reverb II. Descended from the all-time great studio amp, but with more power and lots of extra features. Like mid boost, presence control, switchable lead sound, 12" speaker, lock-joint pine cabinet, and more.

We rate it at 20 watts, but we think it sounds more like 50.

The legend returns to bring you clear-as-a-bell chords plus creamy lead sound with fat harmonic distortion and all the sustain you'll ever need. Before you buy an amp that doesn't live up to your expectations hear what the world's most experienced builder of amps has been up to lately. Check out the Super Champ, Champ II and Princeton II — the mini marvels — we think you'll approve.



Fender

THE SOUND THAT CREATES LEGENDS

Distributor in U.K. and Benelux Countries: CBS *Fender* Fender House, Centenary Estate, Jeffreys Road, Enfield, Middx



MIKE CHECK

SHURE SM10A

RRP: £110 (approx)

THE SM10A IS A PROFESSIONAL quality head worn boom microphone intended for use as a vocal mike by keyboards musicians, drummers, dancers, and anyone else who does not want to be inhibited by a fixed microphone on a stand. It is used for example by Herbie Hancock with his vocoder, by the current keyboards player with The Who, by Mulligan, keyboard player in Fashion, and was used by Kate Bush for her 1981 UK tour. It is remarkably lightweight and comfortable to wear, yet would appear to be quite sturdy in construction and remains firmly in position once fitted and properly adjusted. Visually it is rather like a communications headset with talkback mike, except that there are no earphones and the whole thing is considerably less bulky and less obtrusive. At almost £110 it does not come cheap, but nor does anything else that is purpose built to do a specific job and that does it properly.

Construction & Presentation

The SM10A comes in two basic parts; the headband assembly and the microphone boom with its associated universal mounting barrel, and it all comes complete with a foam windscreen, an adaptor plate to enable the microphone boom assembly to be attached to certain types of headset, and a belt clip for the XLR/3 type connector, in a durable and serviceable, well padded, hard plastic carry case.

The headband is a fully adjustable, single band assembly having a spring steel inner core inside a soft and pliable plastic outer sleeve. To this is attached a pair of moulded thermoplastic head grips with sorbo rubber linings and mounted on stopped axial pivots, thereby allowing a considerable range of adjustment to fit practically any cranial shape or size. One of these pivoted head grips has a threaded boss moulded into each arm and these serve as a mounting base for a double spring clip arrangement which accommodates the universal mounting barrel of the microphone boom assembly. The arrangement permits the headband to be worn either way round so that the microphone boom mounting clip can be on the left or right hand side of the head by simply unscrewing the clip from one mounting boss and re-mounting it on the other. It is altogether a very simple, totally serviceable and effective design which has been very well executed using

sensible and high quality materials. All the plastic components are in non reflective matt black and the few metal parts that are exposed (the extension adjusters of the headband and the barrel clip, for example) are in a satin chrome or nickle plate.

The microphone boom assembly is of minute proportions yet is extremely sturdy and strong — again, due to good design and the use of sensible materials. The microphone head is a tiny dynamic capsule mounted in a moulded thermoplastic housing with a stainless steel wire mesh grille. This is mounted at the end of a cranked stainless steel tube boom which is only 3mm in diameter, and which has the microphone cable fed through its centre. The boom in turn is carried in a very clever ball pivot device which is accommodated inside a barrel housing. At the top of the barrel housing is a knurled thumbscrew clamp which requires only slight finger tightness to hold the boom arm securely in the desired position. The whole assembly is mounted onto the headband simply by inserting this barrel housing firmly into the mounting clip attached to one of the moulded head grips. The obvious design feature of this arrangement is that the two parts are disassembled for stowage thereby permitting the whole assembly to be stored flat inside the stowage case provided, thereby almost eliminating any possibility of damage to what would otherwise be an awkward and delicate item. Again, the moulded thermoplastic parts are in matt black and the boom arm is of dulled stainless steel — presumably to minimise reflection.

The method adopted for anchoring and terminating the cable is also eminently sensible and practical, with two secure anchorage points to eliminate any strain on the capsule terminations. The first of these is in the form of a moulded cap at the point of exit from the boom arm tube, and the second in a firm final anchorage in the barrel housing. A length of about 1.5 metres of very fine and nicely flexible twin screened cable is permanently attached and is terminated in a special Switchcraft XLR/3 male connector which is machined to accommodate a spring steel belt clip.

Two further accessories are included with the kit. A foam windscreen is provided to minimise popping and this fits over the microphone head which it completely encloses. The other is a special mounting plate to enable the boom mounting clip which is normally fitted to the headband assembly to be fitted instead to one earphone housing of certain types of stereo headphone sets, thereby enabling the microphone to be used in a communications situation. I assume that these 'certain types' of headphones must be of American origin, as none of the AKG or Beyer headphone range are fitted with the necessary anchorage point to accommodate this mounting plate, and I personally cannot recall having ever seen such a headset on this side of the Atlantic.

Performance

Before we get stuck into this part of the review, it is necessary to say a few words about the way in which this

Some dummy shows off the SM10A



particular microphone was tested and to understand something of the operating principle of a noise cancelling microphone.

In essence, it relies entirely on a severe proximity effect rise for its low frequency performance. For this to be so, it follows that the microphone is only suitable for use in the very near field to the sound source, which in turn means that there are likely to be severe reflections off the source present in the vicinity of the diaphragm. The noise cancelling microphone therefore is designed to compensate for these conditions of use. So instead of the proximity effect rise producing an increased level of low frequency output, the microphone is designed to be insensitive over the lower frequency bands, so that when used close up, the resulting rise in output level restores the balance to produce a normal low frequency response. This means that when used under free field conditions, this type of microphone has a very poor low frequency performance. But being insensitive over this part of the frequency and, this also means that it is insensitive to unwanted noise — i.e. general stage noise from backline amplification, drum kit, etc. as these sounds are in the far field in relation to the voice that is intended to be picked up. So a properly designed microphone of this type can be very effective in providing a good ratio between wanted and unwanted sounds — hence the term 'noise cancelling'. In addition to this, the microphone is also

designed to make use of reflected sounds off the source, and without these, the sound quality is often rather lifeless.

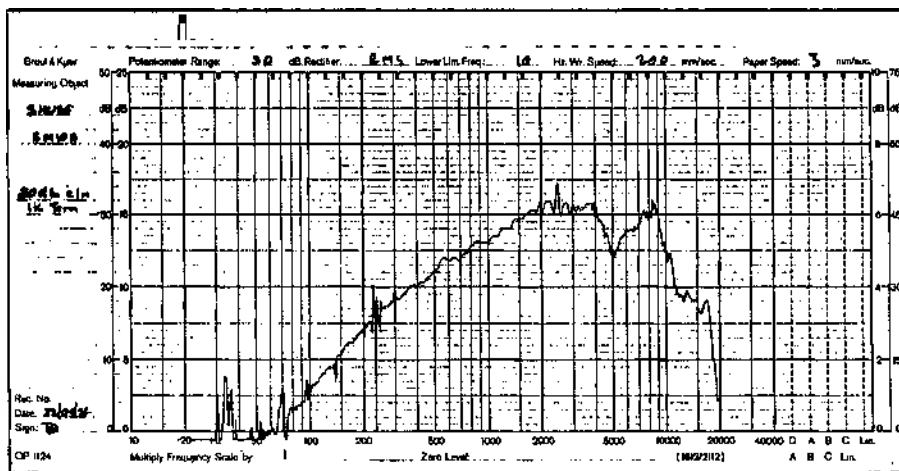
In order to verify the theory, we first dismantled the microphone boom from its mountings and tested it under free field conditions. We then had the problem of how to measure the near field performance, as a loudspeaker as a sound source in no way resembles the human face or mouth and would not provide a representative result. In the end, we resorted to using a scientific sound source which is specifically designed to replicate the directional, reflective and cavitation characteristics of the human mouth, known as an 'artificial mouth' or 'artificial voice'. This is the Bruel & Kjaer 4219 and is shown in Fig. 1. The headband was clipped over this device with the microphone boom positioned close to one side of the orifice as recommended by Shure in their user instructions for the SM10A. However, as the maximum sound pressure level capability of the 4219 is only 115dB, and as there is no way we can rotate the microphone capsule in front of the orifice, we had to resort to free field measurements for the high SPL/distortion test and for the polar response plots. So what was the outcome of all this science and theory?

To start with, the free field frequency response curve shown in Fig. 2 clearly shows the severe roll-off over the mid and low frequency band below 1kHz (Yes, I know that the slope actually

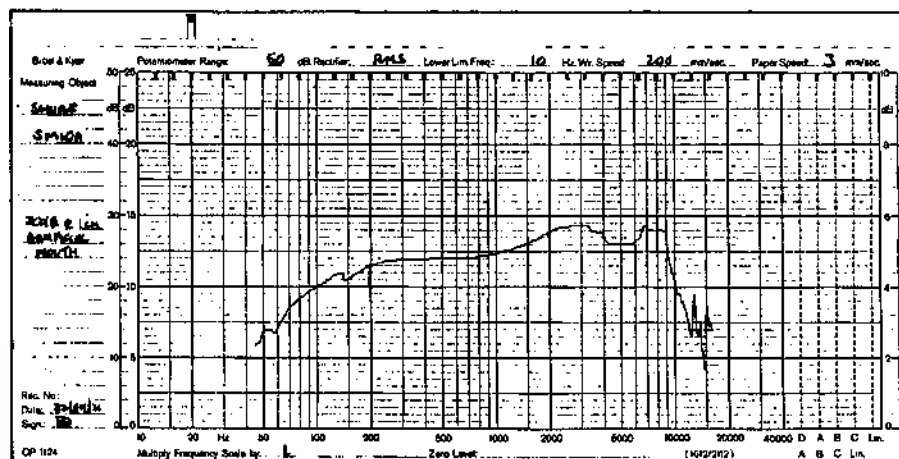
continues up to 2kHz, but the last octave is due to the presence lift characteristic of the microphone, not to the response roll-off). Also there is considerable irregularity in response evident on this curve. Fig. 3 shows the same plot, but with the SM10A mounted on the artificial mouth, and it can be seen that the mid and low frequency response has come up nicely to produce a useful response of 90Hz to 10kHz according to our measurements, and that most of the irregularities have disappeared to produce a smooth and uniform curve with a presence lift characteristic at around 1kHz to 4kHz. This is the curve that should be taken as representative of the SM10A's performance, but it should be appreciated that because of the way in which this microphone works, its actual response will vary considerably according to its actual position in relation to the mouth — hence the discrepancy between our figures and those given by the manufacturer.

Moving on down the performance data section of Table 1 we come to sensitivity and — as is so often the case with American products — we find that the maker's figure is given in different units to those recommended in the IEC standards. However, — 47dB in the units used by Shure works out to an open circuit sensitivity of 0.45mV/Pa in IEC units and this agrees well with our measured figure of 0.42mV/Pa. This is only about one third of the sensitivity level of, say, the Shure SM58 or Unidyne II and is almost certainly due to the very small diaphragm/voice coil diameter of this tiny capsule. The input sensitivity control on most mixers will, however, have sufficient gain in hand to compensate for this, and provided that the input stage is not over noisy, there should be no problem. Based on our measured sensitivity figure of 0.42mV/Pa, the theoretical output level at a sound pressure level of 128dB should be 21mV, whereas the measured level is only 14mV, so there is some evidence of non-linearity. Again, this is likely to be due to the size of the diaphragm, but given the fact that this microphone can only be used very close to the sound source, there can be no possible argument to suggest that subjecting such a small capsule to sound pressure levels of this magnitude is unreasonable, as it will certainly be subjected to such levels in practice. We recorded a total harmonic distortion of 2%, also at 128dB, which is about twice the normal level of a conventional microphone, and yet again, is likely to be due to the diaphragm size. Even so, it is not an unreasonable level and should not materially effect the sound quality.

The next matter of concern is the impedance information provided by the manufacturer, for although Shure do in this instance give a recommended actual load impedance, we must disagree with the information given. It will be clear from our results table that when loaded with its own rated impedance, the sensitivity — which is already on the low



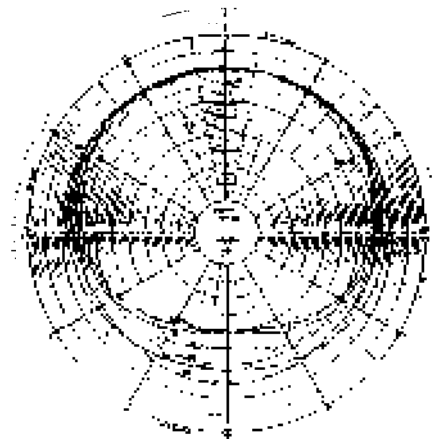
The free field frequency response curve



Near field frequency response curve measured on artificial mouth

side anyway — drops to just 0.17mV/Pa which is obviously too low for most normal applications. Shure recommended an actual load impedance of anywhere between 19 Ohm and 300 Ohm, which is obviously unrealistic based on our figures. When connected to an actual input impedance of 1kHz, the sensitivity drops to 0.34mV/Pa which is really as low as is reasonably acceptable, and is not much different at 600 Ohm. So I'm afraid I must refute the maker's data in this instance and strongly recommend that 600 Ohms is absolutely the lowest actual input impedance that should be contemplated, with somewhere between 1k Ohm and 2k Ohm being preferable.

It will be seen from Fig. 4 that the polar response of the SM10A gives a somewhat wider acceptance angle than is usual for a unidirectional microphone, and in fact, at 8kHz, it is almost omnidirectional. Our plots are in general agreement with those published by the manufacturer as far as the wider pattern is concerned, but at variance in respect of the sensitivity at the rear of the capsule, for whereas we show considerable tail lobing with a front-to-back ratio of only a few dB at some frequencies, the maker's plots show a marked null — which one would normally expect of a cardioid device. I cannot really offer any explanation for this discrepancy, as we went to some lengths to dismantle the microphone boom from its encumbrances to enable a genuine free field plot to be taken without



Free field polar response plot

reflections etc. from the barrel housing, boom arm, etc., and are reasonably satisfied that the plots measured are fairly representative of the particular sample we tested.

Soundcheck

Fitting the microphone over the head is a relatively straightforward operation once you have become familiar with the mechanics of the headband. Under normal conditions, the headband will sit quite securely and quite comfortably over the top of the head with the head grips positioned against the sides of the head just above the ears. The microphone boom is positioned so that the capsule is at one corner of the mouth — not right in front — and spaced about 8 or 10mm from the lips. Once in position, a gentle

Shure SM10A (USA)

Resale Price incl. tax:	£109.60
Furnished Accessories:	Headband, headphone mounting plate, connector belt clip, foam windscreen and durable, padded plastic carrying case
Transducer System:	Noise cancelling, pressure gradient dynamic
Response Characteristics:	Unidirectional, tailored response for optimum near-field vocal performance
Special Features:	Universal ball-pivot boom arm mounting with locking screw
Intended Applications:	Headworn 'hands free' vocal microphone for keyboard players, drummers, dancers, etc.
Connector Type:	XLR/3 wired to IEC 268 with belt clip on lightweight attached cable
Nett Weight:	78gm complete assembly but less cable & connector

Performance Data:

Parameter	Manufacturer's Data	Test Result
Frequency Response	50Hz-15kHz@8mm	90Hz-10kHz@ -6dB on B&K 4219 artificial mouth, 500Hz-10kHz free field Major contributing factor in operating principle of this microphone — see text
Proximity Effect	Not given	0.34mV/Pa@1kHz with 1k ohm termination 0.17mV/Pa@1kHz with rated impedance 0.42mV/Pa@1kHz open circuit
Sensitivity	-47dB open cct. ref. 1V/100ubar	14mV@1kHz 2% THD@128dB SPL Parameter not measured
V. out@128dB SPL/THD	Not given	
Rated Impedance	150 ohm	
Recommended Load Impedance	19-300 ohm	600 ohm or greater
Polar Response	Cardioid (polar plots given)	180°@500Hz 196°@ 1kHz 210°@ 2kHz included angle @ -6dB 270°@ 4kHz see text 230°@ 8kHz 130°@16kHz

Measurements taken under anechoic conditions with microphone mounted on, and spaced 1cm from the office of, a Bruel & Kjaer model 4219 artificial mouth working at a constant sound pressure level of 80dB unless otherwise stated.

tightening of the thumb screw on top of the barrel housing will hold the boom firmly in place. Provided it has been carefully fitted as described above, the SM10A will remain in position even with quite energetic movement, and it takes quite a violent jerking of the head to dislodge the headband. Yet it is not at all uncomfortable, and due to its very lightweight construction, is hardly noticeable once you get used to its presence.

The sound quality is remarkably good for such a minute microphone capsule and has no relationship whatsoever to the standard communications type of microphones which are more usually found in this format. Okay, so the bottom end is not quite as full bodied as an SM58 and the top end is not as crisp and clean, but we are talking of a very small order of difference. It is rather more prone to feedback than an SM58 but not to ambient noise pickup due to the noise cancelling characteristics as previously explained, and to the fact that the face and head provide an effective acoustic screen against so small a capsule. Although there does not seem to be any attempt in the construction of the microphone to insulate against handling noise, because of the method of use, there do not seem to be any problems in this area. The microphone certainly is sensitive to touch if you do handle it, but under normal conditions of use, and provided the microphone is properly fitted to start with, there should be no requirement to handle it during use anyway. Surprisingly, the SM10A is not overly susceptible to 'popping' or 'blasting' provided that the capsule is at

the corner of the mouth as described, and what popping there is can be readily overcome by the use of the foam windscreen provided.

Variations

Two additional models are available based on the same boom microphone, mounting, and headband assembly. The SM12A has a tiny earphone element incorporated into the lower end of the barrel housing and which is coupled to the ear by means of a very small tube which is terminated with a conical ear plug. Also available is the SM14A which has an earphone on both sides and is wired for independent signal feeds. The prices of these variants are £148 for the SM12A single earphone version and £190 for the SM14A twin earphone model.

Conclusions

The SM10A and its derivatives are without doubt superb examples of modern manufacturing processes and precision engineering. They are built to do a very specific job of work and this they do without compromise and I am sure that many musicians and performers will find their playing considerably improved by the freedom of movement, free of the constraints normally imposed by a fixed microphone, that is offered by the development of these microphones. They are a real alternative to conventional microphones built to a full professional specification — not playthings for the curious — and are priced accordingly.

Ken Dibble

Roland NEWSLINK



Oscar Peterson plays the £625 H.P. 70.

WHAT'S A BIG PLAYER LIKE OSCAR DOING ON A LITTLE PIANO LIKE THIS?

Answer: a great deal more than you might think. As far as piano players are concerned, Oscar Peterson is about as big as they come. He's topped more popularity polls than anyone else and continues to stand head and

shoulders above the rank and file of ivory-tinklers. The Roland HP-70 piano, on the other hand, has based its principle claim to fame on fitting full-size piano features, feel, and sound into a remarkably small package.

Nevertheless, larger-than-life-size performer and smaller-than-life-size instrument share a professionalism and an innovative spirit, that can't be ignored.

The Contemporary Piano

The HP70 and its stablemate the HP60 are the new generation of pianos. They use the latest digital electronics to do for the time-honoured acoustic instrument what the calculator has done for the adding machine. Perhaps not completely, because these models are not offered as an alternative to the concert pianist's Steinway Grand, but Oscar plays to larger audiences than many classical virtuosos and he's converted.

The key is an authentic reproduction of the acoustic piano sound. Plus delicate harpsichord voices and the variation on both themes that only electronics can give. Plus 'touch responsive' keys that allow the use of conventional piano techniques and expression. Plus a price-tag well below that of even the cheapest upright. Plus reliable performance even through changes of temperature and humidity that would leave the traditional piano at best de-tuned and at worst in need of major attention. Plus headphone sockets which take the pain out of practising (for other people, that is). Plus, for the gigging or travelling musician, a degree of portability that leaves the drawing-room piano simply standing.

Incidentally Roland's contemporary keyboards division have named their new instruments the Piano Plus series.

With Proper Piano Action

The reason pianos are popular is that they have a percussive element which allows the player to transmit emotions very clearly and directly. For drama and excitement you pound hell out of the keyboard. For more lyrical passages you allow your fingers to ripple across it. Only it doesn't work unless the piano is sensitive to the velocity with which they keys are played. Early attempts at 'electronic pianos' were not, and consequently did not carry much conviction with the Oscar Petersons of this world, or with anyone else who wanted to play or learn to play a proper piano. The Roland HP70 and HP60 have changed all this. Not only is the 'touch' responsive to your playing as with a conventional instrument, but there's another plus point - the degree of sensitivity can be varied to taste or according to what you're playing. Chopin, Scott Joplin or Chick Corea can be done justice.

With Proper Piano Sound

The sound of the piano has endured remarkably through all the changes that have taken place in music for a hundred and fifty years. That sound is directly related to the touch and the technique, and by perfecting the touch and the tonality Roland have en-

sured that the tradition is carried on by the new generation of pianos. All the technology of the HP pianos is concentrated on the piano voice, the related harpsichord voice, and their variations. The result is that Roland have got them right. Ask Oscar. Listen to Oscar. Better still, try one yourself. From pub honky-tonk to a mellow concert sound all the permutations are there. And for the rolling, powerful sounds of a Grand the HP70 is equipped with the famous Roland Chorus system. Basses and trebles, too often the weak point of electronic instruments, are rendered perfectly even to the ends of the 75-note full-length keyboard. Built-in speakers and amplification give ample volume for domestic use, connection to a hi-fi or external amplification will bring out the full range and power.

With the greatest of Ease

Recommended by Oscar Peterson as an ideal learning instrument, it's also easy to adapt to, easy to fit into your own musical ideas, even easy to pay for. In fact it's so easy to get hooked on the HP series pianos that they're attracting people with no experience of keyboards at all. They've been accepted by serious musicians but the great man himself sums up the fundamental attraction when he advised: 'Roland Piano Plus - Enjoy It!'

SEE US
AT HALL 5
STAND No. 5 0555

FRANKFURT... ROLAND AT FRANKFURT... ROLAND AT

HIT FOR SIX

Jupiter Puts 6-Voice Synthesis Into Orbit.

Just when you thought it was safe to go back into the music store... the Roland Jupiter-6, launched at Frankfurt and due in England early Summer, bursts onto the scene between the Jupiter-8 and the Juno-60.

It's a major polysynth priced at around £2000, but with many features that recall the prestigious JP-8. An on-board memory will store up to 32 patch presets which can be selected by footswitch if required: tape dump is available for storing further programmes. The synthesis controls are based on 12 VCO's (with Auto-Tune) and a wealth of functions including Cross-Modulation, De-tunable VCO's, a continuously variable envelope key-follow, footages 2' to 32' and the possibility of creating any desired waveform using the VCO keys.

The Splits, The Runs, and the Bends

An important feature of the JP-6 is a split keyboard with Whole, Split-1 and Split-2 settings. Not only does that mean that different sounds can be assigned to different parts of the keyboard but the multi-pattern arpeggiator can also be set to operate only on part of the keyboard. Poly-1, Unison, Solo and Solo-Unison modes of key assign can be brought in to give different solo and layering effects especially in conjunction with the de-tune control. Other special effects include a bender control that can vary the range by over 3 octaves. Naturally, the JP-6 will interface with other products in the Roland electronic music system but a new feature is a MIDI world standard interface buss connection.

A CLASS OF ITS OWN

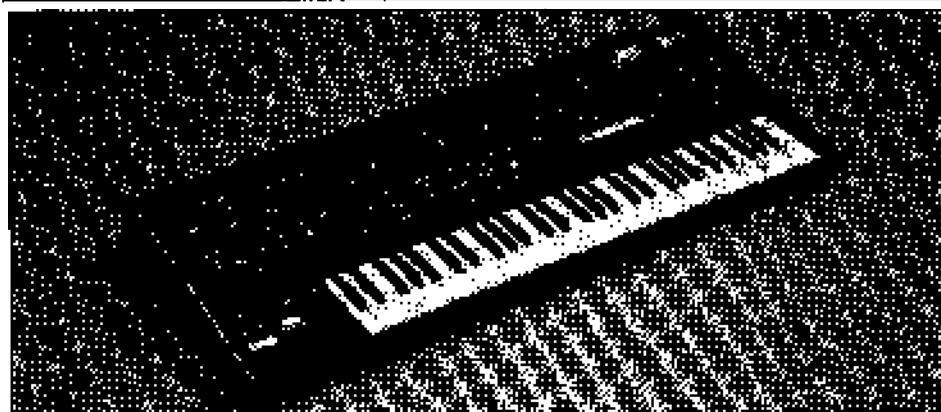
The TL-12 Teaching Lab System brings music lessons into the computer age.

The Roland TL-12 is essentially a communication system designed for the efficient running of group music tuition - or even as a language lab. It represents a simple way in which a teacher can avoid both the impoverishment of teaching one-to-one and the stress and impracticality associated with larger groups. It could revolutionize the availability of music tuition.

The system is based on a master console priced at around £500, headset/microphones at £45 a-piece, and associated junction boxes and cables. The console handles up to 12 student headsets in up to three separate groups.

Facilities allow the teacher to talk or play to individual students, individual groups, or the whole class. Students may address or play to the teacher, or a student's playing can be patched to the entire class or group for demonstration purposes. Teaching aids such as tape recordings, records and drum machines can be switched in and out via the main console.

The system will function for any instrument with a headphone or Line Out socket and is already proving highly successful in music education giving a new meaning to the three R's; reading, writing, and rhythmic...



NEW GENERATION PRESET

The Roland JX-3P was developed in response to a demand for a simple to operate preset synthesizer along the lines of the old SH-2000. Even though only monophonic, the SH-2000 was extraordinarily popular due to the convincing sounds it offered and the fact that they were available at the touch of a button - no complex synthesis controls.

The JX-3P is also appealingly simple. But it's 6-voice polyphonic and can be programmed, and at around £800 is highly competitive, a musician's instrument with full 61-note keyboard.

12 DCO's (the same that give those vibrant brass sounds to the Juno range), 6 VCF's, 6 Envelope Generators and 1 LFO give richness and variety, and a built-in Chorus adds even more depth and colour. The 32 voices are stored in two banks and include common orchestral instruments including choice of string and brass, rock sounds such as distortion guitar, some well-chosen 'synth' sounds (easier to play than describe) and even a Human Voice.

Programming

Some people require a programmable polyphonic, others don't. Roland's new generation preset caters for both. The basic synthesizer is supplied with factory presets only but with 32 free memories for programming. For a further £175 you can invest in the PG-200 accessory programmer, with all the functions of a top line synthesizer. With this you can programme the JX-3P and edit the existing presets if desired. Twin de-tunable DCO's with three waveforms plus Noise, and other features including cross-modulation, LFO with two waveforms plus Random, and a full complement of filter and envelope functions will turn the JX-3P into a formidable sound machine.

Expandable

The JX-3P is the world's first truly expandable preset synth. You can start with a unit that's within your price range and suits your immediate plans, and then up-date to a first-rate programmable poly without encountering the trade-in hurdle. What's more there's even a specially developed polyphonic sequencer on the way to add even more to the possibilities of the JX-3P.

SPEAKERS CORNER

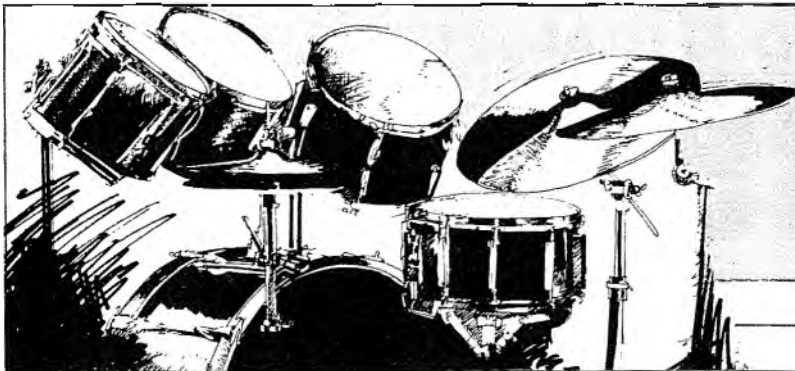
Roland's new range of PA cabinets throws a clear challenge to the sound reinforcement market. Following on from the already established SST-120, the SST-80, 60 and 40 are designed to be flown and give excellent sound definition for vocals and instruments. They equal the performance given by Bose units, but without requiring a special equaliser.



CHORUSES AFOOT

Among Boss exhibits at Frankfurt is the CE-3 chorus pedal, retailing at around £85, which is probably the most sophisticated footswitch chorus in the world. The provision of two separate chorus modes plus the usual controls means you can get exactly the effect you're after.

ROLAND U.K. Ltd., Great West Trading Estate, 983 Great West Rd., Brentford, Middx., TW8 9DN. Tel: 01-568 4578.



DRUM CHECK

LUDWIG STANDARD
RRP: £699 (no stands)

THE LUDWIG STANDARD SET WAS originally launched in the mid '60s and was meant, I believe, to be a more affordable/student type of outfit. At that time, though, the economic boom was in full swing (more or less) and drummers had money to spend. So, they tended to gravitate towards the better appointed, up-market sets, and the lowly 'Standard' was deemed superfluous. It was discontinued in 1969.

The dark days of the '80s seemed like a perfect time for the Ludwig company to re-introduce the line. (A little bird told me in 1981 that at one time Ludwig were considering making some cheap sets in the Orient, obviously to keep their price down. However, once the Selmer USA company acquired Ludwig they decided that they would have a cheap set, but that it would be built completely in America.)

Close inspection of the standard set reveals that corners have not been cut quite so strenuously as on the other economy sets. Mind you, the Ludwig set is more expensive than any of the competition. The only obvious 'cheapo' feature is in the bass drum's 16 tension casings instead of the more usual, and to my mind very important, 20. (If a drummer is playing with just a batter head he especially needs the tension control afforded by lots of tension screws.)

The only Standard set available is made up of a 22 x 14" bass drum, 12 x 8" x 13 x 9", and 16 x 16" tom toms. The snare drum is a new one on me, it's something of a hybrid, with a wood shell and called (or rather numbered) 600. It has a 5" deep shell and approximates reasonably closely to an old 'Super Classic'. The shells are die moulded from what looks like Maple or Birch, cross grained, butt-jointed at right-angles; four plies thick for the snare and toms, six for the bass. No glue rings are fitted and the bearing edge is simply radiused over *inside*, the covering itself is then cut away for a 1/4" or so to allow the head to fit easily.

Tom toms

Our two smaller toms have six square headed tension screws per head, whereas the larger one, the floor tom, has eight. All toms have, as near as dammit, the normal pattern triple flange

hoops and the usual 'Classic' nut boxes. One size is for the larger drums and another for the mounted toms.

The double tom holder is the non-modular one (also fitted to the Big Beat), which has been fitted to Ludwig sets since the late '60s. I'll discuss its relative merits later on; as far as I am aware there are no black marks against it anyway. The tom receiver-blocks and leg holders are also as before, ie cast hollow blocks which contain 'eye-bolts' (threads with rings formed into them) to encircle the leg, or tom holding 'L' arm.

Corners have not been cut

All the Standards are fitted with Ludwig Rocker heads which aren't actually marked with any particular weight but which an educated guess would designate **Medium**. There are no dampers fitted to the toms which I feel

Quickcheck

(Marks out of 20)

Appearance	16
Shell construction	15
Stands construction	n/a
Sound quality	16
Value for money	17
Total %	64/80 = 80%



is no great loss; especially if it keeps the price down.

Bass drum

The 22" bass drum is thicker than the other drums at six plies, and it too has the Rockers fitted as standard (if you'll pardon the pun). The only surprising thing is I couldn't find a damper strip for the drum. The catalogue doesn't show one either (which I suppose is not really surprising since no Ludwig set is pictured with a felt muffler), I'm sure the company do supply one though.

Anyway, the drum has 16 Classic nut boxes, pressed steel claw hooks, and the usual curved 'T' handled, Timpani type, tension screws.

The spurs are not the usual 'outrigger' type which Ludwig have favoured for the past 20 years. These cheaper, and not quite so substantial models, are the disappearing sort which have a retainer socket bolted through the shell, and can be used with or without metal spiked ends. A rubber foot fits over the spike. These sockets angle the spur forward, and would appear to work well.

The hoops on the bass drum are the usual wide wooden ones inlaid with plastic to match the covering of the rest of the set. These hoops would appear to be four plies thick, but without resorting to a knife it would have been tricky to count the plies — what with them being sprayed black.

Might I make so bold as to talk about the tolerances between Ludwig's swivel-nut inserts and their tension screws. They always feel exceptionally secure to me, this is not something one can say about these very important little items in respect of some of the other manufacturers.

Snare drum

I've searched through all my old Ludwig catalogues and haven't seen anything really like the 600. I suppose the closest one is the old Combo, which had the same amount of nut-boxes but were of a slightly different pattern. 600 has the waisted type which are fitted to the Rock/concert wooden drum. The Standard's snare drum has a wooden shell too, although at first sight you would take it for a 'bead-less' metal one. It's finished in chrome-O-wood, which of course means a saving of money for Ludwig because they have only to cover in one colour for any of the four different hued sets. It occurs to me that it must be cheaper to produce a wooden snare drum in America, whereas the Orientals tend to churn the metal ones out cheaply. Certainly any cheapo Japanese set is completed by a metal drum — often of dubious quality. Perhaps Ludwig do not want to compromise the images of their other illustrious metal-shell drums.

The 600 does have an internal damper made from spring-steel which works underneath the batter head. It also has pressed steel triple-flange hoops, and eight square headed tension screws per

head. The snare strainer is the well respected P.85 one as fitted to the 400, 402, and several other Ludwig drums. (On first sight the strainer seemed to be more flimsy than I expected, but having inspected some other P.85 on/off levers they all seemed of a muchness). The snares fitted were, for me, lacking in numbers — 12 wires were cord-attached



Tom holder can take the strain

to the strainer, but I find it difficult to believe that an extra six or eight strands would make the set any more pricey. More snare-wires invariably give better response. These snares are cord — attached to their strainer and instead of an old fashioned bed to help them to 'sit' against the bottom head all the way they have a slight dip in the bearing-edge to accomplish the same feat; but better. The 'Rockers' fitted to the snare drum had that 'brush-finish' which I feel gives more of a crack than a shiny opaque one like on the 400.

Accessories

This section will not take long this month because except for the double tom holder, there aren't any! Perhaps I should elaborate on this.

For reasons of economy the Vincent Bach Company (a division of Selmer USA who now own Ludwig), have decided to sell the Standard sets without stands. Of course stands do exist for the sets which are, I perceive, really a cross between the Atlas and the Lightweight variations with the amazing addition of a Speed-King foot-pedal. However, the inclusion of these bits and pieces would increase the price by an unwarranted £285. So, it was decided to sell the set without stands. I must stress that you can buy with ease a complete kit, and V. Bach esq would be overjoyed to sell you one at £984, but we (and they) know that there are cheaper, and heavier duty stands available — and not just from the Orient.

Ludwig's double tom holder has been tried and tested by a previous generation of 'heavy' players who did not have the advantage of heavy-duty accessories. The 781 holder above all

the other equipment stood up to the strain of touring and frequent setting up and taking down. It was seen to be successful and was then slavishly copied. Like most things which work well it is neither a complicated, nor sophisticated, piece of hardware. It consists of a down tube with a setting clamp, which has a cast, curved 'T' bar sweated to its top. The tube locates into a cast receiver block bolted to the bass drum's shell. A pair of eye-bolts are fixed to left and right of our 'T' bar and these locate and hold a pair of 'L' shaped, straight-knurled arms. These have one short side, which is held fast at the 'T' piece, and a longer one which locates directly into the block bolted to the shell of the tom tom. The angles of these arms are adjustable in the horizontal and vertical planes where they meet the 'T' bar. A slight amount of vertical adjustment is possible at the block itself which has a wing-nut to hold the tom securely. One of Ludwig's plastic handled bolts holds the whole unit at the right position relative to the bass drum.

Conclusions/Sounds

If I had been told this was an old Big Beat set which had been sitting at the back of a warehouse for a few years I would have believed it. The Standard set did not sound appreciably different to any other Ludwig. Aurally I'm sure it would be impossible to tell. The bass has the usual Ludwig clear round sound with plenty of thump. I did fit a damper to test it, just in case you think I'm getting blasé.

The three toms all sounded clear and clean too, and the snare is the only unknown quantity in the set. This is not to denigrate the 600 by any manner of means but I am not too familiar with it — although I do own an old 'Classic' snare drum with roughly the same attributes. The 600 sounded very crisp and sharp to me, roughly in the direction of the Rock/concert. It doesn't have an awful lot of 'bottom and balls' and seems to be more pitched in a classical-orchestral style. I sense that a see through head might give a little more depth, and more snares would give extra 'snap'.

I believe I already said that other colours are available (I saw white cortex, but red, blue, and black are to be found). The interiors are all up to Ludwig standard clean and smooth. The badges on the set are exactly the same as those on the super-duper sets (shape-wise that is) but the colours are different. The Rhombus is black, grey and silver on the 'Standard' instead of blue, green and silver on the up market sets. The cheapo sets, however, do not have any numbers on them.

In conclusion this is not a cheap set by other manufacturers' standards, but in retrospect I don't believe there ever was a cheap Ludwig set. At this end too you get what you pay for.

Bob Henri



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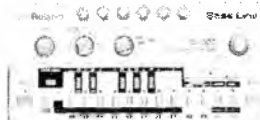


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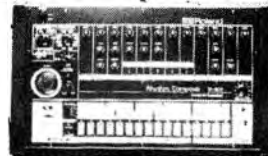
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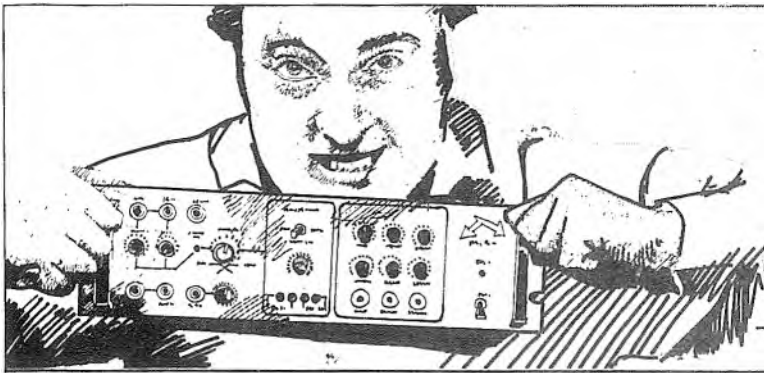
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SOUND CHECK

TOM SCHOLZ ROCKMAN

RRP: £200 (approx)

I AM WRITING THIS REVIEW after having just taken down my Christmas decorations, my kids have pinched the last of my typing paper, forcing me to use the backs of some old technical reports, I fancy a drink and have got the right post Christmas hump, so this little bugger is gonna have to be pretty damn good to get a good response out of me!

Well that's set the tone for what's to follow, although I must admit that I have had a good go of the Rockman over the last couple of weeks and I know that it is going to get a first class write up.

Firstly — what is a 'Rockman'? Well, you know those little personal stereos that all the Leroy lookalikes (Fame — you have a lot to answer for) on roller skates zoom about with permanently attached and used as a life support system? You do? Well this is the same sort of thing except that you have to do the work instead of playing your favourite cassette. What we have here is a personal practise amp, with various effects, that can be used with very lightweight earphones or direct injected into an amp or PA system as an effects unit. The thing is compact, attractively

styled and measures about 6 1/4" x 4 1/4" x 1 1/2". It weighs about a pound and has a clip on the back to enable the user to clip it into their belt. The earphones provided are small, lightweight and as if they weren't convenient enough already, they are hinged in the middle of the headband so that you can fold them in half. You could, in fact, carry the whole lot in a jacket pocket without any trouble at all.

The whole system works in stereo, effects included, and has a stereo auxiliary input to enable you to plug a stereo cassette or hi fi system into the Rockman and play along with it. The booklet supplied with the unit tells us that to obtain the effects and facilities provided, you would need \$10,000 worth of studio equipment. I think this

is a bit ambitious, but the facilities are good and the effects nice. The Rockman is not cheap at around £200, but if you tot up the prices of individual effects units providing comparable effects and, more to the point, quality — then you will find that the price is reasonable. I have a few quibbles about the switching and socketry but the sound quality and effects are exemplary. (That's very, very good John!)

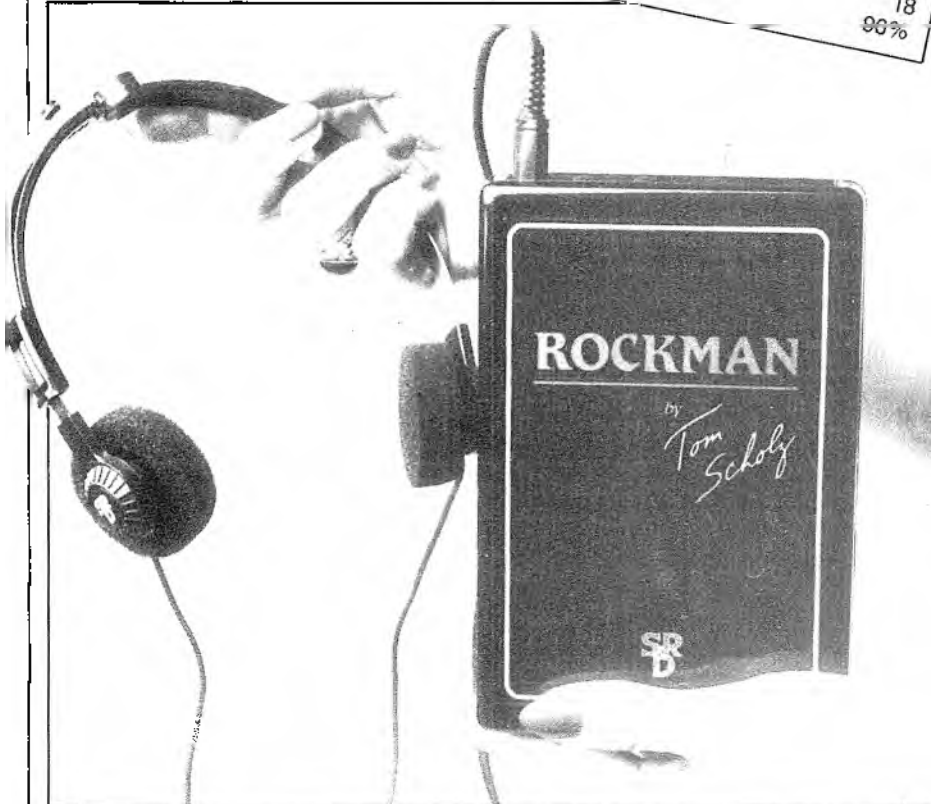
So far I've gone on quite a bit about the effects offered without telling you what they are. Well, apart from being able to use the Rockman as a personal practise amp it provides you with stereo echo, stereo chorus, two different Eq'd clean sounds, two different distortions and three different output levels (with an overall level control preset). I do not like the small output sockets, they are 3.5mm stereo jacks and this necessitates the use of special leads not common to musical equipment. They suit the headphones, obviously, but the leads necessary for DI and amp use will be fiddly. In fairness to Scholz I must add that space is the one thing that they haven't got a lot of and provision of standard jacks would be an impossibility. I am merely expressing my personal dislike of specialised leads and miniature jacks whilst at the same time fully appreciating the reasons for providing them.

The whole thing is turned on and off by means of a slide switch, and a flashing LED indicates that the unit is turned on. I think that this is an unsatisfactory arrangement as the unit can be put away switched on. The makers claim about 35 hours of battery life but I don't think that this will be improved by leaving the thing on overnight by accident. I think that the usual switching on the input socket would be preferable. (As you will probably be able to tell by reading between the lines, I left the Rockman on accidentally!)

The switch for turning the effects on and off is curious in its operation because you can only turn off either the echo or the chorus. There is no position where you can just have dry guitar without echo or chorus, and I feel that with the distortion available on the other switch the overall versatility would be improved by being able to have distortion only.

The chorus is very acceptable — clean, quiet and smooth in its operation, and as I have said before, stereo.

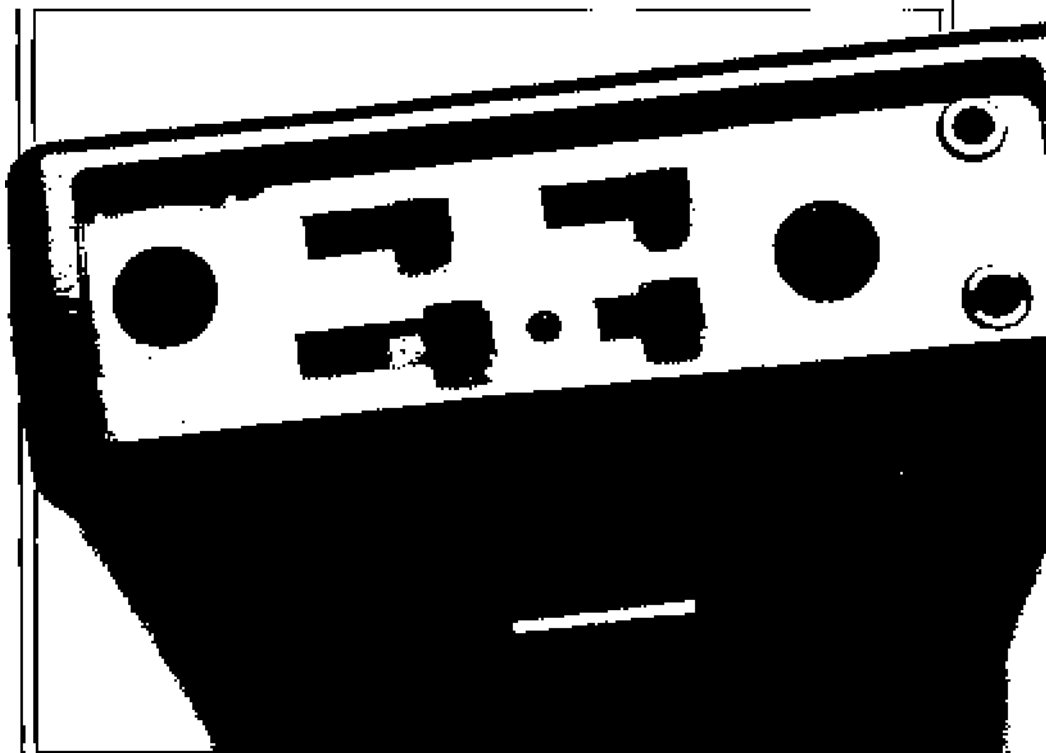
Quickcheck	
(Marks out of 20)	
Construction	18
Tonal Quality	20
Tonal Range (+ Effects)	20
Performance	20
Value for Money	18
Total %	96%



10,000 dollars of sound for £200?

Stereo chorus is a beautiful effect with its swirling full bodied sound and this chorus is excellent. No speed or depth variation is available but the speed and depth given is just about right. The echo is also very acceptable. Again no variation is available but the echo, leaning more towards a good quality reverb, is nice. They have not bowed to the temptation to overdo it, and the outcome is a very sensible and enhancing halo of excellent quality echos and in stereo. The initial echo seems to come from all around you and then die off to one side. Nice. I'm probably completely wrong about the technicalities but that's certainly what it sounds like.

The two clean settings give you a clean sound (not surprisingly) with different overall tonal qualities, ie one is brighter and the other fuller. They are good sounds and they sound compressed, although I think that they are probably not or the makers would make something of it in the spec. They have that nice studio sound, however; the one that usually comes from compression. It certainly can be described as 'produced' as they claim. The Position marked 'edge' gives you just that, a lovely edge to the sound. Hit it hard and the guitar will distort, treat it gently and the sound is clean, but thick. The distortion is magnificent. Real screaming biting grind. A super marvellous sound. When you consider that you are given these effects with no variation, the amount of effect and



No position for dry guitar without echo and chorus

tonal mix etc is just perfect. Whoever chose these sounds clearly knows his noises and the sounds have a definite musical quality rather than an electronic quality. Clearly, although these fellas are electronic wizzes, they are musos as well.

The volume switch gives you a wide

range of output level so that you can suit or overdrive your amp or system (or indeed blow your bleedin' head off with the phones on) and the gain preset adjusts for a wide range of instrument outputs. I think a word is required here to praise the technology of headphones in general since the advent of personal stereos. The 'phones provided here give you a very faithful reproduction, and the effect is amazing when you really give your guitar some stick on the distortion setting with all the business for a while, and then take off the phones to realise that you cannot hear a thing above the merest squeak from the outside of the phones. You would think that everyone in a 500 yard radius had gone deaf, but not so, could this be the secret of life as the guitar hero knows it?

With the range of input and output variations provided the Rockman records very well. It's easy to get a good 'produced' sound and the stereo is very nice. The unit is quiet and doesn't seem to have any hangups at all as far as the sound is concerned. The unit takes eight AA batteries and a power unit is available although no provision is made to connect a conventional add-on power supply, although most units of this type would not provide the voltage necessary anyway. Construction is very good with the whole thing splitting into two internally to give easy access. Quality and layout of the gubbins inside are first class and with the exception of the few minor points I have mentioned before, I think that that would have to be my summing up — FIRST CLASS.

I feel better now, Tom Scholz has cheered me up, I'm off for my drink and they are going to have to send the boys round to get this one off me!

Alan Kensley

February 1983 117

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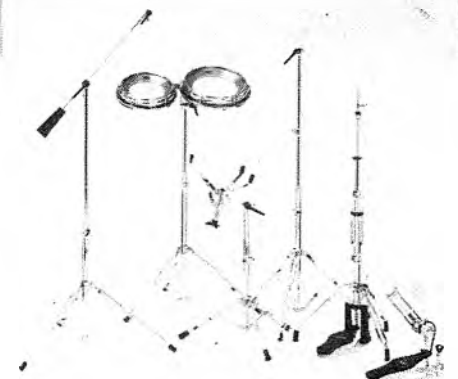


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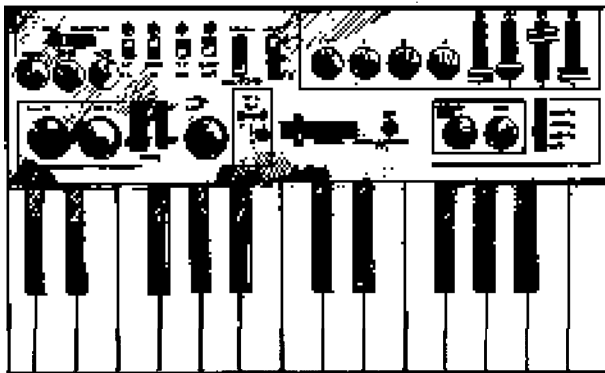


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CASIOTONE PT-30

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IN THE WORDS OF THOSE gallant men who have made this country what it is today — I'm referring, of course to that breed apart, the Advertising Account Executives, this month's review instrument can be summed up in one recherche (I found that word whilst looking up 'referring' to see how many 'r's it had, and it seemed like a nice one to use — wonder what it means!) term — "CASIMAGIC". And that really is what the PT-30 is all about, it is technically a superb little instrument, and its price is in keeping with the Casio tradition — i.e. extremely low.

The problem that one encounters when reviewing an instrument with a recommended retail price of just £79.00 including VAT, is that it is hard to criticise a product that offers such good value for money. Okay, one can mention that the monitor speaker could be of much better quality, or make some comment about the action of the keyboard, but frankly you cannot expect the moon and stars for just £79.00 (or even less in some stores); of course the

piano preset (for example) could be better, but one would have to pay for it. Here, Casio are offering a marvellous little instrument that offers the man in the street a chance to make music, and make it so that it is satisfying to him. I also think that many more professional musicians are going to be rather impressed with the PT-30.

The PT-30 looks as if it is going to be there first in a line of new Casio keyboards. We've got the MT range of mini-keyboards, the CT range of full size instruments, and the VL machines with calculator like keys; now with this, presumably the first in the series, we find an instrument with a micro keyboard — smaller than the one used on the MTs but more than just a calculator keypad arranged in the form of musical notes. Here the keys are actually hinged and move, if only a small amount. Now, before we examine said product, let's consider why it is called a PT-30. Well God only knows why Casio designate the '30' to it, although if you remember the very first Casiotone product was the MT-30. With my Sherlock Holmes style crash helmet firmly strapped on, I deduce that the 'PT' hints that the instrument is a Programmable Tone, which, as you will soon see is most probably the case.

Instrument Definition: The Casiotone PT-30 is a preset monophonic

instrument, that incorporates rhythm and accompaniment (bass, chord, and arpeggio) facilities. All melodies, chord changes and rhythm lines can be stored in the PT-30s memory banks and in addition these arrangements can be chained together to form realisations of complex pieces. The PT-30 is battery powered and is fitted with a monitor amplifier and speaker.

So, there's a brief outline of what the PT-30 can do, but blimey, it can do even more.

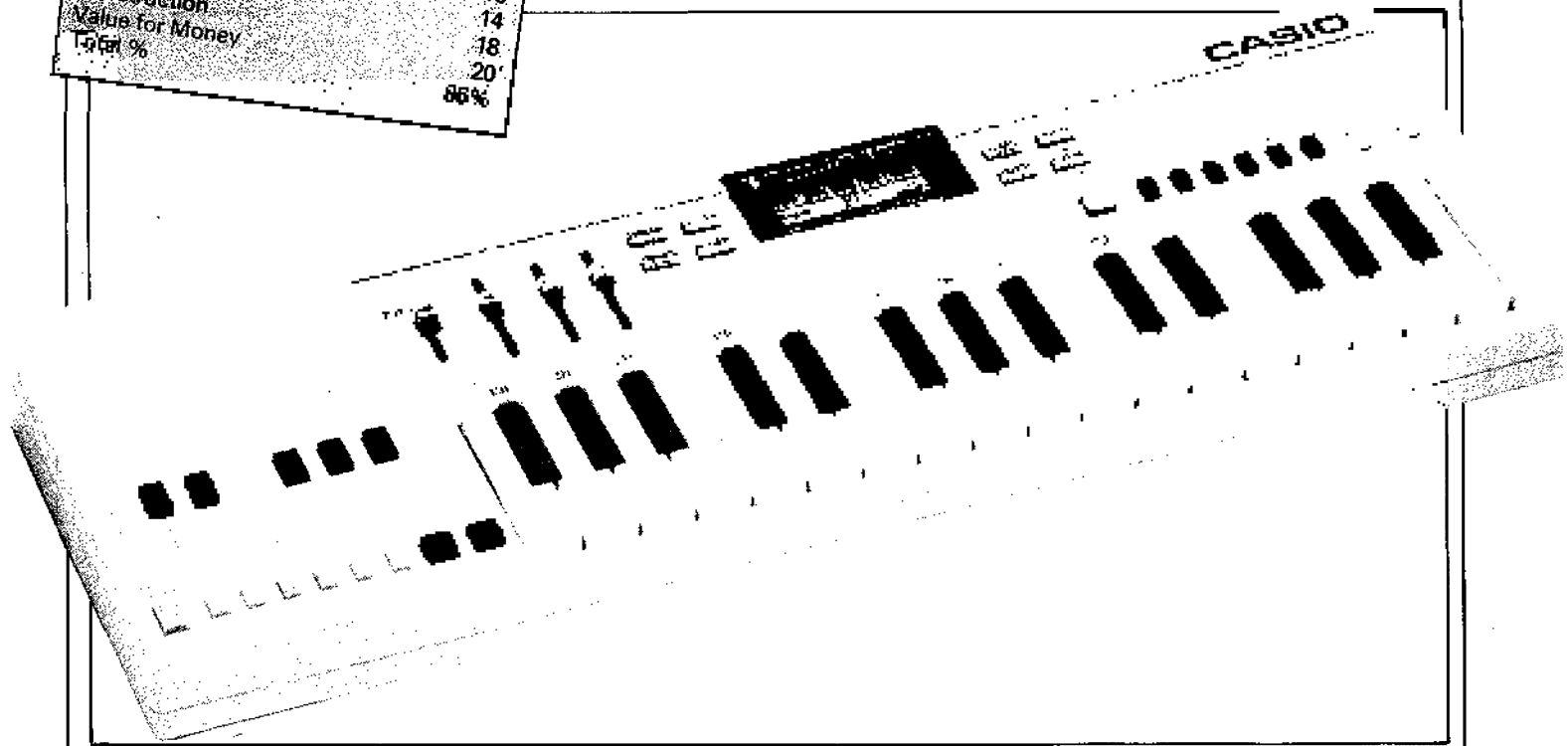
Casimagic

Most of you will be familiar with the VL-1, which spawned an era (can one say that?). The VL-1 must be the lowest cost electronic keyboard instrument ever produced. The PT-30 is really an extension of the VL-1 concept, though taken three steps further.

There are a considerable number of control switches to be found on the PT-30, some of them serve more than one role, so this machine can take a bit of getting used to. The heart of the matter is the central liquid crystal display, a crude representation of which is depicted in figure 1 (please locate this

A useful songwriting tool

Quickcheck	
(Marks out of 20)	
Performance	19
Tonal Quality	15
Tonal Variation	14
Construction	18
Value for Money	20
Total %	86%



SYNTH CHECK

figure as I shall be referring to it throughout in due course).

Construction

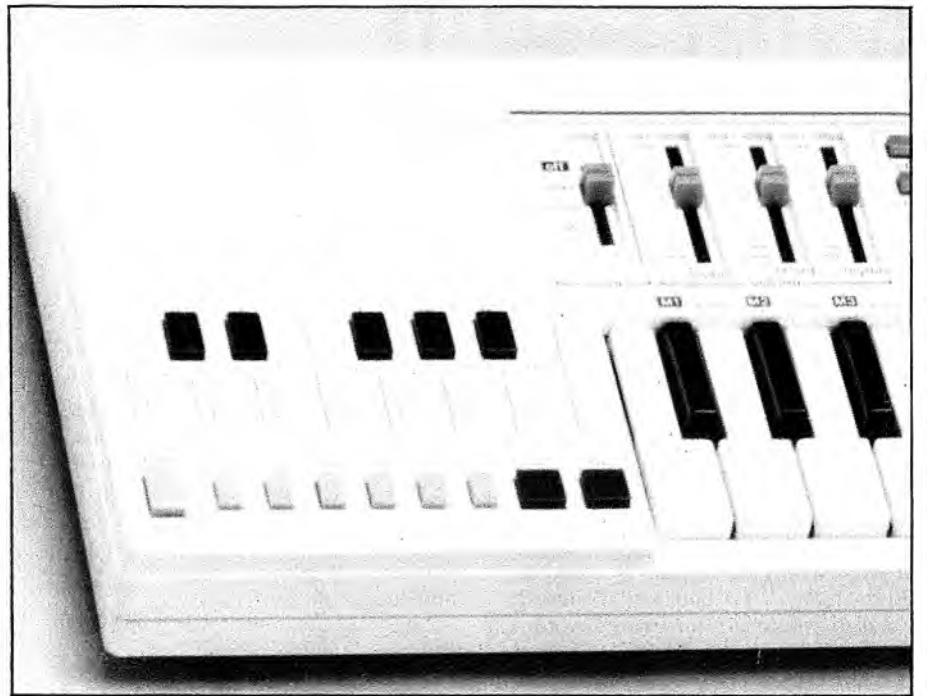
The casework of the PT-30 is now commonplace in basic design, to many of the mini keyboards, not only from Casio but also other Japanese firms. Essentially it is moulded from a high impact white-ivory plastic not dissimilar to our old friend Bakelite (remember), but this plastic doesn't shatter into a thousand pieces if, say, you were to accidentally let it slip from your hand and drop it into your lap! There's nothing revolutionary about the instrument's shape — no delta cross sections claiming to have been a design spin off from Concorde etc — just a simple 40 × 415 × 143mm (1% × 16% × 5%) rectangular section, weighing in at 1kg (2.2lbs) and that's with the batteries inserted. And, whilst on the subject of batteries, the PT-30 takes five AA size cells (the pencil light ones), though it can be used in conjunction with an AC adaptor (AD-1), or if you have a smart car with a cigarette lighter (like me, although of course I don't smoke) then with the aid of a CA-1 car adaptor you can play drain your car battery on the North Circular Road waiting for the ubiquitous overturned car transporter to be removed from the gyratory system. Casio claim that the high performance manganese dry batteries last about 12 hours in the PT-30 (that's until someone else in the office comes and nicks them because he's left his calculator on overnight). A nice touch from Casio is that they actually include a set of batteries with every instrument — they're worth over a pound.

The keyboard isn't marvellous, it feels rather cheap, and sort of clicks everytime you play a note, however, as I said in my opening preamble, you can't criticise such things on an instrument of this price. The keyboard works, and shows every sign of continuing to do so, that's really all there is to it.

The control surfaces consist of three sliders, one slide switch, and the remaining functions are carried out by calculator switches of different sizes and colours, 46 in all! The sliders and the switches are of a very nice quality and action, and should perform perfectly for many years (famous last words).

Sounds

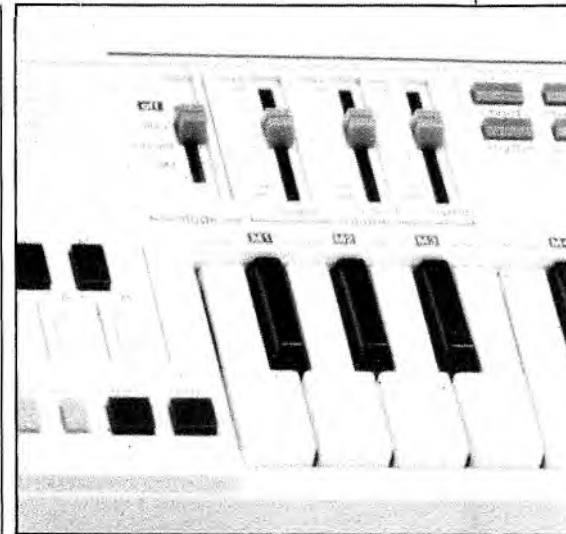
Let's begin by examining the monophonic preset melody section. This



Incredibly sophisticated automatics

is of the last note type of voice assignment priority, which for the hard of hearing means that the last note played is always the one that will sound, even if you are still holding another one. Strangely, however, if you are holding two notes, though goodness knows why you should be, then the new note doesn't sound. I think I would have preferred it if a low-note priority had been adopted, but there's nothing wrong with this system.

There are eight preset melody voices, which strangely have more or less the same basic envelope; although some are percussive and others sustained, they all have a similar release time (except the Harpsichord) i.e. they all die away fairly gently, the Harpsichord being the only one that decays virtually immediately the key is released. Perhaps I should begin that sentence again — aw, what-the-heck, you know what I mean. The voicings are: Piano, surprisingly good in timbre, though of course the whole effect is destroyed when producing a sound of a polyphonic instrument from a monophonic source; Harpsichord, an average thin-ish sound; Organ, with



Central liquid display is at the heart

delayed vibrato(?) and the wrong envelope release phase!; Violin, also uses delayed vibrato, although the overall timbre could be a little less harsh, and a bit more mellow Flute, warm and rounded; Horn, again well

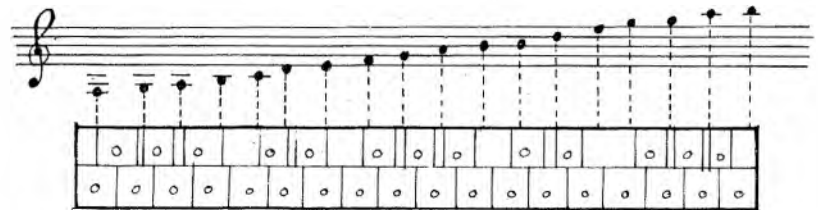
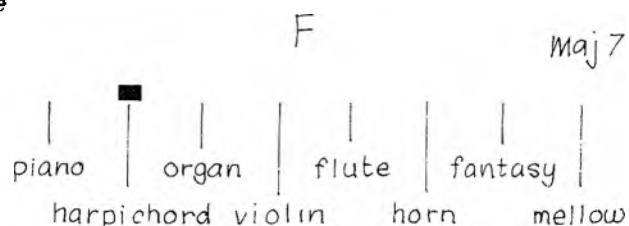


Figure one



rounded especially in the lower octaves, this is one of the few brass tones I've come across that doesn't utilise some form of filter sweep; Fantasy, is in interesting tone which is pitched fairly and high, and doesn't really sound like anything else; finally Mellow is rather nice, it is somewhat like the Flute voicing, but when the key is released the tone dies away, an accelerating low frequency oscillation can be heard — very interesting. As you can see from figure 1, the voicings are identified in the LCD display (that means I've said display twice) by a dark bar, so you know which one you have selected. The output jack is dual purpose — you can either connect headphones or use some other form of amplification, treating the socket as a line output (actually the output is a one volt max. into 100 ohms). These presets do sound a lot better than, and, though there is quite a bit of background noise, some of them sound better than ones you'll hear from £500 jobs.



The rhythms, of which there are 18 different patterns, are selected by means of the white notes of the keyboard, having, of course, activated the 'rhythm' button. The percussion simulations aren't any great shakes (i.e. there are no maracas — groan), you wouldn't expect there to be stunning bass drum and cymbal voices, but Casio have managed to get some pretty convincing sounds into the PT-30, and these are well voiced when arranged into their respective rhythm patterns. Twelve of the rhythms are labelled: Waltz, Ballad, Swing Enka, 16 Beat, Rock 1, Rock 2, Disco 1, Disco 2, BossaNova and Samba; whilst the remaining six are identified as Arp 1, Arp 2, ... Arp 6, 'Arp' stands for arpeggio (nothing to do with our old friends the synth makers — God rest their souls) and when these patterns are used in conjunction with the automatics, all hell breaks loose! Synchronous or is it synchronised start is to be found on the PT-30, so all sections can come in together when a key is played — how jolly!

The automatics offer an incredible degree of sophistication, and are

centred around the small calculator-key keyboard (a microkeyboard) set into the control panel to the left of the main keyboard (the micro-mini-keyboard) — see the photo if you're confused. Not only can this section of the instrument produce major and seventh chords to back the melody line, but also... wait for it... Diminished, Suspended 4th, Minor 6th, 6th, Maj 7th, and Min 7th variations of each chord. What other instrument does that I ask you? These chords can be used as a straight accompaniment to the melody line or, when using the rhythm section, they are



The memory has eight basic locations

pulsed in the relevant manner, and a bass line and, if applicable an arpeggio pattern, is introduced. Rather neat for an instrument of such a suicidally low price.

Before moving on to the climax of the show, I should point out that the PT-30 can be fine tuned so you can play along to all your favourite gramophone records even though your deck suffers from a recurring 31 1/2 rpm problem. And obviously the rhythm track can be adjusted to provide various tempos.

If I were to tell you all that this fine little instrument is capable of, I would run out of space, and of course, there wouldn't be enough money in International Musician's piggy bank to pay me, so I'll stick to the best bits, and keep things relatively simple. Now the PT-30 is programmable in that you can feed it information that it will remember and use at a later date for you. To start with you have eight basic memory locations each of which is divided up into 63.5 steps, and are selected by means of the black keys of the keyboard. The keyboard depicted on the LCD display (figure 1) as well as indicating which notes and chords are being played etc, can also show you which memory you have selected and which ones are free for you to use. So if you decide on a memory, you can

feed into it chord and melody line information, i.e. what notes you want playing — you don't have to worry about the timings just yet. Each note requires one step of memory and each chord 1.5, so you can get a fair sequence into each memory (63.5 steps) — if your tune is too long for one memory it will automatically start to use up some of the next's capacity. Right, you've loaded the notes, now set off the rhythm and tap out the timings as to how you want the notes and chords to run — it is easy. When you've finished you can sit back and listen to the completed section.

Repeat this sequence of events for other phrases of music, and then you can chain up all the memories to provide a complete arrangement of your composition. Now you've got to agree (if you understand it) that that is pretty impressive for an instrument of such a low low price — "bloody amazing", yes. I know.

You may be satisfied already, but what's even more bloody amazing is the PT-30's Automatic Chord selection function. This looks at what you've played for the melody line and, without any assistance from the accompaniment keys, automatically comes up with a suitable chordal backing; and if you're not too happy with each chord it chooses there are two alternatives from which to choose. So at the end of your single note melody line, you now have a complete accompaniment track worked out for you — superb for composing. CASIOMAGIC!

It can take quite a while to build up your composition, and when you switch off it is rubbed out, so for a few extra quid you can purchase a TA-1 tape recorder interface, which will enable you to feed the contents of your PT-30's memory banks to a domestic tape recorder. Thus you have room inside your PT-30 to work on a new piece, whilst retaining the information you were working with on tape, which can be fed back into the instrument when required.

I know that this is going to be a phenomenally popular product in 1983, the VL-1 was a great success, so Casio may have been able to insure that they can meet the inevitable demand that is bound to follow the launch of the PT-30. I hope that I've been able to convince you of the worth of this instrument. Okay, it may not be a live performance instrument, nor a studio tool, but as a cheap fun-keyboard it takes some beating, and it is also a valid compositional device, I think you'll find.

It's time now, like all good plastic American TV shows, to end up with a pathetically weak joke, which everyone wets themselves at; so how about "Well, we've had the MT-30 and the PT-30, I suppose the next logical product is the PMT-30 — the only instrument for those pregnant pauses" — what will they think of next? (Perhaps we shouldn't run the last para Mr Editor.)

Jack Barren

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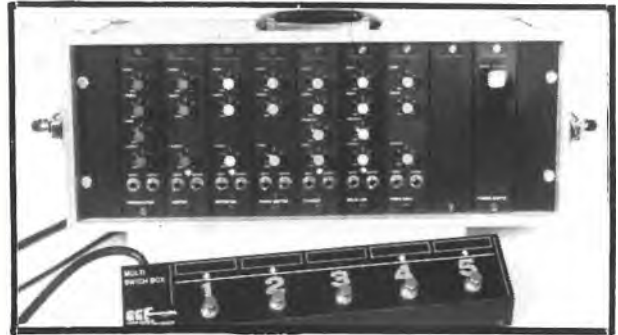


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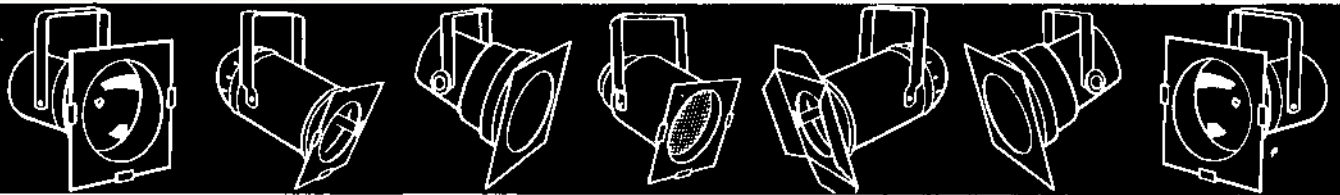


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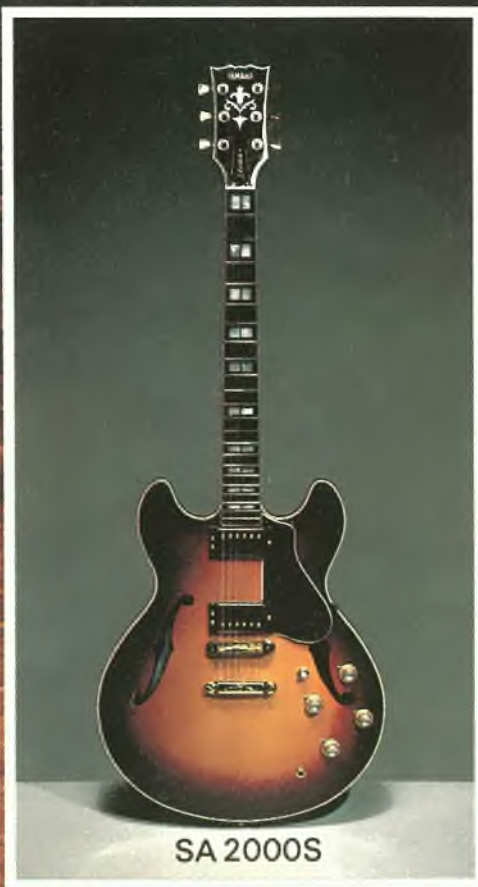
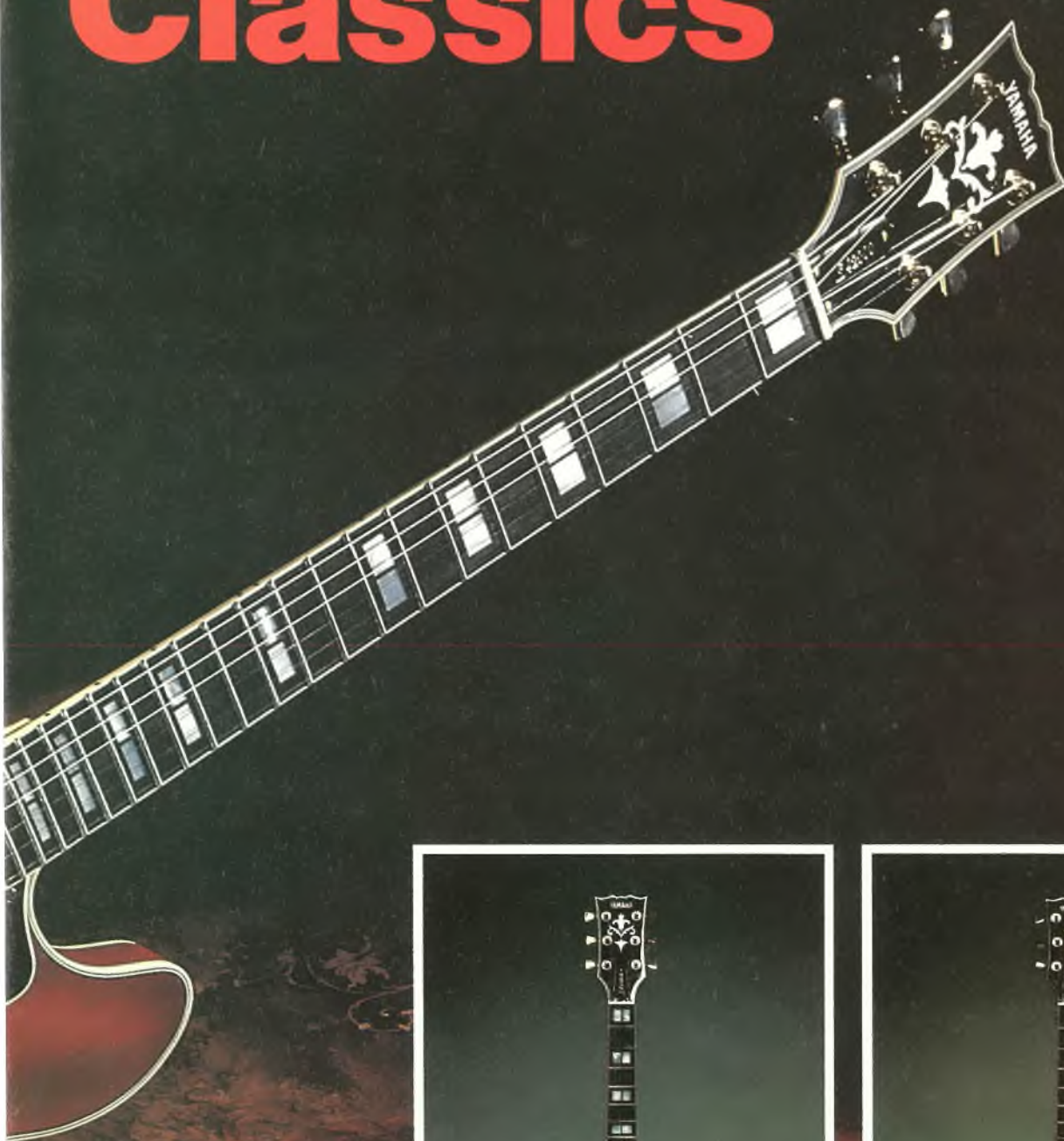
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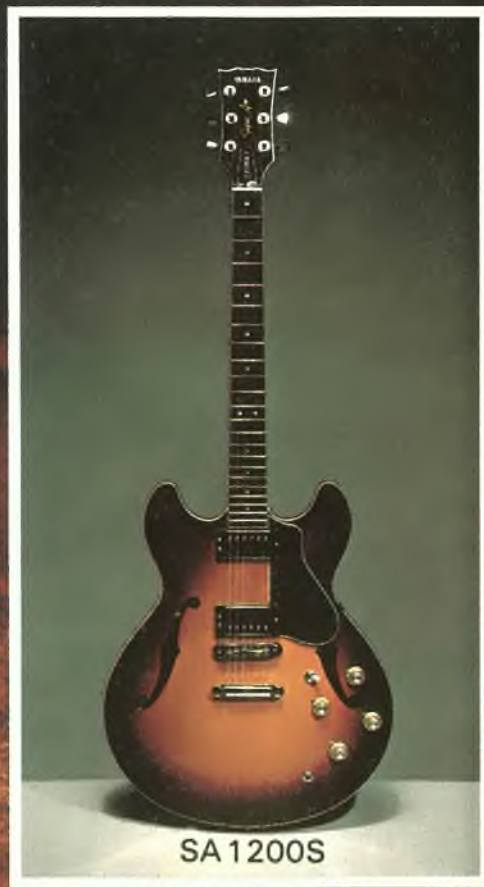


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STUDIO
DIARY

Captain's log, star date Volume 9, Issue 2. Janet Street-Angus has been captured by the Sound Reinforcement Test Guide (plug plug, available soon, £1.95 from you newsagent), so I'm making this month's entry (if you'll pardon the expression). Still, it's better than working...

It's still early days yet for 1983, but Air studios has been positively crawling with celebs obviously trying hard to fulfill some New Year resolutions. First off those recently demised *Japan* chappies have been in with our own Billy Punter's brother John Punter (are you sure?) at the controls. Expect a live album soon(ish). Also seen roaming the corridors was *Paul McCartney*, looking pretty shocked over the recent collapse of The Beatles (this information comes courtesy of Beat Instrumental, 1970). Seems he's still got some more work to do on his soon come (maybe) solo album.

work on a new album. Come on Elvis, we need you.

And finally from Air (the last breath?) the charming young lady who relayed all this terrific news was recently back from a visit to Air's Caribbean abode with news that the new *Police* album that is taking shape there is "The best I've heard them do in ages". Can't wait...

Anyway, enough of them, hogging the pagelight like that. Let's move on. Deep in the heart of naughty old Soho we find Good Earth Studios housing live-in-wife of the recently mentioned Paul, *Linda McCartney*, making her first ever album without her hubby-poo. Nay mind, eh. At least the great Tony Visconti (spotted recently actually enjoying a hamburger in a Chiswick Wimpy bar, by the way) is there to lend his professional ear. Meanwhile, those *Duran Durans* have been recording a single with Ian Little, *Junior Giscombe* has been in to record an album and the Wimpy king has found time to get a new *Modern Romance* album down. Good on ya.

Bunnyman, Landscape, Jimmy Pursey and *Rocky Sharpe and the Replays*.

Back in town at the Townhouse, those *Cinema* boys crop up again with Trendy Trev at the desk. Also Ray Faulk and Rase McKenna have been in to mix a new LP with *UB40*, and staying with letters for a while (what continuity) *UFO* have been rockin' all night long with their producer Mick Glossop. New album soon come. *Heaven 17* also re-emerge with Greg Walsh, as Steve Brown finished the mix on the *Haysi Fantayzee* album (you probably don't spell it like that, but who cares?). Also, our Steve has been busy working with *Wham!*

A mere zebra crossing away we find Abbey Road studios, with *Tears for Fears* mixing tracks, as they say in the biz, with producer Chris Hughes. Also *Alan Parsons* has been producing himself for a follow up 'Project'.

And finally for this month we find ourselves at Britannia Row, where *Cozy Powell*, not wanting to go too mad, has locked himself in with the



Fashion — new tracks from the new line-up

And if that wasn't enough the wonderful *XTC* are mixing an album with Steve Nye at the desk, while *Heaven 17*, with producer/engineer Greg Walsh, are blip blippin' away up the corridor. And there's more. The half of Yes that isn't Asia, *Cinema* to their friends, have been in with Trevor Horn (would you believe) at the controls. *Madness* too will be in to start a few songs soon. *Haircut 100* are in to do a few vocal tracks, and the bee-hived one, *Mari Wilson* has been in with, to quote, a 'Big orchestra'. Also any moment now, possibly as we're talking, *Elvis Costello* will begin

Ridge Farm, meanwhile, finally waved goodbye to Simon Kirke and cronies *Wildlife* who've completed their debut album, which I've heard and is pretty fab, fairly Bad Company-ish, and ripe for the US market. The vacant studio space has now been taken up by *Praying Mantis* who are to do a Long Player.

Meanwhile that big drip Flood (only kidding, honest) has finished a new *Cabaret Voltaire* LP for Some Bizarre records. *Dave Stewart* has been recording a new single with engineer Colin Green, and those plaited ones *Fashion* have put down a few newies. The cutting room has been busy too, churning out the acetates for *Echo and the*

Philharmonic Orchestra to record a new LP co-produced by Nick Griffiths and Cozy himself. *New Order* are also producing themselves but being engineered by Mike Johnson, and to wrap it up *Monty Python* have been putting the finishing touches to the soundtrack of their 'Meaning of Life' LP soundtrack.

Well, that's this month's entry over and done with for a month (not tonight, I've got a headache) but we'll be back soon with more hot scoops (yeuch) for the gossip hungry and the fact-fiends in March, boldly going where no mag has gone before.

Captain James T. Horkins

THE PRODUCERS

NIGEL GRAY

NIGEL GRAY IS SOMETHING OF an enigma. Everybody knows his name and everybody knows his work. Production credits on monster albums by the Police, Siouxsie and the Banshees and Godley and Creme have surely seen to that. But precious few seem ever to have met the man and fewer still know what he's really like. Many claim to have the inside story yet the more you hear the more confusing and incoherent the pictures become.

One paints him as a whizz-kid barely out of his teens, ligging from party to party and club to club in sky-blue shoes, baggy trousers and a Stingalong peroxide hair-do. Another has him marked down as a terminal dope fiend on a hotline to ICI. And all agree on treating him as the office junior. Even after four years of international success he is still referred to in the music press as 'young Nigel Gray'.

But truth, as they say, is stranger than fiction and it certainly came as a shock to me to discover not some kind of elusive butterfly hovering in the half-light of Leatherhead's Surrey Sound Studios, but a charming, friendly, unaffected and obviously conscientious fellow. A family man (with a wife and three kids waiting at home down the road in Epsom) and a fully qualified doctor to boot, he was actually working full-time for the National Health Service, writing out prescriptions for old ladies with gammy legs and treating kids for tonsillitis, before he took up this recording and production lark as a living. And to further shatter the illusions he admitted his age. Despite some very boyish good looks Nigel Gray celebrated his 35th birthday a good few months back.

All of which should serve to suggest that this man is anything but a maverick and an opportunist, despite his somewhat unorthodox background. Unorthodox for a record producer at any rate. But then regular readers of this column will be used to the notion that stereotypes rarely exist and that the 'big names' are frequently not what they might seem. Nevertheless, in the surprise stakes Nigel Gray must take pole position number one.

Sitting in the control room of his own Surrey Sound Studios while taking a break from working on a project of his own with Status Quo's pianist Andy Bown, Nigel

Gray told me how his recording career had begun: with two old valve Revoxes and a home-made mixer while he was still at Medical school in Birmingham. On graduating he moved South to the stockbroker belt and filled the front room of his hospital house with a vintage rack-mounted Ampex four track machine, a desk and all fixtures and fittings which he bought in a job lot from a local studio moving up market. Then he was offered a derelict community centre for £25 per week rent.

"That was seven years ago, so £25 was worth rather more than it is now. And was harder to find too. But I thought 'If I can get two sessions a week, that will pay the rent. And if I can get three, then that'll see to the HP bill too. So I took the plunge."

The next few years were spent sandwiching doctoring time with studio work as gradually the word about Surrey Sound got round. Soon well-established artistes like Joan Armatrading and Mike Batt began to oust the local groups booking demo-time, drawn, no doubt, by Gray's own calm self-assuredness and the studio's major asset — a wonderfully ambient room.

"Right from the start we were getting great drum sounds", said Nigel proudly. "When we first moved in and converted the place we had no soundproofing at all and we found that cymbals and hi hats used to echo and bounce around the walls just a little too much. But I got a load of old acoustic tiles from a local builder for some ridiculous price like £80 and they did the trick. So I've always been able, basically, to put up two microphones just about anywhere in the room and get a good natural drum sound.

"Nowadays, of course, there's

quite a difference between a 'natural' drum sound and a 'live' one, although strictly speaking they're one and the same. 'Live' today means 'echoey' and is usually worked up with the help of £8,500 worth of Lexicon Digital Reverberation. They're fantastic machines, especially if you're working in a room that's really dead, you hit a drum and the sound just stops. You can make a cardboard box sound like anything you like with a Lexicon. But you shouldn't need one. You should be able to get a good natural sound from the room first and foremost. Once you've got that then you should be able to capture it on tape with any old microphone you like. But if you want to work that way then you need a really good drummer who can get a great sound from his kit at source. Listen to Stuart Copeland on the first Police album. By today's standards he sounds very dry, but on a cassette or a car radio his drums really punch it out."

No conversation with Nigel Gray could ever keep away from The Police for any length of time. He first engineered then produced the band's first three albums *Outlandos D'Amour*, *Regatta De Blanc* and *Zenyatta Mondatta* and must surely have been responsible, at least in



part, for their runaway success. Sadly he never benefitted financially from those megabuck sales for a mixture of naivety on his part and the recalcitrance of the band's manager Miles Copeland left him with little more than a basic fee to put in the bank. For some strange reason he never quite hit it off with A&M, the Police's record company, either, despite the fact he brought the first two albums in well under budget and the proceeds from the first alone doubtless helped the company weather a very sticky patch at the end of the Seventies. By the time it came to record the third, in Holland, the relationship was at an all-time low and various complications involving the need for a total re-mix and the Customs and Excise man's decision to impound the multi-track on its way back into Britain proved to be the final straw.

"When we started *Outlandos* I was still working as a doctor and I had to break off some of the sessions early in order to open up the surgery. I'd leave my brother Chris to do the engineering and then come back after a couple of hours, take off my jacket and tie and get back to work. We were still only 16 track at the time and the Police were the first band we'd had come in to do a whole album. Right from the beginning the guys at A&M thought I was some idiot amateur who didn't know his arse from his elbow, and although we reckoned the finished album was great they weren't at all impressed. They said the sounds weren't sophisticated enough and they asked to get me to remix *Roxanne* and *Can't Stand Losing You*. They didn't understand that if you record something in a primitive way then that's really the only way you can mix it. You can't polish it into something that it's not. So they kicked up a real fuss when Stuart Copeland insisted they use me for

the second album. But what they failed to realise was that two years had elapsed between the two and in that time we'd not only gone 24 track but I'd been working with people like Kevin Godley and Lol Creme who showed me so many things I'd never have guessed were possible. By then I'd made all my mistakes and I really knew my way round."

You'd expect a man to be bitter after he's let a small fortune slip through his fingers and received no thanks for doing it. But Nigel Gray takes it all quite philosophically. He says he's not in the business to make money. Indeed he tries actively to avoid getting involved in the business anyway, and prefers to see himself in the lucky position of a man paid to indulge in his favourite hobby. And since the huge success of the Police in both commercial and artistic terms — *Zenyatta Mondatta*, remember, was awarded two Grammy Awards in 1981 and Gray was nominated as Producer of the Year and some of the best have been queuing at his door to have him indulge himself in them. Albums like *L* and *Freeze Frame* for Godley and Creme, *Kaleidoscope* and *Ju Ju* for Siouxsie and the Banshees and loads of others by bands as varied as the Passions, Hazel O'Connor, Wishbone Ash, Girlschool and Tank have all reeled off the mastering machine down at Surrey Sound. Not all have been received too triumphantly, perhaps, but Nigel Gray is aware of that. And aware of his own strengths and limitations.

"To be honest I can only really guarantee a good job if the band and the songs sound right to begin with. I'm not one of those producers like, say Martin Rushent, who has a definite idea about how any band should sound or can take a crappy band and say 'This is how you have to do this song. Do it this way or not at all'. That's not my style at all. So if a record company wants that kind of job done, then I'm not the man. I prefer to work with people who don't need ideas, just someone to interpret them and get them down perfectly on tape. Then I'm in my element and I can use all the technology to clean up and enhance rather than create something which was never there in the first place.

"But, on the other hand, I'm more than just an engineer and I think I have to be. If you book a studio with an engineer then it's his job to get exactly the sounds the band wants on tape, even if privately he reckons they're a pile of shit. A producer has authority, he's permitted to venture opinions and

throw his weight about, and he should do so. Even the most inspired and talented bands need producers because they lack objectivity. They need someone to coax the best out of them.

"I believe there is a healthy balance to be struck between artistic integrity and commercialism. There's nothing wrong with being an artist for art's sake, but if you want to sell a few records as well then you have to show a degree of professionalism. And that's very often the one thing the best groups don't have. For example, I did two albums with Siouxsie and the Banshees who were no trouble at all to work with, despite all the reports I'd heard beforehand. And in Budgie and John McGeogh they have two of the most innovative and creative musicians I've ever come across. They were very exciting to work with. Now the Banshees have a ready made market of kids who will buy everything they release, but they also have the potential to reach a wider audience without compromising themselves and writing mindless rubbish. While I was producing them they were coming up with great songs like *Christine*, *Happy House* and *Spellbound* so I tried to encourage them away from the wailing, turgid, monotonous things they get into left on their own. By the time we got to the *Ju Ju* album I thought we were making real headway and that I'd helped them set a direction for the future, both in terms of material and studio techniques — we were beginning to do all sorts of strange and adventurous things with digital echo and tape loops and so on. But then we recorded a version of *Fireworks* using one of Kevin and Lol's Gizmos and although it turned out well enough for an album track it didn't strike me as a strong enough single to follow *Spellbound* and keep up the momentum we'd created. So I said so, which was tantamount to hearsay and I was, to all intents and purposes, sacked on the spot. All for telling them I thought they could actually do a lot better."

Not surprisingly Nigel Gray has had it up to here with bands — for this week anyway. But who knows about next? When the telephone rings in the front office tomorrow morning offering the hottest thing since slice bread, just watch the man jump. Despite the setbacks and the disappointments, you see, Nigel Gray is one producer who really enjoys his work. And more often than not his work reflects it.

Chas de Whalley

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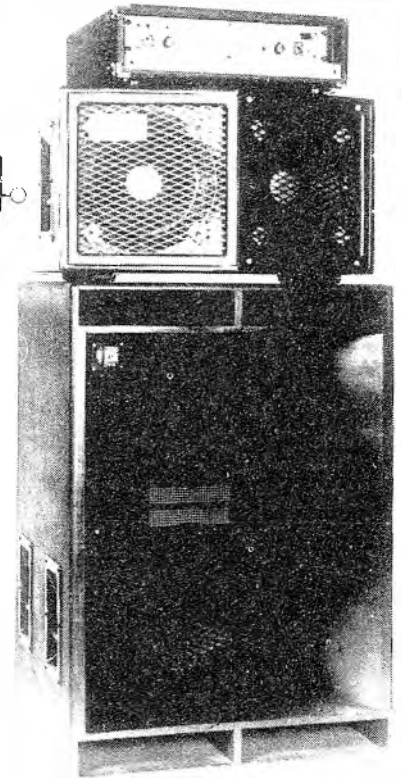
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STUDIO OF THE MONTH

Studio Profile

Vivaldi Studios, Sweden

A LOT OF THE SCEPTICS IN the Scandinavian music business shook their heads when Marcello Mancini started building Vivaldi Studios in Gothenburg. It was a time when nearly every studio in Sweden had problems and Gothenburg isn't exactly the musical centre of the country. Fortunately for me, I had known Marcello from the time he commenced this project and therefore, I suppose, I had a better opportunity to appreciate the wisdom of it.

Marcello originates from Italy and has spent many years in Gothenburg as a professional musician. During his career, he amassed an impressive number of musical contacts throughout Europe and America, and Vivaldi was designed with these people in mind as well as local customers. Marcello hoped to attract the interest of record companies in Europe who wanted to record in Sweden.

There was also another area of the music scene that Marcello had in mind and that was the many young, up-and-coming bands and artists who were rehearsing and recording in sheds and garages. He decided to incorporate two workshop studios in his project, each with four and eight track facilities at rates they could afford. Marcello even included an educational scheme for the young musicians to enable them to get the best out of the new equipment. This, he knew, would provide vital experience at an early stage of their musical development and subsequently, they would be better prepared when they undertook professional recording.

In conjunction with his colleague, Bjorn Asplind, he created a complete studio environment, containing not only the recording facility, but also rehearsal rooms, an actual club/bar setting with a large stage for rehearsals or video promos, a cafeteria, repair rooms, a music shop stocking general accessories, and tutoring facilities.

The remainder of the project is scheduled for completion within the next few months. The recording studio itself has been in operation for some years and now handles 85% of

major studio work in Sweden today.

The actual surface area of Vivaldi covers 9,000 sq ft with the studio and control room occupying about 2,000 sq ft of the total area. More space is available if the question of expansion is ever raised and there is certainly no shortage of interested parties for the rehearsal room which was hired out immediately it was opened at the August Music Fair in Gothenburg last year.

Marcello still hopes to increase the number of clients from outside Sweden and now that plans are well advanced for the development of a 16 track studio in the main complex, it is anticipated that this latest move will release the 24 track facility for outside producers who wish to bring their artists in to record.



Marcello Mancini and C. Bernard Löhr in the control room.

Generally, the studio is extremely spacious and has a calm, steady working atmosphere which is guaranteed to put both producer and musicians at ease right from the start. The design of the place is more Italian than Scandinavian and the oils and watercolours which adorn the walls are further enhanced with plenty of natural daylight.

Since the original building was an old factory, space never really posed a problem, and this meant the conversion went ahead very smoothly. All three studios have 'floating' floors, walls and ceilings which completely isolate them from each other. Most of the walls are constructed with a layer of acoustically 'dead' hardwood and the wooden floors can easily be covered with carpet to reduce the 'live' sound still further. The intention was to build a studio with as much natural reflection and acoustic variation as possible without losing the ability for picking up different frequencies for separation into the multitrack.

The main control room also acts as a master control centre which enables all three studios to be interfaced with one another. This means that the recording session can utilise sounds or effects in one studio and be combined with a totally

different set-up in one or both of the other studios simultaneously.

The eight track facility is intended mainly for Rock bands as the overall sound is more acoustically 'dead' than the others. This also serves as the workshop studio and those who have undertaken one of the Vivaldi weekend courses are given the opportunity to hire it at a very competitive rate. This gives the hirer the chance to try out techniques and experiments that would normally cost a good deal more in larger studios. On the whole, even in the 24 track unit, studio time tends to be somewhat less expensive at Vivaldi.

On the equipment side, the studio has a 28 channel, Sound Workshop Series 1600 mixing desk, a 24 track Otari MTR-90 in the main studio and

two Otari's for mastering. Other equipment available includes dbx effects, A&D compex limiter, Omnicraft GT-4 gates, Ursa Major Space Station and Echo plate unit. Monitors are Urei and Auratone.

The eight track studio has a 16-8 Allen & Heath Mod-3 mixing console and an 8 track Otari MX-5050 1/2" tape machine. Monitoring is on Tannoy Little Reds and Auratones with an Otari mastering system and Sound Workshop reverb. Both studios use BGW power amps.

The four track studio is used entirely as a rehearsal workshop and has a 16-4 mixer and a four track Teac/Tascam recorder, a two track Otari master machine and again, Tannoy and Auratone monitors. An assortment of microphones includes Neumann, AKG, Sennheiser, Electro-Voice, Milab and Shure models. Backline and any additional musical instruments can also be provided plus a wide range of external effects units.

Vivaldi has given Sweden an ultra modern studio which is as much a benefit to amateur musicians as it is to professional artists. The complex is more than a studio — it's a totally new concept catering for the needs and requirements of all from start to finish.

Tom Larsen

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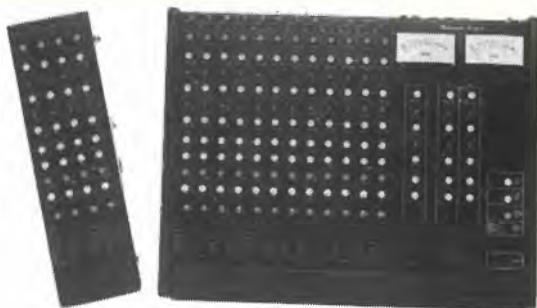
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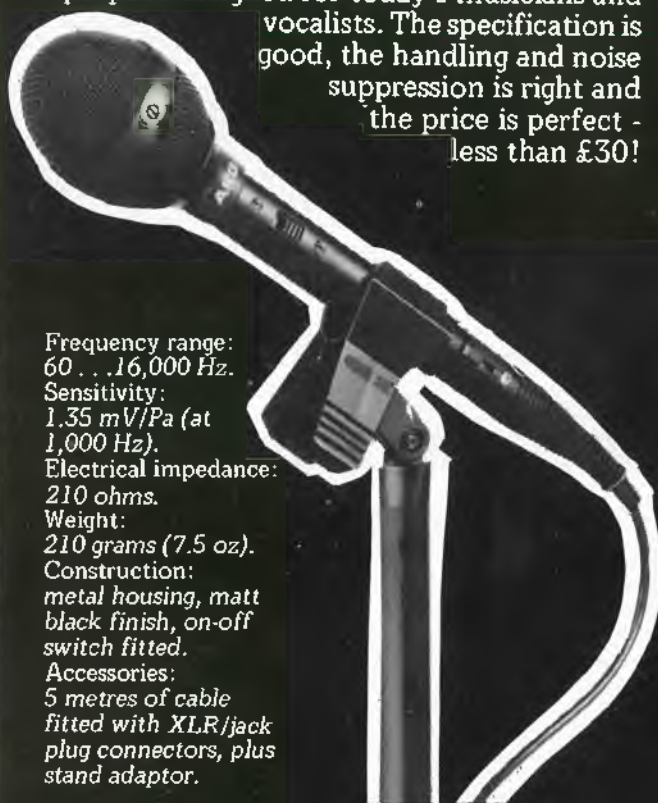
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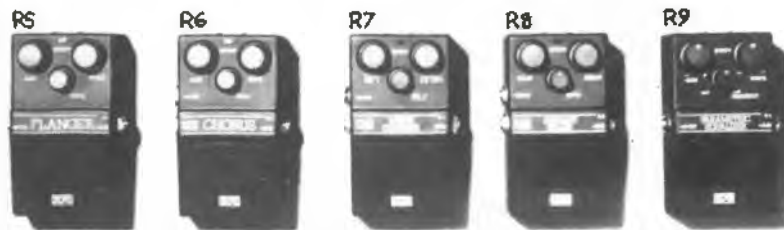
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STUDIO TEST

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A look at conventional tape editing and a new device which should make future editing a lot easier

IT IS A RATHER DIFFERENT topic that concerns us this month — tape editing. For the professional recording engineer, editing of $\frac{1}{4}$ " tape is fact of life, something that has to be done. It is usually mastered (or not) at the tape-op stage between making the coffees and fetching the sandwiches. Initially this will be just cutting masters off a reel of mixes just to separate them from the rejected takes, and this is quite simply just cutting the tape and requires no precision skills other than a basic technique and tidiness. The precision aspects come later when the exact edit points have to be located and cut. This aspect is a skill that may come easily or sometimes not at all.

For the professional, gaining editing experience is easy to come by. For the home recording enthusiast it is not quite so easy. The professional is learning on someone else's tape, while for the semi pro, that reel you are about to cut into tiny pieces represents an investment of maybe £12 — not to be taken lightly.

The courage to cut is an essential part of editing and even in professional circles there is always a risk with every edit and a tension in the engineer's stomach as he listens back to the edit for the first time. Confidence is in the major prerequisite for editing, and this is only acquired through experience.

Tape editing is a valuable skill and could be of great help at all levels of recording. The songwriter can, for instance, change the order of length of his song; new intro's and endings can be tried; that difficult to play or mix passage can be done separately and then cut in, and maybe most commonly all intros can be 'clean' without counts and other noises, as

can be the endings. This can give a professional appearance to your tapes, especially if you are hoping that they are going to work for you by impressing record company people.

Techniques

I hope I have given enough reasons why editing is important, so now to the techniques. I will be covering only $\frac{1}{4}$ " tape editing as this is the most common. One of the major advantages that reel-to-reel recording has over the Teac/Fostex cassette multitrack/mixers etc is that of the editing possibilities. Editing cassettes is, of course, not impossible, but that very thin $\frac{1}{4}$ " tape is so delicate and fiddley that I personally would avoid any attempts to do so like the plague.

The first editing operation to be mastered is splicing. This is the actual cutting operation and joining again of the tape. This used to have to be done with a steady hand and a pair of sharp scissors, although I find this technique hard to recommend for beginners. The success of an edit depends partly on the quality of the splice and the two cut ends of tape must 'butt' properly against each other with no overlap or gap between the ends.

For this reason the angle of cut and the straightness of the cut must match exactly on both ends. You will realise that this is exceedingly difficult with a pair of scissors and for this reason the splicing block was developed.

The splicing or editing block has the function solely of holding the tape in the required position while the cut is made. The average editing block is made from an aluminium or similar alloy and is long enough to hold about 6" of the tape to be cut. Running up the centre of the block is a machined groove of just under $\frac{1}{4}$ ", side walls of the groove that have a slight angle so that the floor of the groove is exactly $\frac{1}{4}$ " from side to side as well as having a slight curve across the width. This grips the tape quite firmly and it may then be cut. It is common for most blocks to have three cutting angles offered in the form of deep slots that run across the tape groove. This would normally be at 90°, 60° and 45° to the line of the tape. The 90° is generally avoided, except for rough edits, as it often makes an audible noise as it runs over the tape heads. The choice between the other two angles is one of trial and error.

I normally use 45° when editing between two similar points in a song while turning to the steeper angle of 60° for the edit of the coloured leader tape to the top of



The CAT shows its teeth

the title. Because of the angle, one channel of the tape will replay fractionally before the other and the beginning of the song, and may cause image shift etc. It is therefore best to keep splices such as these in the larger angles. This effect is much more obvious at 7½ ips than 15 ips.

The cut

Cutting the tape is normally achieved by the use of a single sided razor blade. There was a time a few years ago that these items disappeared from the shops, although they are now in fair supply. The blade is slid along the channel while angled towards the user, and this cuts the tape. The blade must be sharp as otherwise the tape may tear which is fatal. These blades have a fairly limited life and should be replaced frequently.

So that there is easy movement of the blade in the channel, the channel has to be slightly wider than the blade so there is a degree of movement of the blade from side to side in the channel. The secret here is repeatability. Every blade cut you make should be made with the hand at the same angle, preferably upright, otherwise when you come to butt the two ends of the tape, they will not match.

This movement in the channels also causes wear on the block itself, and the life of the block for accurate editing is limited, although this does vary with the block used and the degree of precision required.

Both points in the tape to be cut have to be cut and then laced so that the ends butt up against each other. All these operations so far have to be achieved without touching the recording surface of the tape as the oils from your hands will cause problems. This also applies to the back of the tape around the splice as with too many finger marks, the sticky splicing tape will not adhere properly.

The splicing tape for editing ¼" tape should be 7/32 wide so that it does not quite reach the edges of the tape. This tape must also not be touched on the sticky side or even left with the sticky side open to the air for too long, as again it will not stick properly. This is almost impossible to achieve fully while you try to locate the ¼" of splicing tape over the edit but parallel to the tape edges and then push down firmly.

Finger pressure is not enough to stick the splicing tape really firmly to the tape, so great care has to be taken in removing the tape from the

machined groove so as not to disturb the splice until it has run through the capstan and capstan pinch wheel gap.

So for the simple edit described you need a splicing block, splicing tape and a regular supply of single edge razor blades. This has been the technique of editing for many years. Various automated techniques have been tried and not been very successful until now. If I was to tell you that most of the lengthy description of splicing techniques I have given can now be avoided and still 99% of the edits will be better than you have achieved before, it sounds interesting doesn't it?

Year of the CAT

This is where the CAT takes its bow. The full description of the unit is 'automated precision recording tape splicer', and is a development of the splicers used extensively in the film world. It is a very simple idea but it works very well. I was, at first, very sceptical of the system producing accurate splices having battled with many so-called automatic splicing units in the past.

CAT stands for Collins Automatic Tape-Joiners Ltd, and the unit is very simple, which is the same with most clever ideas. The design centres around a base plate with a hinge running the back edge about which swivel the platform with the tape groove and the splicing tape dispenser. The tape retaining plate is in two halves. To use it, the tape is positioned in the groove on one side of the plate while the other side is raised. You then lower the raised side and a guillotine cutting edge directly under the groove cuts the tape. The procedure is then repeated with tape in the other side, and the other side is lowered to cut the tape. The first cut tape does not have to be removed from the unit to cut the other side, so there is no problem of realignment. When both sides of the platform are lowered the tape in the two halves match exactly. This is really spot-on with no error. The groove holding the tape is fairly shallow but is a very good compromise between holding the tape firmly and still enabling the user to remove the tape from the unit without damaging the tape edges. The platforms are made from an anti-magnetic steel with a soft-brushed finish. The cutting edges are described as self sharpening and they appear to be that, giving a very consistent performance. One thing that the CAT enables you to do is shave very small slithers from the tape — something almost impossible with the standard block. There is no doubt that it is this cutting system that gives this precise join. Other units I have used

have always been based around a moving blade and fundamentally I think that that this type of system is not capable of such good results.

End of story

But what about the joining of the ends? Well here is the next piece of ingenuity. Also hinged around the rear of the base plate is an upper platform with a cassette of splicing tabs already cut to length and on a continuous reel. You just lower the platform over the tape to be joined, press down the dispensing arm and the splicing tab is placed over the join and pressed down. The tab is automatically centred and aligned, although I must say that sometimes the tab was not quite central on the tape between the edges. It never lapped the edges of the tape so it was not of any great importance other than that of neatness. The dispensing cassette holds 350 tabs and it is quite an easy operation to fit a refill.

The construction of the unit is in a tough type of plastic and anti-magnetic steel, and this gives it a relatively light weight of 350gms and dimensions of 2½" deep, 4¼" wide and 3¼" high. It is fairly compact and will fit on some of the more spacious tape decks, although not quite so easily as the standard ¼" editing block. Even with all the platforms raised the unit is still stable and does not fall over.

The edit from a CAT is quicker and generally better than is achieved by the standard techniques. It is also less likely to leave finger marks on the tape. There are no razor blades to stick in your finger when trying to be too hasty: The splicing tape never rolls off down the back of the tape recorder: Splicing tape rolls and blades become a thing of the past (except for sharpening the chinagraph pencils). I am really quite sold on the unit.

The crunch is that the CAT is not very cheap (about the £65 mark), although this has to be balanced against the continuing cost of razor blades, splicing tape and the relatively short life of most splicing blocks etc, and it doesn't appear so bad.

Perhaps the real beauty of the CAT is that it allows absolute beginners to make perfect splices every time, and by removing that worry it allows you to concentrate far more on the artistic aspect of the edit. The CAT is thoroughly recommended for ¼" tape editing (and what's more, it is BRITISH!)

Martin Forrest

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ROSE-MORRIS, CAPITAL KEYBOARD CENTRE, LONDON

PROBLEMS, PROBLEMS. THE NOW near-legendary K-reg orange Cortina that propels yours truly around this beautiful country of ours in search of dealers to feel(!) had a flat tyre. (What you might call a Billy Puncture). A whip round in the office proved fruitless: Our financially embarrassed editor cried "Go West young man", so with not even the price of a pint in my pocket I trudged the rain-sodden streets of London in search of adventure, and found it... just around the corner from Soho.

Now I know what you're thinking, but you're wrong. I was in Shaftesbury Avenue checking out the new 'Capital Keyboard Centre' on the first floor of the already well-established Rose-Morris store.

The Centre was opened by fellow keyboards wizard Neil Carter of UFO in November of last year, and it seemed the time was now right for me to make my unsuspected, and possibly welcome, visit.

As I reached the top of the stairs to the first floor, I was immediately impressed by how well laid-out the shop was. They had managed to succeed

where so many other music shops fail — by getting a lot of equipment in without making the shop look cluttered. Also noticeable was the lack of hundreds of feet of cable across the floor. I'm sure that continually walking into synths and tripping over wires can't really help the salesman wrench the hard-earned sponds from the punter's hand, and it looks as if Rose-Morris agree with me.

A quick glance around the premises told me that there wasn't much in the keyboard world that you couldn't either try or buy here. Korg and Roland dominated the scene with their complete ranges, but the display also offered a liberal sprinkling of 'boards from Casio, Teisco and Hohner. Having also clocked the vast range of accessories available (DDL's, Rhythm units, effects etc) I approached salesman Bernie, the main protagonist in this month's tale...

Fortune has shined my way this month, and as I clutched at the air for



an idea, the word 'Polysynth' and the sum '£1000' rolled easily off the tongue. To complete the fantasy I told him I was an aspiring songwriter who wanted to make this extra investment to complement his Rhodes/Portastudio set up at home. Bernie was in quickly.

"There's really only two to choose from in that price range", he explained, "The Roland Juno 60 and the Korg Polysix." He switched the Juno 60 on and invited me to have a tinkle (they can't touch you for it) leaving me alone for a few mins. When he returned the Arpeggiator was going apeshit, hopefully making it obvious that I didn't really know what was going on. It was then that he began to explain the differences between the Juno and the Polysix.

Initially he blinded me with science. Having told him I once owned 'a little Moog' he started talking DCB's, PMW's HPF's and other assorted letters of the alphabet, possibly overestimating this simple punter's knowledge of electronic keyboards. However, once the sudden rush of blood to his head had passed, his explanations became a lot simpler and we made a bee-line for the Polysix.

I got the impression that he was more familiar with this instrument, a fact which he later admitted, and he seemed to find the sounds more quickly on this than on the Juno. I was expecting company loyalties to creep in — Rose-Morris are the UK distributors for Korg — but Bernie kept an unbiased view throughout, continually pointing out that there were sounds that you couldn't achieve on the Polysix that you could on the Juno, and vice versa. Possibly the more obvious sign of a stronger link with Korg came when Bernie told me if I bought a Polysix and it refused to function, I could take it back if it was still under the year's guarantee, and I would be lent another while mine was being repaired. They hope to extend this service to other keyboards soon, but as it stands it struck me as an excellent deal.

After offering me a good price on both keyboards I asked for the ever-popular leaflets and watched for his face to drop, as is often the case. But no, the face remained intact and he handed over the relevant pieces of paper, and he then went on to mention that I might like to make a return visit to try out a Korg mono/poly which is some £400 cheaper.

As I left the shop I realised what an extensive array of equipment they have generally. Drums by Pearl, Aria and Cappelle, guitars by Gibson, Schecter and Ibanez, and back up on the first floor a full range of amplification.

If you're in the market for a keyboard the Capital Keyboard Centre gets The Punter seal of approval. It's the best service I've had in years. Meanwhile, it's back to the London rain and an orange Cortina for me. Anyone got a tyre-iron?



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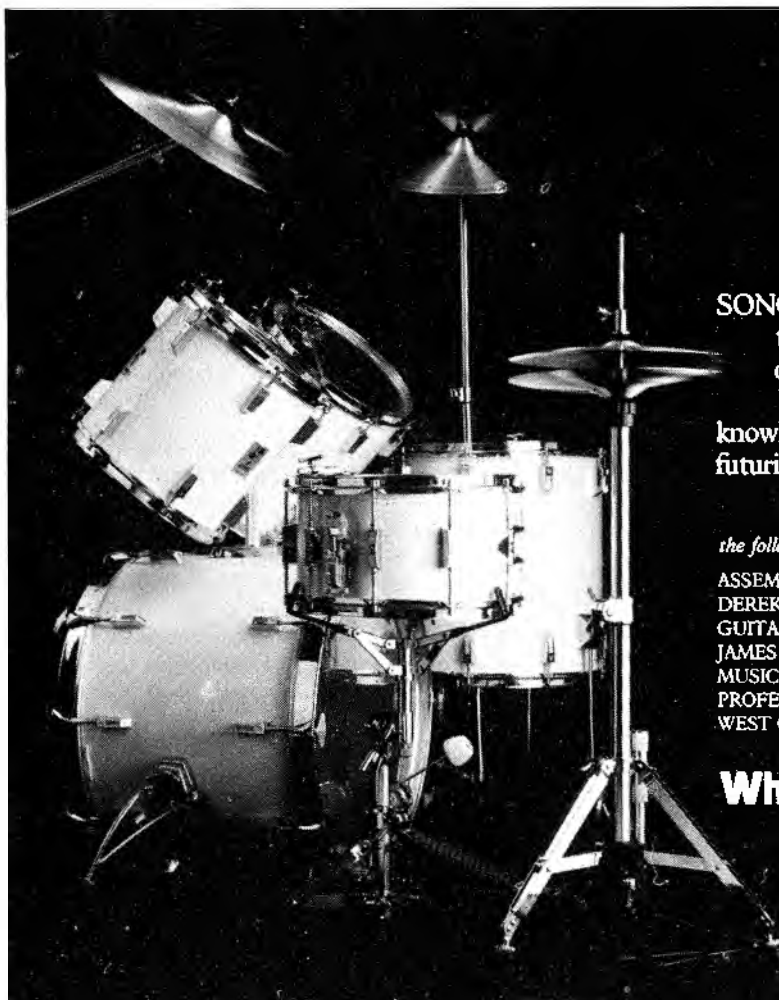
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Richard Allan

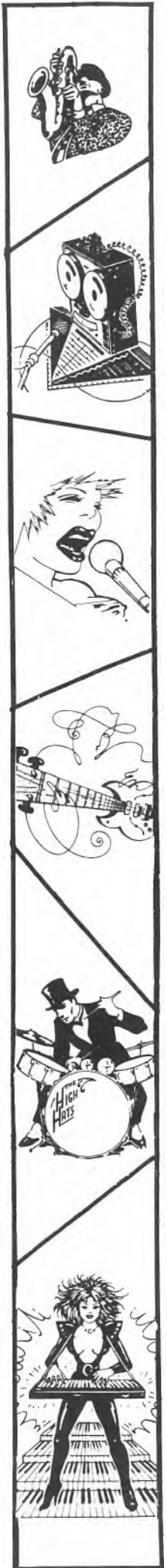
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Beyer Dynamic have developed two new quality microphones to meet increased demand from the amateur recording enthusiast.

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16,000Hz.

Both mikes are supplied with a foldable tripod stand and can also be fastened on to any normal floor stand. Alternatively, they can be used as hand-held microphones.

The M1 will have a recommended retail price of £18 plus VAT, and the M2 £27 plus VAT.



Two budget newbies from Beyer

PAICE MAKERS

In a move that should be a surprise to his fans, Ian Paice, former drummer of Deep Purple and Whitesnake and currently a member of the Gary Moore band, is now

a Pearl endorsee.

Those that have followed the career of the motor-footed one will know that Ian has been a Ludwig man for years.



Ian Paice — a Ludwig man no more

DON DELIVERS

Don Larking Audio Sales now carry a limited range of instruments and recording equipment for studio use only for studios in the London area.

They are offering a daily delivery service to all London areas, and the cost of delivery and collection is included in the hire price. All the equipment listed is in very good condition and can be relied upon to give optimum performance.

Equipment available includes The Emulator available for £100 a day, Roland Jupiter 8 at £50, Roland MC4 at £30, Linn LM1 for £50 and the Lexicon 224 4.4 digital reverb at £80. An operator is also available for these items at a further £40 per day.

Also available for hire is a Trident Trimix desk at £100 a day and Soundcraft 24 track at £200. Complete recording

systems can also be arranged. For further information contact Don Larking on Luton (0582) 450066.

DURACELL GO SILVER

Duracell UK have been awarded a silver cassette by the record industry for sales of their recent Duracell Collection of four cassettes offered as a point of sale promotion to purchasers in 1982.

Presented by Colin Taylor, Managing Director of Pushbike Records, who produce the tapes for Duracell, the award signifies sales of 60,000 cassettes.

David Whiting, Duracell Senior Manager accepted the award on behalf of Duracell from Colin Taylor, with Mark Pavan of IMP who arranged the promotion.

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Roland Teaching Machine

During recent years and months Roland have increasingly shown a strong commitment to education in electronic music and keyboards generally. As technological pioneers they have acknowledged a responsibility to make sure the technology is not only available but understood and used. This has resulted in their successful programme of training seminars for dealers, their excellent series of books on electronic music and most recently the Roland TL-12 Teaching Lab.

The TL-12 is basically a system of mixing, monitoring and communication enabling a single keyboard teacher to give continuous and effective tuition to a class of 12 students (although the system will expand for larger classes). The master switching matrix can be used to select for a group lesson or a personal lesson to any student. Communication buttons enable private dialogues to take place between a single student and the teacher (the system is based on headphones), between a group of students and the teacher, and between all the students and the teacher. A lamp tells students whether or not it is possible for them to speak to the instructor at a given time. Separate switches enable a given student to play to all the rest (for example, in illustration of a point or a technique), a tape recorder, a record player or an external source such as a rhythm box can also be switched in and out as required. The instructor can control volume levels.

The system is available for around £1500 and will probably form the basis for a chain of teaching centres. TL-12 can be used with any instrument with a line out or headphone out.

FENDER HOT SQUAD TOUR

The Fender/Rogers/Rhodes range of musical instruments have recently been showcased in a series of presentations co-sponsored by CBS/Fender and musical instrument dealers in the UK and Benelux. All three lines were demonstrated by top session musicians Tony Beard (drums; Labi Siffre, Kokomo, Morrissey-Mullen), Felix Krish (bass; Mike Oldfield, Kate Bush), Peter Vettese (keyboards; Jethro Tull) and Alan Murphy (guitar; Kate Bush).

"We were lucky to be able to present such fine players who have been lured away from their cosy careers in the studio, or with famous bands, just for this tour", said Marketing and Promotions Manager John Hill. The tour took them to such diverse locations as Glasgow, Eastbourne, Liverpool and Luxembourg.

The tour was hailed as a success by all the dealers involved, and more dates, which will highlight existing and new products from Fender/Rogers/Rhodes, are promised for Spring 1983.



Hot, or what? — The Squad

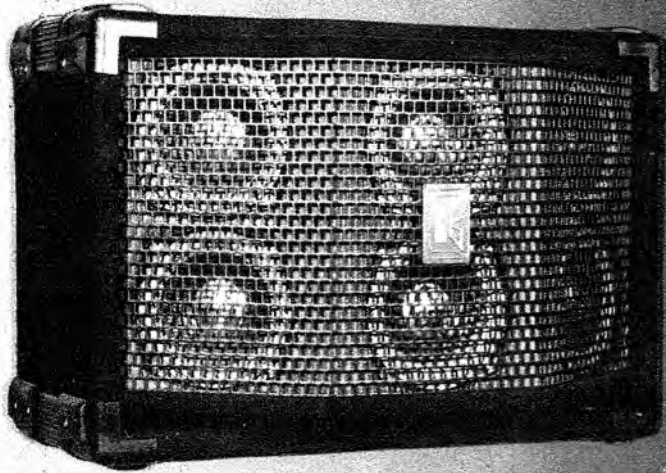
Kinetics move one

Audio Kinetics, manufacturers of Q Lock Time Code Synchronisers and Acoustic Screens, have recently moved their operation to new and larger premises in Borehamwood, Hertfordshire. The move is part of the company expansion programme, and the new building

encompasses R&D Manufacturing, Marketing, as well as providing a permanent demonstration area and housing a new Computer System which will aid general administration and accounts.

They can now be found at Kinetic Centre, Theobald Street, Borehamwood, Herts, WD6 4PJ, Tel: (01) 953 8118.

Furthermore, David Neal has joined Audio Kinetics as Marketing Manager. David was previously with FWO Bauch Ltd, and will be responsible for Advertising, Exhibitions and all other Audio Kinetics Promotional Activities.



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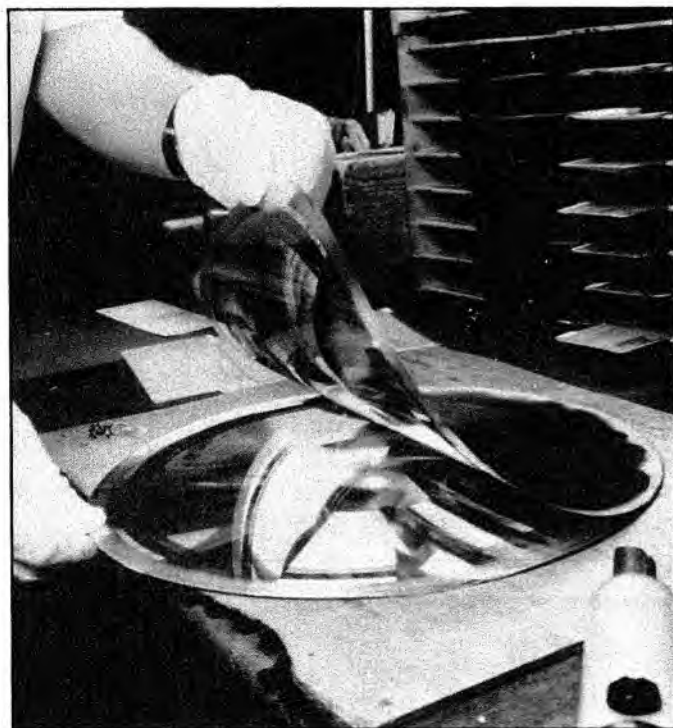
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About the new system Bhaskar Menon, Chairman and Chief Executive EMI Music Worldwide commented, "We are proud to be the first company to offer its artists, and most important, the public, records that even allowing for the high standards already achieved, reach a new peak in terms of quality."

ALL CHANGE FOR PARIS

A change of dates and location for the 10th International Paris Music Fair has been announced.

By request it will now take place in the 30,000 sq mt new exhibition hall — the CNIT — situated a mere 10 minutes from the heart of Paris.

New dates are from April 10 to 17th, and 100,000 visitors are expected. Trade enquiries on (1) 656 5232.

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In time for the Frankfurt Musik Messe 1983, Vox have announced the endorsement of Vox amplifiers by the top band UFO. Famous for using large rigs of amplification on stage, Paul Chapman and Neil Carter tried out the new Vox Climax Combo and decided to change on the spot. Now their new rig will be ten Vox Climax Combos driving twenty extra cabinets

to develop the onstage drive. As Paul Chapman says "The 125's a stormer, and when we next play live, all I want behind me is a complete wall of Vox." UFO begin their massive world tour on January 18 covering Europe, Hong Kong, Bangkok and other exotic countries. Fans in the UK will be able to catch the band at the end of March.



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NEW MOOG MAN

Moog Music Inc is proud to announce the appointment of Harry Diewald as the director of sales in southern Europe. Harry has spent the last six

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He is no newcomer to Moog, having set up most of the present dealer structure in Europe.

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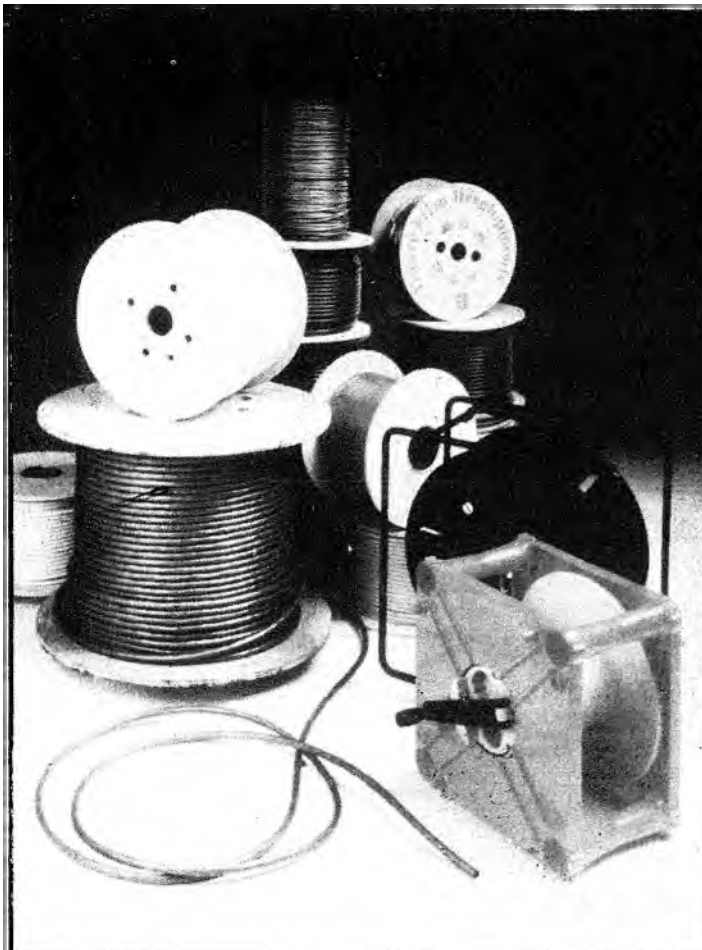
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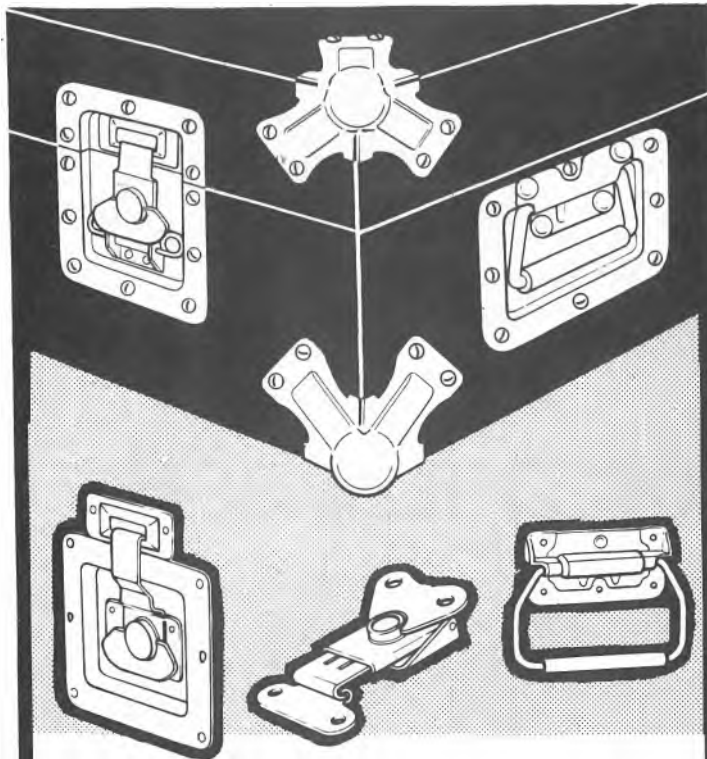
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& Heath, Trident and RSD Studioma-
ster Mixers; Turner, H/H Mos-Fet and Quad
Power amplifiers; Revox tape machines.
Repairs & Services: — Studio alignment
service, spectrum analysis. Specialised
equipment, tape machine and mixer
repairs.
Trade Counter: — Literally everything for
the recording studio, P.A., Rig, and home
musician.
Studio Equipment Hire: — 6T, 4T, 2T and
Portastudios, mixers, mics, stands, head-
phones and drum machines.
For the Pro Studio: — Lexicon, AMS,
Eventide & Publison digitals + har-
monizers. Linn Drum computer; Klark
Teknik Spec. Anal.; Dolby's; APHEX; ADR
Transdynamic; EMS Vocoder; MXR; DBX;
In fact if it's "in Vogue" we'll rent it!

NORFOLK

ALLENS MUSIC,
1 Anglia Square,
Norwich, Norfolk
Tel: (0603) 616098

ALLENS MUSIC
22 Broad Row,
Great Yarmouth, Norfolk.
34 St. Benedict's St., Norwich.
Tel: (0493) 58449
EC. RCN. SYN. G. A. D. S. S/Hnd. MA. RS.
Spec. ERS. EK. K. L. M. RC. SM. PA. CB.

★ DEALER GUIDE ★

Cookes Band Instruments

34 St. Benedicts St, Norwich.
Tel: (0603) 23563
G. A. D. K. S. D. RS. EC. D. IR. SYN. MA.
ERS. GK. G. B. W. PA. M. P. Agents for HH,
MM, Bose Ohm, Citronic, Sound Out,
Premier, Ludwig, Fender, Ibanez, Op-
tikinetics, Tama, Paiste

NORTHAMPTONSHIRE

MUSIC MARKET
15, Market St, Kettering, Northants.
Tel: 0538-518742
G. A. D. S. S/Hnd. E. K. M. P. A. H. L. IR.
RCN. Main agents for: H.H., Aria, Fender,
Carlsbro etc.

SUFFOLK

MORLINGS LTD.
House of Music,
149-151 London Road North,
Lowestoft, Suffolk.
Tel: Lowestoft (0502) 65491-713143
EC. O. IR. SYN. S/Hnd. RS. ERS. K. B. W.
L. H.
Main agents for: Aria, Premier, Kawai,
Hohner, Custom Sound, Carlsbro
AC. SFI. SM. P. SG. Di.

TYNE AND WEAR

MUSIC MAKER
30 Dean Road, Westoe, South Shields
0632 561349
Underneath Beverley Artists Agency.
EC. RCN. O. IR. SYN. G. A. D. S. S/Hnd.
MA. RS. Spec. ERS. EK. K. B. W. L. H. AC.
SFI. M. RC. SM. PA. PSG. D. Main agents
for ATC. Giannini, Custom Sound, Hut-
chinson ATC, HMC, Specialists in Beyer,
Carlsbro, Caneri, Guild, Tama, Ibanez,
Acoustic Gibson, Westbury, Yamaha.

WANSBECK MUSIC
13-15 Gallow Gate,
Newcastle-upon-Tyne
Tel: (0632) 611999

Main agents for: Pearl, Miyazawa (flutes),
Susuki, Raimondo, Miyazawa (guitars),
Mayel, Dolme, Moek (recorders), Boozy &
Hawkes, Takumi, Hammig, Piasiro,
Jargar, Pieroni, Passold (strings).
Also at: 1 Sanderson Arcade, Morpeth,
Northumberland.

SCOTLAND

ABBEY MUSIC
32, Guthrie Port
Arbroath, Tayside
Tel: (0241) 79904
G. A. EK. RS. Spec. EC. RCn. S/Hand.
Rent. HP.
Main agents for: (Guitars) Guild, Gibson,
Fender, Yamaha, Westbury, Washburn,
Ibanez. (Amplification), OHM, Vox, (Mics)
Shure, Ibanez. (Electronic Keyboards)
Tisco, Korg. Every guitar is set up per-
sonally by Terry Wood.

C.C. MUSIC
421-423 Great Western Road, Glasgow G4
Tel: (041) 339 0566
Main agents for Bose, Peavey, H&H, Pro-
Sound, Little Rock, Ohm, Fender, Gibson,
Gordon Smith Guitars. Amp and guitar
repairs. P.A. and instrument hire.

WALES

LIVEWIRE
21A Penylan Road, Roath, Cardiff.
Tel: 0222 496619
EC. Syn. G. A. D. S. S/Hnd. RS. Spec. ERS.
EK. K. M. PA. CB.
Burman, Korg, Sequential Circuits, Iian,
Vamps, Jay Dee, B.C. Rich, Hamer, Deon,
Kramer, Manson, Odyssey, Dynacord,
Trace-Eliot, Carlsbro, Badger, Capelle,
Rindall, Ovation, Pro-amp, Teac, Veillette-
Cliton, Ashley Pan Born. Specialists for
Custom made and unusual guitars &
amplification

SOUNDWAVES MUSIC CENTRE

51 Gwent St.,
Gwmbran, Gwent, Wales
Tel: (06333) 2501
EC. RCn. O. IR. A. D. S. G. S/Hnd. B. W. Ac.
M. SM. CB.
Guitar specialists. Vintage Guitars.
Main agents for: Aria, Burman, Gibson,
Fender.

PETER NOBLE LTD

11 Station Road,
Llanishen, Cardiff
Tel: (0222) 753911
EC. RCn. Syn. G. A. D. S. S/Hnd. RS. ERS.
EK. L. M. RC. PA. Di.
Main agents for: Marshall, Korg, Teac,
Moog, Kudos-Elite, Pearl, Premier, PA
Cabinet specialists.

YORKSHIRE

JIGSAW SOUND CENTRE
2 Station Road,
Ossett, W. Yorks
Tel: (0924) 277981
Fender, Gibson, Vox, Carlsbro, Music-
man, WEM, Custom, Pearl, Rogers, Area
agents for MM equipment.

K.G. SOUND CENTRE
13 New Road, Halifax, Yorkshire.
Tel: (0422) 51333
EC. RCN. G. A. S/Hnd. MA. RS. ERS. L. H.
M. RC. PA. CB. D. Main agents for:
Carlsbro, HH.

KEY FOR DEALER GUIDE

EC	Echo Chamber
RCn	Re-Coning
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	Mics
RC	Reconditioning
SM	Sheet Music
PA	Public Address
PSG	Pedal Steel Guitars
CB	Custom Building
Di	Disco

RING STEVEN
(01) 379 6342
**(Ext. 60) FOR DETAILS OF
YOUR FREE LISTING IN
THE DEALER GUIDE!**

★ STUDIO GUIDE ★

BIRMINGHAM

ZELLA RECORDING STUDIOS
Walker Hall, Ampton Road,
Edgbaston, Birmingham B15 2UJ
Tel: 021-455 0645 24hr answerphone
16T from £15p/h. Cap 35. (Bechstein,
Chappell, Ludwig, Fender, Hammond).
Soundcraft, Neumann, AKG, Klark
Teknik, Tannoy, etc. If. VS. SM. ba.
Separate copy room. R-R. R-C. R-CR. D-T.
DC. (Brochure on request).

F.S.R. STUDIO
29 Bagot St., Birmingham B4
021-359 6587/373 0744
24T £28 p.h. from £160 p.d. inc. VAT plus
block deals. Cap 40, drum. AC elec
pianos, outboard processors 15+30 IPS.
Noise reduction, twin 31 band Equalised
Amcron/Tannoy super red monitoring.
R/C lounge, synths, 12/6 string guitars,
hnd/perc. 48 in line 24 group desk. Out-
board Processors + fx. plus echo reverb
24T noise reduction. 31 band equalised.
Amcron/Tannoy super red copying. R/C
lounge, TV, video games + kitchen. SM.
AR. Pressing, Video.

FAIRMORN STUDIOS
4 Rectory Lane,
Castle Bromwich, Birmingham
Tel: 021-747 3837
8-track with DBX noise reduction, space
echo, Yamaha electric grand piano,
Roland Jupiter 8 synth, acoustic piano,
7-shell Gretsch kit, Hammond organ with
Leslie speaker, Yamaha string machine,
Roland SH09 synth, stereo reverb, digital
sequencer, Roland CR8000 rhythm com-
puter, sound on sound, automatic
double/triple tracking, parametric Eq,
compressor/limiters, phasing, flanging &
other FX, real time cassette duplication,
pro engineers for only £7 p.h.?

THE ASSOCIATION OF PROFESSIONAL RECORDING STUDIOS

AN ASSOCIATION FOR TOP RECORDING STUDIOS
THROUGHOUT THE COUNTRY

**FOR FULL DETAILS CONTACT
Mr E. L. MASEK
23 CHESTNUT AVENUE,
CHORLEYWOOD, HERTS WD3 4HA
TELEPHONE (09237) 77907**

KEY FOR STUDIO GUIDE

T	Track
Cap	Capacity
p/h	per hour
p/d	per day
D	Dolby
If	Transfer facilities
R-R	Reel to reel
St	Number of Studios
CP	Copying
tba	to be advised
Ka	keyboards available
R-C	Reel to Cassette
Mix	Mixing Facilities

R-Cr	Reel to Cartridge
Dc	Disc Cutting
Comp. Mix	Computer Mixing
	Facility
d-t	Disc to tape
Q	Quad
OTC	Overtime charge
M	Mono
S	Stereo
tcf	Fully coated film
vsf	Video Studio
AC	Accommodation
ba	by arrangement
SM	Session Musicians

BRISTOL

CAVE STUDIO
12 Cave Street, Bristol 2.
Tel: (0272) 426409
16T. M79 with autolocate. Amcom & JBL
Monitoring. DBX Noise Reduction. Dolby
A Mastering. Rebis parametric Eq. de-
essers comp. Limiters. If. R.R. R-C. Mix.
M. S. Studio inst. available. Bluthner
Piano. Slingerland Drum Kit. Amps.
Roland string synth. Rates from £12.50
p/h. (Block bookings neg.)

MUSHROOM RECORDING STUDIOS*

18 West Mall, Clifton, Bristol
Tel: 0272 35994/35867
16 T. M79 with Autolocate. Custom Built
Desk. Monitoring Lockwood Cabs. Tannoy
H.P.Ds. 2 E.M.T. Stereo Plates. Urei
Graphics Parametric & Sweep E.Q. &
Comps. by Audio Design. Scamp Rack.
Cooper Time Cube. Harmoniser. Broad-
wood Piano. Synthi.Fender Amps.
Eastlake Drum Cage. Ludwig Drum Kit.
A.M.S. Phaser Flanger. Mikes by
Neumann Electovoice A.K.G.&S.T.C.
Block Bookings (negotiable) Accom-
modation.

BUCKINGHAMSHIRE

ALPHA MUSIC LTD.
49 Garamond Drive,
Winbush, Milton Keynes
Tel: (0908) 566634
24T £15 p/h. After 20 hours discount. D.
Ig. R-R. 1 St. CP. Ia. R-C. d-I. Q. OTC.
Mono. Stereo.

PARKWOOD STUDIOS
Chalfont, St. Giles Bucks.
Tel: 404 5711
8T. £10 p/h. depending on length of stay.
Day rates neg. S. mix drums, AC. BA.
Soundcraft Brennel Mini 8, Revox Master-
ing, Reverb. DGL.

CAMBRIDGE

SPACEWARD RECORDING STUDIOS
The Old School,
High Street,
Streatham, near Ely
Cams CB6 3LD.
Tel: (035 389) 600 (24 hrs.)
24 track from £20/hr, £200 a 14 hr day,
£160 10 hr, £144 8 hr; 16 track 10% off 24T
rates. VAT extra. Spacious air-
conditioned studio. Member of Associa-
tion of Professional Recording Studios.
Engineer, tape, Yamaha grand, CS80
polysynth, Moog, Solina strings, Gretsch
kit, Fender Precision, acoustic & Stral,
backline, Roland Drumatix & bassline in-
cluded. JBL/Amcron monitoring. Studer
A80. Dolby A. 32-channel microprocessor
desk. Eventide Harmonizers, Flanger,
Audio & Design Vocal Stressers, gates,
compressors, filters, AMS digital reverb.
Neumann, AKG, Beyer, Amcron, EV,
Calrec etc mics. Accommodation & video
available.

CHESHIRE

CAVALIER SOUND RECORDING STUDIO
280 Wellington Rd. South
Stockport, Cheshire
Tel: 061-480 607/3061-483 7294

★ STUDIO GUIDE ★

(Ask for Lol Cooper)
16T £12.50 p/h, DBX, R-R, Ka, R-C, Mix DC, S. SM. EMT. Gold Foil Reverb. Audio + Design Compressor. Drawmer stereo multi tracker. Chappell acc. piano. Various guitars + Bass. Thomas V.L. 3A organ with 122 Leslie + strings. Tascam 16/T, Tascam 2T. Master. Turner H.H. amps. Tannoy monitor. H.H. Backline. MXR. Flanger MXR. Graphics. Roland SDE 2000 Echo. Roland SPE 2000. Digital Delay. AKG/Shure/Caltrack/Electro Voice/Sennheiser mikes. Friendly relaxing atmosphere.

LIVE SOUNDS
Tethers End Zan Drive Wheelock Sanbach
Cheshire CW11 0Q9
Sandbach (09367) 2857/3618
8T £9 p.h. + VAT. 10 hr £70. Longer bookings negotiable. Soundcraft 16/8. Alice 8/2/8 Tascam 80-8. Revox HS B77 DBX on all machines. Nakamichi cass. Rebs rack, noise gates, De-ess, limiters, compressors, reverb, Yamaha ADL. Graphic EQ, 2-2, CP, real time and first copying Acba, Smba. 8T facilities fully mobile.

SWALLOW STUDIOS
Congleton Rd., Smallwood, Nr Sandbach, Cheshire.
Tel: Smallwood (04775) 201
8T studio. 450 sq ft. Live/inter/dead areas, drum/vocals booth. Comfortable lounge, in converted 19th barn in pleasant rural Cheshire. From £8 p/h. Weekly neg. 16/8 studio master, Teac 80-8 with DBX, Revox. 877HS with DBX. Teac C3X. Tannoy and Auratone monitoring. GBS reverb. Teac. Graphic EQ, noise gating, DL, Lexicon PCM41. Digital delay processor, MXR comp/Lim, DBS reverb. Teac. graphic eq. dl, ff, R-C, R-R. Piano, K-ba. Mix. Smba. ACba. Video ba. Mics AKG, Beyer, Sennheiser, Shure

DEVON

BLAZE RECORDING STUDIO
Castle Chambers, Higher
Union St., Torquay, Devon
Tel: (0803) 38543/28288
8T £10 p/h. £65 per 8hr. day + VAT + Tee. 10 cap. D. R-R. Ka. D.T. SM. CP. Free hotel (licensed) accommodation available.

ESSEX

VILLAGE SOUND STUDIOS
(Formerly Pussycat Essex Studios)
72, High Street,
Inglestone, Essex.
Tel: (02775) 4589 (Daytime)
or (0245) 420014 (other times)
Tascam 80-9. 8T with D.B.X. 16-8-2 Desk. Roland Echo. AKG. Shure Mics. Rates from £6.50 p/h + VAT. Trade Hire. Special rates for block bookings. Also available — Rehearsal studio £3.50 p/h. Restaurant and large car park.

GLOUCESTERSHIRE

WINDRUSH RECORDING STUDIO
High St., Bourton on the Water.
Tel: 0451 20172.
41 6 cap £5.50 p/h, £35 p/d 8 hrs. DBX ff R-C. R-R. D.I. CP. Kabd Studiomasler 16 + 04 OTC after 10hrs £7.50 p/h. MS Acbd smbd.

MILLSTREAM RECORDING STUDIO
Vernon Place,
Gloucestershire
Tel: (0242) 43243
16T. Cap. 8. Rates: £15 p/h, £150 p/d (10 hrs). All rates negotiable. Mix. CP. S. ACba. Stereo D. 1 St. ff. R-R. d.I. Smba. Eventide DDL Harmonizer, Scamp Effects, Air Conditioned, Bechstein Piano.

HAMPSHIRE

TOUCAN RECORDING STUDIOS
Finchwood Farm,
Copse Lane
Haylins Island, Hampshire
Tel: 07016 67734
8T Cap £6 p/h. No OTC ff. RC. XO.
ACBA.MS. SM. Complete backline free.

HEREFORD

CHAPEL LANE STUDIO
Hampton Bishop, Hereford
Tel: Holme Lacy (043 273) 430/437
16T and 24T daily rate negotiable. Cap. 60. Yamaha CS80 Steinbech Grand. Mics AKG, Beyer, Neumann, Sennheiser. Amek mixing console 28 into 24. Lyres 24T Studer Master. Ancillary gear — Revox A77, Sony, Tannoy Super Red Speakers, Emt Auricon Stereo Plate. Any other equip. avail. for hire. AC ba.

LEICESTERSHIRE

**Q. STUDIOS *
VIDEO & GRAPHICS
COMPLEX**
Queenborough Ind. Estate,
Queenborough, Leicestershire
Tel: 0533 608194/608813
24T £20 p/h 16T £15 p/h. Discounts for bookings over 10 hrs. DBX + Dolby. Cassette duplication. 28 into 24 desk. Harmonisor. Aural exciter. Flanger De Eссор compressors, expanders, time delay, EMT Reverb. Yamaha piano, Fender Rhodes, ARP, OMNOC, Mellotron, Neumann & AKG mics. Airconditioning resident arranged. Jingles & commercials broadcast standard. Video production.

LIVERPOOL

CORNDON HOUSE STUDIOS
7, Cearns Road,
Oxton, Birkenhead
Tel: (051) 6253258
16T £11 p/h. Discounts for 9 hrs. or more. Tascam model 15/85-16, Otari MK5050B. Nakamichi Cass. Monitoring Quad Rogers full range of effects & ancillaries. Free use of Piano, Drums, Synths, etc. AC. ba. SM.

LONDON

AOSIS RECORDING STUDIO
10a Belmont Street,
London NW1
Tel: (01) 267 4680
24T fully professional recording studio. Large space, friendly atmosphere, video, television, phoenix etc. Synths, Drums, Pianos, Effects. Phone for details of special package deals (01) 267 4680. Our low rates and high quality will amuse you!

BASING ST. ISLAND MOBILE STUDIOS
8-10 Basing St., London W11 *
01-229 1228
Studio manager: Doug Hopkins
Studio One: Size 60' x 40' x 25' high. Capacity 80 musicians. Console: Neve 8108 with Necam automation and custom modifications. Tape machines: 24/16 track 3M. 2 track Studer A80. Lyrec 24 track. Monitors: Urei 815's. Alternatives available. Atteci/JBL/Tannoy. Microphones: AKG, Neumann, Beyer, Sennheiser. Multitrack digital recording facilities also available. Video playback facility U-matic with G-lock sync facility to multi-track.
STUDIO TWO
Size: 30' x 20' x 10' high. Capacity: 20 musicians. Console: MCI 542C 42 in/24 out with automation. Tape machines: 24/16 track 3M. 2 track Studer A80. Monitors: UREI 813's. Alternatives available. Atteci, JBL, Tannoy. Microphones: AKG, Neumann, Beyer, Sennheiser. Instruments available for both studios: Steinway Grand Piano, Hammond C3 organ with Leslie Electric Piano. Selection of outboard equipment for both studios.

ISLAND MOBILE
Console: Helios — 62 inputs 62 outputs — 24 monitors. Tape machines: 2 x M79 24 track/2 Studer B62 2 track. Automation/Synchronisation: Maglink or Q Lock. Monitoring: Attec. Microphones: AKG, Neumann, Beyer, Sennheiser. Other facilities: Video.

B.T.W. RECORDING STUDIO *
125 Myddleton Road, Wood Green,
London N22
01-899 6655/449 6110
8T at £12 p/h, £10 p/h. block booking. ff. R-R. Ka. dt. M. s. sm. dbx noise reduction. Alice 12-48 desk. Tannoy and Auratone monitors. MXR digital delay.

GARDEN STUDIOS
10a Dryden St.,
Coven Garden WC2.
Tel: 01-836 2221
Studio 1: 27' x 21' NOW OPEN. Studio 2: 27' x 15'. 1000w P.A. New 7 piece Tama kit with Ludwig snare, Roland J.C. 160. H-H 250w bass amp. Peavey 2 x 15 bass bin. Ka. E.V. + Shure mics. Ring for prices.

R.G. JONES RECORDING STUDIOS *
Beulah Road, Wimbledon.
London SW19 3SB.
Tel: 01-540 9881. Telex: 881 4917
Answerback R. Jones
Solid State SL4000E Console with Master Studio Computer and Total Recall Computer. Studer Tape Machines. Eastlake Control Room and Monitoring with JBL and TAD Drivers. Studio: 90 square metres with three isolation booths. Steinway Model B Grand. Instrument Hires arranged. Mics: Neumann, AKG, Calrec, Beyer, Schoeps, Electro Voice, Shure, STC and PZM. Rates: £50.00 per hour (no over-hm).

KONK RECORDING STUDIO *
84-86 Tottenham Lane, London N8 7EE.
01-340 7873/340 4757
24T. Cap. 35. £40 p/h. (Discounts by arrangement). D. ff. R-R. 1st. Vocal + Piano booths. Ka-Hammond + Leslie. Yamaha Grand. Percussion. ARP Synth available with studio. Mix. Comp-Mix extra £10 p/h. O. OTC £6. MS. Monitors JBL tannoy. Smba.



TIN PAN ALLEY
22 Denmark Street, WC2
Tel: (01) 379 6266; (01) 274 0714
16 TR 2' fully professional top quality equipment. Midas, 3M, Dolby, Studer, Neuman, AKG, Electrovoice, Eventide, EMT, DBX, Klark Teknik full backing, Gretsch/Ludwig Kit, Bluthner Grand, guitars & synths. All this with friendly, creative atmosphere at £14 per hour. Reductions on 8 hours plus. Big rehearsal rooms at £3.50 p/h.

WAVE STUDIOS
1 Hoxton Square,
London N1
Tel: (01) 729 2476/2440
STUDIO 1—
24T. Soundcraft 2400 Series Desk. Comp Mix 3m 24T, 3M + Studer 2T. Cap. 15. 8' Steinway Grand Piano. 2T Dolby Rodgers Kit. ff. R-R. R-C. Smba. Kaba. Block booking rates negotiable. Normal rates: £20 p/h.
STUDIO 2—
16T. Soundcraft Series 2 Mixer. Ampex 16T. Studer 2T. Cap. 15. 6.6" lbach Grand Piano. 2T Dolby Rodgers Kit. ff. R-R. R-C. Smba. Kaba. Block booking rates negotiable. Normal rates: £10 p/h.

MANCHESTER

BIRCH LANE STUDIOS
Birch Lane, Dunkinfield
Tel: (061) 368 2234
16T. £70 p/d (11hrs) £7.50 p/h. 8T £40 p/d (11hrs) £5 p/h. Open 7 days a week. Free use of drums, amps etc. R-R. R-C. CP. DBX. Mix.

PLUTO STUDIO
36 Granby Row, Manchester
Tel: (061) 228 2022
24T £40 p/h (per day negotiable). D. ff. R-R. R-C. R-Cr. Lyrec 24T. Trident series 80 30/24 desk. Studer stereo.

MIDDLESEX

LANE STUDIOS
87 Deans Lane, Edgware, Middx.
Tel: 01-959 8466
8T £5 per hour. £35 per day. 4T £4 per hour. £25 per day. CAP 8 T.F. R-R. R-C. CP. M.S. S.M. (TBA) (Guitars, Amps, Cabs available no ex. charge). Mobile unit available same rates.

MAGRITTE MUSIC SOUNDS
15 Holloway Lane, Harmondsworth, West
Oxorton, Middlesex.
01-897 9670
24/16 tracks. TRIDENT/EASTLAKE. £35 p/h. £350 p/d inc full acc. Comprehensive range of aux. equip. Every possible facility & more. All rates negotiable.

NOTTINGHAMSHIRE

SIN CITY STUDIOS (NOHPONEX LTD) *
22A Forest Rd. West
Nottingham NG7 4EQ
Tel: 0602 784714
16T £16 p/h, £116 p/d (8 hours). Further discounts for longer periods. 4T also available. Cap 35. ff. CP. R-R. R-C. d-T. M. S. DBX. Ka. AC. SM. DC. ba. Various instruments and amplification available or by arrangement. New Professional Recording Equipment with many Accessories and Effects. New spacious, expertly designed studio premises. Snack bar and Recreation room, lounge, Showers, Car Park etc

YEU TREE FARM STUDIO
Sutton-Com-Beckingham,
Nr. Newark, Notts.
Tel: 063684-582
24T 3M. M79. Raindirk desk 28 into 24. 56 lines on mix down, JBL Monitors, digital delay, ADT, Flanging Phasing, Compressor Limiters, reverb etc. Neuman, AKG, Shure mics. Free use of Hammond Leslie, Wurliizer keyboards, Sonor drums, Fender, Gibson guitars, Music Man, AC30 amps. Large control room and studio, relaxed country atmosphere, rates negotiable.

ABINGTON PARK STUDIOS
17 St Matthews Parade
Kingsley
Northampton NN2 7HF
Tel: (0604) 715757
24T M79 with Autolocate, M.C.I. & Revox Stereos. Raindirk 28 input in line console. Tannoy & Auratone Monitors. Crown/Quad amps, graphics, Rebs rack, Eventide Harmonizer. DBX Comp/Limiters. Ursa Major Space Station. Master Room reverb, etc. Neumann/AKG/Beyer/Shure/Sennheiser mics. Free use of Bechstein Grand. Polymoog synthesiser Lowrey organ and various guitars. Relaxation room with Pool table, dartboard and video. Studio and control room areas are air conditioned. R-R. R-C. CP. d-I. Ka. Smba. ACba. Ratecard on application.

SCOTLAND

CRAIGHALL RECORDING STUDIOS
68, Craighall Rd.,
Edinburgh, EH6 4RL.
Tel. 031 552 3685
16 track. Cap 25. £25 p/h. 2 track £19 p/h D. 7/S. KA. R.C. Mix. DC. DT. M.S. AC. SM. 8 track self-contained mobile unit £200 p/d + expenses.

PALLADIUM STUDIOS
Edinburgh. 031-440 1089.
24T £12 p/h. Jupiter 8 & Linn Drum. Yamaha CP70 & Steinway Pianos. Rhodes 88. Drums. Percussion etc. Accommodation. Pool room. This is a master quality studio with every facility.

SURREY

CHESTNUT STUDIOS
Wishanger Lane, Churt, Farnham, Surrey.
Tel: 0252 726299/025125 4253
16/8T. 15 Cap. 16T. £12 p/h. or £90 p/d. Urban stereo Soundcraft 800 series desk 24-16 Tannoy Quad Monitoring — good range of effects inc. Digital Delay. Bechstein grand. Yamaha CP30 Elec Pno. Neumann, AKG, Shure mics.

★ STUDIO GUIDE ★

JACOB'S
Ridgeway House, Runwick Lane,
Farnham, Surrey.
0252 715546
2x24 track studios. Studio 1 p5h £30 p/d
£240. Studio 2 p/h £20 p/d £160. TF, RR,
CP, KA, R.C. Mix. Comp. Mix. D.T. M.S.
AC. SM. Separate live room & 24 track
mobile unit.

WICKHAM STUDIOS
(Croydon)
121 Caterbury Road,
Croydon, Surrey
Tel: (01) 683 1470
24T Cap. 10 Digital £20-24 p/h. Pd. R-R.
1st. CP. ka. R.C. Mix. d-t. M. S. SM.
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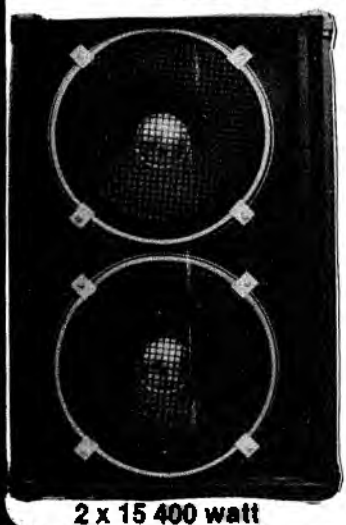
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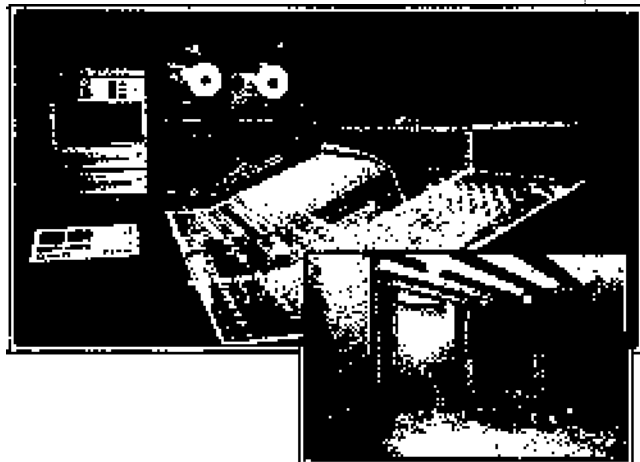


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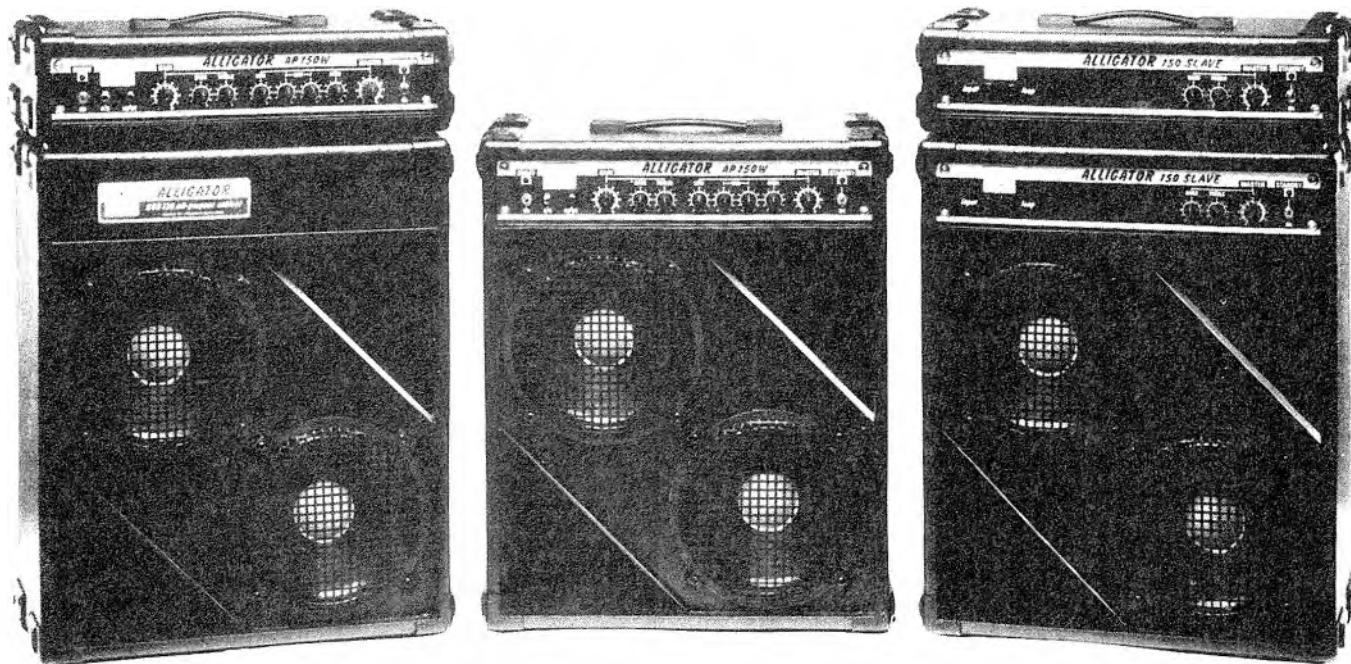
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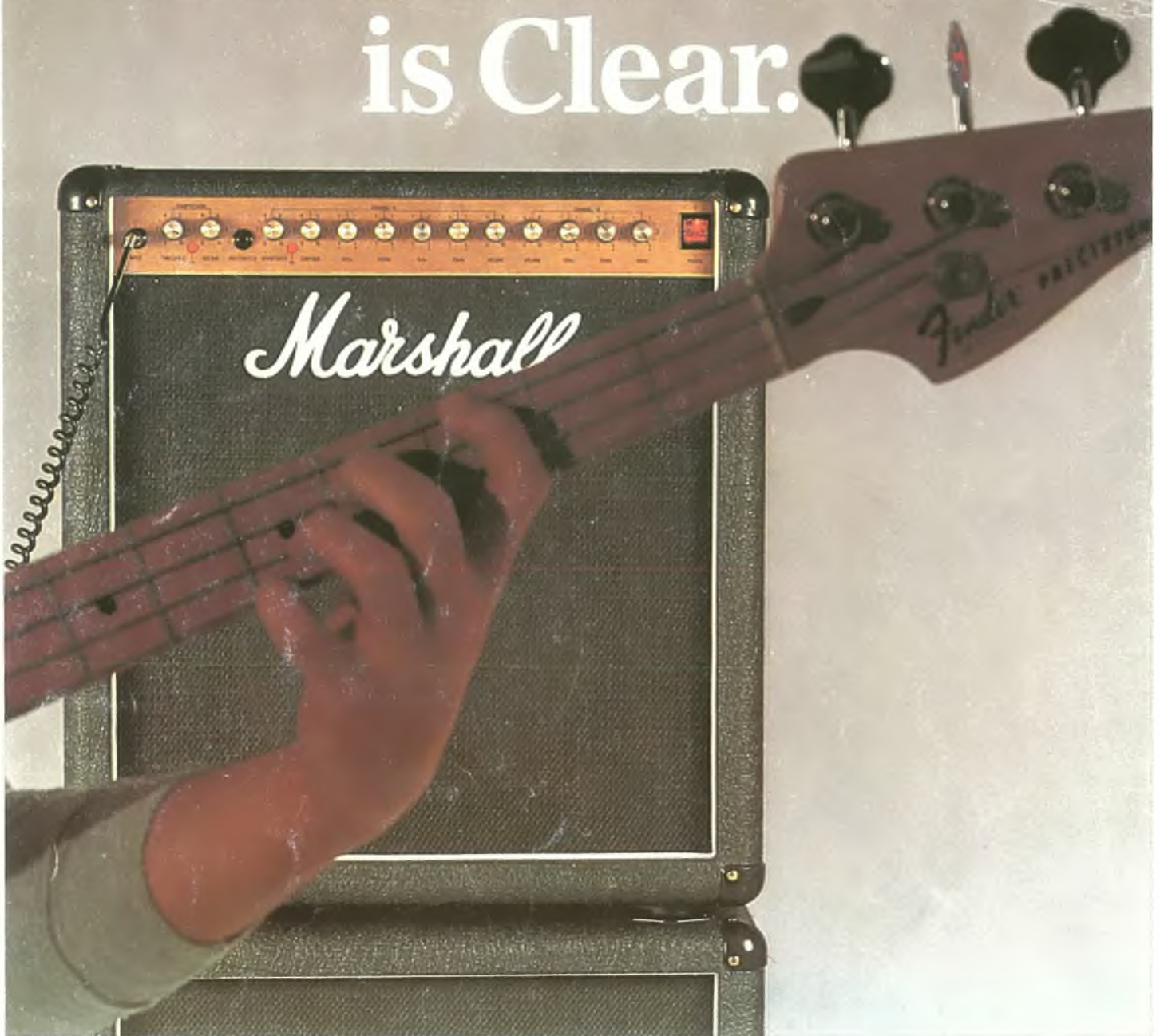
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Low 50Hz + 12dB
Mid 1kHz + 12dB
High 5kHz + 12dB
Master volume linked with gain control for producing clean sounds, distortion, fuzz effect etc.
Lead/Bass switch selects sound to suit instruments.
Use "Lead" for guitar, organ, synth's.
D.I. output socket.
Size 17" x 17" x 10" Weight 40lbs.
Cover includes zipped pocket for leads etc.



ALLIGATOR AMPLIFICATION LTD
LONDON ENGLAND

The Difference is Clear.



Marshall Transistorised Bass Combo's. Clear-cut distinction.



5520. 150 Watt Transistorised Combo
200 Watts with external speaker.



5501. 12 Watt Transistorised Combo
with auxiliary headphone socket.



5506. 60 Watt Transistorised Combo
with four band graphic EQ.

It must be *Marshall.*

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