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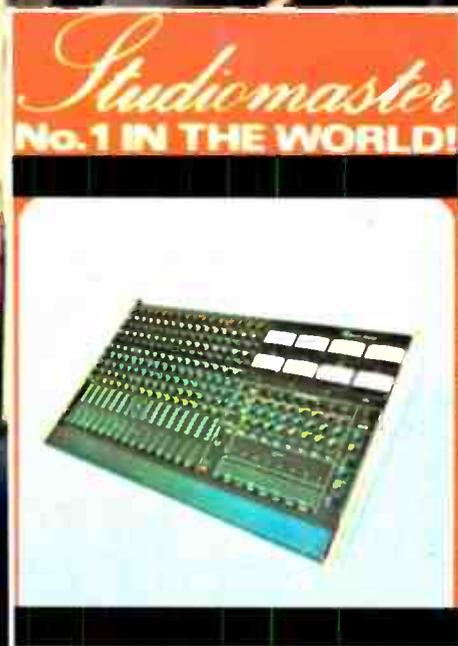
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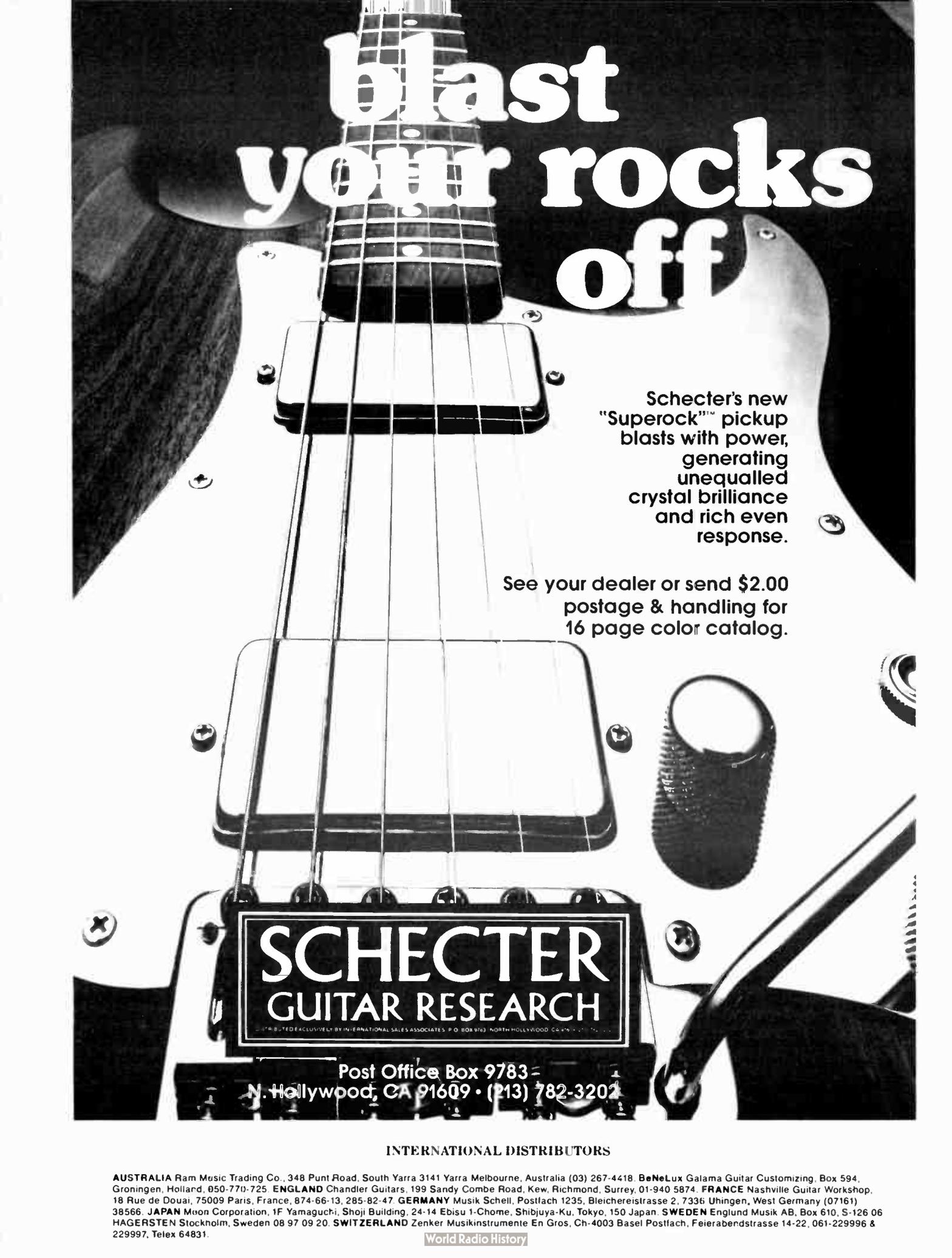
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IMRW/USA has demonstrated a constant ability to change and evolve right along with the technological revolution currently manifesting itself in the related fields of Musical Instruments, Recording (Pro, Semi-Pro and Home Recording), Video and Live Sound. In keeping with this, we will be knocking off our supplemental "Recording World" coverage with special supplements on Digital Recording and High Performance Records. These will not only deal with the

professional applications for this highly sophisticated equipment, but exactly how they affect you — the potential consumer — in terms of hardware and software. Also, due to numerous requests from individual musicians, we will also be debuting in the October issue a Classified Section covering all aspects of the contemporary scene — Details pertinent to this section can be found below.

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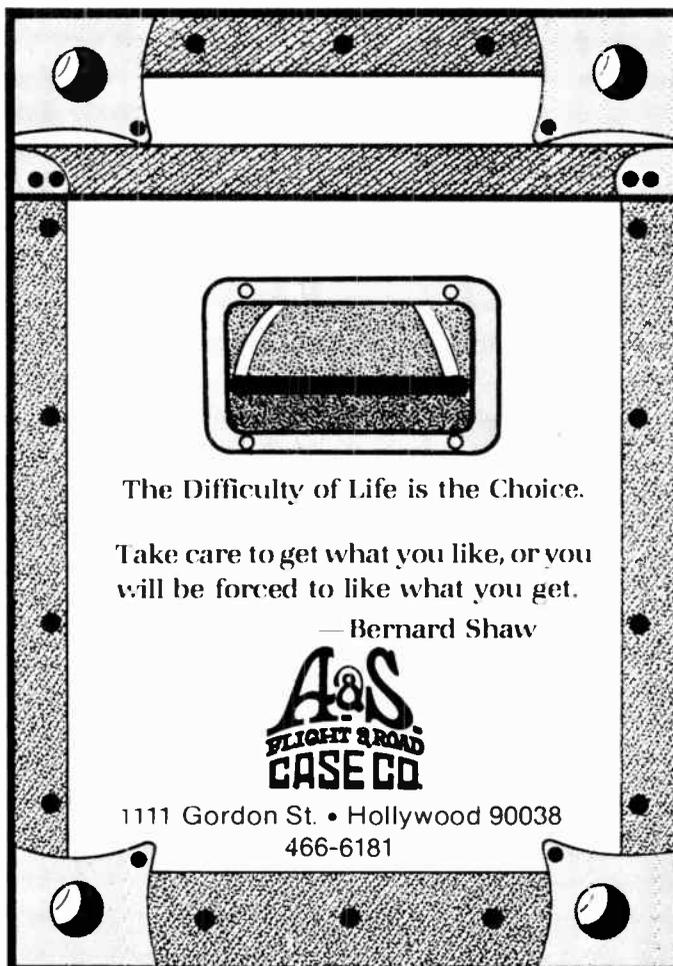
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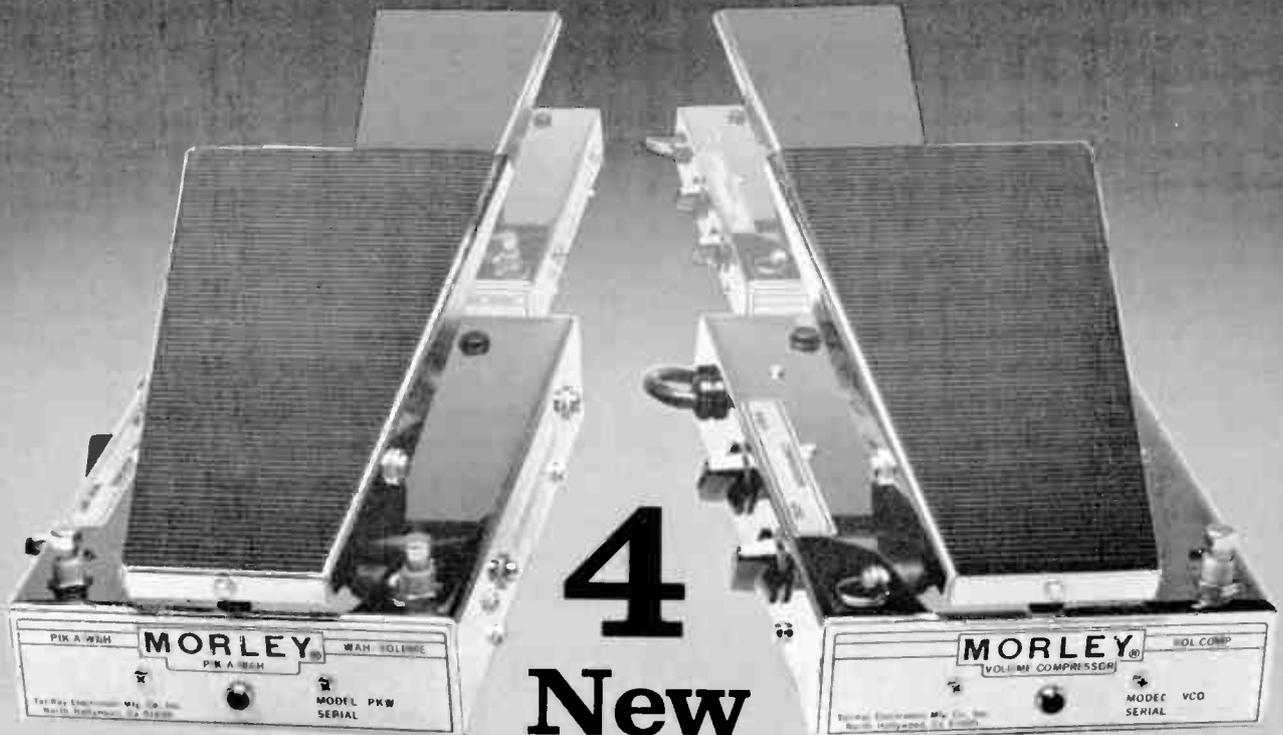


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Letters

Mac fans?

I would like to compliment the writers of this magazine who do an extremely good job. The articles I've read concerning top rock bands were put together nicely. I would like to ask a favor of you. Over the past several weeks, I've had well over 100 professional musicians suggest to me the possibility of an article on Fleetwood Mac in your magazine. We are all fans of Fleetwood Mac and are captured by



the energy in their music. Even though quite a number of us are in to different types of music which Fleetwood Mac would not be associated with, we still would love and appreciate an article written about them. Let's see Fleetwood Mac in the near future. Thank you very much.

Jon Re

Thanks for the compliments and the suggestion (are you sure that was 100 professional musicians...?). This letter points out a problem that more and more magazines without the power and circulation of a Rolling Stone or People have been having lately — simply getting interviews with major bands or star performers. Besides Fleetwood Mac, who've turned down repeated requests for interviews, there is a long list of musicians including Bruce Springsteen, The Eagles, Jackson Browne, Tom Petty, Bob Seger and too many others who — often its

not their decision but one made by a manager or publicist who's hungry for saturation coverage — we simply are not allowed to interview. We fully intend to keep trying for interviews with your favorite bands, but subtle pressure from readers like yourself (write to the management or booking agent) could definitely help us along. — Editor.



Mesa Boogie

In my copy of your June '80 issue you list in the Table of Contents that on page 118 there's an article on the Mesa Boogie amp. On my page 118 there is an ad for Syndrum. I am very interested in this article and wonder if this article will be printed next month or could I obtain a copy of the article with pictures. I think that many people would like an in-depth article on Mesa-boogie. Lest I forget, you folks have a wonderfully informative magazine and I appreciate you including the prices of the things you review.

Luke Pennington,
Michigan

Rest assured that it wasn't only your issue that had this problem. The Mesa Boogie piece had to be bumped from the June issue at the last moment and you should be able to pick it up in this very issue. Thanks for noticing. — Editor.

Taken aback

I was somewhat taken aback by a comment in one of the interviews in *International Musi-*

cian. The interview itself, one with Cozy Powell, was fairly honest in its presentation of Powell's career as a professional musician. The comment was one concerning Powell's present band, Rainbow. Certainly, I can appreciate the fact that Ritchie Blackmore's accomplishments with Deep Purple

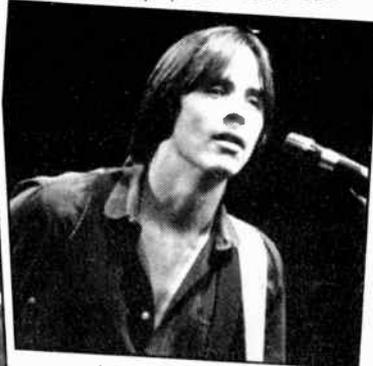


ple were immense and a rather difficult act to top. This may be part of the interviewer's reason for denouncing Rainbow. The unacceptable comment, however, was the one describing his style as "A mediocre blend of Beck and Jimmy Page". While I respect the abilities and talents of these musicians, I find that it is rather an unfair way to describe a musician, in terms of his contemporaries. What bothers me even more is the fact that Blackmore's playing, a style based somewhat in the blues, would be so viciously evaluated as being a blend of two musicians who were broken from the same mold, i.e. the Yardbirds. In saying this I do not mean to express criticism of Messrs Beck and Page, I merely want to express my rejection of this evaluation of Mr Blackmore's style.

To add a comment, while Rainbow has not met with the commercial success that befell Deep Purple, the music that has resulted from this lineup of musical talent seems to be one style that fuses some of the best features of hard rock, classical music and mysticism in the lyrics. The final product

has certainly kept me interested in what Mr Blackmore will do next. Thank you for taking the time to read this.

May I also add that your magazine is one of the few music periodicals that one in the field of popular music can

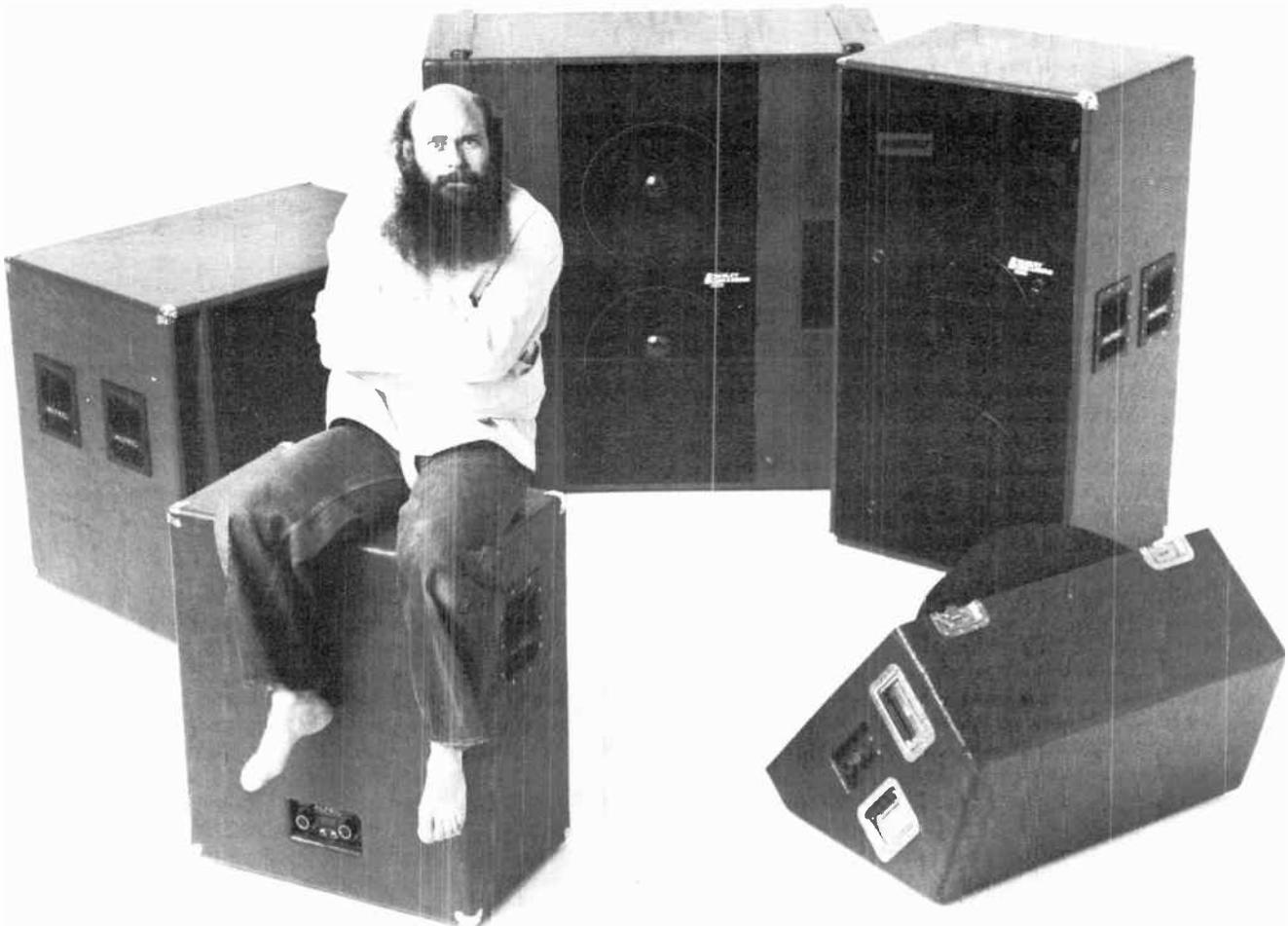


take seriously. The lack of sensationalism in articles and other critical, unbiased evaluation is surprisingly refreshing.

Peter C. Van Nostrand

Thank you Mr Van Nostrand for your praise and a very reasoned response to what can often be a totally irrational situation. Without defending Harry George, one of our UK freelancers, a few points: Although Blackmore undoubtedly can count the blues as a partial influence, he is and always has been essentially a rock & roller. You are correct in pointing out that Blackmore's style was not really from the Yardbirds "mold" — he actually followed Beck and Page by a few years chronologically — but we fail to see the harm in being stylistically linked with two of the better British guitarists of the Sixties. Describing a musician in terms of his contemporaries can often be unfair, but sometimes its the only way to give other readers a frame of reference. The word you're objecting to in this instance is "mediocre", admittedly a value judgement, but one the writer is entitled to make and one you are just as entitled to disagree with. — Editor.

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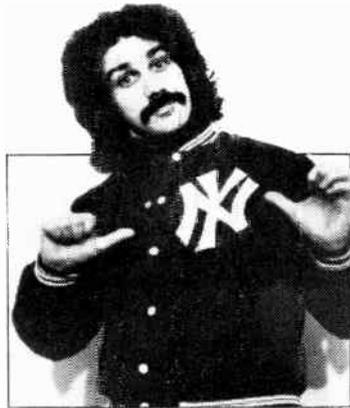
On Guitar:

Steve Khan

First, let's get one thing out of the way, Pat is a good friend, and I unashamedly adore and admire him and his work. Along with George Benson, he is one of the last players to have paid those invaluable organ trio dues in full and truly distinguish himself as a unique composer and voice on his instrument. The solo we're going to look at comes from his second album as a leader for the now defunct Prestige label; the album was *Strings* (PR 7547), and was recorded in September, 1967 and, though long since out of print, if you do some serious hunting, you just might be able to find it. Anyway, we're going to do quite a detailed analysis of this solo, but — remember this — in the greater scope of things, all that I'm about to say is essentially meaningless because what stands on record of this improvisation is one moment in time. Pat sat down and played, and, on this particular take, this is what came out. He was not thinking about any of the stuff I'm about to say; though his great knowledge and training obviously contributed to the seemingly endless flow of his spontaneous creativity. So, with that in mind, we'll proceed.

Before we look at the specifics of the solo, we'll take a look at what Martino's playing on top of. Basically, it's a simple one-chord vamp with a very strong quarter note pulse driven home by the cowbell on the record. Now, if we're to look at this harmonically, we have an extended A⁷ vamp — looking at this in terms of the root this would modally bring us to the A mixolydian mode (A, B, C sharp, D, E, F sharp, G). So, at its simplest, these are the given conditions.

I remember when I was at U.C.L.A. and I used to play this tune for a lot of my friends who were hard-core rock & roll or R&B fans. Without exception, they'd always



Steve Khan has recorded three solo albums — "Tightrope," "The Blue Man" and "Arrows." He is also the author of "The Wes Montgomery Guitar Folio" and has worked as a session musician for such noted people as Billy Joel, James Brown, Phoebe Snow, Dexter Gordon, the Brecker Brothers and Steely Dan, to name but a few.

describe the guitar solo as very "jazzy" even though it was being played over a repeated groove with a strong pulse. The sound of the guitar notwithstanding, I couldn't see why they couldn't relate to this, since guitarists like Eric Clapton, Mike Bloomfield, Jimi Hendrix, Carlos Santana and others were experimenting with improvising over vamps which yielded modes. So, I was led to ask myself what makes this sound so jazzy? For me, the answer lies in two words — *Modal chromaticism*. While some of the other players mentioned played with the modes, they usually just used the scale tones and blues nuances. What separates Pat from them, is his usage of the modes — with the insertion of some very specific chromatic passing tones and upper and lower neighbors.

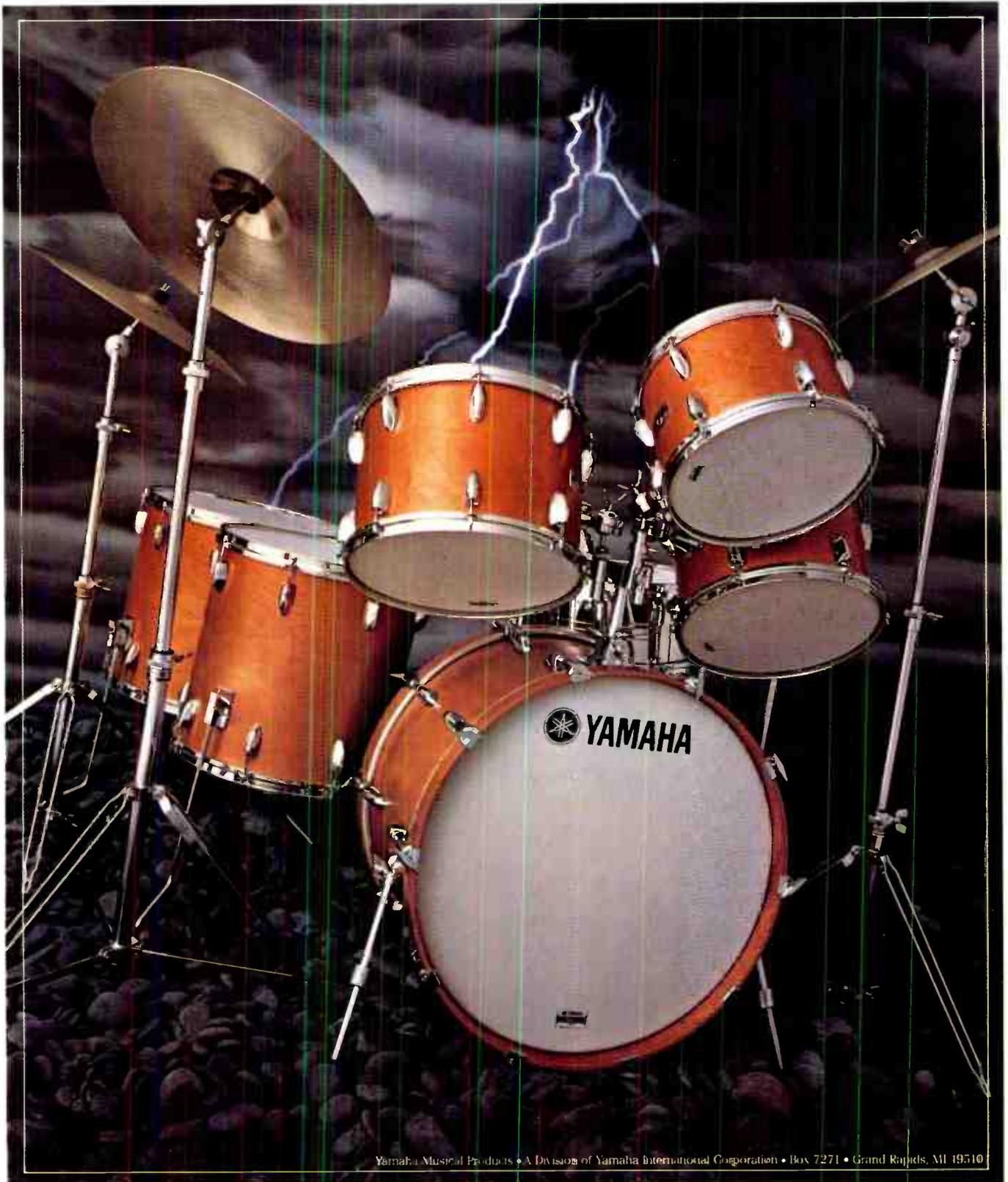
On a dominant 7th chord vamp such as this, one of the tricks to produce some of the prettier extended tones is to superimpose the ii⁷ chord (we'll think of the A⁷ as a sort of non-resolving V⁷ chord. So, if you play an Em7(9) over this you've got E-G-B-D-Fsharp,

PAT MARTINO: STRINGS

Transcribed by
STEVE KHAN

Vamp
A7(13)

(continued on page 71)



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On Bass: *Jeff Berlin*

After a short break, I'm ready to resume writing the bass column. This particular article, however, will not be a very palatable one. In fact, it will probably leave a bitter taste, especially to those of you who have written letters to me. Mainly because I am going to comment quite bluntly about what I think of your questions and comments. Before I do, I should remind you that I speak from a certain level of musicianship that I've worked hard to attain. And it's really not a superiority complex that influences the following comments — I simply take my readers seriously, and I assume that most of you have a strong desire to excel as players.

However, judging from the majority of the mail I receive, most of you simply do not care enough about music to ever really do anything with it. Where are your eyes? Don't you read the words I've written in the past "On Bass" columns? Why do you ask me what school to attend when I've stressed Berklee College in at least two columns? Why ask me what books to study when I've already mentioned the valuable information available in trombone books and by transposing jazz tunes into bass clefs? I've already received letters from players saying they don't know what to listen to after I'd suggested listening material from A to Z. Remember my comments about varying your listening rather than only listening to rock or the big jazz-rock groups? I suggested that you listen to soul music, all forms of jazz, funk, Reggae, Salsa, Gospel, ethnic music from Africa, the Caribbean and India.

And in every single letter, the writer professed to like my column. How in the hell can anybody like it if they don't read it? Why do you tell me that you "don't know what to study" or you "don't know what to listen to," when there's a lot of this kind of in-



formation to be found in every column. One clown wrote to me that he was a great talent on the bass and, if I didn't write back to him, it would haunt me in the future! Another guy said that all the musicians he plays with are children and if they didn't listen to what he said, he'd "kick 'em in the ass." Still another illuminated beacon of talent asked for family news about my mother, my brother and my little sister — and what kind of technique did the bass player from Ten Years After use? This is all a ridiculous waste of time — mine and yours. Aren't there enough suggestions from my column to prevent you from writing these insipid letters?

If you want to know what to listen to, listen to Ornette Coleman, Miles Davis, Bill Evans, James Brown, Sam Cooke, Charlie Haden, Carla Bley, Otis Redding, Jimi Hendrix, Eric Kloss, Manler, Brahms, Bach, John Coltrane, Tower of Power, King Curtis, Arthur Blythe, Beethoven and Scott LeFaro — just to name a few!

You don't know what to study? Aren't there any piano teachers in your town, or within a few miles? No guitarists, drummers or horn players who could play with you or teach you? You should study piano even if you never intend to play it professionally. Is there a show playing in your town where live players are used? If so, have you gone down to introduce yourself to the
(continued on page 73)



Percy Jones



Mike Clarke



John Goodall



Peter Robinson

BRAND X

BREAKING DOWN THE BARRIERS

It all started in the late Sixties, when phrases like "breaking down the barriers" and "musical hybrid" were thrown about as freely as frisbees. The barriers in question were those between jazz and rock and the idea of merging the two was considered fresh and exciting. A plethora of young English musicians, tired of the excesses of acid rock, decided to dig out their Mingus and Coltrane albums to pick up a few tips. If only they could marry the musicianship and imagination of jazz with the adrenalin of rock... these college types' minds boggled briefly before donning cool shades and diving into the rehearsal basement.

Saturday afternoons just wouldn't have been the same without the Soft Machine, augmented by the front line of Keith Tippett's group, blasting away for 20 minutes on the John Peel radio show (you were really cool if you liked bands that played non-stop for 20 minutes).

Meanwhile across the Atlantic, similar ideas were stirring. Miles Davis was preparing the ground with a whole string of albums — *Filles de Kilimanjaro*, *In a Silent Way* and *Bitches Brew*, the ultimate status symbol for cool college kids. The Tony Williams' Lifetime decided to mix free jazz with electronic rock, with potentially explosive effect (they were largely ignored).

Then it happened. Ex-Miles and Tony Williams guitarist John McLaughlin got religion, formed a band of virtuoso musicians and called it the Mahavishnu Orchestra. The Second Wave of Jazz-Rock was born. Eight years later and the idea of a union between jazz and rock isn't so exciting. There's even an established name for it — "fusion". Many of the original innovators have burnt out —

McLaughlin seems lost for new ideas, Cobham churns out cliched disco, Chick Corea produces mindless schmaltz and Miles Davis appears to have disappeared up his own backside.

But there are still a few exceptionally talented musicians around who strongly believe that the genre has some creative mileage left, and they're determined to prove it. Some of them regularly get together to form a loose venture called Brand X, and whilst believing in the positive aspects of the music are perfectly aware of the traps in front of them. As bass player Percy Jones says: "There's a lot of fusion bands over in America, some of them are so cliché-ridden. There's a couple of radio stations in New York that play jazz-rock 50 per cent of the time. Some of it sounds like "fuzak", it sounds really predictable. We try to get away from that, because that's one of the criticisms we get a lot, that jazz-rock is played out. It's not an unreasonable criticism, it's something we're very aware of."

And Peter Robinson, one of Brand X's two keyboard players: "Miles Davis made that breakthrough where you could play jazz tunes through that hard rock thing. It's very hard to keep on coming up with good tunes and present them in that way. Basically it's really masculine music. I wouldn't call it aggressive, it's athletic. There are some sweet things that have come out of it, but basically with the high energy jazz-rock with a lot of technique, generally dazzling the audience, there's a limit to how far that can go, there's not much intimacy. It's really important on stage to display to the audience that it's fun to play, rather than this guerilla warfare."

Brand X have shown on record that it is

possible to escape the clichés. Much of their work has consisted of relaxed, atmospheric playing aimed at creating a certain mood — examples include the eerie "Nightmare Patrol" on *Livestock* and most of the second album, *Moroccan Roll*, recorded with heaps of space echo — an area largely uncovered by their US counterparts. On the minus side, they are sometimes guilty of substituting flashy playing for ideas — "dazzling the audience" as Peter Robinson puts it — and pushing their techniques to the limit when the music doesn't demand it. The latest album *Do They Hurt?* is a clear illustration of the strengths and drawbacks of jazz-rock in 1980. Many of the compositions are inspired and beautifully played, in particular "Voidarama" and "Act of Will", with synthesized vocal from Percy. But there are also passages of fast playing which shatter the mood that's been built up — or perhaps that's deliberate.

The idea of a band of world-class jazz-rock musicians, coming from Britain at first, seems ridiculous. After all, the major names that have defined the genre have been from the States, virtually all Miles Davis alumni... Tony Williams, Joe Zawinul, McLaughlin (British born but naturalized American), etc. How can a British band possibly match them for musical pedigree?

It may come as a surprise therefore to hear that Peter Robinson had gigs with Stanley Clarke, Lenny White, and master Japanese percussionist Stomu Yamashta, before joining Brand X. And that Herbie Hancock is only one of a list of well respected musicians that drummer Mike Clarke has played with. The other members of Brand X have also spent more than a few years "paying their dues",

as we say in the biz — but more of that later.

Brand X caught the public eye almost as soon as they started gigging due to their drummer being The Very Famous Phil Collins of Genesis. It was a definite advantage, once they'd thrown off the tag of being "Phil Collins' part-time band". The group was actually started as an Average White Band-type outfit by a singer called Phillip Spinelli and guitarist Pete Bonus, and initially made an album for Island Records which was scrapped. The original drummer, John Dillon, left for personal reasons and Phil Collins was called in on the recommendation of Island A&R men. John Goodsall recalls: "We tried out some really hot drummers, but Phil settled in straight away with Percy (Jones), the bass player, into a really tight thing just naturally. We eventually got the band together with Phil, Robin Lumley (on keyboards), Percy and me, and the four of us decided that the instrumental passages were a lot more fun. The other two guys started going more and more into commercial songs and we started going out more into improvisation."

The line-up of the group has constantly changed — not because of musical dissatisfaction, but because the idea behind Brand X is that of an informal group of musicians getting together to play for enjoyment rather than making money. Robin Lumley spends more time on producing these days, although he did play on a couple of tracks on their latest album *Do They Hurt?* and gigged on their recent tour with Bill Bruford's band. Phil Collins also played on the same two tracks, although he doesn't have much time to play with the band now (see the feature on Genesis in the May 1980 issue of *IM&RW*).

Other members of Brand X have included drummers Chuck Burgi and Kenwood Denard, percussionist Morris Pert and bass player John Giblin. As current drummer Mike Clarke explains: "It's not like it's *my* gig, it's like when they want Phil they call Phil, when they feel like calling me they call me, and him and I have been kinda split level the last couple of years."

John Goodsall

'John had a pretty far sighted Mum and Dad. At the age of seven, when most kids were playing with their Meccano building sets and Scalectrix racing cars, the young Goodsall was given a guitar — a Rosetti Lucky Seven semi-acoustic, to be precise. Our John just picked the thing up and knocked out "Telstar" by the Tornados and "Apache" by the Shadows, and you could say that since then he has never looked back. He left school at about the age of 16 or 17 to play with a band called Babylon, with Carol Grimes on vocals and Tommy Ayres on keyboards, and then went on to join Alan Brown, gigging around tiny clubs and halls seven nights a week. "It was interesting, those bands were playing jazz-rock kind of fusion," says Goodsall. "It was soul riffs but sometimes it would get heavy and there would be horn players and stuff."

Life on the road continued with Atomic Rooster, with Vincent Crane on "heavy metal organ" and Rick Parnell on drums, where John started "getting into the more legato sound, screaming sustain and feedback." He met the founder members of Brand X after that when he hung around in London playing with people in pubs.

He had been listening to people like Sly Stone, Jimi Hendrix and Jimmy Page, and jazz artists like Coltrane, Charlie Parker and the Charles Lloyd Quartet (which included the young Keith Jarrett), but the real musical turning point came when he heard John McLaughlin. "I'd heard him with Miles Davis on *Bitches Brew*, but it was *Live Evil* that killed me, and *Inner Mounting Flame*, where I was really frightened by what I was hearing," says Goodsall. "It wasn't humanly possible, I was really worried. I'd be staring at the speaker wondering what was coming out of it, I was really quite scared." McLaughlin is still the most obvious influence to be detected in his guitar playing, and in his compositions — the track "Cambodia" on *Do They Hurt?* is heavily based on the Mahavishnu Orchestra's "Dance of Maya", for example.

Goodsall set about developing his technique "pretty much by feel, I found myself sitting around a lot improvising a lot with an acoustic guitar," and learnt a lot by just playing with the other members of Brand X.

"Pete and Robin are into Lydian modes and Dorian modes and all this kind of thing, and we've hit all that, diminished stuff, flattened semitones clashing. Since I've been in Brand X I've learnt a bit more about soloing over those kind of passages, which is like more of a jazz thing."

John's preference is for hollow bodied guitars — he mainly uses a Gibson ES345 stereo (a 1974 model), which gives a lot of sustain, and a Gibson ES175 for quieter, funkier playing because it has a harder sound and "doesn't feed back so much." He also uses Washburns and a Fender Stratocaster (about 1974) for louder rockier passages. "It's got some pre-amp in it," explains John. "I'm just having it done up by this really good guitar bloke in the States called John Caruthers, who designs a lot of stuff for Yamaha and Ibanez." His guitar strings are Rotosound Superwound, gauges 009 to 042 and his amp is a Burman combo (he thinks it's 160 watts). "I like the pre-amp stages in it, it's all set up in a line, it's no hassle, I can virtually adjust it in total darkness. I find it's very directional, the spread is a bit better than most."

Effects-wise Goodsall goes for the Boss Chorus. He used to have a gadget which he says was similar to the Mutron envelope effect. "You could switch the envelope backwards, as well as the funk box sound you could also get a suction sound. It's like a very "Zawinuly" sound I used it on a track on *Livestock* called "Isis Mourning" where I use it on a solo and switch from the forward envelope to the backward envelope. It was also put through a Roland Space Echo,

which I use on stage a 'ot, but I've found that since we've started doing bigger places the ambiance of the room is enough. I set a little bit of reverb on my amp." He adds that he also really like the Mutron flanger pedal.

Peter Robinson

Keyboard player Peter Robinson "never really liked pop music" when he was young "because it was always so atrociously performed." Like percussionist Morris Pert he had a formal training at the Royal Academy of Music, having started playing piano at the age of 11 and "making so much headway that it was decided that I should take it more seriously and get a proper training." But he soon became disenchanted with the restriction of musical freedom enforced by the Academy. "One of the things I was very good at was improvisation, which was essentially discouraged at the Academy," he explains. "You got two minutes of improvisation — what they politely called 'extemporisation' — at the end of the year as an ear test. I thought 'why do I keep doing things by other people?' when I could actually sit down and music would come out. So I tried a sort of semi-jazz. I did one jazz gig, a bebop thing, and couldn't understand what was going on. So I turned towards Indian classical music, which incorporates improvisation, and found that was more understandable and I could express myself more clearly."

After leaving the Royal Academy he spent about three years as a session musician, which helped wean him onto a more electric-based diet. He played with Chris Farlowe for a while and then joined a band called Quatermass.

After Quatermass Robinson was with Stomu Yamashta and Suntreacer, a sort of avant garde rock band that also consisted of bassist Neville Whitehead, Paul Buckmaster (of Elton John fame) on cello, Morris Pert, soprano sax player Robin Thompson and Martin Ford (arranger for Barclay James Harvest) on electric French horn. Peter then played with Sean Phillips for a while and got fed up with it, so decided to move to the States.

It was a lucky move. He played on Lenny White's *Venusian Summer* album and then one day received a phone call from Stanley Clarke inviting him to do a European tour, which naturally he accepted. That was how he met Brand X — they were the support band on the tour, and when Robin Lumley left to concentrate on production Peter joined.

Robin came back to play with the band on their recent tour, and it was a strange sight indeed to see two keyboard players squeezed into one corner of the stage sharing the same set up — a Yamaha CP70 electric grand, a Roland string machine, Sequential Circuits Prophet V and a Yamaha CS80.

"We've virtually never had a collision," claims Robinson. "Basically it's like one keyboard player with four hands, rather than two separate units. On most things we've ▶



worked out who does what, but on some nights he'll go to another instrument and I'll be wondering what's happening?."

Percy Jones

You may find this difficult to believe, but Brand X's superhuman bass player was always bottom of the music class at school. So there's hope for some of you frustrated pluckers yet.

Jones the Bass has a phenomenal technique which is sometimes hard to believe — a tape of Brand X's Venue gig had the IM&RW staff gasping in astonishment at Percy's solo. And not just at his agility — the man has got Funk with a big F, and his solo spots display infinitely more taste than Weather Report's Mr Superbass Jaco Pastorius.

Percy's technique revolves around resting his thumb on the back pickup of his Wal fretless bass. "If I can't anchor it onto something I can't play properly," he explained. Therefore, there are certain types of electric bass that he finds difficult to get to grips with.

The Wal bass is made by a bloke called Ian Waller, nickname Wal, who is based in High Wycombe in Buckinghamshire. One day, Wal approached Percy with a bass to try out and he was immediately impressed. "Before I used the Wal I had a Fender Precision fretless. I could never get enough mid-range out of it, no matter how much EQ I used it would never come out, and it didn't sustain very well. The first thing that impressed me with the Wal was that I could get all this mid-range response."

His amplification is made by Frunt, a small English company based in Surbiton. He uses a total of 400 watts, consisting of two 200 watt amps and two cabs, one a reflex cabinet with two 15" speakers, the other a 4 x 12 (the speakers are Fane). "It's a pretty straightforward amplifier," says Jones. "Before that I'd used an Ampeg SBT which was good, but it also had a certain roughness in sound, a real second harmonic distortion. I've been trying to get a cleaner sound because with a rough sound I just play harder on the instrument. This one does the job."

It was Jaco Pastorius who provoked Jones' interest in bringing out the mid-range on the bass guitar. "I think he's done a lot for the electric bass, not just technique and playing but the sound too. It's still basically the same instrument, a Fender Jazz fretless. But with Fender basses before that—all you could hear would be the fundamental, I always thought they sounded a bit characterless. So he revolutionized things in that respect, he made the Fender bass sound more interesting."

Another bass player that has influenced him is, surprise, surprise, Stanley Clarke. "I thought that when he first came out he was quite phenomenal." And an early influence was Charlie Minqus because of his "tremendous feeling for his music."

Jones' nimble bass playing seems even more incredible when you consider that he had not touched the instrument for two years before joining Brand X. He was working on building sites and was thinking about which musical direction he wanted to go in. It was during this period that he started listening to early Weather Report and Miles Davis' jazz-rock experiments, which motivated him to get back into music again.

Percy's musical career began when he was studying electronics at Liverpool University. He started playing with guitarist Andy Roberts and they teamed up with Adrian Henri to form the Liverpool Scene (remember the "Fleetwood Mac, Chicken Shack, John Mayall, Can't Fail Blues"?). He became frustrated with the band, did a short tour with the Scaffold and then dropped out of music for a period.

Mike Clarke

Asking drummer Mike Clarke what bands he has played with before Brand X is like asking Yehudi Menuhin if he has done anything before getting together with Stephane Grapelli. The man's musical pedigree is simply phenomenal.

Mike is the only American member of Brand X. He has played drums since he was a child, and has been a professional musician since he left high school. When Clarke was in

his early 20s he played with such respected names as trumpeter Woody Shaw, vibist Bobby Hutcherson and blues singer Mose Allison around San Francisco. He went on the road and played "a lot of different blues and jazz gigs" and then met up with bass player Paul Jackson.

"In our desperation to find enough work playing jazz we were starving, so we started playing funk because it seemed to be the next best thing you could play and use some creative energy.

The Jackson and Clarke team auditioned for Herbie Hancock just after the best selling *Headhunters* album and got the job. Mike stayed for four years, playing on *Thrust*, *Flood*, *Man Child* and a couple of other albums that he can't remember. "I still had a great love of jazz, I wanted to play jazz or something I could get creative on," says Mike. "So I went to work with Eddie Henderson for about a year and played with a few cats like Pharoah Sanders, David Liebman and Julian Priester."

He got together his own band but found work difficult to come by, teamed up with British born organist Brian Auger. His association with Brand X began shortly after he played on a few record dates with Peter Robinson, when he was invited to play on the *Product* album.

Mike's drum kit is Gretsch, consisting of 24" bass drum, 8 x 12 and 9 x 13 mounted toms, 14", 16" and 18" floor toms, a deep Ludwig snare, K. Zildjian 22" ride cymbal, A. Zildjian 18" crash, and sometimes another 18" or 20". A. Zildjian crash and at other times a big Chinese cymbal.

Why Gretsch? "They just have a certain sound," he says. "I can't explain, a certain ring to them that I like, and I can really hear the separation in between the different drums." Drummers that have influenced Clarke include Elvin Jones, Art Blakey and Philly Jo Jones. But there are only two drummers that "I really love in the universe and they are Tony Williams and Alphonse Mouzon. What Alphonse did with McCoy Tyner I thought was the most amazing drumming I'd ever heard in my life, and some of the most amazing music as well." ■

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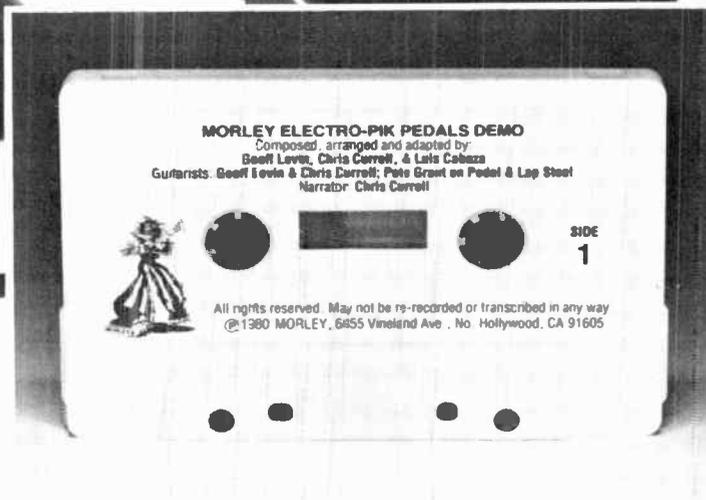
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'Ronin' with Rick Marotta (right)

RICK MAROTTA

OUT OF THE STUDIO WITH RONIN

With the resounding success of Toto and the recognition of Stuff, the "session-man band" is appearing more and more frequently. The most recent addition to go center stage features guitarist/singer Waddy Wachtel, pedal steel/guitarist Dan Dugmore, bassist Stanley Sheldon and drummer Rick Marotta. Collectively called Ronin, a Japanese word meaning "lordless roaming samurai," it serves as a suitable description of their situation.

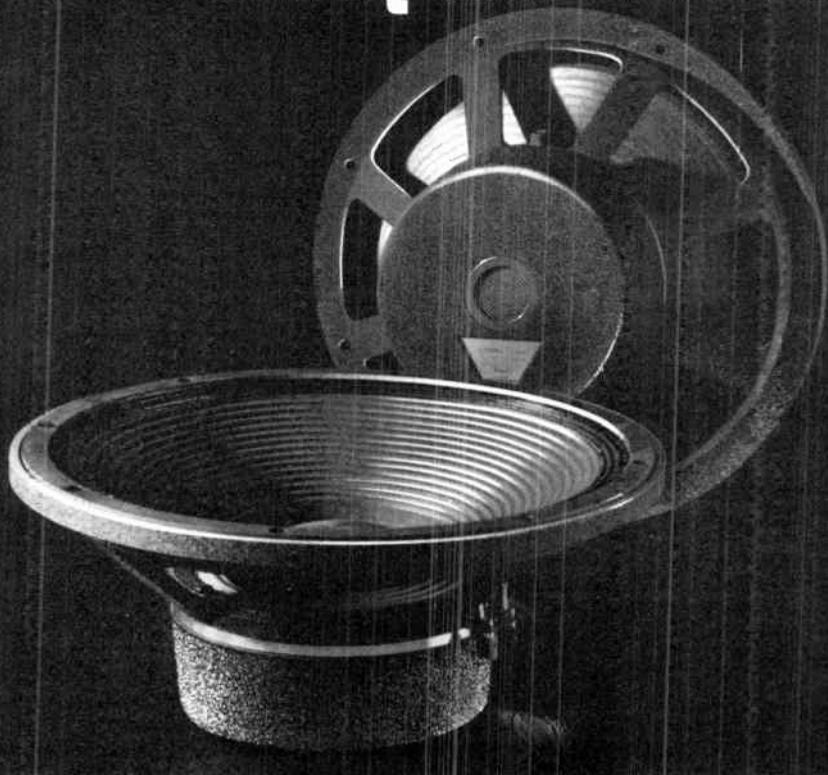
For Marotta, Ronin means possibly not adding to the impressive list of musicians he's already worked with, a list which includes Steely Dan, Linda Ronstadt, Paul Simon, Hall & Oates, James Taylor, Warren Zevon and Peter Frampton. It's a move he approaches with some apprehension. "I won't turn my back on the commitment I've made to the band in any way, but I don't want to burn my bridges behind me," Rick explained. "Let's be honest and practical, the band could bomb. Some of us have made a couple of bucks doing other

people's records, but as a band we've back to ground zero. I'm scared to death. I'm seeing myself in front of all these people who may say, 'take a quick hike!'"

The bridges not to be burned find their beginnings starting almost as an afterthought. Rick remembers, "I didn't play drums until after my first year of college. I never picked up a stick until I came back home (Harrison, New York) and David Spinozza's drummer, who'd been drafted, left me his drums.

"I've never taken a lesson in my life"

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states Marotta. His first teachers were recordings featuring Bernard Purdie, Carmine Appice (then with the Vanilla Fudge) and Dino Danelli of the Rascals. "Dino was just amazing," he recalls. "I saw him at the Westchester Country Center and he threw his sticks up and, about two bars later, he catches them and wham, hits a cymbal. I'd try that and get hit in the eye. After a couple of months I started playing in Spinozza's bands. They were big bands, 12 pieces, and David (now a NYC studio guitarist) was like a white James Brown at that time. He was wearing pink suits and doing R&B. We worked every weekend for anywhere from five to twenty dollars a man."

Before successfully entering the studio as a session drummer, Rick survived mainly on desire. "I just wanted to make my living as a drummer. For a couple of years my family didn't want to know who I was because they thought musicians were just drug addicts and irresponsible know-nothings. I felt if I did this I was going to make a living whether it was \$100 a week or \$200. It didn't really enter my mind. I was living day to day."

Marotta's studio training literally took place on the job. "I learned how to read

in a recording studio," he says. "David brought me in to do some R&B sessions for the Filet of Soul label. I had been playing for maybe a year. The first thing I thought was, 'can I do this?' I thought from hearing Bernard Purdie and other people playing on records that if I could get on a record that would end up on the radio, that was it."

"I used to go to a session and they would put these charts in front of me and I didn't even know if they were upside-down. I would ask Spinozza questions and he'd drive me crazy. I'd ask him a figure and he would look at me and say 'You know Rick that's my one hanqup, I don't know how to play that one figure.' You wouldn't believe it. I've done sessions with 60 guys in the room to do a whole album in one day. I couldn't read and everytime I'd ask David, he'd give me the same line. Finally I went up to the producer and said, 'Excuse me, you may want to get another drummer for the rest of the day because I don't know how to read.' He said 'You go back there and sit down you're doing fine. That calmed me down. But that was my school, doing the gig.'"

Just as he was starting to make a name for himself in the studio, he left to join a band called Brethren. He participated in "one great album" before the internal problems became too much. "I left and never wanted to work with a

band again."

Ronin is not a "put-together" band. It has more natural roots and seems to have emerged rather than formed. "This band started on stage three years ago with Linda Ronstadt. When we were doing sound checks and when she was done, we kept playing. Waddy would say, 'I'm working on a riff here can we do this or that?' It's guys I work with and it just evolved."

The proper balance of road work and studio chores is still important to Rick. "I love performing with the band but I miss jingles sometimes. Where else are you going to learn more about reading and being on target? That's my school. As soon as I come off the road I register in school and I'm happy to do the jingles. A lot of people put them down and say it's a drag, but not me. You're in and out and you learn everyday. After three months on the road, I'm going to want to go back in the studio with Steely Dan and work over a tune, or go in with J. D. Souther or Warren Zevou. I can't do them with the band commitment, but I still have my own free time."

Admitting that he almost never listens to old tracks, Rick still has a few stand-out moments that stay with him. "Oddly enough, one is a record where Steve Gadd (his best friend) came to all the

sessions. It was a Jerry LaCroix album. Johnny and Edgar Winter were on it and it was dedicated to the late White Trash drummer, Bobby Ramirez. There was something about knowing that it was dedicated to Bobby, and Steve being there, that made for a very strange feeling around the studio. There are some things on there that were original, and Steve still goes back to listen to them also. I like that, and I also like "Peq" (from Steely Dan's *Aja*). "That felt real good. Chuck Rainey and I locked into a groove and they recorded it really well. Sometimes you can't listen to something after playing great because the mix just sucks. But they captured a good feeling there."

The sound of his drums is also something Rick feels good about. "I'm

pretty proud of the way my drums sound. They sound big and that's the way I tune them. Drum rentals are another thing that made me crazy with record dates. People have the amazing audacity and balls to send those drums to sessions. One reason I loved going to LA to do sessions was because they brought me *and* my drums out there. They wanted the way my drums sound."

Presently, Marotta's using a bastard set he put together himself. On the east coast, it's a set of Ludwig drums with small Pearl toms, for which he put the bottom heads on himself. On the west coast the core of the kit is Gretsch. Both setups are temporary as Rick recently signed with Yamaha. Of the endorsement he says, "I'm not crazy about

them so far because they're too thick," adding "I'm not qualified to give an opinion yet. I've got to work on them at home." The drum sizes are 8, 10, 13 and 16" toms with a 22" bass drum. "The heads are really important to the way the drums sound," Rick adds. "I use Ambassadors on top of all my drums. I put Diplomat heads on the bottom of the 8 and 10" and Ambassadors on the bottom of the rest. On the bass drum I like a hydraulic head. I use Pearl pedals now, but I may switch to Yamaha. My snare is a 14" Ludwig in which I've inserted a Sony ECN 50 microphone. I like to use the internal mike mixed with an outside mike in the studio.

"With hardware, the best I've seen without a doubt is Yamaha. The hi-hat, though, gives me a problem. The foot plate is too high or low, and I end up having cramps in my legs. I've been using a Pearl hi-hat for a long time now. The cymbals on it are 14" Paiste Soundedges. The rest of my cymbals consist of an 18" Zildjian crash, a 16" Paiste crash, a Zildjian 22" ride and a Zildjian inverted cymbal with the sizzles in it."

Marotta's drum style, loose and simple, features solid time and one of the best shuffles to be found anywhere. "I don't feel like I'm a technician," he volunteered when asked about any playing weaknesses. "I'm not a fast flashy drummer. I never wanted to be like that. I don't like to play solos at all. They also almost never interest me by other people" with Steve Gadd being the exception. "I tend to play simple. I don't think about time, but if it's bad I hate it. I think my time is one reason I get work. The shuffle I learned from Charles Neville of the Neville Brothers. He actually sat down and said 'Here's how we do the shuffle in New Orleans.' Solid bot toney shuffle. I play behind *and* underneath the band."

The other thing Charlie taught me was conceptualizing an interpretation. He would say, 'play what you know and then play it backwards and inside out.' It's an abstract concept like trying to put something together in different ways.

"I'm never going to be the best technician in the world and play with a lot of speed, I just want my drums to sound amazingly good and for every note I play, to have some real meaning and feeling behind it."

John Stix

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Howard

Heart guitar

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World Radio History

GARY BURTON VIBIST



Photo Cathrine Goldwyn

FOR THE MODERN AGE

One of the main reasons the vibraphone, or vibraharp (an electrified version of the xylophone, an instrument developed in the United States from its sister, the wooden marimba), is not readily acknowledged as a jazz instrument is the simple fact that so few people play it. This was reiterated by vibist-singer Roy Ayers on a recent edition of *Soul Train* where, while talking with host Don Cornelius, he listed the vibists in jazz which amounted to slightly more than a handful. He left some names out but there really haven't been that many: Lionel Hampton, Red Norvo, Milt Jackson, Terry Gibbs, Bobby Hutcherson, Ayers, Dave Friedman, Charlie Shoemake — And, of course, there's Gary Burton.

Though he maintains a rather low profile, Burton has played a crucial role on today's jazz music, a role he reluctantly acknowledges, for he was one of the first traditional jazzmen to use rock rhythms, beginning the jazz-rock or fusion wave back in 1967 before Miles Davis' *Bitches' Brew* turned everybody's head around. Burton discounts his involvement with the movement, or calls it coincidental at best, rightfully seeing himself as a mainstream player. Nevertheless, he was instrumental in the change.

"Yeah, I got caught up in a big change that was going on," he recalls with a laugh, "and I sort of got mislabeled for several years. From the beginning, I have essentially been a straight-ahead kind of player, even though I played different styles and had gone through different phases. My plan was to feature jazz improvisation in a small group setting, with the main emphasis on interplay among the players.

"I was 23 when I started my own band (in 1967), and I had been playing for audiences in Stan Getz's band that were twice my age and I had a strong need to somehow get away from the jazz traditions, so I started my band and made two fundamental moves. First, I decided to stop dressing the way jazz groups had always dressed.

"It's funny, but every jazz group from Miles Davis to Coltrane, you name it, they all wore suits and ties on every gig — it seems amazing that no one does it now — and no matter how far out they were musically, they still dressed conservatively. I was inspired by seeing pop musicians dressing very colorfully and creatively, and I thought, 'why not?' So

we changed our style of dress and I also felt a need to change the music as well. I wanted to break with the tradition of playing the same jazz standards. I had seen Stan work Brazilian music into his thing very effectively and I thought there were other ideas along this line. I had previously done it with country music, there's a lot of similarity between the soloing and the tunes, and I saw a lot of it in the rock groups that were suddenly being taken seriously — nice tunes, interesting rhythms, backgrounds, structures — so the group started bringing that into our playing and immediately got labeled 'jazz-rock,' which became 'fusion,' and I wasn't sure if that wasn't accurate the first year or two."

Actually, the implicit naturalness of Burton's move is easily understood with a brief look at his background.

Raised in the rural environs of Princeton, Indiana, Burton got started on the vibes at six. He taught himself, working with sheet music and classical pieces, and he was definitely influenced by the country music that surrounded him, both on the radio and through local performers. "It's a curious thing that country music was frowned upon as being low class by the people where I lived," he says.

Jazz didn't enter the picture until Burton was 16. He'd enjoyed rock & roll, and had made several attempts to teach anyone interested (there weren't many local young players) to play the drums or guitar, but there was the usual shortage of bass players as well, so he gave up and accepted the fact that he would have to play alone, never thinking those solitary hours would give him a distinctive style years later.

"I didn't realize that everyone wasn't playing four-mallets instead of just two until I went East to school in 1960. I played four mallets because I felt a need to fill in the harmonies all the time, it just seemed a natural thing to do, and when I went East, I found out that there was no-one else playing this way, so I just kept going my way and wasn't influenced by other players. I cursed that technique all the years I lived out there because I never had anyone to play with and very few records were available, yet it turned out to my advantage."

Learning to drive, Gary was able to run down to nearby Evansville and, while playing sessions there, he encountered Boots Randolph, a country-jazz tenor player who had a few pop hits in the late

Fifties. Boots told him about a gifted guitarist in Nashville, only four hours away, named Hank Garland, who wanted to make a jazz record using a vibes man, so Gary and Boots made it down to Nashville one weekend.

"I went down and we had a little jam session and that led to my coming down pretty frequently, playing in clubs and such, and then we made *Jazz From A New Direction* for Columbia, which has since become a classic. Twenty years later, people still ask about it."

The trips to Tennessee also led to Burton making the acquaintance of guitarist Chet Atkins, head of A&R for RCA there, and Atkins suggested that Gary record for the label even though the vibist was attending Berklee School of Music in Boston. So Gary made it back to Nashville at least once a year to record and in 1966 made the first country-jazz disc, *Tennessee Firebirds*, which combined Burton's talents with those of the Osborne Brothers, steel guitarist Buddy Emmons, harmonic player Charlie McCoy and others. After it was released, nothing much happened — country people didn't like it and neither did the jazz audience, but five years later, everyone wanted to know where to get a copy and by then it was virtually out of print.

"I took some country pieces and re-harmonized them and re-arranged them so we could all solo a bit, kind of mixing the two styles together. We had a great time and the musicians hit it off wonderfully, but it was so off the wall for 1966 that it didn't go anywhere. Actually, the date was pretty logical because country music has a lot of improvising in it. The songs are a little simpler in structure, but there is a lot of respect for good technique and being able to solo fluently."

After finishing at Berklee, Gary toured with George Shearing for a year, then in 1964 he joined Stan Getz for three years. The merging of Getz and Burton had its comical side.

"Stan hired me *not* wanting me to be in the band, but out of necessity. His guitar player had just quit and Lou Levy, a superb LA-based pianist, told Stan about me, telling him I'd played with Shearing, that I could chord and why not try me. So Stan called me up in New York and I went down and sat in with him and it didn't sound very good. I was at a loss since I had never been the *only* chording instrument before and I wasn't familiar with his material, so it didn't go

(continued on page 90) ▶

NAMM

International Music & Sound Expo McCormick Place, Chicago June 28-July 1 1980

The weather was unusually good for the time of year. A veritable mini-galaxy of stars including Elliot Easton of The Cars (Dean Guitars), Lenny White (Tama Drums), Cheap Trick's Rick Nielsen (his dad's music store), Louis Bellson & Red Norvo (Slingerland/Deagan), Pat Martino (Min'd Pick), Jeff Baxter (Roland), Maynard Ferguson (G. Leblanc/Avedis Zildjian), Ella Fitzgerald & Count Basie and many others were in attendance. And business was fantastic, fair-to-middling or mediocre—depending on who you talked to.

Despite the nation's current economic woes which has obviously had some impact on the M.I. industry, there was a persistent sense of optimism and a legitimate desire to continually evolve permeating the proceedings, both on and off the convention floor. The Roland Corporation, who should get an honorable mention simply for offering the largest and sturdiest shopping/carry-all bag which facilitated carrying home the wealth of printed material from the show, introduced an extensive and varied selection of new products at a special press conference hosted by Ron Wilkerson. Some of these included the new EP-09 Electronic Piano (claimed to be "the first reasonably priced, fully self-contained Electronic Piano with automatic Arpeggio function"), the Jupiter 8 "performance-oriented" polyphonic synthesizer (8 voice, 16 oscillator polysynth with 64 user-programmable memories and an advanced 5 octave keyboard—all triggered by a new computer-assigned keyboard), the

SRE-555 Chorus Echo and the brand new Roland CSQ-600, a computer-controlled digital sequencer. Also, from the BOSS Division of Roland, their classy line of EFX devices (FET silent switching, LED on/off indicator, battery level check, non skid pads and quick access to battery compartment) was augmented by new units like the PV-1 Rocker Volume Pedal, the RX-100 Reverb Box, the BF-2 Flanger and the DM-100 Analog Delay unit.

CBS Musical Instruments Division (Fender/Rogers/Rhodes) had an item of particular interest to guitar fanatics—specifically, the new "Fender Strat," an update of the classic original featuring a two-way mode selector switch, a Fender Brassmaster bridge/vibrato bar and hardware, a 4-bolt neck, reduced headstock shape and Candy Apple Red or Lake Placid Blue colors with the matching finish on the peghead.

The Pignose Company, who've already built a sizeable reputation based on their first-of-a-kind mini amps and the 30/60 series, introduced their new 150 R "Crossmix" amplifier which offers a wealth of features including two separate channels offering five different gain options; an active midrange control; high-gain, low noise circuitry; individual reverb controls for both channels; individual effects loops for both channels; separate gain and master volume controls; noiseless internal FET channel crossmixing; footswitch for channel selection and reverb control and other goodies too numerous to men-

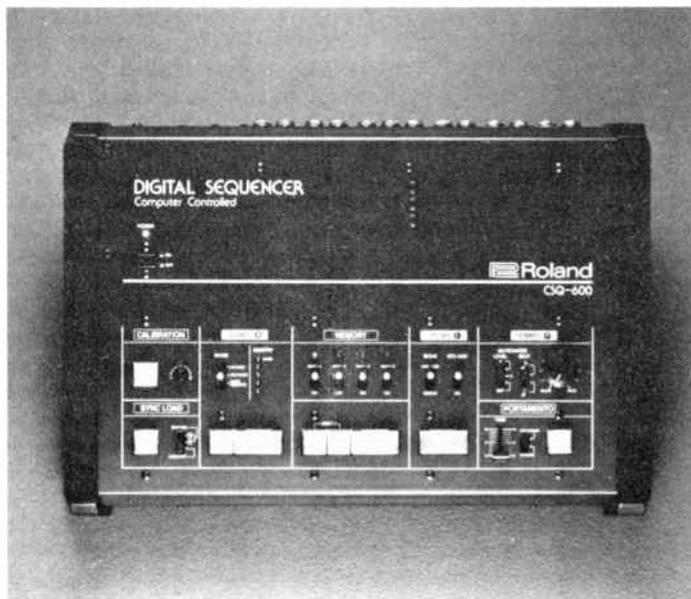
tion here. Based on what I heard at the Pignose display booth (the amp wasn't even "cranked" because of the ever-vigilant DB police prowling the aisles) and knowing that this unit was designed by the eminent Paul Rivera of the Rivera Research & Development Co., I'm already predicting big things for this unit.

The Yamaha Company had a full display of their guitars, keyboards, wind instruments and amplifiers attractively showcased. The new CS-20M and CS-40M Programmable Memory (w/ Digital Programmers) Synthesizers were prominently displayed along with the already classic SA-2000 semi-acoustic electric guitar (recently discussed in "Grace Notes") and the SG-1500 & SG-2000 solid body electrics. Besides their new "JX" Series of amps and the BB-800, BB-1000 and BB-1200 basses, the gentleman from Yamaha

also informed that they will be coming out with a moderately priced line of solid body instruments, still well within their quality parameters, later on this year and IMRW/USA will be first in line to test and evaluate them for our readers.

Over at Rickenbacker, in addition to their line of guitars and basses which are even more popular nowadays since becoming a staple instrument for New Wave-style bands, the new Model TR35B solid-state amplifier (low-priced and *extremely* portable) was introduced to compliment the 4001 Bass Guitar.

At Gallien-Kruger, the new 400B/4412H/215B Direct Coupled Bass Systems dominated the display area. The powerful and efficient 400B Head features a preamp with low-noise field effect transistor (FET) circuitry and is rated at 200 watts RMS from 20Hz to 20kHz at less than .1% THD. A "mas-





sive" 200 watt heat sink helps the unit to run cool throughout a gig. The 4412 H cabinet has four 12" woofers mounted in two folded horns and, for extra "bite," two direct radiating tens are mounted in their own box. The woofers and tens are crossed-over with a 6dB per octave passive filter.

Speaking of speakers and enclosures, Bag End Modular Sound Systems had their attractive series of speaker enclosures—including the "Bass Series," "The Midrange Series," "The Wedge Series," "The BiAmp Series" and the "Rack Mount Series" — displayed along with a new Protective Speaker Grill, a Speaker Front Mounting Kit and a Monitor Swivel Attachment. Structurally, Bag End enclosures feature top-grade 3/4" 13 ply birch plywood and double rabbet joints held together with high viscosity glue and steel pins. The cabinet is finished with a dark walnut oil finish, applied in two steps and hand-rubbed. Designed for high fidelity, high volume applications, all of Bag End's drivers are front mounted, direct radiators and, except for the tweeters, no horns or bass reflex systems used so as not to compromise fidelity for higher output.

Sequential Circuits Inc showcased their two popular keyboard synthesizers, the Prophet-5 and the Prophet-10. Billed as "the most complete keyboard instrument available today," the legitimately awesome Prophet-10 is a "true synthesizer" with 10 complete voices (each

with two voltage controlled oscillators, a noise source, a voltage controlled 24 db/octave low-pass filter and two 4 stage envelope generators). The unit is completely programmable and there are two different programs which can be used at any one time giving the player an option of up to 64 programs!

Morley displayed a full array of their opto-electronic failsafe (no pots, gears or batteries) volume and effects pedals and introduced their new and improved Digital Tuner for guitars which reads the vibrating string's fundamental frequency, locks on in one second and stays there until you pluck again.

Music Technology Inc. spotlighted the precedent setting Crumar General Development System, a fully digital computer-controlled synthesizer. Divided into three basic structural sectors — 1) A Z-80 based general purpose computer system with 64 Kbyte of memory; 2) Performance input devices with a dedicated processor to pre-process input data (keys & pots); 3) a digital oscillator system that performs the function of 32 completely programmable oscillators and patching network — the Crumar GDS System also has performance input devices including a 61 key velocity detecting keyboard (sensitive to 256 distinct striking velocities) sliders, rotary pots, 2-axis joystick, multi-function foot controls, a general purpose computer, video terminal screen and keyboard control panel. And if that wasn't enough, M.T.I. also featured

their new line of Vantage solid body instruments and the "revivified" line of the legendary Ampeg amplifiers.

The TAMA/Ibanez display area was graced by the presence of Lenny White (signing drum heads for the fans) and guitarist Bobby Cochran who demonstrated the extensive new line of moderately-priced Ibanez signal processing devices including items like the GE-601 Six Band EQ, the CP-835 Compressor, the FL 301 Flanger, the CS-505 Stereo Chorus and the PT-909 Phase Tone.

Rick Turner unveiled his amazing new Turner Model I solid body guitar (used by Lindsay Buckingham of Fleetwood Mac) which features a body of laminated Honduras mahogany (arched top and back, heavy black binding and single cutaway), a five piece laminate neck made of maple and purpleheart and special custom Bartolini pickups (rotating and humbucking) and an electronic system which combines a passive (treble cut tone control) and an active single band parametric EQ.

Sterlingworth Strings, a company founded by former

Gibson president Stan Rendell, offered up a brand new approach to the manufacturing and production of electric and acoustic guitar strings including elements like their core wire which comes from steel ingot imported from Sweden. Drawn and shaped in Worcester, Massachusetts by New England craftsmen, Sterlingworth strings are made of hexagonal core wire because the covering wire bites into the edges and forms a cold weld, giving the tightest wind and the brightest sound. Also, Sterlingworth single winds their strings — one strand for each winding. These and other unusual quality control characteristics make these strings something to watch for in the months to come.

One of the most positive manufacturers at the show had to be James L. Camacho of Deltalab Research Inc. Besides being understandably overjoyed at the response to his successful DL-2 Acousticcomputer and DL-4 Time Line, he was heartened by positive response to Deltalab's new Memory Module, which allows the user an additional two full seconds of

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delay when interfaced with the other units. More specifically, Camacho manifested a dogged enthusiasm about the state of the industry in the sense that he and his fellow manufacturers should "get off their behinds and pick up a phone" instead of sitting around and crying the blues because the phone wasn't ringing. A bracing dose of positivism at a time when some folks seemed to be running for cover.

As a further development of their successful C-12 Mixer, TAPCO announced the new C-12 Series Two Mixing System at the NAMM show. The C-12's sub-grouping feature has been further refined, allowing the routing of input channels *directly* to sub-groups 1, 2, 3, and/or 4, as well as the *direct* assignment to main outputs — bypassing the sub-groups. A new mute switch for each channel allows defeating of all but the pre-fader and solo functions. Other new wrinkles include the addition of pan pots and solo capability on the sub-masters.

I had a very interesting discussion about pro sound with Roy Komack, Bose Corporation's Manager of Professional Products Division. Komack's varied background as an engineer, businessman and musician give him a unique perspective on professional sound applications — something to be expected from a company that already has a very distinct identity within the industry, not just from its reputation in the HiFi-Stereo market but also from the determinedly classy way Bose does business, right down to the formal attire worn by their representatives at the show. New from Bose were the Bose SS-3 Speaker Stand (lightweight but able to hold two Bose 802 loudspeakers with no problems) and the GB-3 Gig Bag, a rugged, zippered bag for speaker stands, cables and other pro sound accessories. As always, the legendary Bose Model 802 speaker was prominently featured in their display.

Unicord had a full line of Korg keyboard units promi-

nently displayed, one of the best received being the new Korg CX-3 Combo Organ which features a legit "Hammond-type" organ sound along with pre-sets, drawbars, percussion and a rotating speaker sound which can be speeded up or slowed down. The unit, weighing only 23 lbs., also has electronic switching LED indicators and a wood cabinet.

Unfortunately, due to the rather immense scope of the show (2 floors at the mammoth McCormick Place Convention Center), I've been forced to report back to you in rather broad strokes to say the least — so if certain manufacturers have been temporarily overlooked its not by design but mostly due to limited time and space. Most everyone will be mentioned throughout the coming months — either in the context of New Products, Grace Notes, Equipment Checks or Company Profiles. But before I sign off, two quick last-minute mentions. The A.M.P. company has developed an in-

teresting "Triplet" pick (two tips with the small tip slightly longer than the main body) that theoretically "generates two very close sounds of the same intensity creating a very harmonious tone." While on the subject of picks, I should also mention Jim Dunlop (great molded jazz type picks used exclusively by yours truly — Jan Akkerman turned me on to 'em) who has added a bunch of new items to his already extensive array of picks, slides, capos and other guitar accessories. I also finally had the chance to see Terry Gould's Universal Lever Capo — the *only* (and I know, 'cause I paid my folkie dues!) guitar capo that makes complete sense to me. It fits flat OR curved fingerboards of varying widths, the trim and compact lever action *doesn't* get in the way of your fingers and the entire capo is so easy to use, it can be actually be slid up and down the neck with one hand. Thanks to Mr. G for spending the time and getting it *right* — the capo lives once again.

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LA BELLA'S MUSICIAN of NOTE

Photo by Richard Laird

JIMMY RANEY

Born: August 20, 1927

Home: Born in Louisville, Kentucky, resides in New York City.

Profession: Jazz Guitarist

Earliest Musical Experience: I played the guitar when I was 10 and started playing jazz with a group when I was 13 in Louisville, Kentucky.

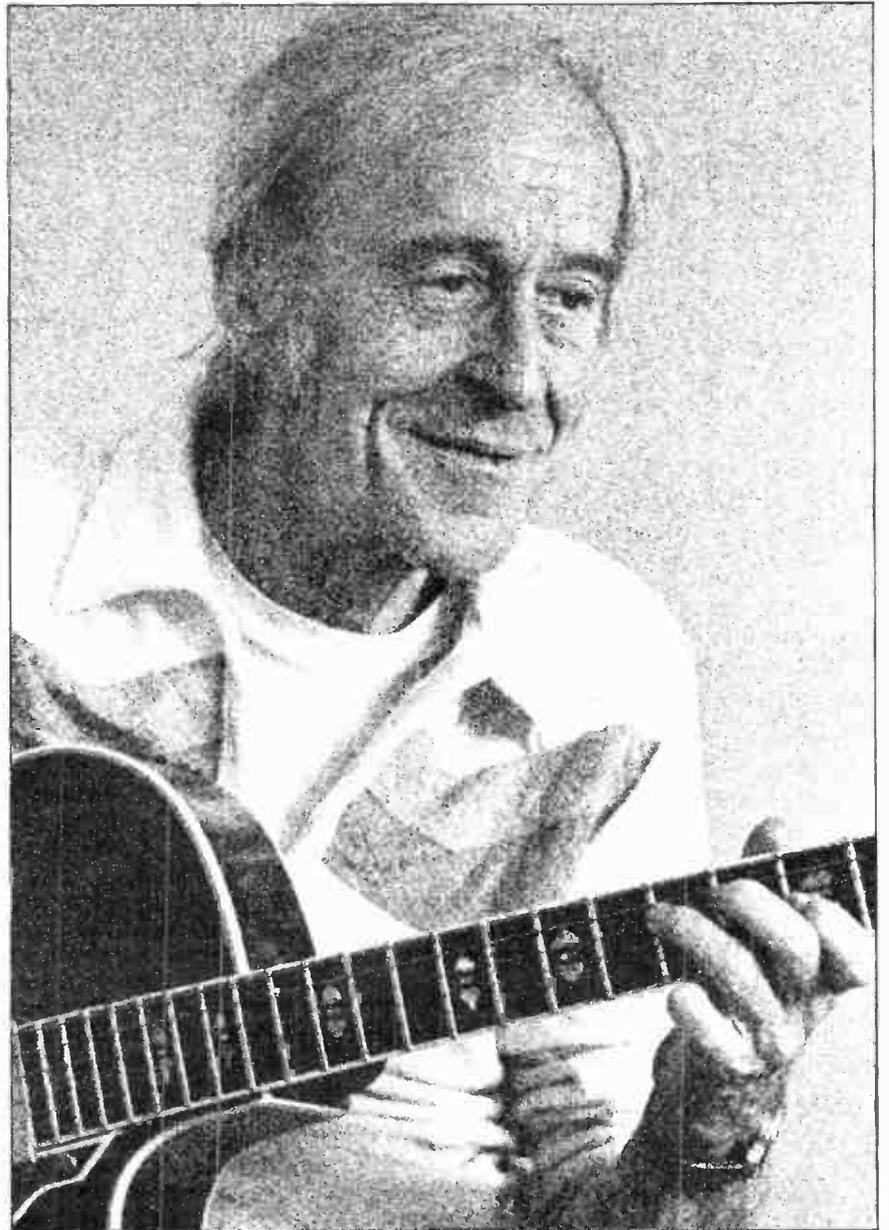
Major Influences: I was influenced most by Charlie Christian, Charlie Parker, and classical music.

Latest Musical Achievement: I am playing in the Newport Jazz Festival in Carnegie Hall, and Avery Fisher Hall in New York, and then playing in Nice, France from July 12th through the 22nd.

Keynotes: I cut two albums recently; one with my good friend, Attila Zoller called *Jim & I*, and another with my son Doug Raney called *Stolen Moments*, on Steeplechase Records. I have another album with my son, due out soon.

Today's Music: I enjoy modern music...especially what Stan Getz, Richie Bierach and Chick Corea are doing.

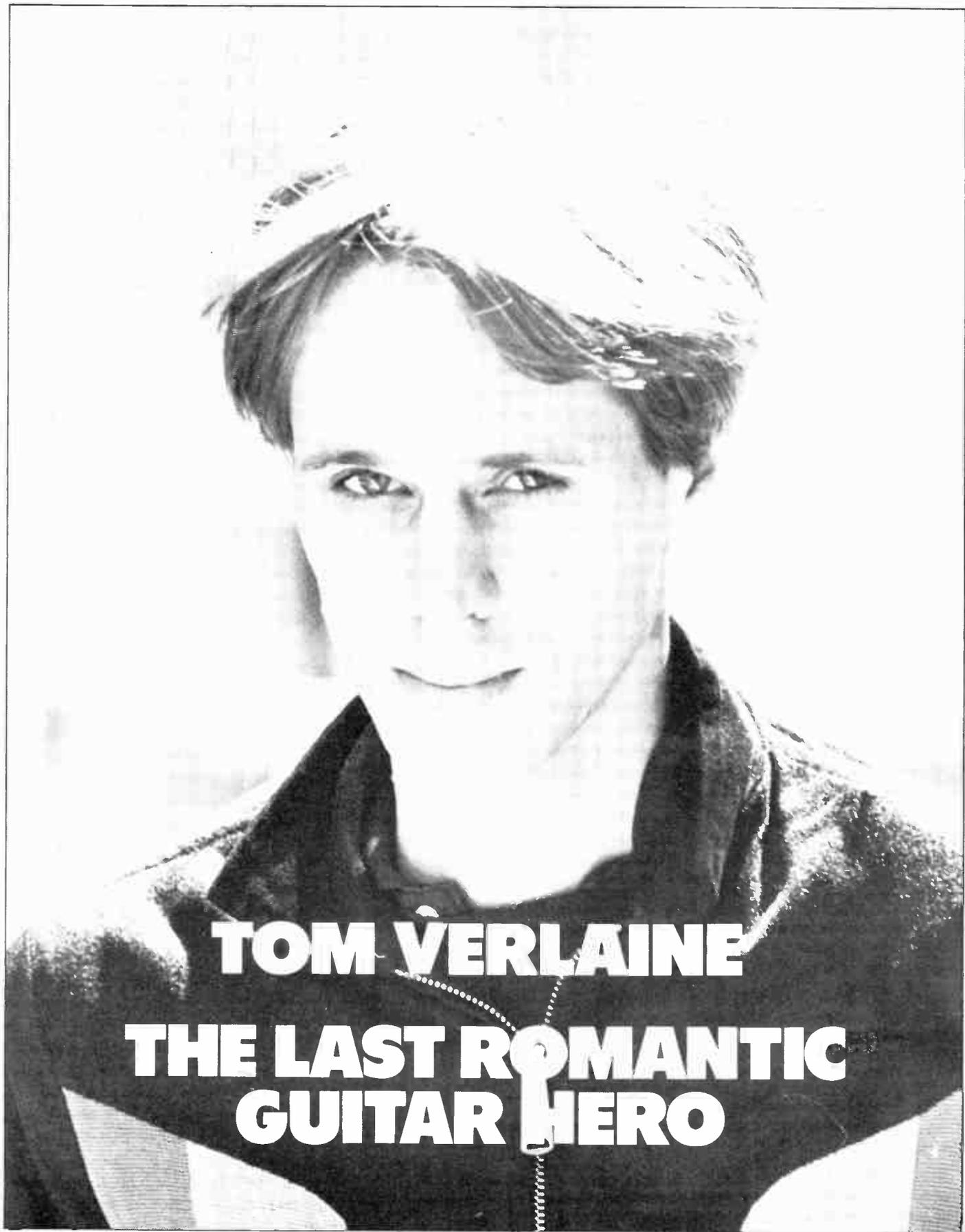
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TOM VERLAINE
THE LAST ROMANTIC
GUITAR HERO

Photo Barry Plummer

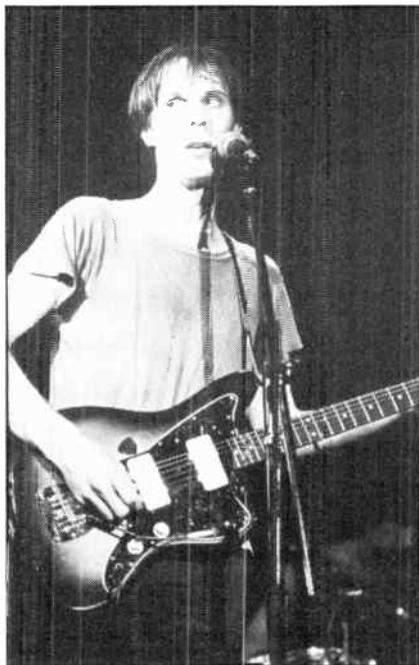
"There have been two strong dreams in my life but I've never written anything about them because it's hard to get across the language of dreams."
— Tom Verlaine

"I'm a bad judge of my own work."
— Tom Verlaine, twenty minutes later.

Tom Verlaine's guitar work is the stuff dreams are made of. Not that they're ethereal or indefinite or any of those qualities we impose on dreams. Rather, the isolation, the internal self-absorption, and the mysterious allure of "the language of dreams" is what Verlaine's playing can offer. As lead guitarist of Television until their breakup in the Summer of '78, and now on his own as a solo artist, Tom Verlaine represents the guitar hero as romantic figure. A category all too rare in this age where guitar maniacs have to put up with the moronic fog-cutting heavy metal of Van Halen, the reupholstered latino rhythms of Carlos Santana, the excessive repetition of the Outlaws ilk or loads of tired old sixties blues-based hold overs.

Instead, Verlaine's Television gave us hefty doses of *purposeful* six-string work and a band attitude totally centered around the almighty guitar. Sadly, even many of their small cult following didn't recognize this. The problem has something to do with the setting. In late '73, Verlaine formed his band (with short-term member Richard Hell) in order to 'tell-a-vision'; debuting in '74 at arty outhouses like Max's and CBGB's. Playing on the same historic bills as the more lyrically oriented Talking Heads and Patti Smith in the early days of "punk", Television's guitars were viewed by some as simple backdrops to their symbolist lyrics and remote, brooding stage persona while the trendy "artiness" imposed on the scene stole a lot of attention from the real work of Verlaine and his more conventional second lead, Richard Lloyd.

And as some downplayed the guitars, others overplayed them. Several complained about the long, drawn-out solos, even though most of Television's guitar work was brilliantly choreographed. If you listen to Television's two albums (*Marquee Moon* and *Adventure*) or Tom's solo L.P. (released last September), you'll see that, in many ways, everything is a solo and nothing is a solo. There are lead lines running through all of the choruses and verses, mounting the guitar work vertically, while even in the few recorded horizontal moments (like the guitar extension in "Marquee Moon") the tones develop in a logical *literary* manner; delivering a sense of built-up tension as tightly constructed as a top forty pop tune. Even in the more extended live movements,



VERLAINE GETS TECHNICAL

When it comes to choosing guitars, Tom Verlaine is truly long suffering. His favorite six-string is the one that causes him the most problems — a vintage Fender Jazzmaster which offers lots of string buzz, horrible hissing in the studio and other troubles to test your faith. For the string buzz, Verlaine suggests taking the bridge out and wrapping masking tape around the poles to keep it from rocking. And because of the hissing, he says you can't jump around while doing a solo in the studio. You've gotta be at a certain angle to the amp where it hums the least.

Verlaine has less problems with his favorite strings (Ernie Ball and Gretsch) and his amps, which since the final days of T.V. have been Ampeg SVT's, which he claims, "totally changed my sound. They fattened up the lead guitar so I'll probably use them next time in the studio." On the two Television albums Tom used Fender 'Super Reverb' amps, and on his solo LP he favored cheap \$57 mikes, which he claims "take more punch. It gives it a slappy effect."

Verlaine generally prefers cheaper equipment, asserting the main problem with guitarists today is, "they all go for those \$3000 Les Paul's and Marshall amps. There's really a lack of the individual with that stuff."

Verlaine has proved to be one of the few guitarists (along with Neil Young, Jimmy Page, Jeff Beck and others), who can solo for more than a few minutes without losing the point. Of all of them, Verlaine's work seems to have the greatest sense of "telling a story;" of bringing you somewhere and coming back with a vividness as insistent as a reoccurring dream.

But beyond tight focus of Verlaine's work, there is the uniqueness of his tone; an almost anorexic sound — thin, piercing, brittle and vulnerable. "I term that sound shiny," Tom asserts. "You can get that with Gibsons. On the solo record, I used an Epiphone "Al Kaiola." It's got six switches on it and every one makes the sound even thinner."

Verlaine's sound actually developed somewhat by accident. "When I was in high school in Delaware I had a different sound," Tom explains. "I was using an old tape deck — you take the pre-amp out of it, which gives you the same sound I later heard when I first saw Clapton play live. He had this little thing on top of his amp, which I bet was a tape recorder with the pre-amp taken out. A lot of people did that in those days — Jeff Beck, Jimmy Page. It gives your guitar a lot of volume before it hits the amp itself. Then the amp distorts it and gives it an edge. When I got to New York my sound changes because I didn't have any of that equipment. The new equipment I bought in New York was a Fender Jazzmaster, which in those days was \$95 because nobody wanted 'em. Now they're up to \$400, probably because Elvis Costello had his picture taken with 'em so many times."

Verlaine labels the new sound he came up with for Television as a "cranked up surf sound. It's basically a combination of Fender surf guitars and Fender amps cranked up."

Interestingly, when Verlaine was growing up as Tom Miller in Delaware he claims not to have like guitars at all. "In the early Sixties I listened to jazz and when a guitar would come over the radio I would literally turn it off. When I heard The Stones, that's when I started to like the electric guitar sound. Also on Dylan's *Highway 61*, Mike Bloomfield's stuff."

"19th Nervous Breakdown" and "Tombstone Blues" may have inspired Tom to trash his sax and piano for a guitar but his style developed on a track far outside of Bloomfield's or Keith Richard's blues-based licks. Listening to early Television, one might more closely associate him with the psychedelic San Francisco sound; Jorma Kaukonen with his vibrato hooked on speed. "I never liked San Francisco music," Tom counters. "People still associate me with that. But the tones I liked more in those days were The Butterfield Blues Band or ▶

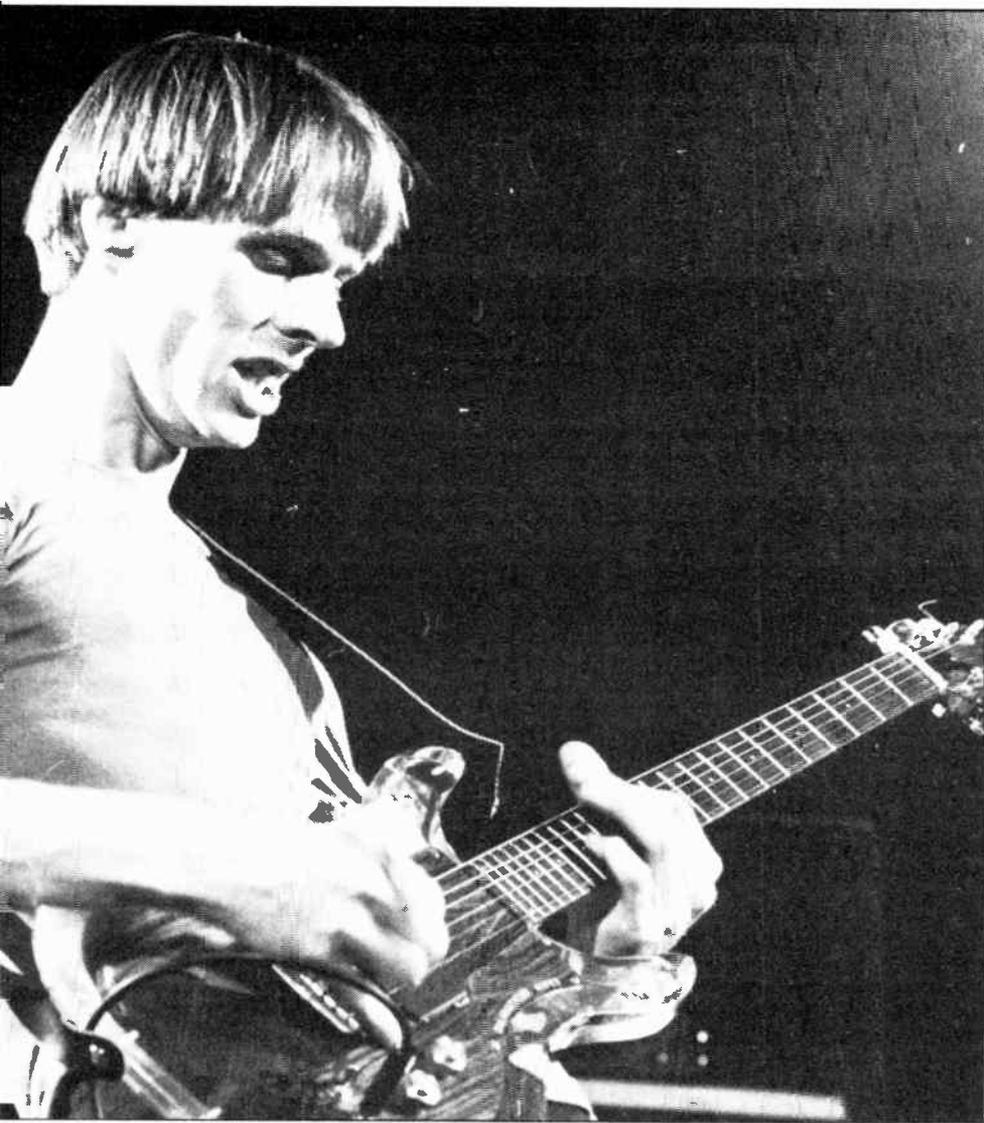


Photo Richard Young L.F.I.

The Yardbird's live record."

In terms of the "lean-and-hungry" aspect of Verlaine's tone, one could also dredge up the name of Neil Young. Both Young and Verlaine feature off-kilter lines, emphasizing convoluted reconstructions or extensions of the main themes in their solos. Yet Verlaine is not as culturally rooted as Young. While Young's lines are pure mythic Americana (ironic for a Canadian), Verlaine creates his own separate reality. One is description, the other implication. "The first Neil Young album I bought was *Zuma* which I thought was great," Tom says. "I think he's got integrity. He's one of the few players who does. His live album I like a lot. The guitars are mixed real loud on that album."

In the past Verlaine has had problems getting his own guitars mixed just right. He complains of engineers not knowing how to deal with his sound. On the first Television album it took a while for the

band to make themselves understood. "When we started making the first album with Andy Johns, he didn't know what the hell to make of it. He pulled me out into the hall and said, 'is this the Velvet Underground? What kind of trip is this?' He recorded a few tracks and then had some personal events so he went to California and I finished the record without him. He came back to mix it and he finally said the band was a lot like The Stones because there's this slight out-of-tuneness to it, and you can't polish it up too much or you lose the energy."

On this debut disc, Verlaine revealed how purposeful his guitar work could be right away; in at least one instance creating a solo to reflect pre-conceived visual images rather than random aural effects. Verlaine labels his feature in "Friction", "a picture solo. It didn't have anything to do with tonality at all. There's a Mingus record called *Oh Yeah* and a song called 'Hog Calling Blues'. It's got trombone players making pig

noises and others making cluck noises and it all sounds great. It's all just a picture."

Interestingly, Verlaine reveals some unexpected roots for other guitar bits on the album. While the stuttering riffs on "Marquee Moon" may seem wholly original, Tom claims it was reggae rhythms inverted with a guitar version of the horn part from James Brown's "I Feel Good" layered on top.

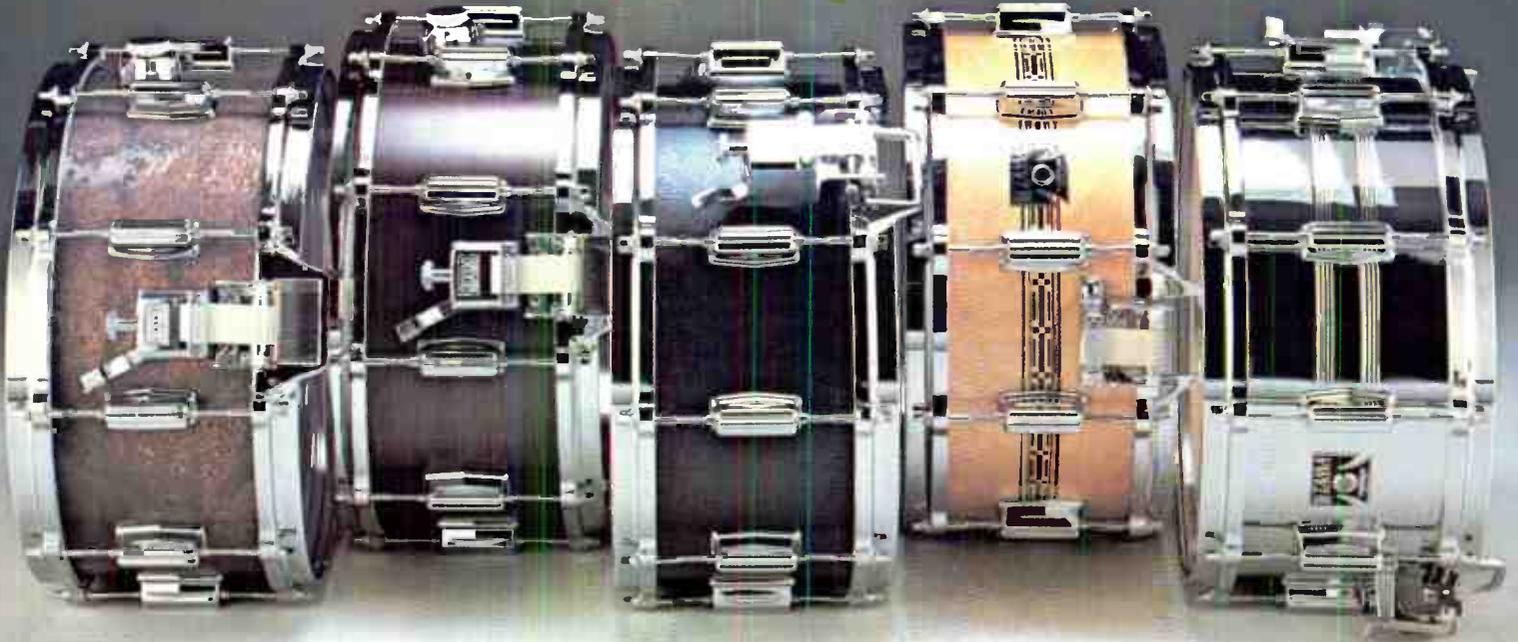
On Television's second album, one of the most stunning guitar riffs is on "Days." It features Verlaine's warmest work, plus a passionate vocal with the key lyric; "days/be more than all we have," to the realm of the spiritual. The captivating main riff in the song has a strange origin. "I had read that Wagner would write something and then write it out backwards," Tom explains. "He'd have the violins play the main theme backwards. I thought that was interesting. And I always liked The Byrds so I asked Lloyd if he could play 'Mr Tambourine Man' backwards. We took that and changed it a little bit and that became 'Days'."

Unfortunately the kind of magic created on the two Television albums could not last. Richard Lloyd had personal problems as well as ego conflicts in the band, and Tom became disillusioned with the drum sound of Billy Ficca. A bust-up was unavoidable but the outcome hasn't been easy for Tom. His solo album was completely misunderstood by the L.A. staff of Elektra Records, partly explaining the LP's poor sales, and Verlaine had to spend many months battling to change labels. A new deal now seems likely with Warner Brothers, but nothing has been finalized. Then there's the matter of finding a new second lead guitar player. and that's a Catch-22 situation in itself. "If a guy's great he wants to play everything himself; he has his own vision," Tom explains. "And if he's not great then who wants to play with him? It's so hard to find someone who's talented and has the right attitude."

For now, Verlaine is writing lots of new songs and seeking out fresh sidemen. It should hardly come as a surprise that he claims much of his new work is very romantic. While so many other guitar "heroes" offer a shallow macho strut, Verlaine has long been delivering the depth and passion that befits a true musical hero. True, this has yet to win over the masses, but Verlaine, like his work, always emphasizes the ideal. To him art should always be a "higher reflection of life." You can almost hear his crystalline guitar work in "Venus De Milo" when he says: "how high you set your sights is a lot how your life is going to turn out." ■

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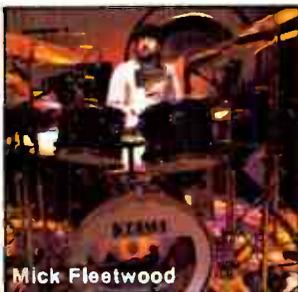
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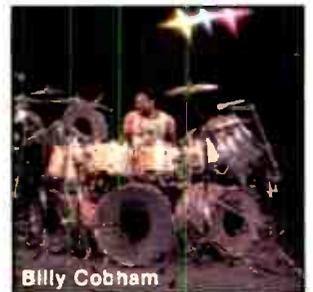
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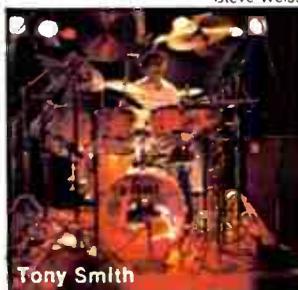
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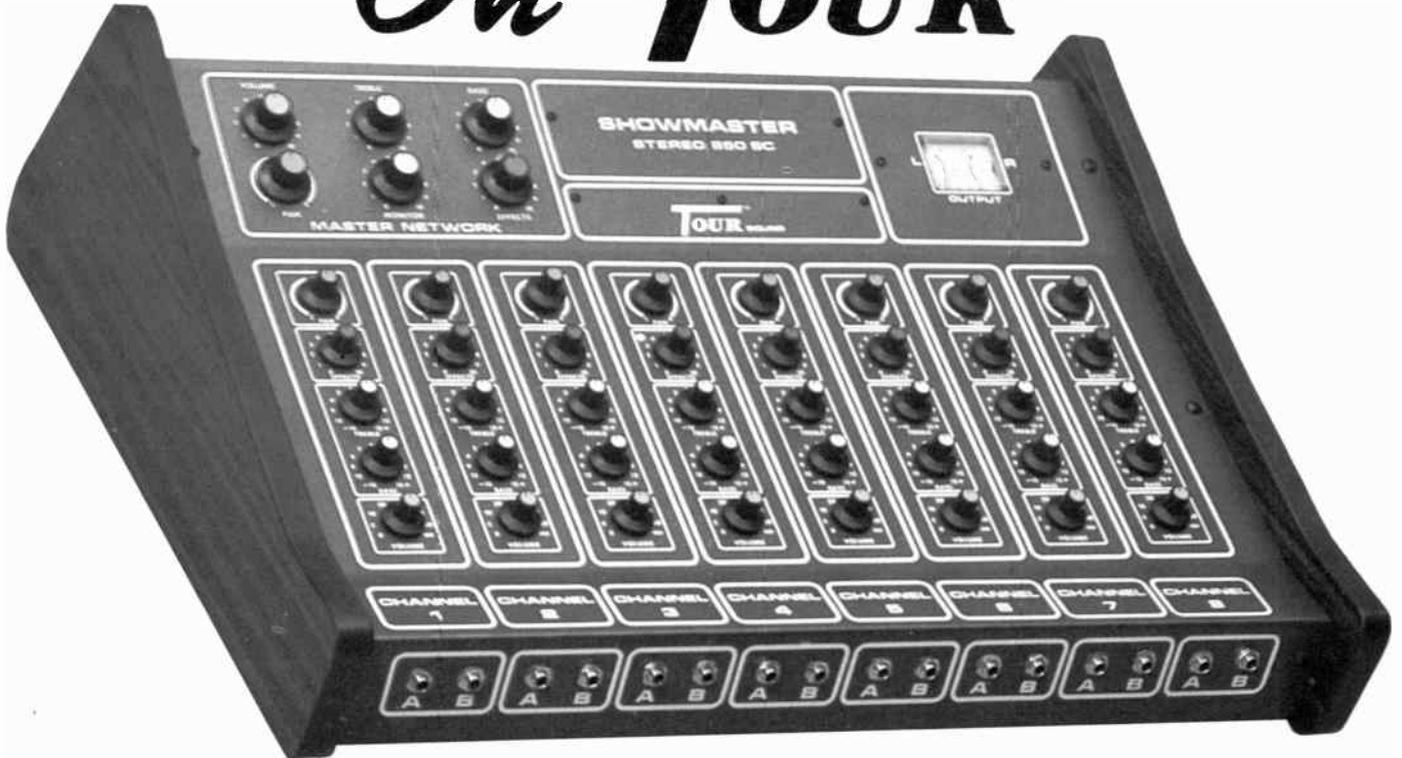
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RONNIE LAWS

A TOUGH TENOR



Imagine: uptown Houston, Texas, dateline 1960. It's late afternoon. The kids have quit school for the day, and the sun blazes onto the sidewalk and the blacktop is sticky. The neighborhood is negro, and the rehearsal room is laid back of the street, not so far that the band rehearsing can't be made out as some kind of jazz outfit — the sax and the keyboards counterpointing the relaxed, almost lazy, rhythm section. A few dudes hang out on a street corner, listening to the music as it drifts by on the thermal currents. They dig it, and wait for something to happen — maybe a Felder solo, or a Sample flash of keyboards.

Inside the rehearsal room it's cool — away from the sun. A few people stand around grooving. The band is the Crusaders, and one of the spectators is nine years old. His name is Ronnie Laws: one day he will blow a tenor horn. It's 1963. Ronnie Laws is 12 years old.

He acquires an alto saxophone, a Buescher in a bad state of repair. His family is not well-off, so he has to make do with rubber bands instead of the proper springs. About five years later Ronnie Laws, in his last year of high school, he progresses to a tenor sax.

And in 1975 he releases the album *Pressure Sensitive*, which turns out to be the biggest selling debut album on Blue Note ever. Ronnie Laws the solo artist has arrived, and a new tenor star is born.

Hmmm... a condensed history like this is accurate, but frustrating, because the very significant bits in between are invaluable in assessing the career of probably the most successful tenor saxophone player in the Seventies decade in terms of sales, and mass market penetration.

Pressure Sensitive was the album that sparked off Laws' solo career. It was eight tracks of saxophone dominated

crossover; raw, vital and funky, and established Laws in the forefront of the fusion artists. Indeed, Laws was, and is, unique in being the only reed playing fusion artist of his time. Junior Walker and Grover Washington, the latter with his famed *Mr Magic* album, spring from different musical milieu, and cannot be labelled as crossover because they did not as such, cross over from anywhere, but play the music they have always played.

The springboard for Laws' solo career was undoubtedly his stint with Earth, Wind and Fire as tenor man: "It was a good association with them, they are very talented people. I learned a lot. Playing with those people early on... the repertoire of that band made me able to appreciate that *it's only music*. It doesn't matter what the music is so long as you're able to project."

Before he accepted the EWF gig, Laws was a staunch jazz purist,

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dedicated to his art, even playing some *avante-garde* material out on the West Coast. It took some time before he realized that music cannot be eaten, or pay the bills: "I really accepted that gig just so I could eat."

It was EWF, claims Laws, that finally lifted him out of his narrow-minded way of thinking, so that he could start playing fusion. But even now, after five solo albums — each exploring the fusion genre — Laws says that: "...reside in this little safe area without trying to expand, because to me there's no growth there, and you just allow yourself not to expand."

This would suggest that he's dissatisfied with the music he's making, defying instead the music made by the great innovators such as Parker and Coltrane "basically that's the way I am."

Listen to *Pressure Sensitive*, and then play his latest vinyl offering *Every Generation*, and it's possible to detect a marked difference in the two musics. The former was, as I said above raw and sensuous, but mostly it was alive and full of energy. *Every Generation* is a different story. Though a thoroughly meritorious record, it lacks the presence and the immediacy of the first solo venture. It has become a kind of soft-focus vision of the initial product, with a hint of middle age about it.

However, though there is nothing on the album to rival "Always There", "Momma", and "Tell Me Something Good", Laws' horn has retained its rough edge and projection, coupled with the gentle lyricism that has become his trademark.

"Every individual player has something unique about him," says Laws as we sip champagne in his room at the Kensington Hilton, "and I'm very fortunate and blessed to be able to stand out as far as sound is concerned. When talking to young players the one thing that I encourage is to try and develop an individuality and uniqueness. Especially if you're a horn player, because you need that one other element that distinguishes you from all the other players. If you don't have it you're just one of the crowd."

Laws uses Selmer MkVI horns. He has a MkVII tenor but is not happy with it, and carried it purely as a spare: "My preference is the MkVI because it resonates better, it projects. It's a lighter horn."

On the tenor he uses a Berg Larsen hard rubber mouthpiece, with a 90 lay. The soprano has a Selmer metal

mouthpiece, size G. La Voz or Rico reeds are preferred, strength 5, but Van Doren also get pressed into use from time to time.

As his reputation hangs on his prowess as a tough tenor, it's surprising to learn that Laws actually prefers soprano, though he still regards the tenor as the more boisterous of the two. He claims that a soprano is easier to make heard when playing in an electric band with all the attendant mid range frequencies coming through the PA. Does his technique change from instrument to instrument?

"I play more open throat on soprano, which has a tendency to project the horn more. And I can relax my lips more, whereas on tenor it's like a very tight embouchure, to control breath flow. Most players approach soprano, alto and tenor with the same technique, which I think is an error."

Laws' vibrato, he thinks, is probably a combination of an open throat and stomach control: "I try to make the horn sing. If you can dig that mentally and you can convey that through the stomach muscles, then it'll come out that way. It really depends on the person."

Does Ronnie use standard fingerings on harmonics, or did he learn the hard way?

"A combination of both. I was basically self-taught, but I learned from the books. I just picked up the books and this must be this. On soprano I alter my embouchure for harmonics, and sometimes on tenor."

"...I was fed-up with being a sideman"

"I guess I come from the school of John Coltrane," explains Ronnie, "in the sense that he really made the instrument project, and he really got the most that the instrument could give, and that always impressed me. That's what I want to maintain on my instruments — yet also generate a smoothness and delicacy. Sometimes it's difficult to project if you don't practice enough."

Ronnie did most of his practising between the ages of 12 and 22 years. That

was the eight hours a day trip, where he built up his daunting expertise and technique. Ronnie claims that now, due to being a successful recording artist, he hasn't time to practice for more than five or six hours a week. "When you become well-known your time is consumed in other areas—such as sitting here giving you an interview."

However, asserts Laws, the foundation of those years playing eight hours a day is still there. He practices scales and formal exercises, plus a little sight reading. Largely it's just scales. He regards himself as a "good reader," but qualifies that statement by saying that sight reading is relevant to what musical context you happen to be in. A classical musician, for example, is reading every day and naturally develops almost perfect sight reading. In the nature of what Laws does it's half and half. He makes the point that he can still sit in with anybody and play—"I'm not hindered by reading."

Unlike a lot of other saxophone players, the young Laws did not play any other instrument before the saxophone. The usual progression towards the tenor horn takes in clarinet first, but Ronnie went straight into playing the horn. Later he had clarinet training at college, but found he disliked the instrument, a distaste that persists to the present day.

After high school Laws found himself with several educational scholarships that he could pursue, notably an offer from the Berklee School of Jazz. However, he declined this offer in favour of Austin University, but even there he quit in his junior year after getting married, and then made the big move to the West Coast, to join a growing band of Houston *emigrées*, notably the Crusaders and his big brother Hubert, one of the great jazz flautists. At this time Ronnie had John Coltrane and Wayne Shorter on a pedestal, and it was their kind of playing that he aspired to.

That was in 1971, and Ronnie admits that that year could've been either the worst or the best for him. As it turned out, it was the best. Ronnie picked up a date with Quincy Jones as a sub for the regular tenor player who was off for three nights.

"It was the first time I got to play with all of them heavyweights," explains Laws, "Jerome Richardson, J.J. Johnson, Ray Brown, all these guys I grew up listening to. And to be able to play with them, especially in Quincy Jones' band, was a blower." ▶



The Bolt Strikes

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RONNIE LAWS

Later, Ronnie was playing with his band in a park in LA, and unknown to him Walter Bishop was standing at the back of the crowd listening, was impressed, and decided to use the whole group as his band. During his tenure with Bishop, Laws found himself blowing in a club by the sea called The Lighthouse, with Doug Carn in the band. And it was Carn who introduced Laws to Maurice White, the prime mover behind the Earth, Wind and Fire organization. It started a relationship that lasted a year and a half, and which took Laws to Europe and Great Britain, playing only the CBS Convention in the latter country.

Laws finally made the decision to go solo after he split from EWF, when he was playing with the Hugh Masakela Band: "I guess I was fed up with being a sideman. At that time things were really shakey in the way of work in LA, because I wasn't really into the *clique*. So after I left Hugh Masakela I realized it was time to start building on my own career, and I began writing. I had in mind that I should put my own band together."

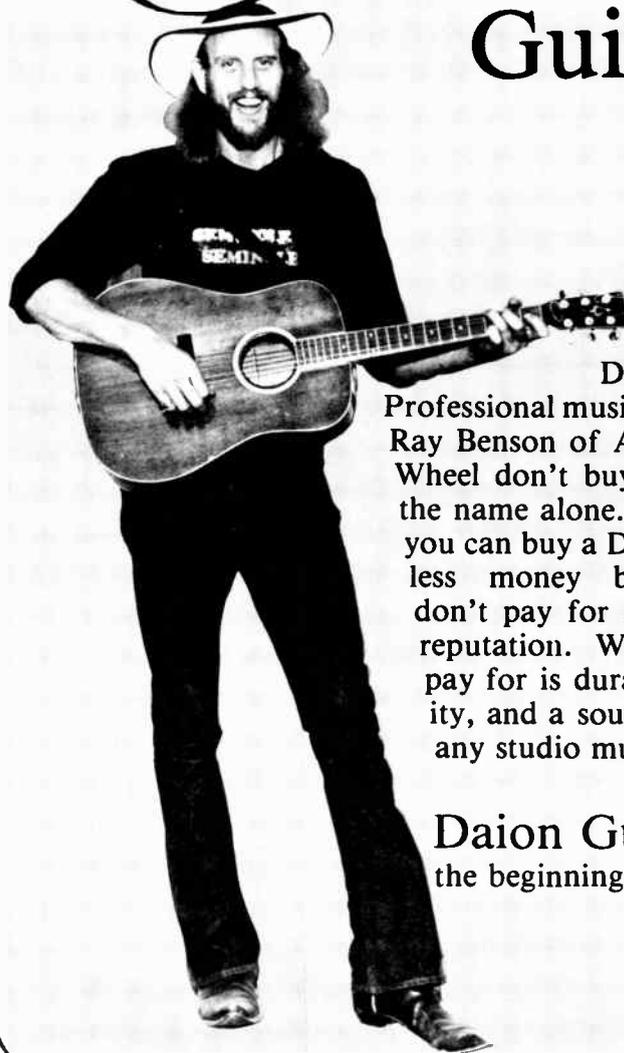
This was the embryo time for the *Pressure Sensitive* material. Laws secured his recording deal with Blue Note and acquired as producer Wayne Henderson, trombonist for the Crusaders. In fact, it was Henderson who suggested that Laws cover "Tell Me Something Good", the famous Stevie Wonder number. And "Always There", the opening track, was co-written by both Laws and William Geoffrey, Laws' musical director. The album was made, put out, and the rest, as they say, is history.

Laws keeps a 16-track TEAC tape machine in his studio at home, and with this he does demos to play to his band before going into the studio. They all have a pretty good idea of what a number is going to sound like before they go into the actual session.

Tunes that Ronnie has as personal favorites from his four albums include "Tidal Wave" and "Always There", on the *Fever* album a number titled "Karmen", dedicated to his wife, and on the *Friends and Strangers* he likes the title track. The *Every Generation* album? Well, he claims he likes them all, but every artist says that about a new album.

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Guitarcheck

ARIA Pro II 'Herb Ellis' \$859.50

If two guitarists meet and start talking about jazz, there is a good chance they are each talking about different kinds of music. The types of guitar traditionally associated with various kinds of jazz are also subject to the same kind of confusion. If we take for example, a Gibson L5, or an Epiphone Emperor, many of the old school of players would reject the description "jazz-guitar" for these instruments

and insist (quite correctly) that they are plectrum guitars.

On the other hand, many younger players would describe them loosely as jazz guitars on the empirical basis that jazz is what people usually play on them. From their point of view, it is just as valid a description. We are not out of the woods yet, because there are various opinions on the exact meaning and applications of the word jazz itself. How-

ever, if my friend Val will forgive me, I am going to sidestep that one for the moment, and plough on with this month's guitar reviews.

Most of the old school of jazz guitar players already have nice old arch-top plectrum guitars and they are not likely to be interested in modern instruments. However, for those young rockers who secretly aspire to becoming old jazzers, here are a couple of interesting and very different instruments. If it be possible without opening up Pandora's box into the Letters page, I should like to call them both "jazz guitars."

The first one of the pair is the Aria Herb Ellis model. As Aria have very honestly proclaimed, "Herb Ellis did not design this guitar, he just gave it a good name" — or something like that. Well, it is a good name. Mr Ellis is an impressive and tasteful player, he has been around for long enough, and he ought to know a good guitar when he sees one. So what has he put his name to?

Aria's Herb Ellis guitar, which is also labelled "Aria Pro II" across the head and the tailpiece, is a medium-sized, arch-top guitar with f-holes, two pickups, a single cutaway and a pearl-inlaid ebony fingerboard. The pearl inlay may not reproduce very well in the accompanying photo, but the pieces are well matched and nicely figured, and the inlay work is almost impossible to fault, even on close inspection.

This is not the usual sort of job, with oversize inlay holes and plenty of black epoxy filler: this pearl actually fits. The fingerboard is good quality, straight-grained ebony, with slightly scruffy plastic bindings and nicely shaped frets of medium width. The machine heads are gold-finished Japanese Schaller-copies. As machine heads, they work well enough, but it is a pity that they should look so much like

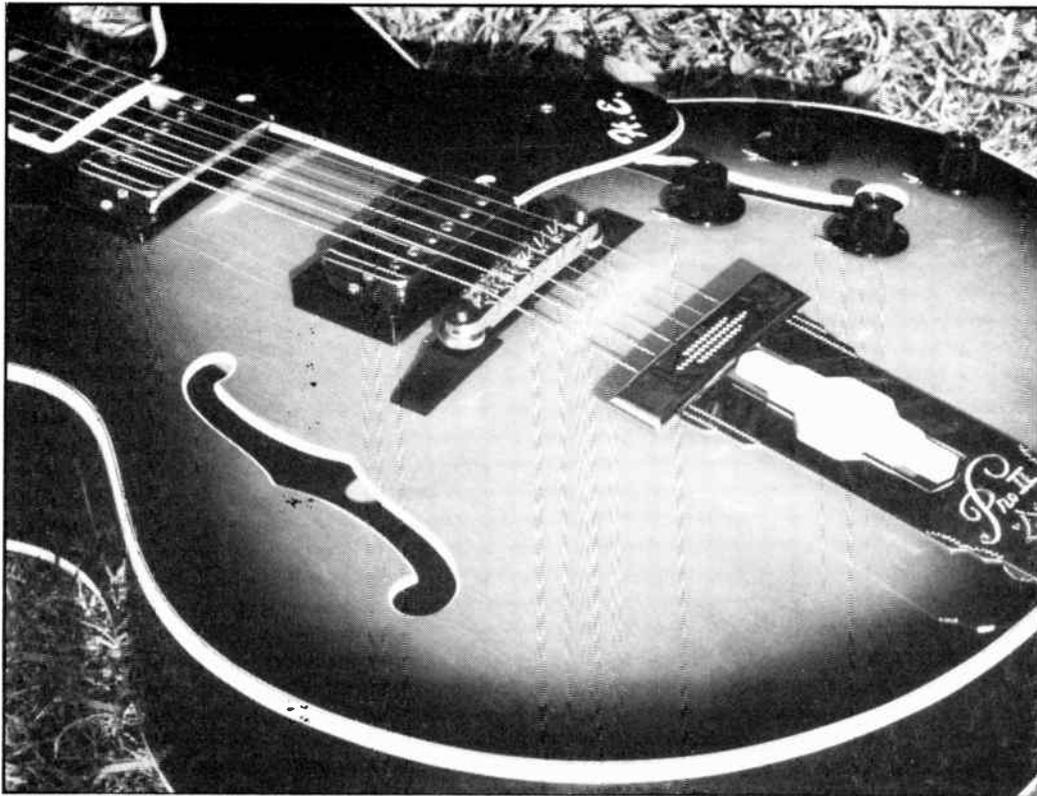
the German machines. There are plenty of other possible shapes for machine head buttons. By now, Aria are big enough and prestigious enough, that they have no need to be playing about with "look-alike" copies.

Although many guitars now have brass or Micarta nuts, this one has a nut made from bleached bone. This material has similar properties to ivory, and should please both the traditionalists and the elephants. There are two sorts of truss-rod used in Japanese necks. One has a screwed rod running in an aluminum channel. The other has a screwed rod set directly into the neck and works the same way as truss rods in Gibsons, Fenders, Guilds, and others. I think it is preferable, for several reasons, and it is this "American-style" truss rod system which is used in the Herb Ellis Aria. It is said to give a better sustain and it certainly works in a more predictable manner.

As some jazz guitar players are likely to use rather heavy strings, it is a wise choice for this particular guitar. The neck is made from Luan, or something rather similar, and the body is made from laminated maple or possibly birch wood. Most of the body strength seems to come from the arched shape of the front and back, as the only bracing visible inside is a curiously-shaped "pillar" from front to back, just behind the bridge. The two gold-plated humbucking pickups and the usual selector switch and controls are fitted directly to the body.

The bridge has a wooden base to fit the arched front of the guitar, with a die-cast metal top section having the usual electric guitar bridge intonation adjustments. The tailpiece is modelled after a similar Gibson tailpiece and retains this unit's odd adjustable brace between the underside





of the tailpiece and the edge of the guitar front. I believe this was supposed to adjust the down pressure on the bridge, but as I have yet to find an "original" of this kind which was working properly, I cannot fairly comment on the working of the "copy". If anything, it is likely to work better on the hard laminated front of this Aria than on the relatively soft front of the original Gibson model.

The whole guitar is finished in yellow/brown/black sunburst and a hard clear gloss lacquer. F-holes and body edges are neatly bound with plastic trim and the whole guitar has a very clean and straightforward appearance.

The neck on our sample guitar is quite straight, and will accept a low action without problems. I found that the guitar works quite happily with either medium or light strings, without needing any truss rod

adjustments. (Another advantage of the "American-style" truss rod, when correctly fitted into a good neck.) The string action as supplied, at nut and bridge is a good general purpose compromise, which should suit most players. Recent converts from solid electric guitar might like the strings a little lower at the nut. Some of the older players I have met would prefer them a bit higher above the frets at the nut end and perhaps a bit lower at the bridge end. This would produce similar twelfth fret action measurements but a totally different feel in each case. Twelfth fret measurements are a useful guide, but they are not the whole story. There is a tendency for strings to creak as they pass over the nut, but I think you all know the cure for that, by now.

At the time of review, the nearest guitar I had available for direct comparison, was an

old Gibson Switchmaster, with three pickups, but otherwise of roughly similar construction. Both guitars would feed back if placed too near to the amp, and at almost identical notes (around middle E on the D-string). In both cases, feedback could be controlled, but not eliminated, by covering the f-holes with gaffer tape, or filling the guitar body with well teased-out Terylene fluff. This problem has not prevented Steve Howe from using a Switchmaster in the past. It is probably one of those things which is worse in theory than in practice.

The voicing of the pickups on the Aria was brighter and more "open" than on the Gibson, although there was little apparent difference in output level. It was noticeable that this guitar, a full, hollow bodied, electric/acoustic, had rather more "poke" than one particular make of American

solid-body guitar, widely advertised on the basis of the unusually high output and aggressive sound of its pickups. It may be that Aria have chosen these pickups with the needs and tastes of rock guitarists in mind.

Conclusion

Overall, this is a nice and not too fancy looking guitar, with a very attractive fingerboard, in-laid in the old style. It balances well, feels comfortable to play over long periods, and was supplied well adjusted, with good quality fittings. The sound is a bit more mellow than many solid guitars, but it can certainly hold its own if you are worried about pickup output levels.

Almost any guitar of this type will produce some feedback if you stand too close to the amp. Gaffer tape over the holes, fluff inside the body, and possibly a small graphic equalizer with one of the middle sliders pulled well down, seem to keep the problem under control in practical playing conditions. You may need none of them, or all three, depending on how, and where, you play.

Stephen Delft

Aria Herb Ellis Model

Serial No: 088024
 Scale length: 629mm
 String spacing at bridge: 55mm
 Fingerboard width at nut: 43mm
 String spacing at nut: 36mm
 Depth of neck at fret 1: 20mm
 Depth of neck at fret 10: 27mm
 Action as supplied. 1.3mm treble/
 2.2mm bass
 Lowest recommended action:
 1.5mm treble/2.5mm bass
 20 frets on fingerboard/body joins
 at fret 17 on treble side. Body
 depth at waist 85mm. Heel starts
 around frets 9/10.

Stephen Delft is a maker and repairer of guitars and other instruments, and a member of the Institute of Musical Instrument Technology. He is also a more than capable performer on the guitar.

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EffectsCheck

DOD Chorus \$179.95 Overdrive \$49.95 Phasor \$79.95

Both of these units use the same casing and layout, so the physical description of both units is the same. The case is a substantial die-cast zinc alloy construction and measures 2½ inches by 4½ inches. The input and output jack sockets are on opposite sides of the case — with the input on the left and output on the right. The effect can be powered by an external 8-10 volt power supply via a miniature jack socket by the side of the output jack. Both these units were, however, run on an internal nine-volt PP3 type battery for the review. Plugging into the power socket disconnects the internal battery. All the switches and sockets are of a good quality.

Internal access is by four screws on the base. All the internal electronics are on a neat PCB. The battery is not held by any clip or secured in any way which initially worried me but it sits between the body of the footswitch and the casing and cannot in fact move or rattle around so I reckon that it is acceptable like this.

Both units have an effect on/off switch and two controls on the top of the case. The finish appears to be durable but only use would confirm this.

Phasor 490

The two controls available are Speed and Regen. Speed is obvious in its meaning but Regeneration is the to control the amount of feedback from the output recycled to the input.

On first plugging the unit between an instrument and an amplifier with the effect controls set to minimum, the first thing noticed is that there is no insertion loss — the volume is identical to the effect not being used. The depth of effect is immediately noticeable with the phasing having a bassy quality giving a very warm



sound. The speed control can be adjusted over a wide range but even the upper end is still useable musically. It is almost a tremolo effect at this position.

The regeneration will emphasize the tonal quality of the phasing and with the control full up, the effect becomes extreme and all the high frequencies disappear over that part of the phasing sweep. This position would not be suitable for lead guitar work where the guitar had to cut through other instruments. There should however be enough range on the controls to satisfy most requirements that can be provided by a small phasor like this. I would recommend trying the Phasor 490 before purchase to ensure that it gives what you want.

Overdrive Pre-Amp 250

The two controls on the preamp are gain and level. The gain is a sensitivity control and the level is the output of the unit. By adjusting the position of the gain control a wide choice of "distortion color" is available from a relatively clean sound at the minimum position to a very rich sound great for lead work but too much for chords. There is a lot of gain available at the output and I feel this is a very good example of this type of unit.

DOD Chorus 690

The DOD Chorus 690 is a mains-operated effect and is in a rather different class to the other DOD effects reviewed. The case is another die cast construction and is extremely strong with dimensions of 5¼

inches by 7½ inches. Controls available include Depth, Width, Speed 1 and Speed 2, with footswitches for effect in/out and speed selection. The rear of the unit had a jack input socket and output jacks for the A and B outputs, as well as the entry for the mains cable. The power on/off switch is an illuminated rocker switch.

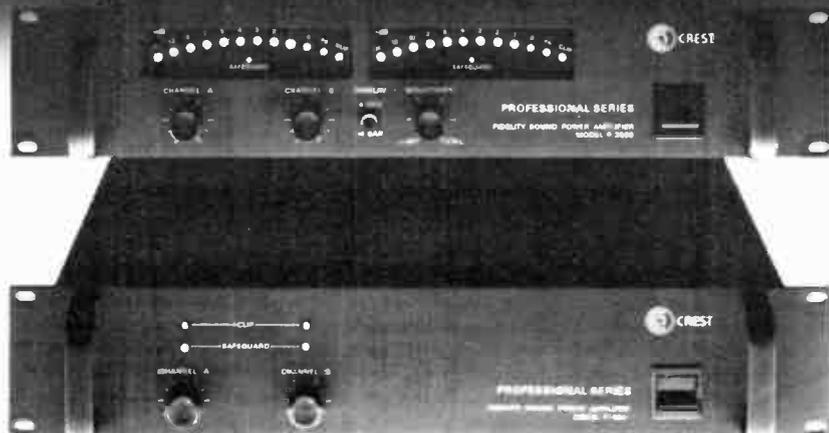
As with the phasor unit, there is no insertion loss with the chorus — nor any gain. The depth control adjusts the amount of delayed signal to be mixed with the original signal and so the depth of effect. The Width control varies the amount of sweep or pitch change used for the chorus effect. The two speed controls are identical — both controlling the rate of chorus sweep. It is possible to set two independent speeds and change between them with the speed change footswitch. The change between the two speeds is not immediate but gradually speeds or slows into the selected speed which I found to be a useful feature. There is a LED which flashes at the selected speed.

The A and B outputs can be connected to separate amplifiers to give a pseudo stereo effect although the chorus effect is present on both outputs equally. (Don't try to plug both outputs into the same amplifier as the effect cancels out leaving you with the straight guitar sound.)

I do have some reservations about this unit though. I found myself to be using the depth control fully up all the time. I kept wanting more depth of chorus effect which I couldn't get, the sound all the time being too subtle for my liking. In all other respects however this unit performs very well and could be recommended when you consider its modest price — but listen to it *first*.

Keith Spencer-Allen

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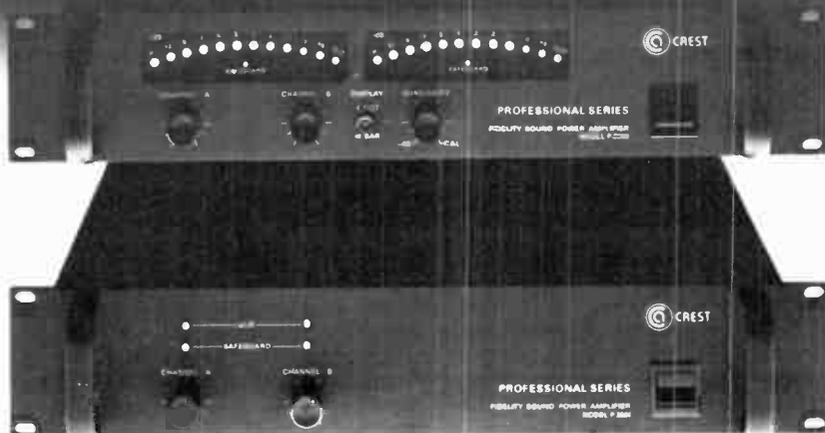
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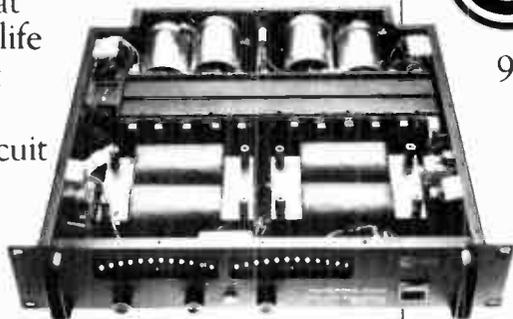
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Synthcheck

MOOG Prodigy \$599.

The name Moog has always been a synonym for quality, and it's increasingly coming to represent good value as well — a development endorsed by the Prodigy.

Moogs have also been the one brand of synth whose owners become almost sentimental about them, and I can certainly imagine Prodigy owners developing an affection for this little machine.

The Prodigy is monophonic (with a lower note taking precedence). It spans just two and a half octaves from F to C, which might possibly be restrictive for the more extravagant soloists among you, though of course, it has octave switching which allows a wide range of pitch to be produced.

The prime virtue of the Prodigy as a budget synth, is that it features two sound source VCO's, which means that much more color and depth can be imparted than on monophonic synths with a single oscillator besides an LFO.

On this Moog, Oscillator One has three octave settings, 32', 16' and 8', while Oscillator Two overlaps to a higher pitches at 16', 8' and 4'. Both VCO's provide sawtooth (raspy) and triangular (purer) waveforms. The first oscillator can also give out a rectangular wave while the second features its more symmetrical, version, the hollow sounding square wave.

Already then, it must be clear that quite a variation of potential sounds is on offer from such a small synth. Furthermore, each oscillator has its own volume control, which means you can mix together different amounts of each basic sound, and then there is an overall loudness pot which affects both oscillators equally.

With an interval control, Oscillator Two can be tuned up or down, up to a fifth relative to Oscillator One. The tuning is



rather fine, and you have to be careful to tune precisely if unison is required. Of course, it's often an advantage to leave two oscillators ever so slightly out of tune, since this can give greater tonal interest to the overall sound — rather like the "principle" of ADT in a studio.

The heated chip technology employed in the Prodigy should ensure virtual complete stability of its oscillators. There is an overall tuning control up or down three semitones which affects both oscillators equally and I found this pot less likely to move in performance than the tuning settings on some other synths.

Besides the two VCO's there's also an LFO by which it is possible to create vibrato, tremolo and wah-wah effects. The LFO has a choice of square or triangular wave form, its rate is controlled by a pot setting and its amount by a modulation wheel. There is also the traditional Moog pitchbend wheel which allows your free hand to move pitch

up or down a fifth without changing your keyboard position.

Another switch can synchronize both VCO's in which case the pitch wheel affects only oscillator two, and wheel movements are experienced more as a phasing effect.

Another venerable Moog feature handed down to the Prodigy from its more expensive predecessors is the low pass filter operated by the cut off control, which brings distinctively "Moog sounds" within the scope of this little synth. Indeed, it's possible to conjure some really sophisticated sounds out of the Prodigy. It may be cheap, but it certainly doesn't sound cheap.

One slight disappointment is the envelope generator, in which the decay and release functions are set on the same pot control. This means that the decay and release gradients on the envelope you shape must always be the same, which means there is less versatility in envelope

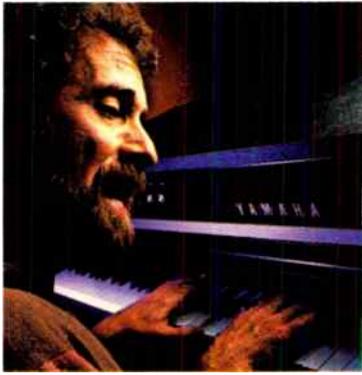
shaping than on synths where decay and release settings are separate.

On the credit side, however, here is a switch to instantly create an abrupt release whatever the decay/release setting on the envelope or filter control, which can assist hasty re-patching on stage. Indeed, quibbles about the Prodigy must be minor ones. For its size and cost it can produce an almost limitless catalog of sounds and effects, and it is tremendous as a lead line.

The bass end is particularly full and throaty, and excellent string sounds can be produced with judicious use of vibrato, so much more naturally "musical" when controlled from a modulation wheel. There's also plenty of novelties and effects to be wrought, some of which are suggested in the first class accompanying manual.

Particularly good are the ring modulator type effects, such as bells and chimes. But a word of warning for those of

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The CP-20 is a single-channel unit with similar features at a lower price.

The portable CP-10 (not pictured) is the newest addition. It features 61 keys and a built-in EQ.

For more complete information write: Yamaha, Box 6600, Buena Park, CA 90622. (In Canada, write: 135 Milner Ave., Scarb., Ont. M1S 3R1.) Or better yet, visit your Yamaha dealer for a demonstration of the keyboards that take true acoustic sound and feel as seriously as you do.

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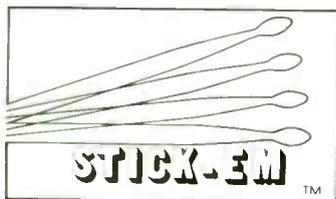
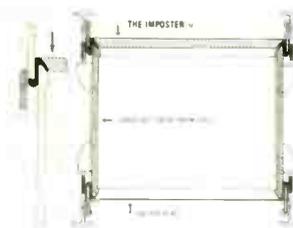


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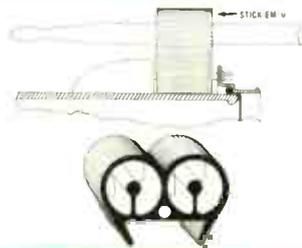
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WHEN USE OF THE SECOND HEAD OF A DOUBLE HEADED BASS DRUM OR TOM TOM IS NOT DESIRED, THE IMPOSTER™ ALLOWS THE USE OF THE RETAINING HARDWARE (RIM AND LUGS) FOR APPEARANCE AND REINFORCEMENT. THE IMPOSTER™, MANUFACTURED FROM AN ALUMINUM COLORED VINYL, OFFERS A PROFESSIONAL APPEARANCE AND BECAUSE OF IT'S ELASTIC PROPERTIES THE HARDWARE WILL NOT VIBRATE LOOSE. WITH THE IMPOSTER™ A DOUBLE HEADED DRUM KIT BECOMES A CONCERT TOM TOM KIT.



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NO MORE DRUM STICKS RATTLING ON THE TOP OF YOUR BASS DRUM - STUCK IN YOUR HIP POCKET - OR LAYING ON THE FLOOR OUT OF REACH. STICK-EM™ HOLDS A PAIR OF STICKS RIGHT WHERE YOU WANT THEM. FASTENS TO THE DRUM USING ONE TENSION LUG. WHEN YOU NEED THEM - STICK-EM™



PICK-CLIP™ PATENT PENDING

IF YOU BREAK OR DROP YOUR PICK IN THE MIDDLE OF A SONG - PICK-CLIP™ WILL PULL YOU THROUGH. DESIGNED TO SNAP ONTO THE UPPER PART OF A MICROPHONE STAND, OR BOOM, PICK-CLIP™ HOLDS ANY COMBINATION OF THIN, MEDIUM, HEAVY, OR EXTRA HEAVY PICKS (ENOUGH FOR THE WHOLE GIG - AND WITHIN REACH.)



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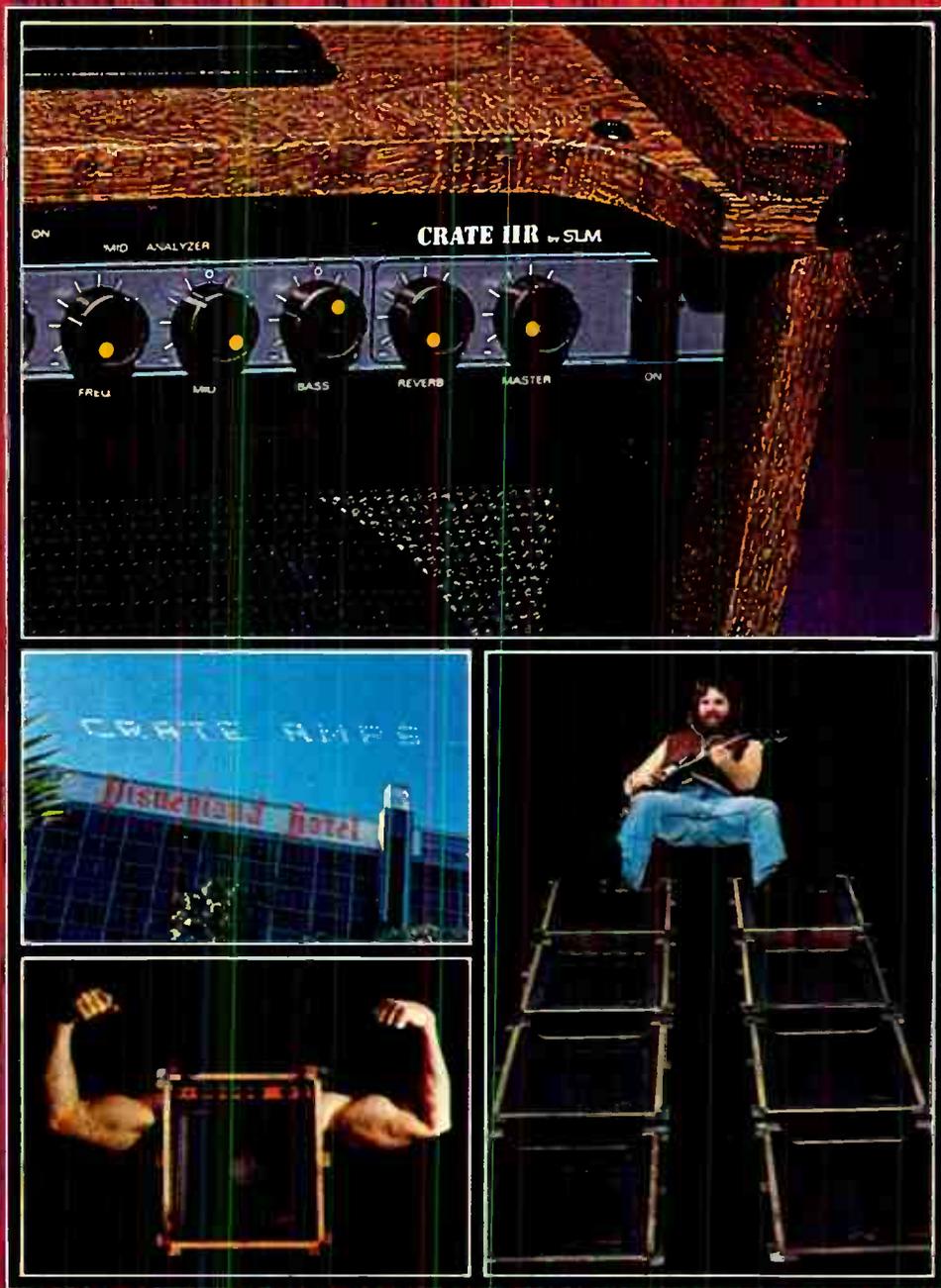
DO CANS, BOTTLES, OR GLASSES DRIP ON AND VIBRATE OFF YOUR AMP? NEED A PLACE TO PUT YOUR PICKS, CAPS, SLIDE, OR CIGARETTES? NOW THERE'S HEADKEEPER™. ATTACHES ONTO ANY AMPLIFIER BY SLIDING THE RETAINING CLIP UNDER THE HANDLE. HEADKEEPER™ KEEPS IT ON TOP!



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CRATE AMPS

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World Radio History

CRATE AMPLIFIERS



Crate amps are built by electronic engineers and technicians who are also musicians. Crates are small enough for backstage warmup as well as practice, powerful enough for stage performing, versatile enough for the studio. Crates can be combined to create different sized systems to fit any job requirement. With this "Crate System" concept, musicians have the advantage of portability. You no longer have to haul around a two hundred pound monster amp to play at 1/10th its capacity. If you play in a small club, you can simply use as many speakers and amps that you feel are necessary, without altering your basic sound. You can now play large auditoriums, small clubs, or record with the same system. You just balance the number of Crates and speakers to fit the room.

CRATES SAVE YOU MONEY!

To the beginning musician, the new Crate System makes good sense. You start with one amp, add a speaker, add another Crate for bi-amping or add more amps for more power. You no longer have to worry about losing money by trading in your old amp for a new one in order to progress musically. You simply add whatever Crate components you feel necessary as your pocketbook and ability grows.

CABINET CONSTRUCTION FEATURES THAT ARE YEARS AHEAD . . . COMPARE US!

1 Solid Wood Cabinets.
Only solid 3/4" wood is used in Crate cabinets—which look even better after a little "road wear". The overlapping corners are a full 1 1/2" thick with steel reinforced caps for ladder-like strength.

2 Solid Steel Handles.
The handle is heavy gauge steel (not plastic) to hold up under the toughest road conditions. Handle is spring loaded to snap neatly back into place when not in use for easy "Crate System" stacking. World Radio

3 Solid Steel Speaker Grill.
The grill cover is also heavy gauge perforated steel (not a thin plastic or cloth mesh as on most other amps). Grill is mounted with a wood frame against foam rubber for maximum speaker protection without

4 Solid Steel Chassis.
The amplifier components are protected in a solid 18 gauge steel chassis (not weaker aluminum as used on many other amps). Chassis is firmly mounted at the top of the cabinet and is easily removed

CRATE I SERIES I

Five competitively priced amplifiers built for studio, practice, or small club work. These 20 watt RMS amps all feature solid Ponderosa Pine cabinets with 10" or 12" Magnum Projector Crate speakers. Each amp has a lineout for use as a preamp, with a separate power amp, or plugging into a console mixing board.

CR-M Crate Mini Amp

A low cost solid wood Crate with separate gain control, treble, bass, and master volume. Other features include two inputs (one high, one low), a separate lineout, and a 10" Crate Magnum Projector speaker, 20 watts RMS. Overall Crate Mini Amp dimensions are 15 1/4" wide, 16" high, 7 3/4" deep.

CR-I Crate Standard

20 watts RMS with 12" speaker, two inputs gain, treble, bass, and master volume control. Separate lineout. Ponderosa Pine cabinet.

CR-IR Standard/Reverb (not pictured)

Same as CR-I standard with the addition of an Acutronix reverb suspended in vinyl bag.

CR-ID Deluxe/Distortion

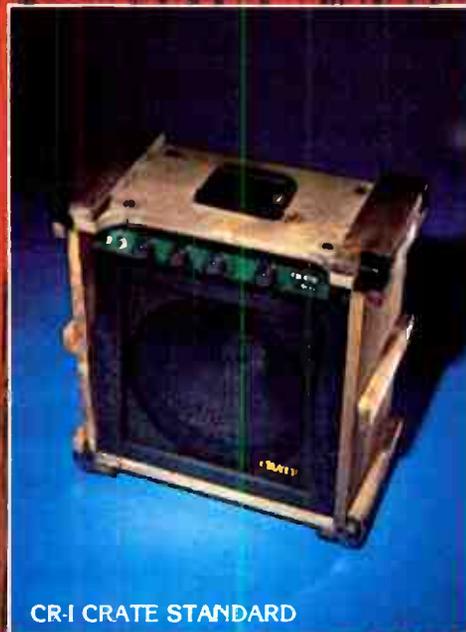
Features 20 watts RMS with 12" Magnum Projector speaker. Special bright switch boosts treble frequencies. A separate distortion control in back can be activated with an optional foot switch for added tone variation. Gain, treble, bass, master volume, lineout.

CR-IRD Deluxe/Reverb/Distortion

Same as CR-ID with the addition of reverb and variable foot switchable distortion. Foot switch extra.



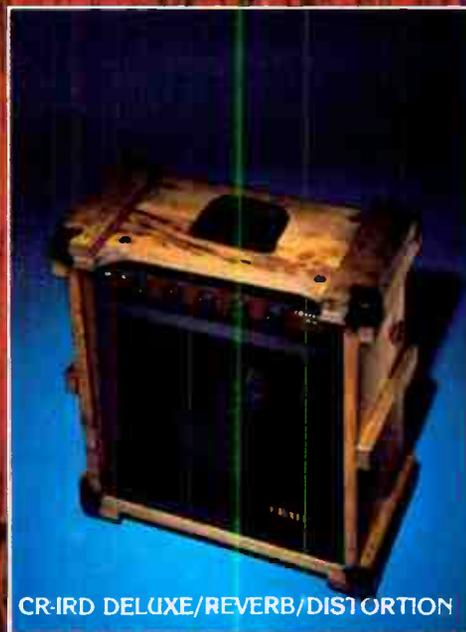
CR-M CRATE MINI



CR-I CRATE STANDARD



CR-ID DELUXE/DISTORTION



CR-IRD DELUXE/REVERB/DISTORTION

CRATE I General Performance Features

CR-I series overall dimensions are 17 1/2" wide x 19 1/4" high x 10" deep.



Two inputs (one high, one low). Allows a choice of either tube type distortion from high input—or a cleaner sound from low input.



Preamp Gain Control. Can be combined with master volume to induce tube type distortion at low volume levels.



Speaker Lineout. Allows use of Crate II series preamp section for mixing. Signal can then be sent to a separate power amp, mixing board, or other sound reinforcement equipment.



G10 Fiberglass Circuit Boards. Stronger than regular phenolic circuit boards. G10 boards last longer which lessens the likelihood of annoying service hassles.



Separate Internal Heat Sink. Output transistors are attached to a separate aluminum heat sink for efficient cooling. Many other amps use the chassis as a heat sink.

CRATE SERIES

Small and
Powerful Packages

Added power with extraordinary tone shaping capability. These compact 60 watt RMS amps have all the features demanded by the working musician. Bifet low noise integrated circuitry delivers the tonal warmth of a tube type amp. Mid range frequency analyzer acts like a mid range parametric. Line in, line out for effects looping and a bright switch that gives a 20 db treble boost. Main speaker disconnect. Available with a standard 12" Crate Magnum Projector speaker or optional British Celestion speaker (56 oz. magnet).



CR-IIIH

CR-IIIH 60 watt Lead/Bass Head

Now you can buy the Crate II "brain" separately. This rugged 60 watt RMS chassis comes complete with the same performance features as the Crate II lead amplifier with speaker. Solid Ponderosa Pine cabinet. Can also be used as a bass head. Overall CR-IIIH dimensions are 17½" wide, 10" high, 9" deep.



CR-II

CR-II Crate Lead Amp

Ponderosa Pine cabinet. 12" Magnum Projector speaker. Extension speaker jack plus line in, line out. 60 watts. Bright switch, mid range parametric plus active bass and treble controls. Gain and master volume.

CR-IIC (not pictured)

Same model as CR-II but equipped with 12" Celestion speaker with 56 oz. magnet

CRATE II SERIES PERFORMANCE FEATURES



Active Tone Equalization Controls

All tone controls on the Crate II series provide for active cut and boost of all frequencies from 40 hz to 20 K hz—giving more tonal variety. Many amps have only passive tone controls.



Mid Range Analyzer Circuitry (Frequency and Mid Range Controls)

Acts like a mid range parametric equalizer by letting you actively cut or boost the mid range frequency of your choosing. Guitars are basically mid range instruments. You now have more control over a guitar's most fundamental tone spectrum, for maximum tone shaping and sound control.



Bright Switch (located over treble control)

Provides you with an immediate 20 db boost of the higher treble frequencies and produces piercing crisp power lead highs.

OTHER CRATE II SERIES AMPS AVAILABLE

(all with the same performance capabilities as the Crate II but featuring Acutronix reverb)



CR-IIRN

CR-IIRN Natural Oak with Reverb
Lead/Reverb amp in natural oak cabinet. This compact Crate is housed in a natural oiled solid oak cabinet. 60 watts RMS.

CR-IIRNC Celestion Natural Oak
12" Celestion speaker with 56 oz. magnet. Reverb. Same specifications as CR-IIRN.



CR-IIRS

CR-IIRS Stained Oak with Reverb
Stained solid oak cabinet with reverb. 60 watts RMS. 12" Magnum Projector speaker. Same specifications as CR-IIRN.

CR-IIRSC Celestion Stained Oak
12" Celestion speaker with 56 oz. magnet with reverb. Same specifications as CR-IIRN (not pictured).



CR-IIRH

CR-IIRH 60 Watt Lead/Reverb Head
This rugged 60 watt RMS chassis comes complete with Acutronix reverb. All other controls are the same as on CR-IIR series. Can be used as PA head, especially when combined with a separate mini-mixer. Ponderosa Pine cabinet.

CR-IIRP Ponderosa Pine/Reverb
12" Magnum Projector speaker with Ponderosa Pine cabinet. Same specifications as CR-IIRN. (not pictured).

CR-IIRPC Ponderosa Pine/Celestion
12" Celestion speaker. Same specifications as CR-IIRN (not pictured).



Bi-Fet Pre Amp Circuitry

These low noise integrated circuit chips achieve the soft clipping normally associated with the tonal warmth of a tube type amplifier.



Modular Printed Circuit Board Design

Three G10 all fiberglass printed circuit boards are used in each Crate II series amp. Each board can be individually tested. If servicing is required, it is faster and easier to isolate trouble in three smaller boards than one large board commonly used in many other amps. Average servicing cost is less, and you get your amp back faster.



Massive External Heat Sink

Black anodized aluminum finned heat sink cools heavy duty silicon power transistors which prolong transistor life. Many amps use the chassis for cooling.

CRATE CR65 SERIES New Crate Compacts with Channel Mix

This ultimate compact professional amp has two channels which have been designed to produce two entirely different tonalities. There are two independent sets of equalization controls. The front channel has Bi-Fet integrated circuits, while the rear channel has C-Mos integrated circuits which produce an entirely different tonal texture. Controls for the C-Mos channel include gain, treble, bass, master volume and combine volume and are located on the rear panel of the amp. Channels can be activated or mixed with a heavy die cast foot switch. Front channel controls include gain, treble, bright boost, mid frequency, mid level, bass, reverb, master volume. LED status lights on the front panel let you know what channel you are in. 60 watt RMS. 12" Celestion speaker.

CR-65C Stained Oak/Celestion
60 watts, 12" Celestion speaker. Reverb. Two channels. Solid oak cabinet.

CR-65DLC Dovetail/Celestion
12" Celestion speaker. Solid Elmwood dovetail cabinet. 60 watt RMS. Two channels. Reverb.

NOTE: These CR-65 series amplifiers come standard with dual foot switch for channel mix.

Featuring 5 separate volume controls for "gain stacking" which gives you complete control of the pre-amp and power amp.



CR-65 C



CR-65DLC

CRATE CR65 Series

Detailed Specifications:

FRONT PANEL

- 1 Two Inputs—Left Input—normal high gain. Right Input—low gain (minus 6db).
- 2 Gain Control—Volume control in preamp section. Allows player to overload pre-amp stage to induce tube type distortion.
- 3 Low-High Switch—Adjusts preamp gain structure to suit various inputs and playing styles.
 - A. LOW POSITION—reduces gain of preamp section to allow for easy dialing of clean settings. Good for the clean player or full volume rocker.
 - B. HIGH POSITION—decreases gain of preamp and changes tonality slightly to allow for easy dialing of distortion settings. Good for rock settings, particularly low level distortion.
- 4 Master Volume—Controls the volume in the power amp section. When used in conjunction with the "gain" control, player can induce tube type harmonic tones at low volume.
- 5 LED Indicator Lights—
 - A. Left light (red) indicates rear channel in operation.
 - B. Right light (yellow) indicates combining of front and rear channels used together in series.
- 6 Active Bass Control ± 22 db Boost or Cut at 40 hz.
- 7 Mid Analyzer Circuit (like a Mid Range Parametric)—Control of the mid range tone spectrum has most dramatic effect on shaping the general tonality of the guitar. This circuitry consists of:
 - A. Frequency—Select the frequencies in the mid range spectrum you wish to boost or cut.
 - B. Level—Governs the amount of boost or cut in the mid range frequency you have selected.
- 8 Active Treble Control ± 18 db Boost or Cut at 20,000 hz.
- 9 Three Stage Bright Switch (located over treble control)—Provides you with an immediate boost of the higher treble frequencies.

Switch to left—off

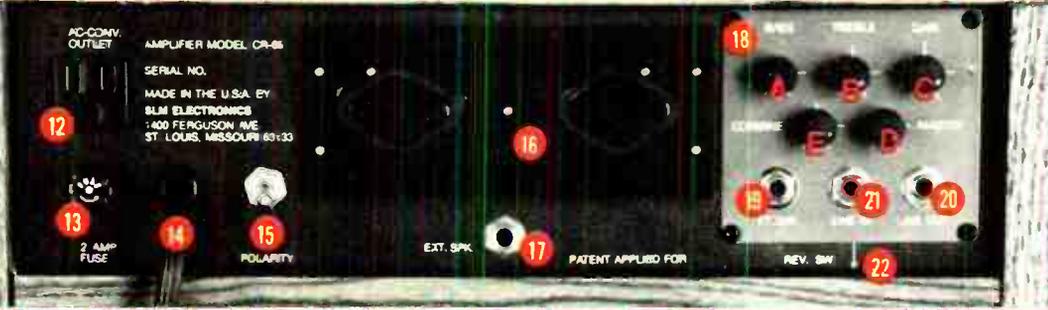
Switch to center— ± 15 db @ 10 khz
low bright ± 5 db @ 1.5 khz

Switch to right— ± 20 db @ 10 khz
high bright ± 15 db @ 1.5 khz
- 10 Reverb Control.
- 11 Lighted Power On-Off Switch.

CRATE
CR-65 SERIES
FRONT PANEL



**CRATE
CR-65 SERIES
BACK PANEL**



BACK PANEL

- 12 AC Convenience Outlet.
- 13 External Fuse Holder.
- 14 Three Wire Grounded Power Cable.
- 15 Polarity Switch—helps eliminate line noise.
- 16 External Heat Sink—cools power transistors providing longer life to amplifier.
- 17 External Speaker Outlet—4 ohms minimum impedance.
- 18 Rear Channel Control Section.
 - A Continuously Variable Bass Control.
 - B Treble Control.
 - C Gain Control—A volume control which also allows player to overload pre-amp stage to induce distortion.
 - D Master Volume.
 - E Combined Volume—Adjusts overall volume of amplifier when both channels are used simultaneously (in series) without affecting the general tonality.
- 19 Channel Mix Foot Switch Jack—Allows you to use either Channel 1 pre-amp. or Channel 2 pre-amp separately, or combine the two in series for the largest selection of tone combinations available in a self contained amplifier of this size.
- 20 Line Out / Effects Out—Allows you to use the pre-amp section for tone mixing and then connect directly into sound reinforcement equipment, or allows for external effects looping in conjunction with line in.
- 21 Line In / Effects In—Sensitivity .6 VAC RMS input level required for 50 watts. Allows for external effects looping for foot pedals and tape echo without using front end (pre-amp) section. This provides a noiseless signal for effects.
- 22 Reverb Foot Switch Jack—Located under chassis

By Popular Demand...
CRATE BASS AMP



CR-IB CRATE BASS AMP

CR-IB CRATE BASS AMP

By popular demand, here is the moderately priced Crate Bass which delivers a driving punch through a specially designed ported cabinet. The Crate Bass has 20 watts RMS

and a 12" speaker with a 30 oz. magnet. Controls include gain, bass, treble, master volume and line out. Housed in a Ponderosa Pine closed back cabinet.

CRATE EXTENSION SPEAKERS



CR-EX



CR-KSH



CR-KS

CR-KSH Crate 60 watt Power Amp
Now you can buy the Crate Kicker "brain" separately. This rugged 60 watt RMS chassis is housed in a solid Ponderosa Pine wood cabinet. Good power source for most speakers.

CR-KS 60 watt Crate Kicker
Excellent for add-on power to your present amp. Ideal for a powered monitor, speaker at an incredibly low price. This 60 watt RMS power extension speaker has a 12" Crate Magnum Projector speaker. Three LED's let you know if your amp is coasting, at normal, or in a clipping mode. Separate volume control for power regulation. Front panel input and output jacks for daisy chaining.

CR-KSC Celestion/Crate Kicker
Equipped with 12" Celestion speaker. Otherwise, same as CR-KS.

CR-EX Extension Speaker
Use this budget priced separate speaker enclosure to increase your sound level. When used in conjunction with any Crate II series amp, you get more power and a marked increase in punch with the addition of the 12" speaker enclosure.

CR-EXC
Crate extension equipped with Celestion speaker.

The Flexible CRATE SYSTEM

Design your own Sound at a Modest Cost

The CRATE SYSTEM -- the only real answer for the musician who is looking for a flexible amplification system at a modest cost. Now you have the ability to add as much power, and as many speakers as you need to fit the job. No need to initially invest in larger, more expensive gear. You can later add more power, achieve bi-amping, or get the sound of a super stack as your ability and pocketbook grows. Write for our booklet that gives complete details. Listed are examples of a few systems.

Exclusive creators and distributors

SLM Electronics

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Twin 12" Mini Stack
(CRATE II and Extension Speaker).
Satellite speakers can be positioned anywhere sound is needed unlike "fixed" twin 12" speaker amps.



120 Watt Twin 12"
(CRATE II and 60 watt Kicker).
Combine the 60 watt CRATE II with the 60 watt Kicker Slave and speaker and use the slave as your own monitor.



Bi Amp 120 watt
Most efficient sound control. Two 12" speakers for bass side, two 12" speakers for the treble side.



Bi Amp 180 watt Six Pack
Starts with 180 watts rms, drops four ohm speaker load to two ohms providing "360 watts of sound".

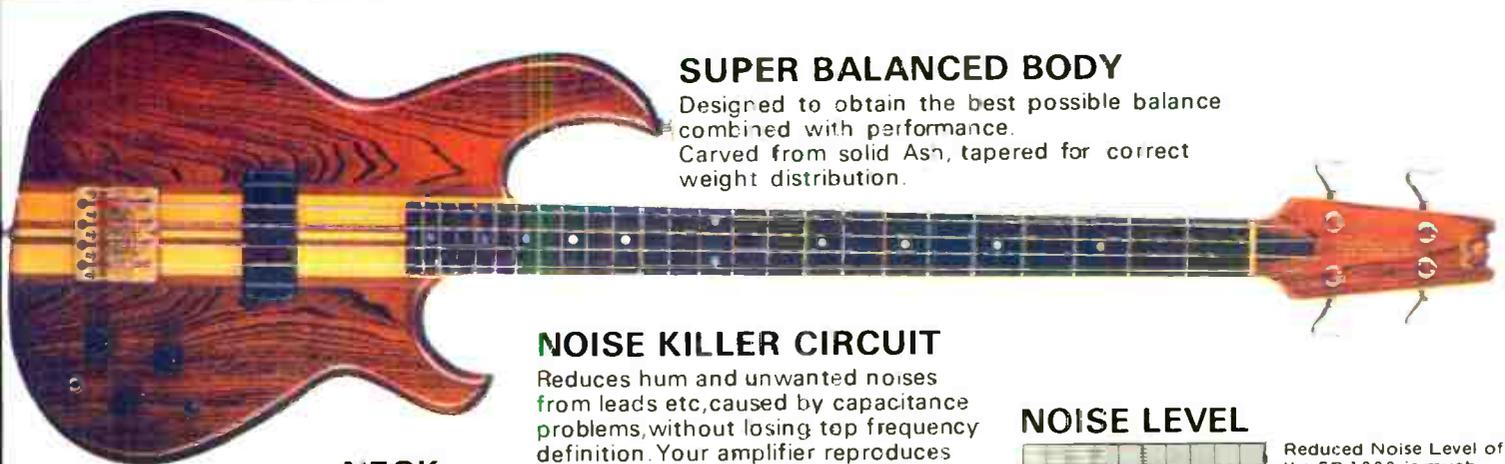
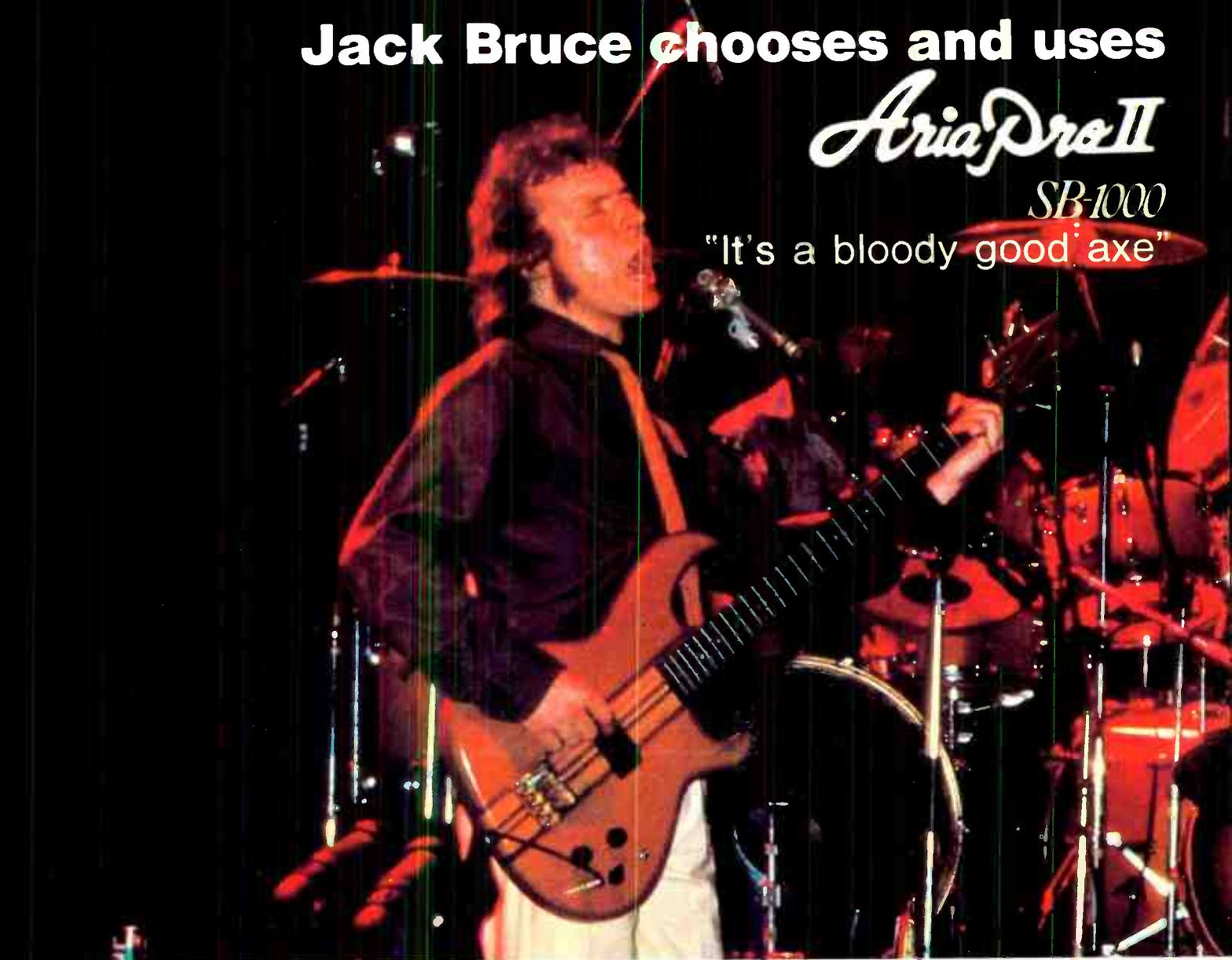


Jack Bruce chooses and uses

Aria Pro II

SB-1000

"It's a bloody good axe"



SUPER BALANCED BODY

Designed to obtain the best possible balance combined with performance.

Carved from solid Ash, tapered for correct weight distribution.

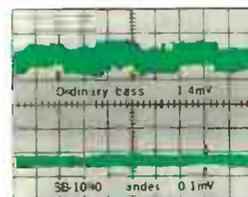
NECK

Long scale with 24 frets. Built with alternate 5-ply laminations of maple and walnut running right through the body for transmitting maximum string vibrations to the pickups mounted in solid timber.

NOISE KILLER CIRCUIT

Reduces hum and unwanted noises from leads etc, caused by capacitance problems, without losing top frequency definition. Your amplifier reproduces only the sounds you want to hear... without external noises. Ideal for studio conditions (the Noise Killer is driven by 9 volt batteries and switches on when Jack Plug is inserted. Life approximately three months with 2-3 hours per day use).

NOISE LEVEL



Reduced Noise Level of the SB-1000 is much lower than in other guitars without active circuits. It is ideal for D.I. where very clear sounds are essential.

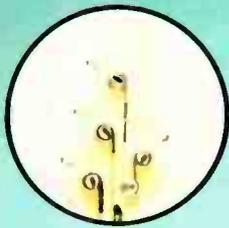
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ONE GOOD THING LEADS TO ANOTHER!



Three years ago, we introduced the StingRay Bass. It is a worldwide success story in which we take just pride. Such internationally famous artists as Joe! Di Bartolo with Doc Severinson on the Tonight Show, Freebo with Bonnie Raitt, Patrick Djivas of P.F.M. in Italy, Louis Johnson of Brothers Johnson, Carol Kaye, writer, publisher and recording artist, Niels-Henning Orsted Pedersen of Denmark, Carl Radle with Eric Clapton and countless others have become enthusiastic users of the StingRay Bass.

With such prominent acceptance we could have easily been tempted to leave well enough alone, to sit back and bask in the sunshine of success. But it cannot be. One good thing leads to another. The crisp, tightly defined sound of the StingRay has now been incorporated into a sister model, the Sabre.

If you have not yet joined the ranks of the growing number of Music Man converts, make a trip to your Music Man dealer. Try both models. We can help contribute a whole new dimension to your sound. MUSIC MAN, INC., 1338 State College Parkway, Anaheim, California 92803.



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World Radio History

you who may try out the suggested patches — don't experiment at too great a volume because some of the high pitches produced, won't do your ears much good. I'm still recovering from the "Long Fall" setting.

It's a very easy synth to get to grips with, the controls are well laid out and everything is triggered from the keyboard. The Prodigy is attractively turned out in a black fascia with E-Z-See controls and maple wood side panels.

Unfortunately, like most budget synths, and indeed some not-so-budget synths, there is no case provided for protection. I really can't understand this, as I'm sure that most people paying out a couple of hundred dollars *or more* would gladly shell out a few more shekels to protect their instrument against knocks, scratches and dust.

Conclusion

If you're looking for an extra lead line or addition to your synth collection, the Prodigy won't let you down. Once you get to know it, it can produce

solo sounds as dramatic as any of its more expensive relatives.

If you're a newcomer to the synth world, this Moog will prove a rewarding first time buy. You'll learn a lot from it and have fun doing so and will be helped considerably by the

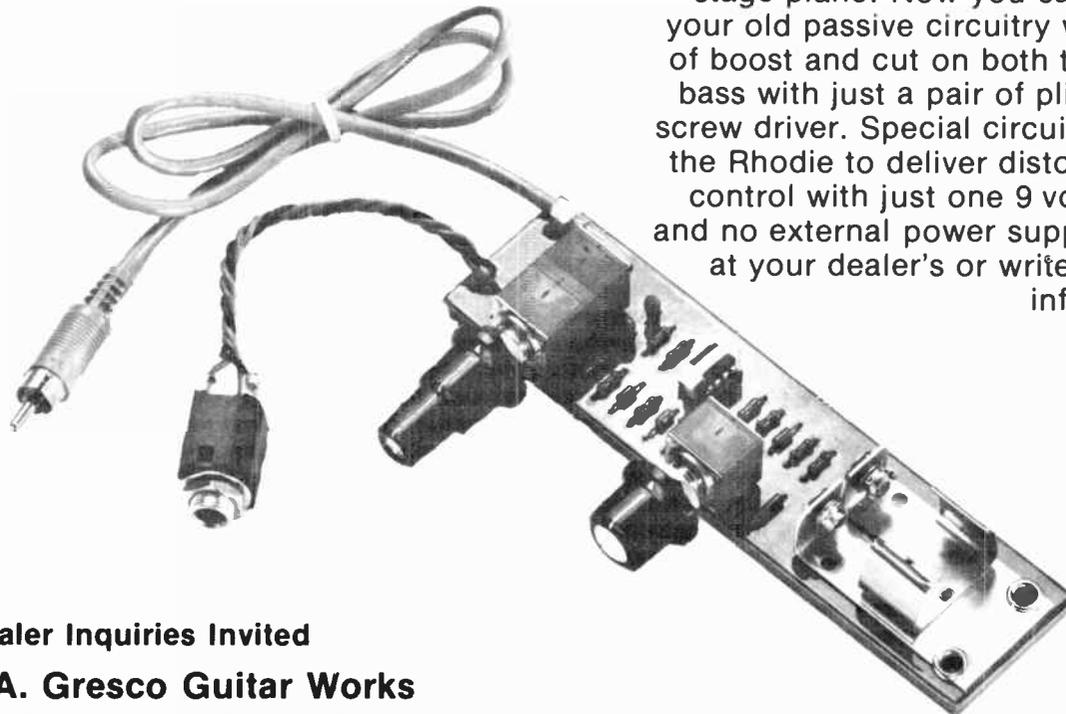
well-written easy-to-follow manual which anyone new to synths would understand and benefit from.

Stan Shaw

Stan Shaw is a keyboard player with a wide experience of both sessions and regular gigging. He has worked with Nick Lowe and featured on early Elvis Costello recordings. Now involved in a solo production venture, he most recently worked with singer Noel McCalla and currently gigs with the Hitmen.



THE Rhodie



is a direct retrofit active tone control kit for your Rhodes* 73 and 88 key stage piano. Now you can replace your old passive circuitry with 15dB of boost and cut on both treble and bass with just a pair of pliers and a screw driver. Special circuitry allows the Rhodie to deliver distortion-free control with just one 9 volt battery and no external power supply. See it at your dealer's or write for more information.

Dealer Inquiries Invited

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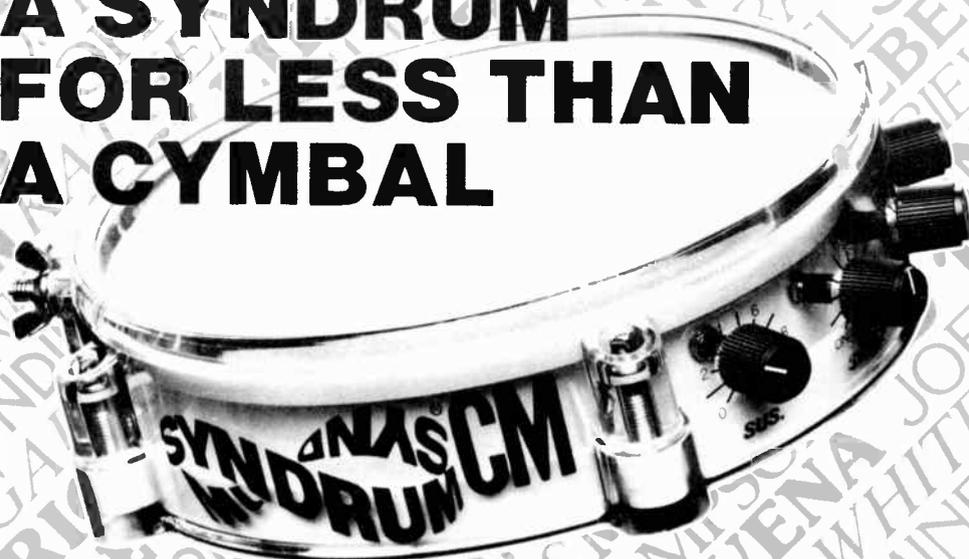
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FOR LESS THAN
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Division of RDSI

On Guitar:



and you've immediately produced the 9th(B), 11th(D), and 13th(F sharp). In this solo you can clearly hear Pat doing this in bars 1, 2, 5, 13, 14, 17-18, 24, 38, 55, 58, and 76-81. You can also clearly see the use of E dorian superimposed (same tones as A mixolydian, just a different starting point). You can observe this at bars 13 and 55 specifically. Now, for the aforementioned modal chromaticism. You'll see that he uses the same passing tones everytime in the following long passages. Notice that they only appear when the line is descending, you'll see lots of A-A flat-G and slightly less of F sharp-F-E and D-D flat (C sharp)-C-B. Look at bars 21-23, 52-55, 57-58 - these long angular lines are essential Martino-isms and will almost always appear somewhere in a solo.

Here are some examples of his excellent usage of neighboring tones though there are those who'd call the usage of C-natural and E flat (D sharp) "blue notes." Check out bars, 5, 7, 14, 17-19, 23, 26-28, 40, 41-49, 51, 58. Certain "blues" and R & B nuances can be found in bars 9-12, 28-30, 33-34, 35-37, 41-49.

When you have the kind of impeccable time and technique Pat possesses, ramming a "riff" home can be most effective and builds tremendous tension, like in bars 9-11, 17-18, 26-28, 33-34, 41-49 (this one could make the Guinness book).

Anyway, looking at these passages I've pointed out and playing through the solo should definitely bring you closer to understanding the "basic Martino" but, even at his most "basic", he leaves a lot of us behind in the dust. What these written notes can't give you is Pat's insistent sense of time, his precise phrasing, flawless execution of what he wants to say, his great sound, demonic intensity, and most of all, his sincere dedication to his art.

Though you can't go wrong with any Martino recorded performance in my book those

of you not already familiar with the bulk of his work might enjoy checking out his last recorded work as a leader *Joyous Lake* (Warner Bros./BS 2977). It finds Pat at his "electric" best and performing with a fantastic and very energetic young rhythm section. Though this recording didn't seem to get the critical or commercial success it so richly deserved, it's a must for any Martino fan. And if you haven't guessed by now, I'm at the top of the list. Pat, "You're incredible!"

Multivox unleashes the Little David.

For years and years, keyboard players have been afraid to leave their big wooden boxes home! For good reason though... there was never an electronic effects device that could duplicate the sound of a mechanical rotating speaker. Never, until now.

Multivox unleashes the **Little David**. This unique "little box" looks and sounds so much like the old standard, that we feel it will change the course of musical history. Two speeds are selectable and acceleration is gradual just as with a mechanical speaker. The effect depth (intensity) is controllable and a variable speed control has been provided for precise adjustment.

The **Little David** weighs only 5 lbs. and is small enough to sit right on top of your keyboard. Solid state circuitry eliminates the curse of mechanical failures.

You have to hear and play the **Little David** to appreciate its full potential. You'll see why we call it the giant killer.



M LITTLE DAVID
BY
MULTIVOX

370 Motor Parkway
Hauppauge, New York 11787

Advertisement

MESA/BOOGIE Model Mark II



The name MESA/Boogie is well known to many guitarists and many have heavy dreams how to manage to get one because they are hard to get. Of course there are shops where you can order but in Germany it is sometimes another question if you really will get it.

Well I myself have got one after I had waited a half year from Applied Acoustics Bochum, and here that is an acceptable waiting time.

The amp is a Mark II, a further development of the Boogie Amp. The price including hardwood cabinet, flight case, shipping, duty and all other available options supercedes 5000 DM and that's really a lot for a musician. I have spent all my money on this amp but on the other hand I'm proud and happy to own it because this amp is fantastic and hard to describe in words. During my tests I have never before used the word "perfect" but now I am sure to know what it means.

This MESA/Boogie is an absolutely perfect lead amplifier and there's nothing else like it on the world's market. And this is not exaggerated. The Mark I which I played for a while, already had me convinced but the Mark II is even better. If this amp wasn't so heavy I would always have it with me.

Like the Mark I, the Mark II Boogie

is an all tube type amplifier but with additional controls. This gives you more tone especially with the use of the overdrive channel.

My Boogie is a 60/100 watt version within a solid hardwood cabinet and with a 12" Altec loudspeaker. I prefer the 12" speaker to the 15" because it's not so boomy. But with the amp running in 100 watt position you need an additional speaker. The Altec is a good speaker but I don't think that it is capable of handling 100 watts of Boogie power which is indeed more than 100 watts of Marshall power. The available Boogie extension speaker cabinets are slightly smaller and perfectly matched to the combo cabinet. Under aesthetic aspects also, the hardwood Boogie supercedes all other amps. New too is the fan inside the 100 watt models which cools the tubes.

The Boogie's inside is done carefully by hand. Many electronic components are specially designed and unusual for musical instrument amplifiers and are of outstanding quality and carefully selected.

One more option is the 5-Band Graphic Equalizer which is good to further alter the tone. There are so many possibilities to vary the sound that you have to take some time to find the ones best for you. Again

and again I am surprised by new tone settings. You can even get a good clear sound for playing an acoustic guitar through it, indeed you really get many, many sounds—for instance the old Fender sound which you can't get with the new Fender amps.

It's surprising to see some new amps sounding much better than the new Fender itself and all date back in some way to the old Leo Fender amps. By the way, the development of the MESA/Boogie company and their product is a very interesting story too, which I will tell you about in one of our next issues. I hope you will enjoy it.

But back to the Boogie amp. If 100 watts Boogie power is not enough, you can use the Slave Out to plug in additional power amps or to plug directly into P.A.

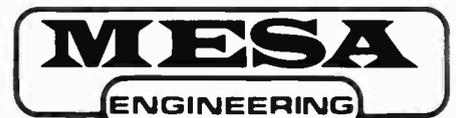
The Boogie is still handmade in the USA as it has always been and is not built on license in England or Japan as the story goes. There are still delivery times of several months and black market prices for getting it early, yet handmade perfection and individualism are rare and worth the price.

During the last Frankfurt Spring Music Fair I was anxious to look for alternatives to the Boogie amps and indeed there were several manufacturers showing very similar looking products but the sound and quality were terrible compared to the Boogie, so you'd better forget it.

To describe the Boogie's sound is difficult for me and for those of you who don't know, the most impressive thing is to listen to musicians using the Boogie such as Joe Walsh, Carlos Santana and Frank Zappa for instance. And all of them have a different but typical sound . . . and what else can I say?

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On Bass:

Continued from page

conductor or bass player for a gig in case the bassist can't make all the gigs? Are there no Holiday Inns or Ramada Inns where show bands come to play? Is there a musician's union near you? Why don't you go down there and try to get a gig by introducing yourself around? Or, try to get a teacher. Or you could learn to read with a good teacher who might have an ad posted at the union hall.

I received an excellent letter a couple of weeks ago from the Assistant to the Chairman of the Bass Department at the University of Miami. If you are going to pursue the student route, try the Miami University music school. It boasts such well-known alumni as Gil Goldstein, Pat Metheny, Mark Egan, Danny Gottlieb and Jaco Pastorius. Berklee College of Music is quite probably the best jazz school in the world, Gary Burton, Keith Jarett, Michael Gibbs, Al DiMeola, John Abercrombie and Joe Labarbara are just some of Berklee's successful alumni.

I'm astonished that most of these letters show such little depth of thought on your part. I was ideally looking forward to some interesting (at least) questions or comments that would help me in creating a column with universal implications that would also pertain to each of us individually. Your questions and comments in conjunction with my explanations could truly create a bass players's column, a "people's column," if you will. All of you have an opportunity to have your most difficult questions answered and discussed. So far that has happened only once, when I received a letter from someone who had difficulty with his teacher and the fingerings he was given. That letter provided the core of my column on upright bass teachers and their electric pupils. But when I still get letters asking me how I hooked up with Bruford, or how many fingers you use when playing

the blues, you're just bullshitting me *and* yourselves! Take your instrument seriously, use your own initiative, and together we'll make beautiful music

PS: Write me.

Jeff Berlin is currently a member of the Bill Bruford Band. He has worked with most major jazz artists and spends a good deal of time as a session bass player.

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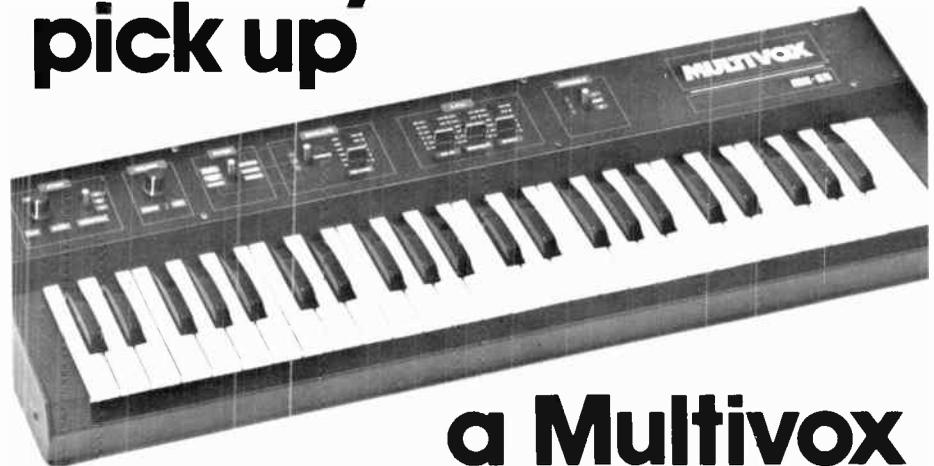
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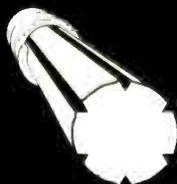
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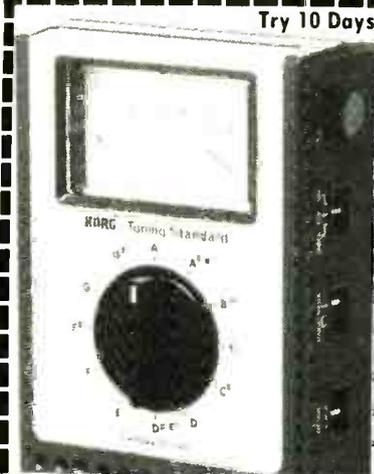
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Grace Notes

"Reissue 1939
MARTIN D-45"
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shell case)

Hot on the heels of their successful 1934 Martin HD-28 (Herringbone) reissue, the inimitable Mandolin Brothers Ltd (629 Forest Ave., Staten Island, NY10310) have come up with another limited reissue series of a Martin instrument that, in its original form, has often been considered the *creme de la creme* of American flat top guitars — more specifically, The Reissue 1939 Martin D-45.

First made by Martin between 1933 and 1942 (i.e. the catch-name "Pre-War D-45"), the D-45 represented Martin's most lavish realization of the Dreadnought-style guitar. In fact, considering the generally sober appearance of Martin instruments (the aesthetics of functionalism), D-45s could almost be considered a flashy anomaly. Replete with multi-hued abalone inlay (Top, back and sides, soundhole rosette and jumbo Martin vertical logo not to mention the fingerboard) the guitar literally radiated a discretely rich and luxurious presence.

Needless to say, there are not many of the originals around (it's rumored that Stephen Stills owns most of them and, if they are available at all, a legit "Pre-War" would probably set you back about 10,000 scoodies), so Mandolin Brothers Ltd, with the kind of foresight that comes from an intimate knowledge of the acoustic guitar market, is now offering a limited edition of 91 Martin "pre-war style D-45 guitars" (the same number as were originally made between '33 and '42) to musicians on mail order basis. And, before proceeding with a look at this



glorious reissue model, I should point out that the Martin Company still offers a "stock" or modern version of the D-45 on a limited basis.

Anyway, some of the features that immediately distinguish the Reissue D-45 include scalloped braces (not available on most Martins since the war), diamond and snowflake fingerboard inlays, a square headstock design, a tortoise shell type peghead overlay and pickguard and the classic Martin "V" neck shape. This guitar also has a light "toning" stain on the top that sets it apart from the regular D-45.

The basic woods include Indian rosewood for the sides and two-piece back, close-grained Sitka spruce (German or "Alpine" spruce is no longer available in quantity, just like Brazilian rosewood) for the top, South American mahogany for the neck and

ebony for the fingerboard. Other characteristic D-45 features include gold Mini-Schaller machines (Martin converted from Grovers last November), a Maple bridge plate and the afore-mentioned abalone inlaid top, back and sides that are almost worth the price of admission on their own. The final note of distinctiveness is provided by a special gold plated brass plate on the neck block engraved with: "CF Martin Exclusive Series Made For Mandolin Bros. Ltd." with a Custom Series number and an individual serial number.

Now, with the understanding that all of this exotic decorative work is near-perfect in terms of concept and execution (a living testimonial to Martin's continuing high standard of workmanship), the average guitarist might still be curious as to how the guitar actually sounds.

The one-of-a-kind scalloped bracing gives us some early clues. Besides the characteristic Martin resolution and clarity in the upper and middle registers (largely due to the excellent piece of spruce used for the top), the scalloped braces seem to free or "open up" to the top a bit to allow for a rich bass coloration that perfectly complements the overall tonal definition of the guitar. The bound fingerboard and unusually comfortable action (for a Martin) make the instrument immediately accessible for even the laziest electric player. The bass notes are crisp and full and higher notes ring clear and true — if perfectly articulated, notes in the upper register seem to exhibit an unusual amount of sustain for an acoustic instrument.

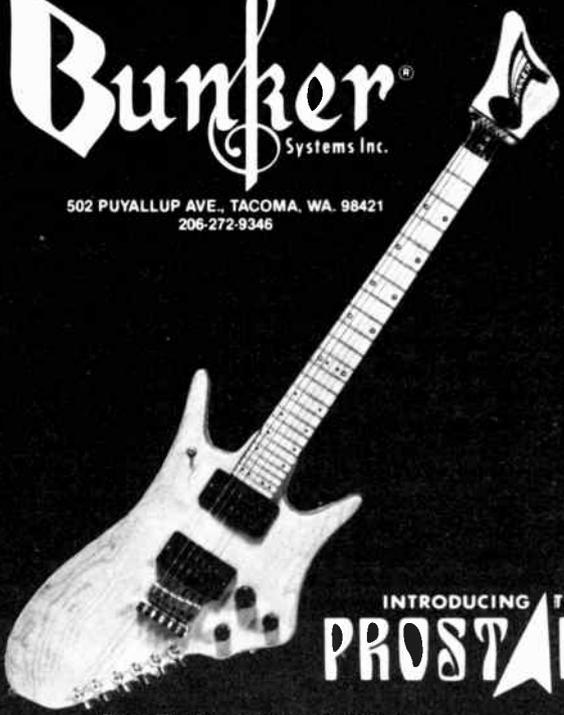
As I intimated before, the inlay work, fretwork and finishing are immaculate and the Mini-Schallers represent a major improvement in terms of intonation. In short, this guitar is a joy to play. It has the warmth and richness of tone that qualify it for folk or improvisational balladry while retaining enough top-end bite to hold its own during those endless acoustic blues jams. And yes, its damned pretty to look at! Set it up on a stand under some soft light and watch it fairly glimmer in a swirl of rainbow abalone.

Admittedly, for many of us caught up in the desperate throes of Recession '80, the price of this guitar (\$2800 list) is a bit staggering. But when you consider the fact that the regular Martin D-45 lists for virtually the same price, and that this bit of living guitar history (made by the *original* manufacturers) is briefly available at all, you might want to give the matter some serious thought. The most heartening aspect of both the D-45 and HD-28 Reissue series offered by Mandolin Brothers is the sense of reaffirmation that comes from knowing a great name in the industry like Martin can still build a superior musical instrument in an era where quality seems an outdated concept.

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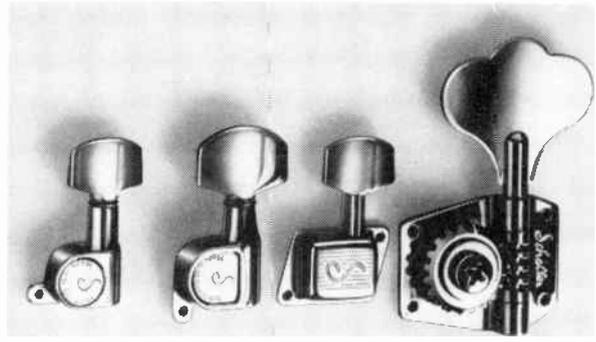
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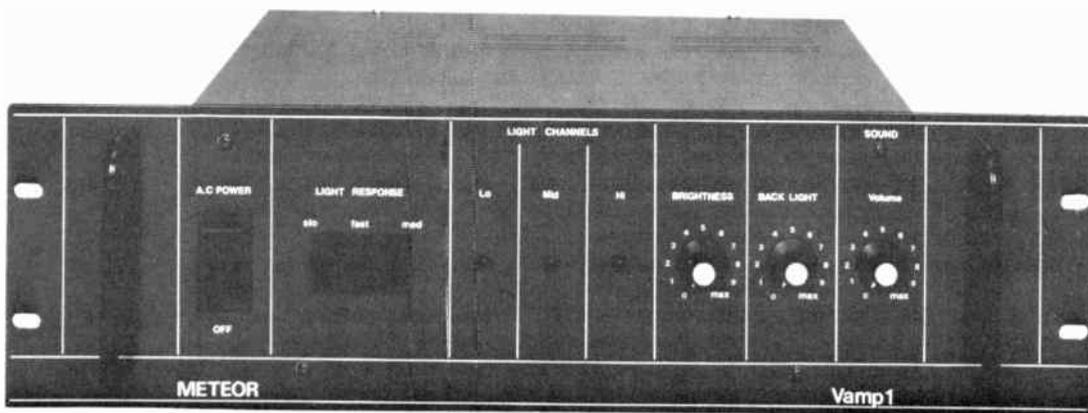
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RECORDING SYNTHESIZERS

Part 4: TIMING TRACKS

In the first three parts of this series, I outlined the various ways in which mono, stereo or 4-track tape recorders can be employed to record your own music using the multi-tracking technique. In this article I describe how to set about recording timing tracks which act as the rhythmic foundation for the parts added subsequently.

Cueing

Let us suppose you have to record an arrangement in four parts, in which the bass starts first, playing alone for two bars before being joined by the other instruments. If the bass part is synthesized and recorded first, then when any other part is recorded, you can pick up the tempo from the bass part before you have to start playing the new part. The bass part acts as a *cue* in this instance.

However, if the arrangement was such that two or more parts had to start *together* at the very beginning, there would be a problem. Let's call the two parts starting together the first and second parts. When the first part had been recorded, there would be no cue when you were attempting to record the second part; you

would have no way of picking up the tempo or of anticipating the first note of the previously recorded part. The solution in this situation is simple and obvious: start by recording the first or second part (whichever you prefer) but lead in with a few bars in strict tempo, repeating the same note on each beat or each alternate beat. Figure 1 shows how to play a cue in the general case where, although the two instruments do not start at the same time, there are insufficient beats (in this case three) between their entries to establish the tempo. Each time a new part is recorded, these extra notes at the start will act as a cue. When all the parts have been recorded, the cue can be physically removed by cutting the tape. If you do choose to tap out every beat, leave at least one beat's rest before the music proper starts, so that editing out the cue is not critical, and there will be no risk of spoiling the first notes of the arrangement.

Click track

It is very difficult to maintain a strict tempo for a long time (ask any drummer!) and it is often helpful to start by recording what is called a "click

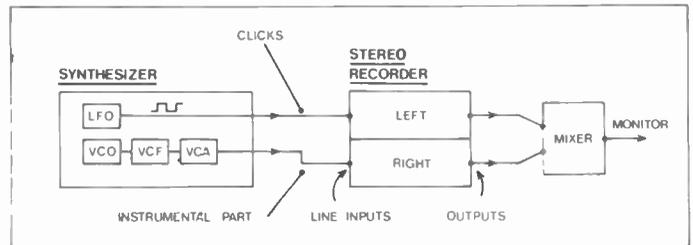


Fig. 2 Simultaneous recording of a click track and one instrumental part as the first stage in making a multi-track recording.

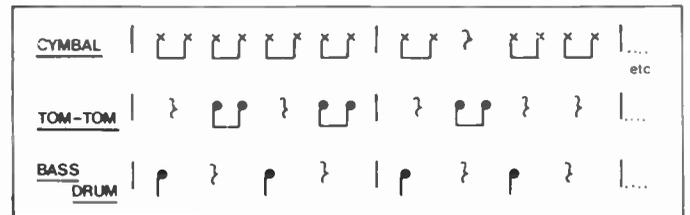


Fig. 3 A basic rock rhythm pattern in three parts. Using only a simple synthesizer, an effective percussion section can be multi-tracked in exactly the same way as any other instrumental ensemble.

track", keeping this track separate from the others until the stage is reached when it is no longer required, when the track can then be reused.

As an example, suppose you had to make a four part recording and you were working with two stereo machines and one synthesizer. To make the click track, you could connect the LFO square wave output directly into the input of (say) the left track of one of the tape

recorders, as shown in Fig. 2 and the rest of the synthesizer could be used at the same time to synthesize one of the instrumental parts. By monitoring the left track, you would hear the clicks produced by the steep edges of the LFO's square waveform, the 'tempo' being set by adjusting the LFO frequency control. Having set the tempo, you would start recording (on both tracks), *play a cue in front of*

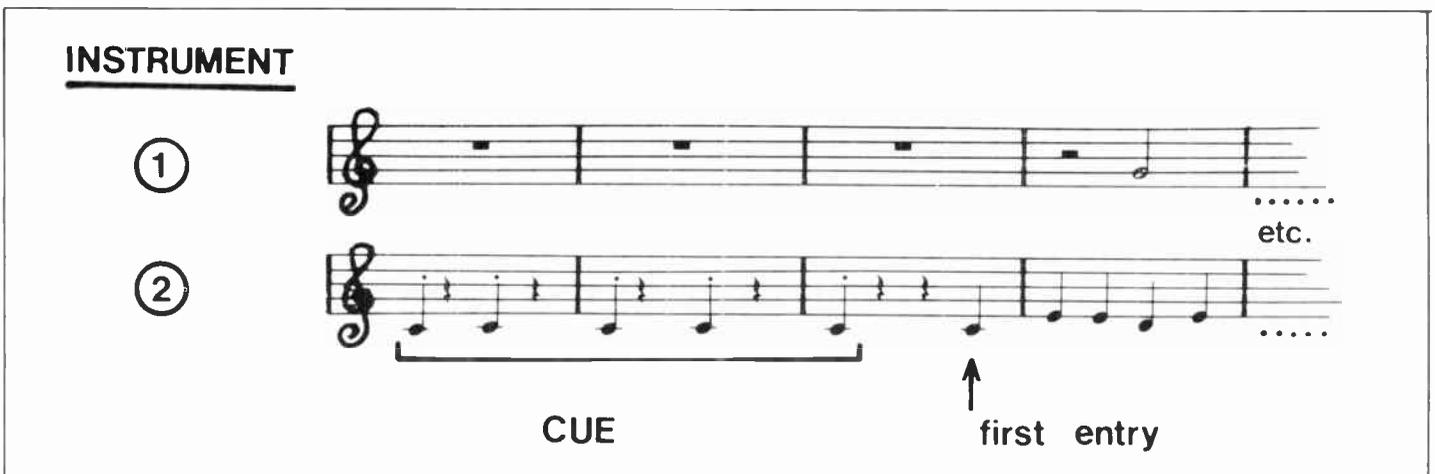
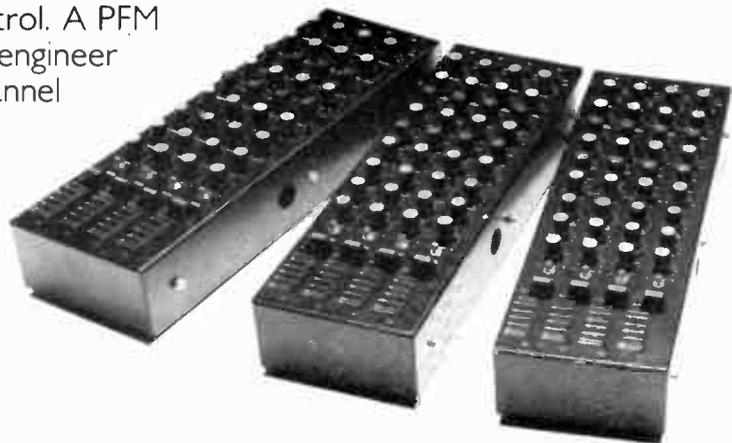


Fig. 1 When making a multi-track recording, a cue should always precede the start of the music. It is easiest to begin by recording the part which makes the very first entry, leading in with a few bars in which notes are tapped out on every beat or on alternate beats.

The R.S.D. 12/2 mixer is a professional desk design to provide close control over sound in small situations. Unlike most other desks, however, you don't have to junk the R.S.D. 12/2 when the venues get bigger and the money gets better. The R.S.D. expander modules allow you to add four channels at a time. You could end up at the Hollywood Bowl with a 32/2 R.S.D. desk still using the same basic R.S.D. 12/2 mixer you bought a year before (if only it really happened that quickly!).

The 12/2 offers input attenuation allowing you to provide mike, D/I or line input into any of the channels, full equalisation on each channel,

foldback mix facilities, effects or echo send and return and full stereo pan control. A PFM button allows the engineer to listen to any channel on its own at the touch of a button and naturally there are separate



ONE STAGE



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AT A TIME



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the instrumental part (this would be essential! — see above), then continue to the end of the piece. The subsequent stages of recording the three other voices would then follow the procedure already described in Part 2, at each stage *both* the click track and the music track being transferred to the other recorder, until the stage was reached when the click track was no longer required. In situations where the first part to be recorded is more or less rhythmically continuous (i.e. there are no long rests in which you might lose the tempo), there is no need to record the clicks, and in this case the synthesizer's LFO can be used simply as an electronic metronome which is heard but not recorded when the first track is laid down.

Electronic rhythm

One of the more subtle difficulties of multi-track recording is getting the right 'feel' into the performance of the separate parts, particularly in the early stages, and an electronic rhythm unit of the kind commonly used by organists is very helpful in this respect. The rhythm unit need not be particularly sophisticated, because the synthesizer can be used to improve the rhythm patterns and sounds enormously as I will be describing later in the series. The electronic rhythm track would be recorded in the same way as a click track, being retained until the final part had been recorded, then modified if necessary.

An alternative approach involves using the synthesizer itself to generate a rhythm pattern: synthesizers can easily produce percussion sounds and it is possible to "multi-track" a percussion section in exactly the same way as the other instrumental voices. Figure 3 shows, for example, the various instrumental parts in a relatively simple rock

rhythm pattern, which could be recorded one part at a time using the synthesizer to generate each percussion sound, and of course a temporary click track could be used to keep the parts in time. Actually by using the LFO to

trigger the ADSR module, a synthesizer can produce (for example) bass drum beats or cymbal crashes at equally spaced intervals, so a click track is not always necessary when multi-tracking a percussion section. Next month I will

be explaining how a synthesizer can be set up to produce percussion sounds and automatically generate simple rhythmic patterns without necessarily involving a sequencer.

by Tony Horsman, Ph.D.

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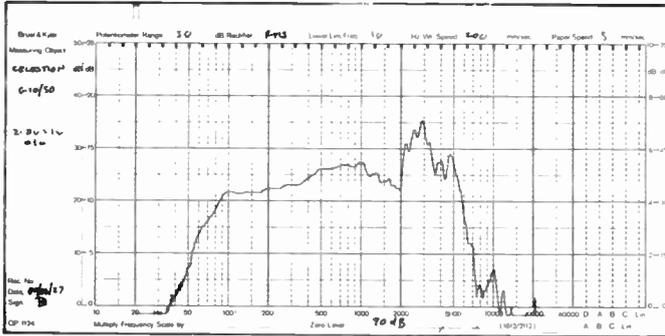
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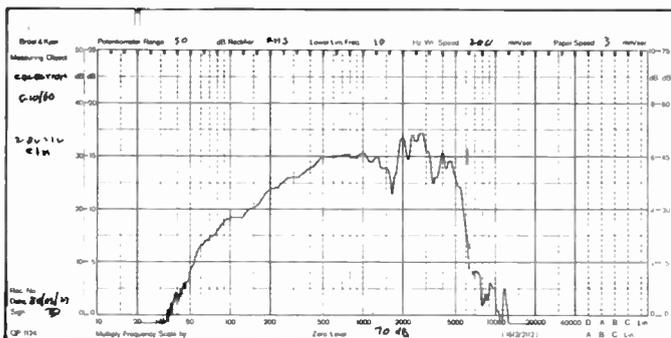
Speakercheck



CELESTION G10/60

Parameter	Manufacturer's Rating	Test Result
Frequency Response	60Hz-8kHz	Useful to 6kHz (-12dB)
Sensitivity	99dB average	99dB @ 1w @ 1m av 400Hz-4kHz
SPL	Not stated	113dB(A) @ 60w @ 1m pink noise
Power	60w unqualified	See text
THD	Not stated	See text
Impedance	8 ohm*	8.5-28 ohm
Resonance	80Hz free air	100Hz in std 50ltr enclosure

*Also available in 16 ohm impedance
Baffle hole diameter for front or rear mounting: 228mm



These loudspeakers are built on very basic, cadmium-plated pressed steel chassis which, despite the absence of any reinforcing ribs or turned-in edges, are surprisingly rigid due to the small size and sensible shape. However, it does rather look as though the pressing tool has seen better days as certain edges on both samples are particularly sharp and ragged requiring careful handling to avoid cut fingers. A fairly small ceramic magnet is fitted to the G10/50, while that used for the G10/60 is about twice the size with the result

that the G10/60 is a considerably heavier unit. Both units are fitted with similar lightweight cones, the outer edges of which are treated with Plastiflex or some similar compound to form the front suspension and a large linen dust cover is fitted over the somewhat smaller voice coil - 38mm in the case of the G10/50 and 44mm for the G10/60. Both units are suitable for front or rear loading and are very nicely made for a basic, low cost drive unit. Termination is by color-coded solder tags on a sensible Paxoline panel and the feed

wires are separately supported prior to the actual soldered joint to reduce the likelihood of fracture.

It can be seen from the results table that the G10/50 returned a very good set of results indeed, although we are not able to agree with the maker's published frequency response range or sensitivity figure. The 50 watt power rating is confirmed and the frequency response curve is particularly smooth below 2kHz and output level is well maintained down to 100Hz. The impedance curve is about right for an eight ohm nominal rating and the in-cabinet resonance figure of 100Hz would tend to confirm the published free-air figure. A very nice little unit indeed - especially at its price,

although it should be observed that this particular unit was obviously perfectly at home in our std test enclosure and is probably working at its best.

Although the G10/60 is exceptionally sensitive at almost 100dB, it has a totally different frequency response characteristic and its output level is way down at 100Hz in our cabinet. In this instance, we find that while we are still 2kHz down on the published frequency response range, our sensitivity figure is in exact agreement with the published figure. The impedance and resonance figures seem to be about right as well. However, there would seem to be a major problem with this particular unit in that a huge spike of second



Mega 2538M (UK)

Parameter	Manufacturer's Rating	Test Result
Frequency Response	70Hz-3.5kHz	Useful to 4kHz (-12dB)
Sensitivity	93dB @ 1w @ 1m	94dB @ 1w @ 1m av 500Hz-3kHz
SPL	Not stated	108dB(A) @ 60w @ 1m pink noise
Power	60w unqualified	Confirmed @ 60w RMS sine wave
THD	Not stated	4% @ 60w RMS sine wave
Impedance	8 ohm*	9.5-23.5 ohm
Resonance	70Hz	90Hz in std 50ltr enclosure

*Also available in 4 and 16 ohm impedances
Baffle Hole Diameter for front mounting: 253mm both models

What's the best thing between you and your guitar?



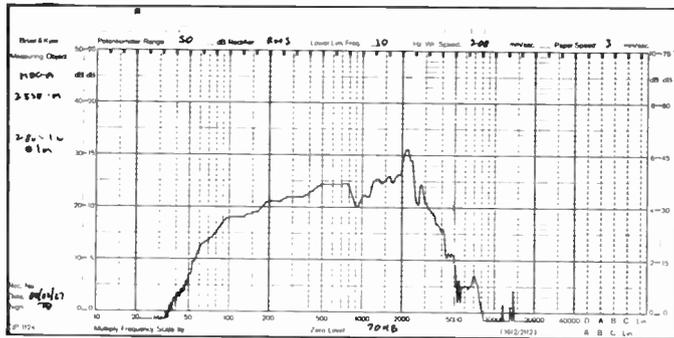
D'Angelico's brand new smoothrounds possess the live ringability of round-wound strings. Yet they play with flatwound smoothness. That's because their windings are ground and polished to a satin-smooth finish. This process maximizes rasp free playing and minimizes fret wear. Wound strings have silked ball ends to muffle random vibrations at the guitar tail piece.

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and third harmonic distortion is in evidence at 1.7kHz — which exactly corresponds to the small dip in the frequency response curve at this point. The distortion level measured at this point is about 50% and is clearly audible as cone break-up. Below 1.5kHz, THD is down at about 4% and above 3kHz is even lower at less than 1%. In view of this result, the manufacturers carried out their own independent tests on another random sample and came up with

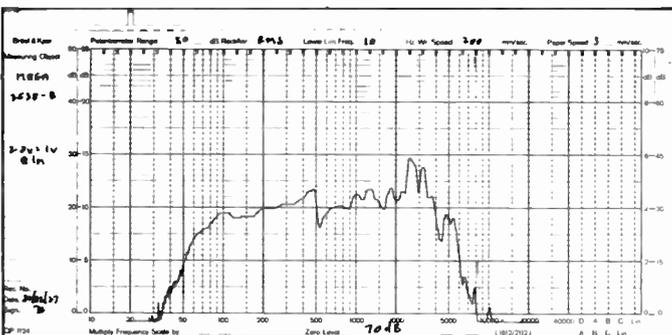
similar results so it would seem that what is undoubtedly a useful loudspeaker is being spoiled by a bad batch of cones or some other temporary problem. Don't dismiss the G10/60 out of hand because of this peculiarity, but check with the manufacturers to make sure that the problem has been overcome before buying — or else use the G10/50 instead. The G10/60 should certainly not be used in the condition in which we found our sample.



Mega 2538B (UK)

Parameter	Manufacturer's Rating	Test Result
Frequency Response	70Hz-3.5kHz	Useful to 60kHz (-12dB)
Sensitivity	93dB @ 1w @ 1m	91dB @ 1w @ 1m av. 200Hz-4kHz
SPL	Not stated	106dB(A) @ 60w @ 1m pink noise
Power	60w unqualified	Confirmed @ 60w RMS sine wave
THD	Not stated	4% 60w RMS sine wave
Impedance	8 ohm*	9-23 ohm
Resonance	70Hz	75Hz in std 50ltr enclosure

*Also available in 4 and 16 ohm impedance
Baffle Hole Diameter for front mounting: 253mm both models



These brand new loudspeaker units are built on particularly robust, acoustically dead, cast alloy chassis that are unfortunately somewhat larger than the order of diameters usually associated with a 10" classification — with the result that the units can only be mounted in specially designed enclosures. The casting is of generous proportions with a particularly thick front rim which is cropped to provide a "square" visual aspect and is finished in what looks like silver paint. A fairly large ceramic magnet is fitted, the front and back plates of which are plated to match the silver paint finish of the chassis. An unusual feature is the black anodized expanded aluminum grille fitted over the cone aperture, and not only does this give a very professional visual aspect in conjunction with the machined natural aluminum facing of the front rim, but also provides protection for the cone at all times. Plus it eliminates the necessity of providing a grille cover on the finished cabinet.

The manufacturer's published specifications for these units is somewhat puzzling, as a single set of figures is given in respect of both units — which from our results have quite different characteristics as would be expected when the different applications are considered. Further, the manufacturers have indicated that the published spec relates to the bass version, while we have found

it more appropriate to the midrange version. Nevertheless, both units returned a good set of results with full confirmation of the 60 watt power rating and useful and appropriate frequency response curves — especially so in the case of the 2538B. Although sensitivity of the 2538M is 1dB better than published, it is, even so, on the low side for this type of unit, while the 2538B is 2dB lower than published. A differential of 3dB between the two does make sense on account of the increased weight of the cone assembly of the 2538B. Impedance is a little on the high side, but I am informed by the manufacturers that this is in the process of being rectified.

While the 70Hz free air resonance figure given could well be about right for the 2538M, it is a reasonable assumption from our in-cabinet resonance figure that the 2538B has an actual free air figure nearer to 50Hz than the 70Hz figure published.

Altogether, a good pair of units returning a useful set of results, of high manufacturing quality and particularly attractive presentation owing more to Japanese hi-fi loudspeaker practices than to music industry standards. The somewhat ambiguous specifications are a little disconcerting and the over-sized chassis may cause some difficulties, but otherwise no problems and good value at the price.

Ken Dibble

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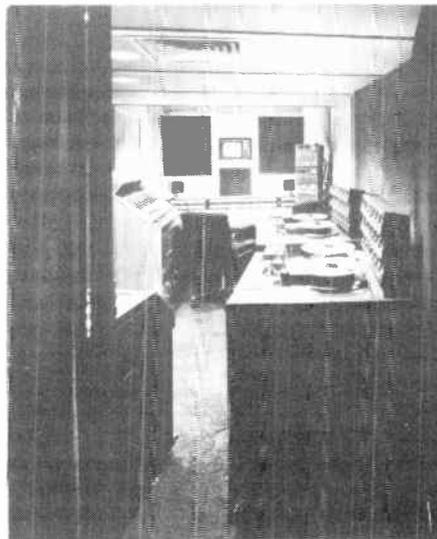
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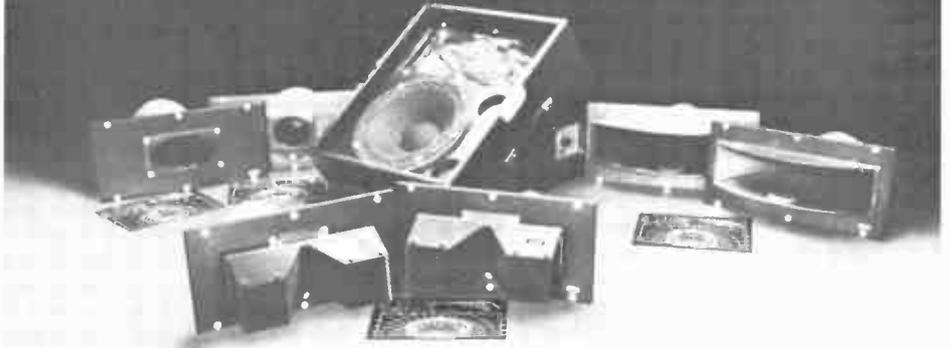
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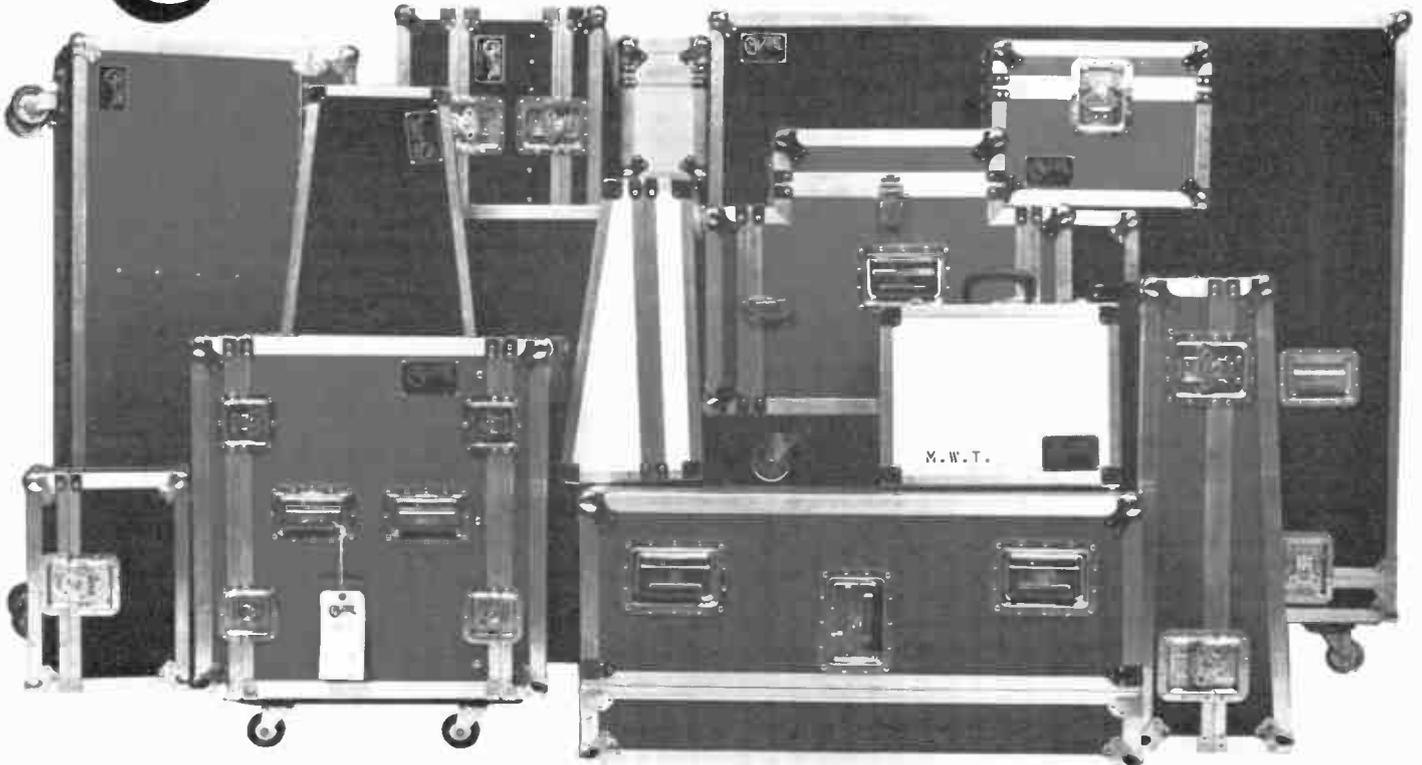
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Magnasound microphone

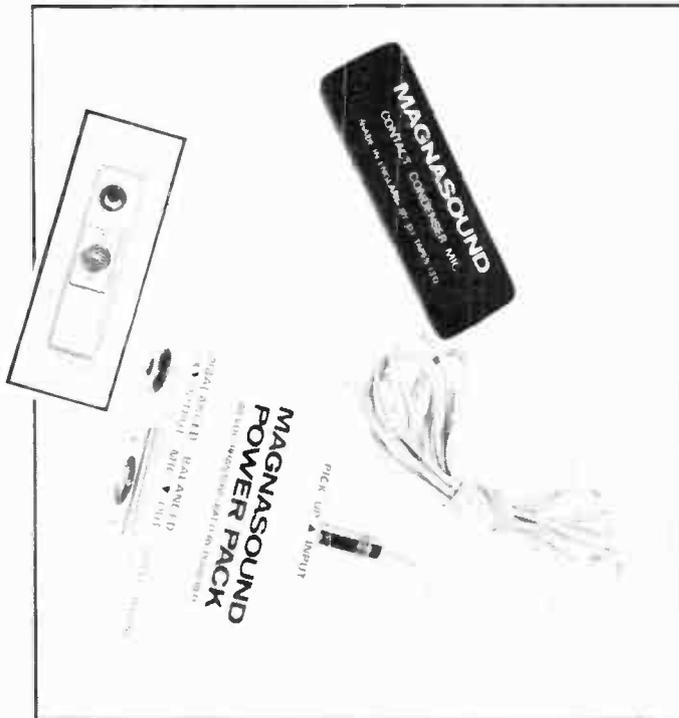
D.I. Tapes Ltd have developed, what is to my knowledge, the first condenser pickup for acoustic instruments and certainly the first that I have come across. They claim it embodies the same qualities as are generally associated with a condenser microphone — high sensitivity and a flat frequency response. It is possible to use it with all acoustic instruments that have a soundboard including piano, acoustic guitar, harp, harpsichord, harp and string bass.

The Magnasound comes in two sections — the contact mike and the power pack. The mike itself is four inches long by one and a half inches wide with a depth of fractionally less than three eights of an inch. The casing is a kind of black plastic and the complete pickup is very light.

It is fixed to the instrument soundboard by a strip of double sided self adhesive tape. (It is recommended to change this tape every time you put the pickup in a new position.) This tape holds the pickup firmly in place and did not mark any finish or leave a sticky residue on any of the instruments I used it on. Twenty spare tapes are supplied with the pickup. The cable leaves the pickup at one end of the case. It is 3mm single core screened cable and about six feet long terminating in a miniature jack plug.

The power pack is a die-cast box of four and a half inches by two and a half inches by just over one inch. The miniature jack socket for the pickup is on one side while on the other there is a choice of unbalanced jack socket output or balanced XRL type socket output.

There are two methods of powering the pickup, either by two PP3 type nine-volt batteries fitted internally or if it is being used with a desk that has a phantom powering facility of 48 volts, it can operate



just like a consenser mike on that system provided the XLR output is used. The internal battery is switched on by inserting the output jack, so operating on batteries with the XLR output requires a jack to be placed in the jack socket. Access to the battery compartment is by four screws removing the lid of the power pack box.

The power pack can be taped to the instrument if it is a piano or placed in your pocket if you are playing guitar. If it does not affect the performance, I would like to see the pickup to power pack lead extended by a couple of feet as it often seemed too short to reach the ideal position for fixing.

The key to successful use of the Magnasound appears to be experimentation. The position chosen to stick the pickup will make the most difference to the sound. Magnasound recommend some positioning for a selection of instruments

in the leaflet that accompanies the pickup. For acoustic guitar they suggest lined up with and close to the bridge.

On the two acoustic guitars I tried in this position, the sound was not balanced very well, being very bass heavy. The sound was improved by moving the pickup further out from bridge where the bass fell off. This is most likely to be a point to do with the design of the guitars as Magnasound say that these pickups have a good high frequency response.

Not having had too much luck with my guitars I next tried a zither type of instrument. This gave a much better result and surprisingly it did not seem to matter so much where the pickup was placed. When I positioned it at one end of the instrument, notes played anywhere on the instrument were of equal intensity with perhaps marginally less attack on the notes further away from the pickup, but this is only noticeable if you try to find it.

Next came the test I was really looking forward to trying — the grand piano. Pianos have always caused problems in recording and stage amplification. Any advance in miking techniques is to be welcomed. I positioned the pickup where Magnasound recommend to try for one pickup, just above the mid range response area. I recorded the output of the pickup on one channel of a Revox and a high quality microphone positioned over the piano on the other track. It was then easy to compare the results.

My first response was that the sound was remarkably natural and very similar to that of the microphone or maybe even more natural. I moved the mike very close to the strings so I was picking up less ambient sound and they sound very similar indeed. The sustain in the bass area was completely natural and not dry like some pickups give. The treble was clean and well defined.

The volume from all over the keyboard was consistent. Placing the pickup in different positions gave subtly different tone qualities and Magnasound suggest using two pickups for a stereo effect and positioning them at opposite ends of the keyboard. The sound with the pickup on one side of the stereo and the microphone on the other is very pleasant. The sustain from the pickup is tremendous and is audible long after the microphone levels drops below the ambient noise level.

With a couple of days experimenting with the Magnasound pickup some really exceptional sounds could be achieved with the added bonus of reduced feedback compared to a microphone in the same position. I think this is an important development but I wish I could get it to sound right on my guitars.

Keith Spencer-Allen



Gary Burton with Chick Corea

very well and we both agreed, so I didn't think anything more about it. Two weeks later, I got a call from Stan and he's going to Canada for three weeks, and 'would I try it again, we'll do the best we can, etc.' I wasn't working so I went, and I was friends with other guys in the band, so why not? Well, the first two or three nights were awful. We couldn't find any common ground. I wasn't used to comping a lot and Joao Gilberto was trying to sing with this, and nobody spoke Portuguese to discuss the tunes with him, so it was a nightmare. Stan would end up getting drunk."

Well, miracles *do* happen. Somehow in the next few days, a cohesion occurred. Getz and Burton found ways to communicate with each other, developing a new direction, and Gary stayed with the band for three years, often working with Steve Swallow on bass and Roy Haynes on drums, easily one of the best combos at the time.

"I probably would have stayed longer except that I was getting the itch to do something on my own. It really was the perfect setting — Stan was at the peak of his commercial popularity, we were working every concert hall, and I was getting more exposure than I would have gotten from most groups. He always featured everybody in the band a lot, giving us solo pieces, announcing our names ten times a set. He's always done that, talk up his musicians. He's very proud of his bands."

For the change, a radical one, Gary turned to guitarist Larry Coryell, who had just left The Free Spirits, to be his plectrist, also working with two members of Bill Evans' rhythm team, bassist Eddie Gomez and drummer Joe

Hunt. Burton had wanted Swallow and Haynes, but they both had families to support (Burton was single at the time) and Burton had never been a leader. But in six months the vibist was a success, working all over, and both Swallow and Haynes came into the band.

Burton has always chosen his music carefully. He's never jumped on the bandwagon of recording cover versions of hit tunes, or even adapting non-hit pop tunes to a jazz context.

And when he made his transition, Burton didn't go in for loud amplification, soon to become the vogue. Even though guitarist Coryell did like to let loose on occasion, his wildness was not a dominant feature of the band, as can be heard from the RCA albums of the period (when you can find them). But the sizzling intensity and intricately arranged and produced pieces, as characterized by John McLaughlin's Mahavishnu Orchestra, were never what Burton had in mind.

"I knew that I hadn't been going in that direction even for a moment. There wasn't a place for a vibraphone anyway, due to the nature of the instrument, and the fact that my intention all along was just to have more choices than jazz standards. We also experimented with classical pieces and many different kinds of music besides mixtures of rock influences, but those were the ones getting the attention at the time. For two or three years we were called a jazz-rock or fusion band and it wasn't until the early Seventies that people saw we really weren't at all."

After Larry Coryell, Burton went through a rash of guitarists, among them John Scofield, Mick Goodrick and

Pat Metheny.

"Pat came into the band while Mick was still there, and that provided an interesting contrast. Mick was experienced, an older cat, and he could play anything. Pat could barely solo at first. He was used to playing fast tunes, but he didn't understand ballads. But Pat continued to develop into more and more of a talent and by the time he was hitting his peak, he left to start his own band, which is the usual case. I enjoyed him very much, and the time he and Mick were both there was really something."

After RCA, Gary signed with Atlantic, turning out a Grammy-winner with *Alone At Last*, an over-dubbed solo date, and albums with Keith Jarrett and French violinist Stephane Grapelli. During his Atlantic years, he went abroad for a solo concert in Germany which totally altered the course of his recording career: he met Manfred Eicher, founder of European Classical Music (ECM) Records, the vibist's label for the last eight years.

"I was in Europe, doing some solo concerts, and at one festival, an evening of solo work was done featuring myself, Chick Corea, German trombonist Albert Mangelsdorf, violinist Jean-Luc Ponty and John McLaughlin. It was kind of strange to all of us, none of us had done much of this before, but everyone loved it and the producers asked for an encore with all of us playing together. Well, we couldn't do it without a rhythm section, so Chick and I said we would. We had worked together a few years before and figured we could come up with something, so we picked a tune and jammed on it and the crowd went wild. The duet was the hit of the evening. So, ▶

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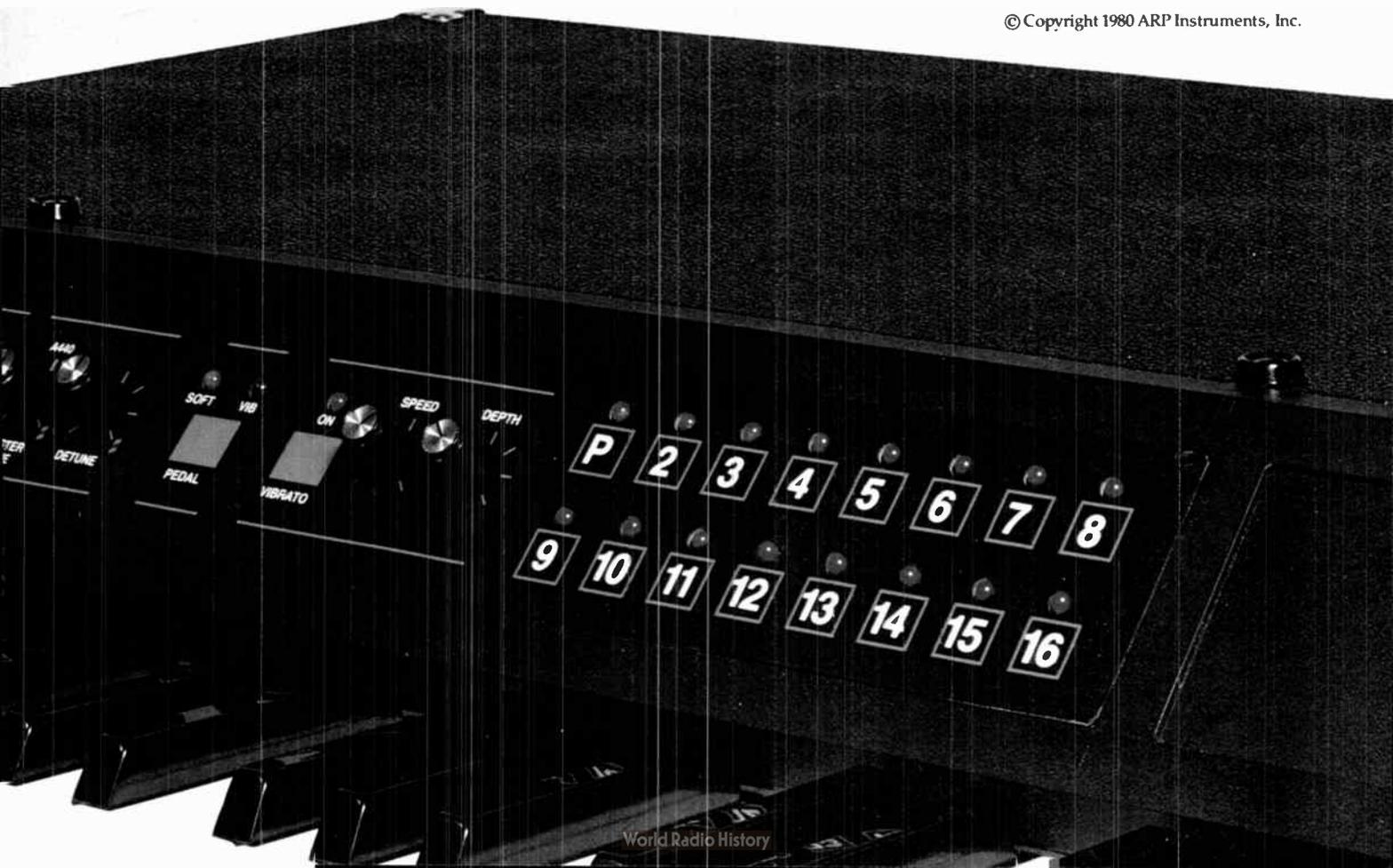


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GARY BURTON

Manfred came up afterwards and said 'You've got to make a record, that was fabulous,' but I was on Atlantic and I couldn't think about recording for another company and I'd never heard of this guy or his company, so I put it out of my mind.

"Three months later, I'm back in Germany again doing another duo with Chick, and Manfred keeps writing me, wanting to do this album. So I finally said 'OK, this little German company will never see the light of day, and it'll be fun.' That was *Crystal Silence*, a very big record.

Burton found a rapport with Eicher he'd never had with an American record executive, but Eicher's company was small and leaving Atlantic represented a big risk. "I was fed up with the bureaucracy. Sure, they'd let me record what I wanted, but nothing was ever done with the albums, so I finally decided to go ahead. I was having so much fun working with Manfred on these projects. I'd never imagined sitting up all night talking about all my wildest recording dreams with the president of the company."

The relationship has been marvelous. Burton, who acknowledges that he's the only close-to-straight-ahead player on the label, has recorded nine LPs for Eicher, including duets with Steve Swallow, Corea and guitarist-pianist Ralph Towner, as well as his own band's dates, the latest being *Times Square*, which features guest appearances by Swallow and drummer Haynes and solo work from Tiger Okoshi, a trumpeter from Japan Gary met while teaching at Berklee.

Now that Burton has a family, the vibist is either on the road with his quartet or dueting with Corea, or at home with wife Cricket and daughter Stephanie. He used to teach at Berklee but no longer, though he will do an occasional clinic.

"I love the duets with Chick. The more we play with each other, the better we get to know each other, so we really dig it. We never thought we'd be doing this as often, but there's a tremendous demand for these concerts, and since they're so easy to do, relatively no instruments to lug around, no big sound deal to worry about, no road crew, we'll just do them as long as people want them.

"We play together like two pianists so that we stay out of each other's way. It's like two pianists answering back and

forth and accompanying each other. In a band, it's too much to have two pianists. Chick and I tried that in the late Sixties and it didn't work, but now we've learned to play a lot better together and we're even tempted to try another group album, because we can't keep doing this duet thing forever."

The two have a new album, recorded in Zurich last November, due out in early Summer. It's been mixed, they just have to select a cover and the tunes they want. At present, they plan to tour at least twice a year.

With his quartet, Gary likes to get out for two or three weeks at a time, then hop back to Boston and the folks. The band includes Tiger Okoshi, who

sometimes electrifies his trumpet for interesting effects, Chip Jackson, who's played bass with Mangione and Woody Herman, and drummer Mike Hyman, a young player that the leader met at a high school clinic. A group date is in the planning stages so Gary will have something fresh and representative out on the market.

And so goes the happy and contented life of Gary Burton, who seems to have followed all the right cues along a meandering musical road, ending up where many would like to be, with a wonderful family, playing the music he loves best and recording for a uniquely empathetic record producer.

Zan Stewart

CHORUS

Chorus / kōr-əs / n

Something sung or uttered simultaneously by a number of persons or instruments.



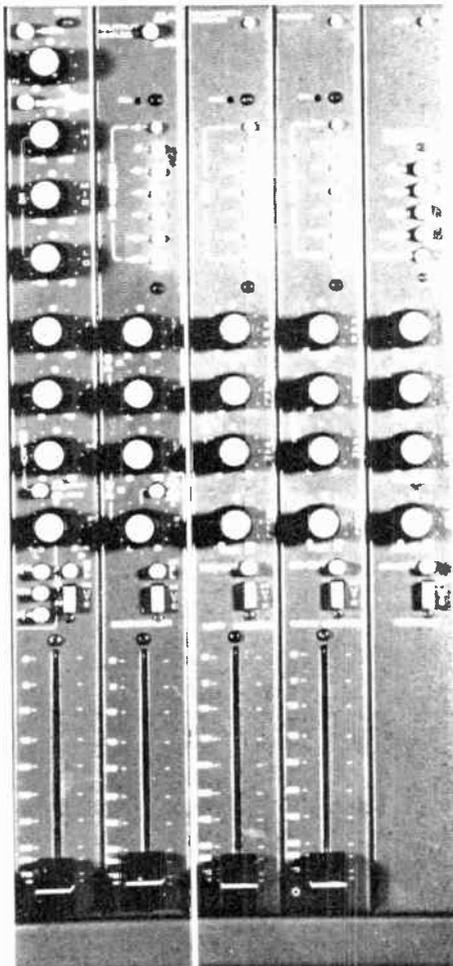
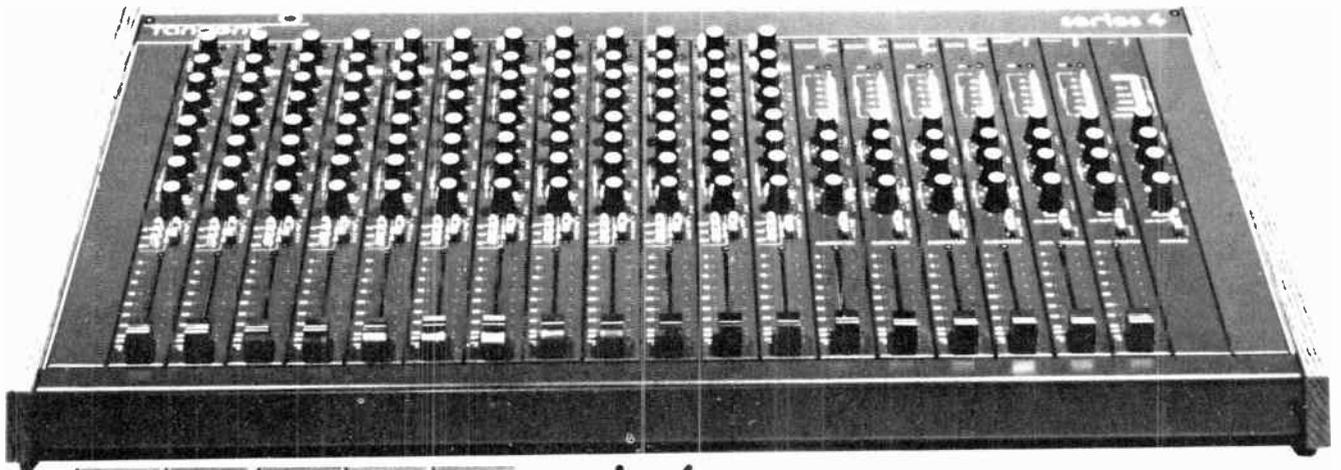
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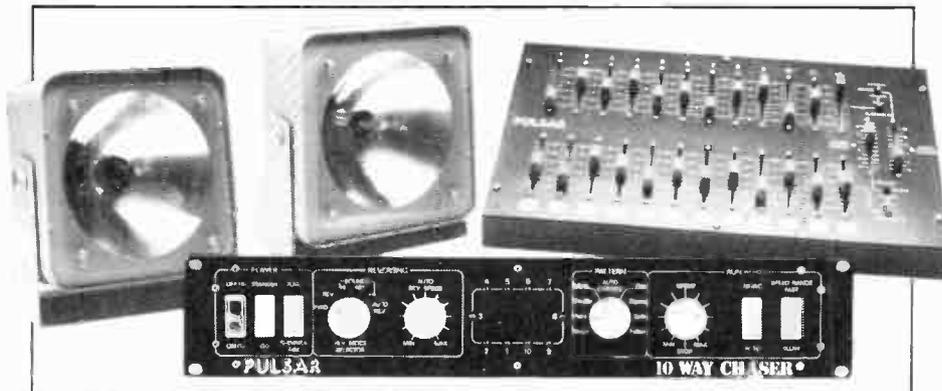
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Albums

With this issue of International Musician we'll be inaugurating a monthly record column designed to provide you with a guide to the most important new releases. Our space is limited so we won't be able to cover everything, and for these reasons our reviews will have to be fairly brief. But we'll try and turn you on to the best music in every genre, and if you have any suggestions or complaints please feel free to pass them on. This is your record column.

Which means you have a responsibility to think for yourself. As a so-called professional critic I receive an incredible amount of product every month; I'm supposed to listen to it all and then offer some sort of intelligent analysis. I hate the term "critic", which summons up images of some snotty creep who casually passes judgments and condemns things capriciously. I'm not apologizing for what I do because I think it's important, so I always strive to be thorough and fair. But I'm only human, and if I think something isn't happening I'm not going to back away from saying so. I'm a music lover with a wide range of tastes, and as you get used to reading my opinions certain patterns will begin to appear. Your responsibility is to read between the lines — in other words, a sow's ear to me might very well be your silk purse. Now that we understand each other, let's begin.

Al DiMeola
Splendido Hotel
(Columbia C2X36270)

Criticism of Al Di(Diatonic?) Meola has become a cliché, and if I can't think of anything new in the way of analysis, perhaps it's because he can't think of anything new to play. This isn't as hopelessly corny



as his previous work, but his sense of composition is still limited to third-hand borrowings from flamenco music, Return To Forever clichés and endless vamps.

Al needs a few years in the minors — then maybe he can develop a curveball and slider to go with this fastball.

Jeff Beck — There And Back
(Epic FE 35684)

This is a return of the acclaimed jazz-funk fusion Beck first announced on *Blow By Blow*, and if you liked the original this should prove pleasing. I'm a little hesitant about it myself. In contrast to DiMeola's cold pyrotechnics, Beck is an emotional power keg, but he needs a little room to build his climaxes and *There And Back* places greater emphasis on arrangements; on some solo breaks Beck does little more than re-state the melody. The sidemen are excellent, but they tend to dominate Beck; Jan Hammer, sounding much less inane than usual, contributes three tunes, including the tumultuous "You Never Know" and the slow, engaging funk of "Too Much To Lose". Drummer Simon Phillips is a churning powerhouse and keyboardist Tony Hymas provides real depth on keyboards, particularly on the star-drive of "Space Boogie." Side two features the later pair and it coheres well, especially Beck's features on "El Becko" and the symphonic "The Final Peace," which sounds like what Terje

Rypdal wishes he was doing. Flawed, but worth taking a chance on.

Ray Gomez — Volume
(NJC 36243)

This album's concept also owes something to *Blow By Blow*, but guitarist Gomez is less interested in fusion than good old rock and roll. The lyrics are useless, but no worse than your usual rock prose, and they can't inhibit the exhilarating joy of Gomez's solos. Next time more instrumentals, please.

Jimi Hendrix — Nine To The Universe
(Warner Bros. HS2299)

This is certainly the best of Jimi's posthumous releases,



but I've heard the original tapes from which these cuts were spliced together, and producer Alan Douglas' instinct for excising Hendrix's most revelatory passages is uncanny. Boo! What remains is nevertheless some of the jazziest, rawest Hendrix extant — just the way you always knew he could play. The sidemen limp along as best they can (only organ master Larry Young really plays *with* Jimi), but nothing can hold this bird down. Important.

Terumasa Hino — May Dance
(Inner City IC6065)

Trumpeter Hino is a likeable Miles Davis clone, with a lot of the master's phrases but little of his subtlety. But drummer Tony Williams and bassist Ron Carter are the genuine article, and guitarist John Scofield in-

spires them with some of the most fluid, harmonically intricate lines this side of Pat Metheny.

Grateful Dead — Go To Heaven
(Arista AL9508)

An improvement over their



last dismal effort, but they're still spending too much time trying to play R&B when they're real strength is in southern rural strains like "Althea" and "Alabama Getaway."

Dixie Dregs — Dregs Of The Earth
(Arista AL9528)

A piping hot blend of southern rock, Mahavishnu Orchestra, country and classical. Their explosive solo power is sometimes mitigated by a tendency to overarrange (like European art-rock bands), but guitarist/producer Steve Morse is really zeroing in on his own brand of improvised Americana.

Ry Cooder — The Long Riders
(Warner Bros. HS3448)

Emmylou Harris — Roses In The Snow
(Warner Bros BSK3422)

These albums make fine use of the American string music tradition. Cooder's music has a southwestern/cajun orientation, while Harris is coming from an Appalachian/country church tradition, like the Carter Family. Cooder's nostalgia sometimes become too mannered but Harris never sounds so pretty as when she's taking a melancholy backward

Albums

glance. Speaking of nostalgia, whatever happened to old country **Bob Dylan**? Well, he found Jesus but lost our faith. The God on *Saved* (Columbia FC36553) no longer resembles the malevolent Jehovah of *Slow Train Coming*, and the evangelical shrillness of Dylan's covenant has matured into the affirmation of a pilgrim ("Pressing On"). Most importantly, he's singing with conviction and the music has deepened into resonant gospel/rock ("Solid Rock" and "Are You Ready") that speaks more convincingly of inner spirit than words. This is Dylan's best album in a long time. If you like the gospel



spirit of Dylan, you'll enjoy *From The Root To the Source* (Soul Note 1006) a beautiful meeting between sanctified gospel voices (Fontella & Martha Bass, David Peaston and Amina Myers) and a house rocking jazz rhythm section (Phillip Wilson & Malachi Favors).

**Link Wray —
Live At The Paradiso**
(Visa 7010)

Wray is unconvincing as a singer, but his trio is producing a raw, thickly chorded rock that pre-dates the British bands like the Stones, Yardbirds, and the Who in the mid-Sixties. A bit overwrought, but energetic and fun.

**Paul McCartney —
McCartney II**
(Columbia F36511)

Doesn't reveal any skeletons in his closet, but this solo

album renews McCartney's reputation as a pop craftsman and melodist. If his Fifties revivals come off cute and empty, his keyboard paintings are the most evocative this side of Brian Eno, and songs like "Waterfalls," "Temporary Secretary" and "Coming Up" rank with his best.

**Roxy Music —
Flesh And Blood**
(Atco SD102)

Singer Brian Ferry and company have developed a quirky new sound that is part disco and part art-rock, with overtones of the Bryds. Some of it is shallow (especially the cover tunes), and it has none of the bite of early Roxy, but it has a dreamy harmonic quality that's very appealing.

**Joan Armatrading —
Me Myself I**
(A&M SP4809)

This singer-songwriter always had the songs and deep roots in gospel, folk, R&B and jazz, but on this album she's decided to rock out. Her singing and music are tougher and more exciting, but her songs have lost some of their confes-



sional edge. This will attract new fans; perhaps leave the old ones ambivalent.

**Professor Longhair —
Crawfish Fiesta**
(Alligator 4718)

The late New Orleans pianist laid the foundation for a lot of rock & roll, and the funk of people like Dr John and Allen Toussaint. This is his last and best album, a mirthful gumbo of parade rhythms, bar-

relhouse piano and keening counterpoint. There'll never be another like him.

**Art Ensemble of Chicago —
Full Force**
(ECM 1-1167)

Everything from jungle sounds to street corner symphonies and blues. Masterful modern chamber music from one of America's most important jazz bands. Don't let the free-form label scare you — it only means that they can shift from style to style with passion and taste.

**Ian Hunter —
Welcome To The Club**
(Chrysalis CH2 1269)

Live double albums containing all your greatest hits usually signify the kiss of death, but for Mick Ronson and Ian Hunter it points to a rock renewal. A tough new band that extends the spirit of Mott The Hoople — new wave in spirit, old wave in craftsmanship.

**Michael Jackson —
Off The Wall**
(Epic FE35745)

Yes, I know it's been out a while, but this is *the* R&B album to own. With brilliant arrangements by Quincy Jones, *Off The Wall* brings the syn-copated excitement of older styles into the land of disco and ballads with sexy, joyous singing by Jackson — this defines the turf in black music.

**Graham Parker —
The Up Escalator**
(Arista AL9517)

Parker could read the want ads and turn them into a rock



anthem, but there's no material here to equal his passion. His last record was a nod to new wave; now he's leaning towards the land of Bruce Springsteen and his guitar rich back-up band (the Rumour) has been defoliated by a keyboard-dominated production. Surprisingly likeable, but the songs lack depth (no "Discovering Japan" here). He's still one of the great vocalists though — you pay your money, you take your chances.



**Patti Labelle —
Released**
(Epic JF36381)

After some half-hearted disco excursions, this virtuoso songstress has re-united with producer Allen Toussaint, resulting in pungent, rhythmically agitated arrangements that capture the excitement of New Orleans and Memphis funk without losing sight of the slick Philly sound. Some great ballads, too ("I Don't Go Shopping") — primo. ■

Chip Stern

Chip Stern is a freelance writer and musician who writes for IMRW/USA, The Village Voice, Musician Player & Listener and several other publications in the field.

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DRUM MUTING: DEADRINGERS

by Chip Stern

I'm not a big fan of the muffled sound in drumming that has become so popular of late, but I've come to appreciate its significance. Personally I like to hear every drum open and resonating fully with a lot of tone and ring; because I also play guitar I also tend to hear the drums in terms of interval relationships and chords. But I've found that a lot of musicians aren't used to having that much sound coming from the drums—"too much ring, man" is the usual observation. Once, when I was playing with a guitarist, I had my Slingerland 20" bass drum set up single-headed with a Ludwig Silver Dot Rocker and no muffle; a deep, full sound with a lot of tone and a very definite pitch (in this case, a low E). While we were playing, a combination of humid weather and heavy attack caused the pitch to drop a step, and my guitarist said the following: "I've never heard a bass drum with that much tone, it's just like a tympani. I like it, but I found while we were improvising it forced me to play everything in the key of Eb."

That experience taught me the value of a certain amount of muffling. At times it's necessary to control the drum's resonance in order to achieve a proper blend with other musicians. And God forbid you should walk into a rock club or a recording studio with your drums wide open and ringing. Cats will come up to you and start throwing wads of tape all over your snare and tom-toms, taking your bass drum apart and stuffing it with pillows and carpeting. By the time they get the sound so that they can mike or record you properly, the feel of your drums is distorted and awkward; the end result is too often a second-rate

performance that lacks the fire and control you know you can bring to the music.

So drummers must come to terms with the necessity for a flat controlled resonance: *flat but not dead*. To get that sort of sound you used to have to tune the drumhead so low that it was difficult to get any sort of decent rebound; that and the use of tape distorted your attack and limited your technique. Now comes a new product with a simple solution to the problem of how to get that flat studio sound. *Deadringers*, designed and manufactured by Silver Street of Elkhart, Indiana, allow you to fine tune the resonance of your drums so that you can achieve a flat sound with a very pure pitch. *Deadringers* are a ring of foam rubber with an adhesive strip that are designed to be placed on the underside of the batter head along the outer circumference. This eliminates unwanted ring.

Perhaps we should explain what we mean by "ring." Ring can refer to the tone of the drum (its pitch), and it can also refer to the high upper harmonics that come from the collar of the drumhead and the bearing edge of the drum. These high harmonics can cause a wavering of pitch and produce the unwanted overtones that can be picked up by microphones. By muffling this critical area of the drumhead, you pitch the tonal note of the drum downwards by about a step; the overall sound is flat and low, but at a completely comfortable playing tension. We tested the *Deadringers* on an old fiberglass set of Fibes Drums fitted with Remo "Ambassador" heads. The package instructions advise you to follow a cut-out diagram on the box; you take this cardboard circle and place the *Deadringer* around

it; remove the bottom head of the drum; wipe the underside of the batter head with Windex; place the cardboard cut-out and *Deadringer* along the outer edge of the head and then remove the protective tape so that the adhesive side is exposed, forming a perfect circle on the batter head. The idea is to get the *Deadringer* perfectly round so that you can get the maximum oscillation from the drum head. If you tune the drums at a medium tension you get a dark sustained sort of sound; if you tune them at a higher tension (with both heads at the same pitch) you get a tight, flat resonance with a surprisingly warm ring. There was more ring to the drums than I'd imagined there would be, but it's a very stable, controlled sound. The *Deadringers* gave the snare drum a full rich sound, eliminating the tinny highs without cancelling out the use of rim shots or crushed rolls. The tom-toms (both double-headed) achieved a very defined pitch and we were able to tune them to a perfect fifth. The possibilities of using *Deadringers* with concert toms were quite apparent.

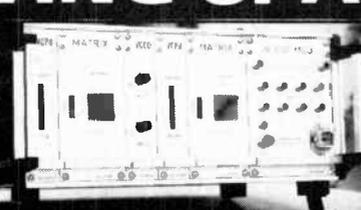
My favorite sound was on the single-headed bass drum, a round full effect that had

plenty of penetration without being overpowering or swampy. When the beater was directly centered the sound was flat and punchy; when moved off-center the resonance increased, a wonderful sound for jazz or funk. Several professional drummers who tried the muffled Fibes were pleasantly surprised by the overall warmth of the kit's sound, but observed that you could achieve roughly the same effect if you know how to use tape (this is what studio drummers like Steve Gadd have been doing for years). But for convenience and consistency of response, *Deadringers* are a welcome aid to the working drummer.

We'd like to thank the staff of the Professional Percussion Center, 151 West 46th St., NYC for their assistance in preparing this article. ED)

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Chart

My chart differs from others in that it continues as far as possible with each harmonic using the keys to ascend rather than embouchure changes. The F sharp will slur into the G then comes the embouchure change to the G sharp which is the A flattened and this fundamental will continue up to the C sharp where instead of opening the side F and getting an equally acceptable D the embouchure change is made for a very stable D using the Auxiliary F key and side C if it seems flat. There is another easy change to the E flat which is sharpened to the E by opening the side D and releasing the G. The F is very stable too and can be sharpened to a not so stable F sharp by opening the side B flat and C together with the E flat and D. The changes to practise are the F sharp to G and C sharp then C sharp to D, D to E flat and E to F. The three changes in fundamental are indicated by arrows on the chart.

For the beginner to harmonics the first one to try for is the first F sharp which is done by playing the ordinary Auxiliary F and then opening the side B flat and closing the right hand E and F simultaneously. If this doesn't seem to happen after a large number of tries spread over a week have the height of the Auxiliary F opening adjusted so that the F is in tune you might then find F sharp easier.

When the F sharp is sounding stable and with a strong tone try opening the E, F and B keys and slurring up to the G. Having mastered the G and being able to play it without slurring up to it try the first step of the series which will take you to C sharp. This is done by fingering the A without the G sharp and with the D, E, F of the bottom action closed.



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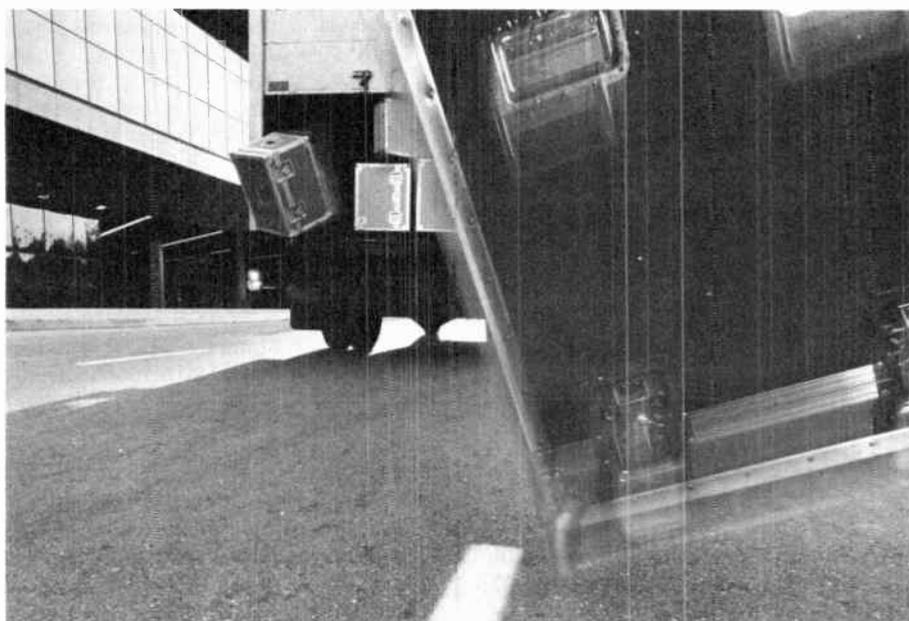
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F#	G	G#	A	B [♭]	B	C	C#	D	E [♭]	E	F
●	●	○	○	○	○	○	○	●	○	○	●
●	○	●	●	○	○	○	○	○	○	○	○
○	○	●	●	●	○	○	○	○	○	○	○
●	⊗	○	○	○	○	○	○	○	○	○	○
●	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○
B [♭] auxF	B [♭] auxF	E [♭]	G# C	C	D C	E [♭] D E	E [♭] D C	C auxF	C	C	D

The octave key remains pressed throughout. Use ⊗ if required for stability



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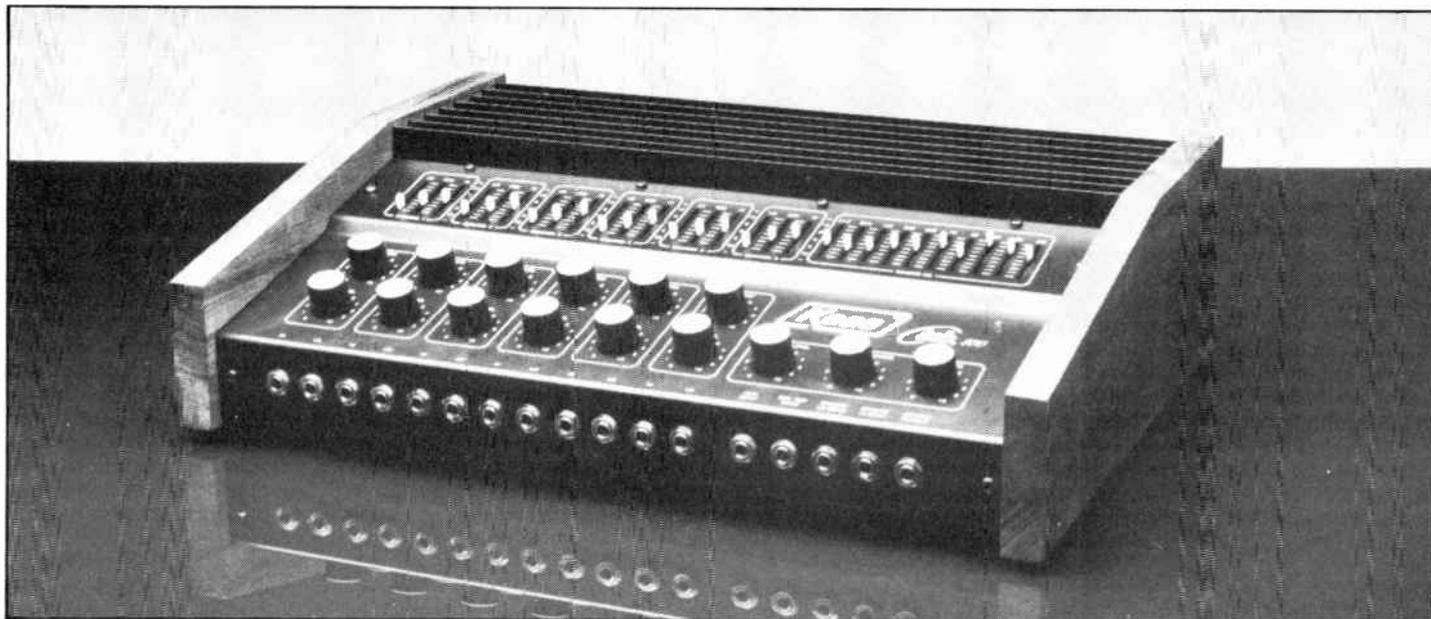
If it doesn't have an ANVIL® ...you don't have a case.

Keep referring back to the ordinary A so that you can hear what to try for and vary the lip and jaw pressure to get the note to sound. The throat should be in a position as if you were saying 'eeee' and it may be helpful at first to bite a little further up the mouthpiece. The tongue is arched upward to deflect the air stream. When you eventually sound this tone, and it may take weeks, keep playing long notes on it.

This will strengthen the embouchure and until this tone can be obtained consistently and tongued without cracking this should be practised daily. When this tone is very consistent then open the bottom D, E, F and G sharp as shown on the chart and this will be a good G. The B flat is perhaps the most unstable note on the chart, however it must be persevered with and it could take as long as a year to eighteen months before these notes are really musical. A lot depends on the time spent as harmonic practise is very tiring for the lips and even more so for the unwilling listener! If your neighbors are prepared to suffer the awful squeals and your mouth the agony then you too can take off into the stratosphere. A word of warning to beginners, do not attempt these olympic athletic marathon of the lips unless you have been playing at least two years or you could damage the delicate membranes and muscles of the lips and ruin your playing altogether so just be patient please and practise the standard range till your lips hurt instead. O.K.?

Soundcheck

KEAS Club Mixer \$399.95



Yet another mixer for yet another band PA System. Well that may be your normal reaction to a new mixer and I suppose it is an inevitable one, with the many thousands that must be on the market.

This mixer however, is a little different and I think warrants a second look. The main reasons for this are summed up nicely in the handbook provided, "to give the user the maximum amount of control over the maximum amount of power output in the smallest practical package."

The Keas name, I assume is derived from a combination of Keaton Electronics, and Ross musical products. The Keas 100 Mixer certainly fulfills one of its aims admirably — it only measures 5 1/4" x 19 1/2" x 14 1/4". The construction of the Mixer is more or less conventional.

A sloping front panel has all the operational controls mounted on it with inputs and auxiliary jacks, along the front edge. Across the top of the mixer is a large heat sink to dissipate the full 130 volts of the power amp. Wooden side cheeks, apart from looking

smart, give protection to the front panel controls.

In trying to fit as much as possible into the smallest possible package I think that Keas has perhaps unconsciously done a lot more. However, perhaps first I should run through the facilities that this mixer offers.

This is a six-channel mono mixer with each channel offering identical facilities. Two inputs are provided for high and one for low impedance (may be used simultaneously if desired). Operational controls on each channel comprise three miniature sliders for equalisation (low, mid and high) a channel reverb control and of course channel level control. The Master section comprises three main operational controls — these are master level, master reverb and effects return.

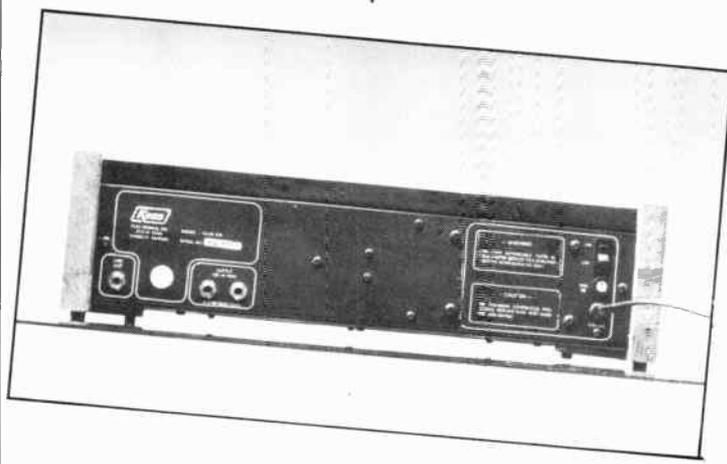
Above these three controls is the master EQ section which is basically a 10-way graphic equaliser again using miniature slider controls. Along the front section of the mixer in addition to the inputs are five extra jacks. These are for auxiliary inputs and outputs and label-

led up aux input, reverb expansion input, effects low send and hi send and effects receive—these will need some explanation later.

The back Panel has mounted on it a mains rocker switch complete with three amps fuse and captive mains lead. Two jacks are provided for loudspeaker outputs (not to be used on load impedances of less than four ohms) and a single jack for line out (for connection to other power amplifiers or for a recording feed). That briefly is what this mixer provides in the way of

facilities.

Before proceeding any further with a more detailed look at one or two of the main functions I think that the design principle of this Mixer deserves some comment. I have always been of the opinion that most mixers are unnecessarily complicated, especially those used for low power small band setups where ease of operation is the main criterion. What Keas have done, perhaps unconsciously, is to divide the operational controls into primary and secondary controls. The primary controls are



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the main operational controls — these being channel level and reverb and master level, master reverb and effects.

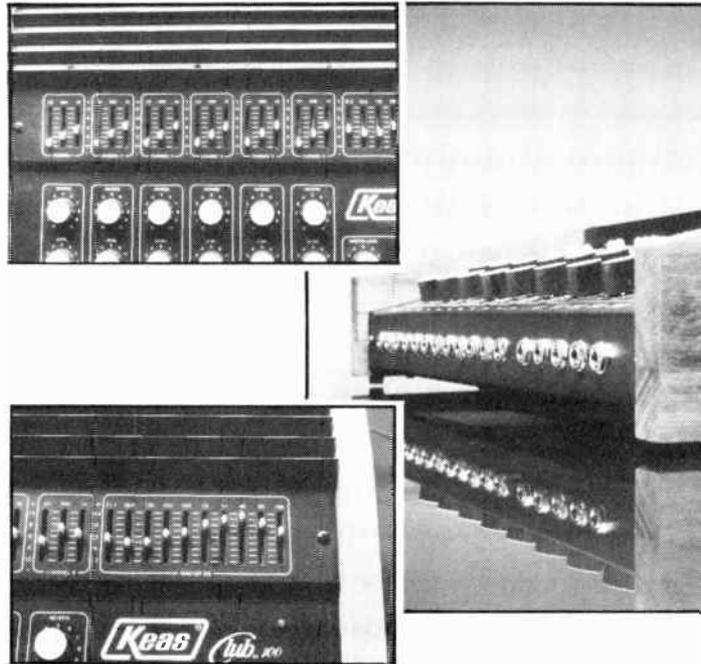
On this Mixer these are all rotary controls with nice large knobs close to the front of the Mixer and so easily accessible.

Equalization although important in the PA situation, is something that should not normally need to be adjusted continuously. Hence, all the secondary EQ controls are in a line away from the primary operational controls. Because short travel sliders are used for all the EQ another important effect is achieved — that of instantly being able to see how much EQ is applied and where.

An internal three-way spring reverb unit is fitted which in fact, sounds rather nice, with separate reverb levels on each channel (as well as master reverb) this does give a certain amount of flexibility. This is especially so as various stages in the reverb chain can be broken into. For example the output of the reverb mixing amplifier is accessible (before going through the spring Unit). On two outputs — effects send high and low. By using one of these outputs to feed to an external effects Unit (reverb or phasing or whatever) and returning the effects unit through effects receive (onto effects level control) any channel or channels can be routed through the external effect. This is why separate channel reverb controls are provided.

Obviously, if reverb is not required one of the two effects send outputs can be used as a foldback output to provide a separate foldback mix which personally, I think is a lot more useful.

Two auxiliary inputs are provided — one labelled Aux. input which is a high level input fed direct to the master section — this is only controlled by master level and master EQ — the 2nd, reverb expansion in-



put allows a high level signal to go direct through the spring reverb.

I hope I have not confused you too much with what I think is a very straight forward mono mixer. The unit, on test, produced a good 120 watts RMS

into four ohms — so I was expecting some good results form it when used in the live situation. I was not disappointed. Setting the unit up was simplicity itself and I think even someone who balks at plugging up the most basic of

guitar amplifiers would find this very straightforward.

The Club sounded good with a variety of different sources and especially with the control available on the graphic allowed a good sound to be achieved in several differing locations. I used the mixer/amp with a pair of 15-inch Fane Crescendos and high frequency horns and was well pleased with the results. Obviously, this unit is designed for use with microphones. If you need to feed a high level signal in, it has to go through an auxiliary input which does not allow proper control. In order to feed a high level signal through a channel to use the EQ I had to attenuate the signal considerably before running into the mixer. I do not think however, that this line input facility is strictly necessary in the sort of situations that this mixer is likely to be used.

Plenty of gain is available with a maximum of about 56dB on any channel — very good indeed. Obviously, channel preset gain controls have not been included as these would need careful setting up to achieve good signal to noise — however, in some situations, with widely differing levels that could be encountered from microphone sources it would be nice to be able to set up channel level controls to approximately similar positions making operation easier. This is presumably why rotary controls are provided instead of sliders for the channel level controls.

Summary

Although this Keas mixer is designed as a low cost mixer/power amp, I am very impressed by both the electronic performance and also by the ease with which this unit can be used operationally — a very well thought out product.

Dave Mann

Test Report

Power Output

126 watts RMS into 4 ohms (1kHz) before clipping.

91 watts RMS into 8 ohms (1kHz) before clipping.

Protection

Short circuit and thermal protection.

Noise and Hum

Mixer amp noise (referred to full output) — 69dB

Channel noise (referred to full output) — 62dB

Equipment input noise not measured as this could be misleading with build-in power amp.

Input Sensitivity

Any one channel \approx 57dB gain for 0dBm from line out.

Tone Controls

Channel EQ Low @100Hz 11.7dB

range

Mid @1kHz 37dB range

High @10kHz 13.9dB

range

Graphic EQ

10-way at 31.2Hz, 62.5Hz, 125Hz,

250Hz, 500Hz, 1kHz, 2kHz, 4kHz,

8kHz, 16kHz

Range on each control \approx 24dB

Maximum Input Level

— 4.9V RMS

Maximum Output Level

10.5V RMS

(Line out)



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Part 18

Finishing off the Finishing and Fitting the Fittings

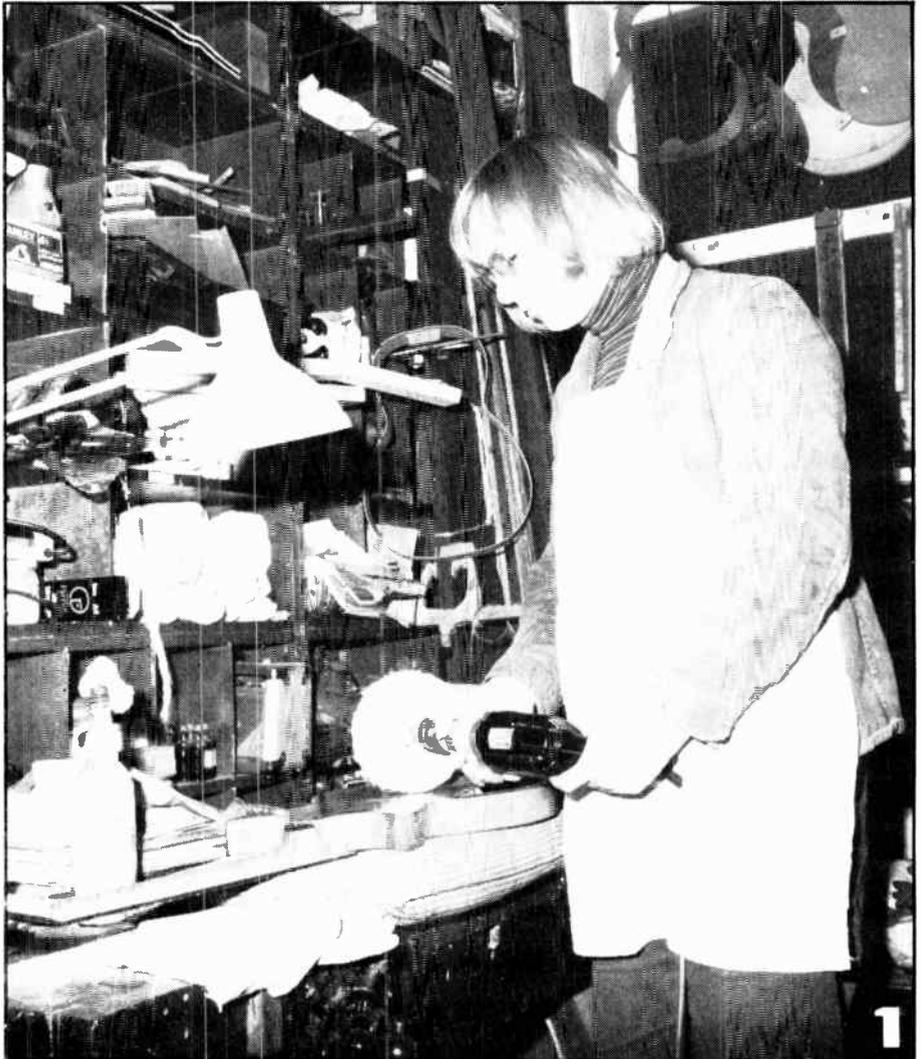
Plain or 'varnished' fingerboards

You can spray or brush lacquer onto the fingerboard, or mask it to keep it clean during the finishing, according to your taste. The only restrictions are that a fingerboard made from a pale-colored wood such as maple, will become very dirty and possibly a little rough and worn if it is not lacquered, and that a fingerboard made from a hard, resinous wood such as rosewood or ebony should be cleaned *all over* with solvent and a clean rag, if it is to be lacquered. This is the same process I have already described for cleaning and preparing the edges of the fingerboard, and it has the same purpose: it helps the lacquer to stick firmly to the wood. Usually, maple fingerboards are lacquered and rosewood and ebony are left bare.

Lacquered and polished fingerboards have a different feel and some players prefer this. There is nothing magic about the use of maple for lacquered fingerboards: a lacquered rosewood one would feel just the same, although it might require a little more work to produce a really flat and shiny surface. Also, some *single-component* varnishes and polyurethane finishes will not 'dry' properly on some rosewoods. If you insist on using different finishing materials from the ones I have recommended, you should bear this in mind. "Ronseal" is one of the otherwise excellent materials which may cause trouble on some samples of rosewood.

If you are going to lacquer the fingerboard, apply thin coats, or you will collect drips under each fret. Also, try to apply some of the coats to the fingerboard with the guitar held upside down to produce similarly-shaped build-ups of lacquer on each side of the frets. This will feel better to most players.

If you are *not* going to lacquer the fingerboard, cover it with masking tape of good quality and rub this firmly down onto the edges of the fingerboard, particularly on each side of the fret ends. There is a trick to this: you rub it down onto the frets as you lay it, one or two frets at a time. If you use the common 1" wide tape, do each edge of the fingerboard first and then fill in the gap in the middle. Trim off any overhang



and rub down again along both edges. You may be shocked by the price of the best masking tape, particularly in the industrial rolls about six inches in diameter. Don't try to save pennies here, either on cheap tape or on small rolls. Buy one six inch diameter roll of good one inch masking tape such as 3-M super-quality. In hot countries, the tape may go stale quickly. If it won't come off the roll in a continuous strip, it is too old. The tape stays on until after the lacquer is hardened and finally rubbed down.

Then it is pulled off and the rough edges smoothed with 600 paper. You must always pull off masking tape in a direction which does *not* tend to lift or

peel back the lacquer film. There is always a risk of this happening when the tape is removed and also when you are rubbing down the edge. Think about the safest directions in which to work. When the lacquer edge has been thinned down gently to nothing, ("feathered"), the risk of peeling is much smaller. It can be made less by careful choice of lacquers and by thorough cleansing of the fingerboard edges beforehand, but it still may occur occasionally. If you can catch the "blister" when it is small, wait for any white-spirit or other rubbing-down lubricant to dry out (usually overnight). Then very carefully lift the open edge of a "blister" by inserting only the tip of a

pointed scalpel blade, and apply one drop of 'Super Glue' or other Cyanoacrylate adhesive. If you are lucky, the glue will run right underneath the blister. Leave to dry for five or six hours and then rub down again to a feather-edge with 600 paper and the lacquer-makers recommended lubricant. This is usually White Spirit (Turps substitute) or soapy water. If you have a choice, use White Spirit. Be careful with the 'Super Glue': it also sticks fingers. Read the instructions before opening.

Hardening and polishing the lacquer

You will probably need about six or eight coats of lacquer, with rather thinner ones on the fingerboard, if it is to be lacquered also. Allow about one week after the last coat and then rub down with 600 paper and recommended lubricant until you have a smooth, matt surface. Try to finish at least the larger, flat surfaces by rubbing uniformly along the direction of the wood grain. To avoid cross scratches, do the sides and edges first, then the front and back of the head and body and the neck. Use a cork block for flat surfaces, and a piece of hard felt about 60 to 80 mm square and 10 mm thick for the curved bits. You can bend the felt to fit different curves, but it will still be hard enough to make a firm backing. Use thinner, but very hard felt over your fingers, for flattening edges and narrow, or very curved, surfaces and apply much less pressure. It is useless to try to rub down and polish the lacquer before it has had a week to harden properly. Several weeks would be better still. Cellulose lacquer can be burnished by hand with cotton wadding and burnishing cream. You can also use a special polishing liquid for celluloid made by Gedge & Co, St. John Street, London, EC1. Polyurethane lacquers are a different matter. They are scratch resistant in normal use, but unfortunately they are also nearly as resistant to the burnishing process. It is possible to do the job by hand with an automobile maintenance product called 'T-Cut', but it can be very hard work. This is probably similar to the U.S. "Mirroglaze" Auto polish compound. I use an electric drill and some mops and compounds supplied by Howard Wall (Mastral Div.), of 25/37 Hackney Road, London E2. I have no connection with the company, but I have found their advice on polishing 'difficult' lacquers to be helpful and totally correct.

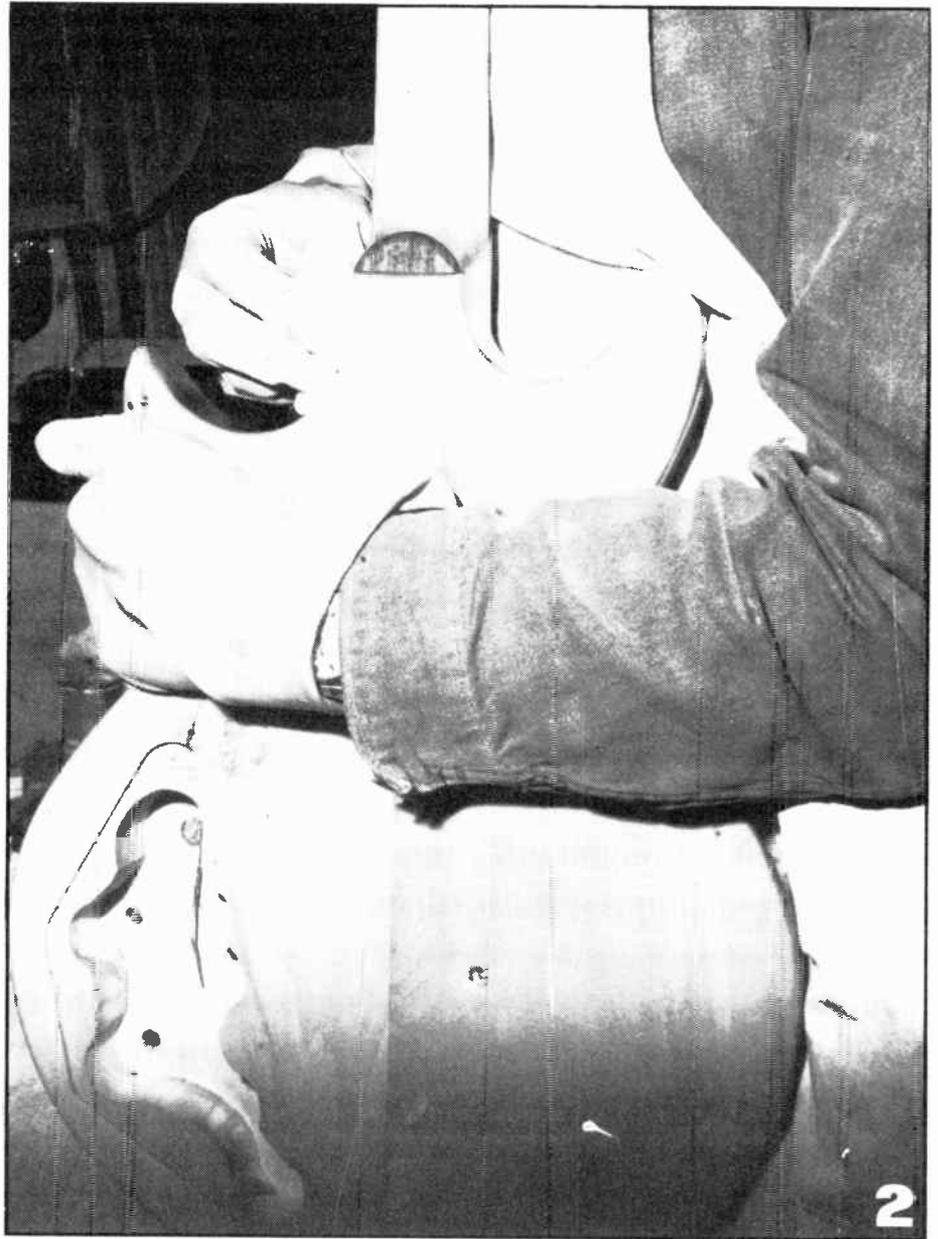
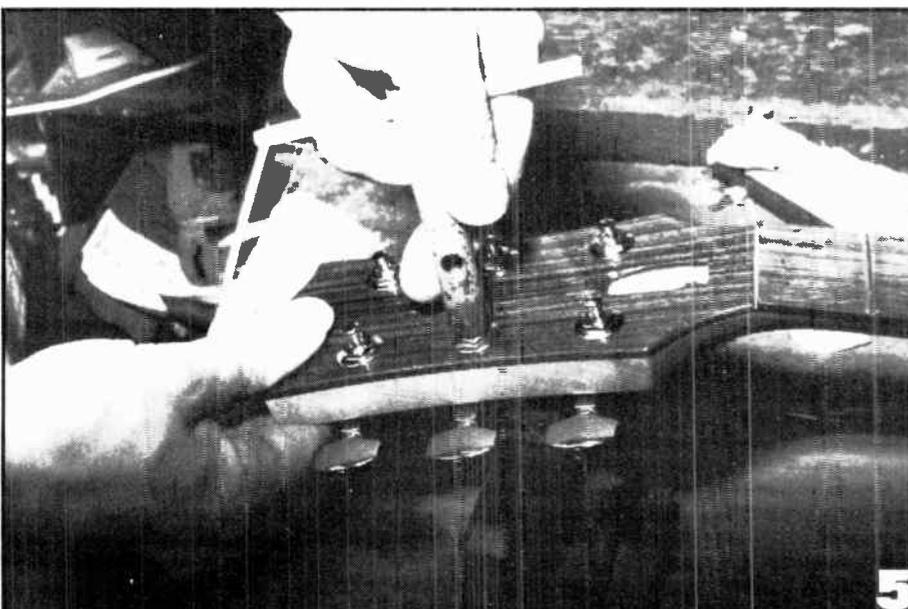
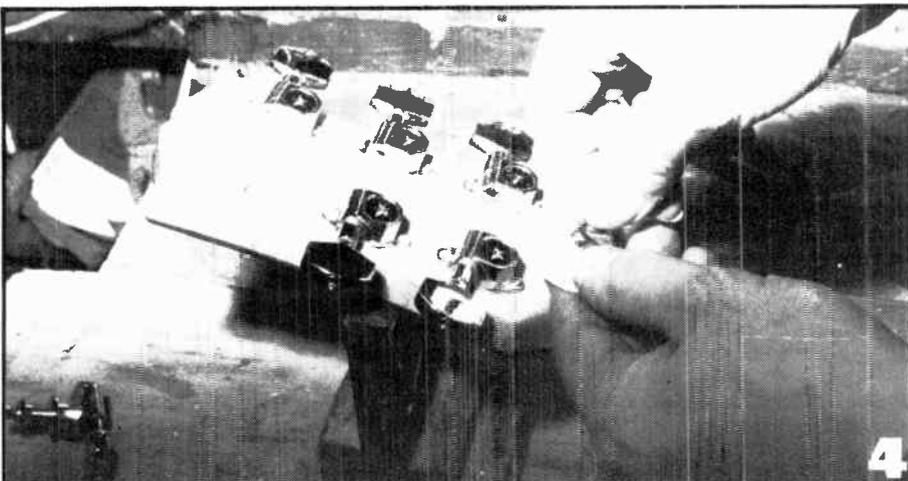
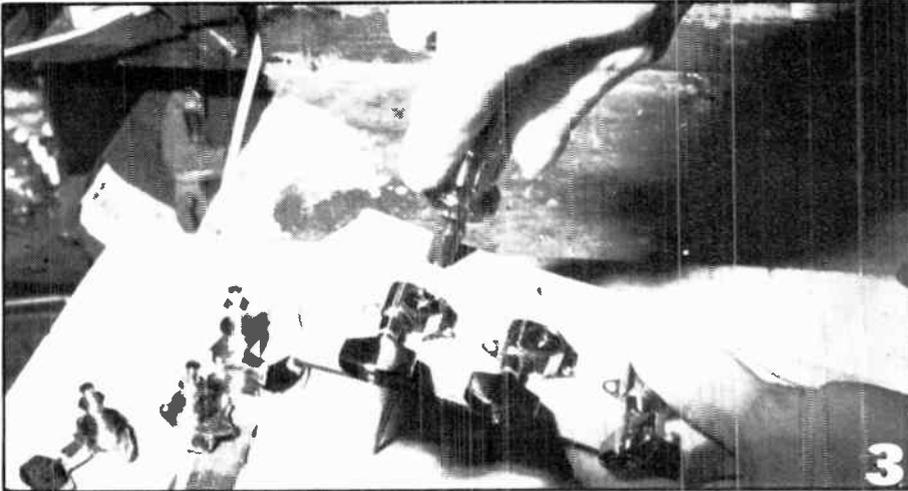


Photo No. 1 shows the rubbed-down guitar, wiped clean and placed on a large, hard cushion, covered with soft fabric. You should be able to see the method of holding the electric drill so the edge of the mop just touches the lacquer. You must keep changing the area of contact, and I try to cover each convenient piece of the guitar in smooth, overlapping strokes. It seems to help if one keeps the face of the mop at a slight angle to the direction of the stroke movements. The course cutting mop is a "6 inch by 3-section Special

White" and is dressed with a bar of "Witex" which can be seen on the corner of the bench. For this, the drill or polisher should have a speed of about 1500 r.p.m. — certainly not less than 1000 or more than 2000. The mop has three rows of stitching. I prefer to cut, and unpick the outer row to make it a little 'softer'. If you have to do a lot of large areas, and you have a powerful motor, you could use a similar 4-section mop, but you will need someone to hold the guitar down, unless you want to launch it across the workshop. It is pro- ►

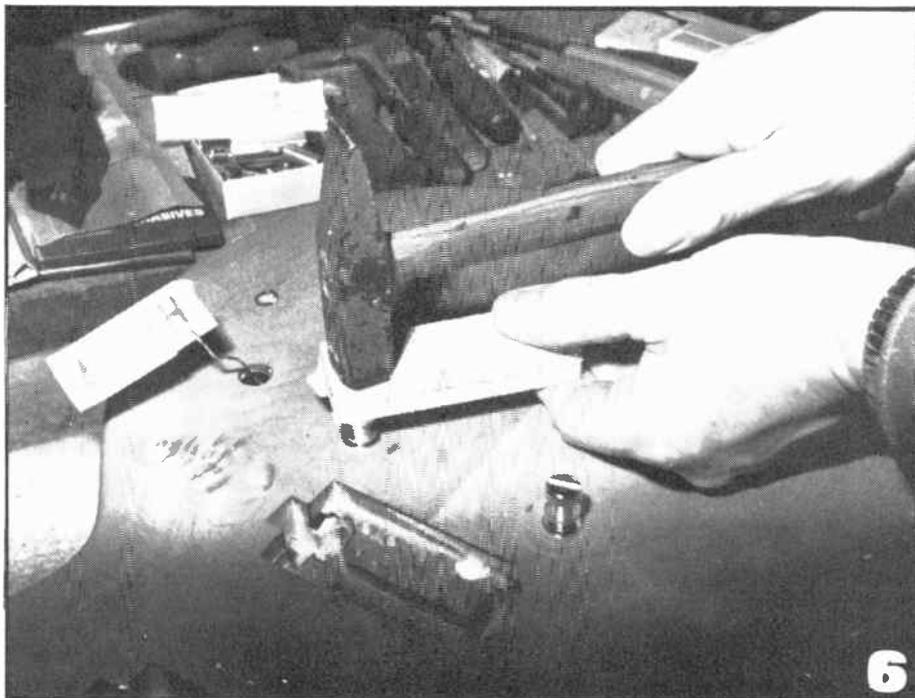


bably safest to polish the insides of the cutaways and the difficult parts of the neck by hand with T-Cut, but I believe one can obtain smaller mops of the same type.

When the body is evenly polished to a dull gloss, I change to a softer glossing mop, which is described as a "6 inch by 70-fold Gloss mop." This is dressed with a finer and rather dusty compound called *Euklas*, which puts a final gloss on the surface. Although the makers recommend a slower speed, I prefer to use about 2000 to 2500 r.p.m. and a very light touch, for this part of the operation. (Don't try this sort of speed with anything but *Euklas* on the mop). This should leave a good gloss under a slightly hazy surface. I take this off with cotton wadding and burnishing cream. It may be necessary to hold the guitar quite firmly and apply fair pressure as shown in *Photo 2*. Polish off any debris with a clean duster and you have a gloss you can see your face in.

If you prefer a satin finish, polish the guitar only with the coarse mop and *Witex*. It is not essential to achieve a perfect gloss as long as the finish has a good depth of color, and no longer looks opaque like ground glass. Take superfine wire wool, grade 000, and any soft furniture wax which does not contain silicones. Saturate a smooth pad of wire wool with the wax, and lightly rub the finish, along the direction of the wood grain where possible. This will be easier to arrange if you do the sides and corners of the head and body first, then the neck, then the rest. Although the grain direction varies of the edges, just rub straight round the outline of the guitar in the obvious way. Try to use long smooth strokes of the wire wool pad, and keep it well lubricated with wax. If you want to, you can buy wax made for this job from polishers' suppliers: it is usually called "flattening wax." From time to time, polish off with a soft duster, in the same direction as the wire wool, until you find you have removed enough of the gloss to suit your tastes.

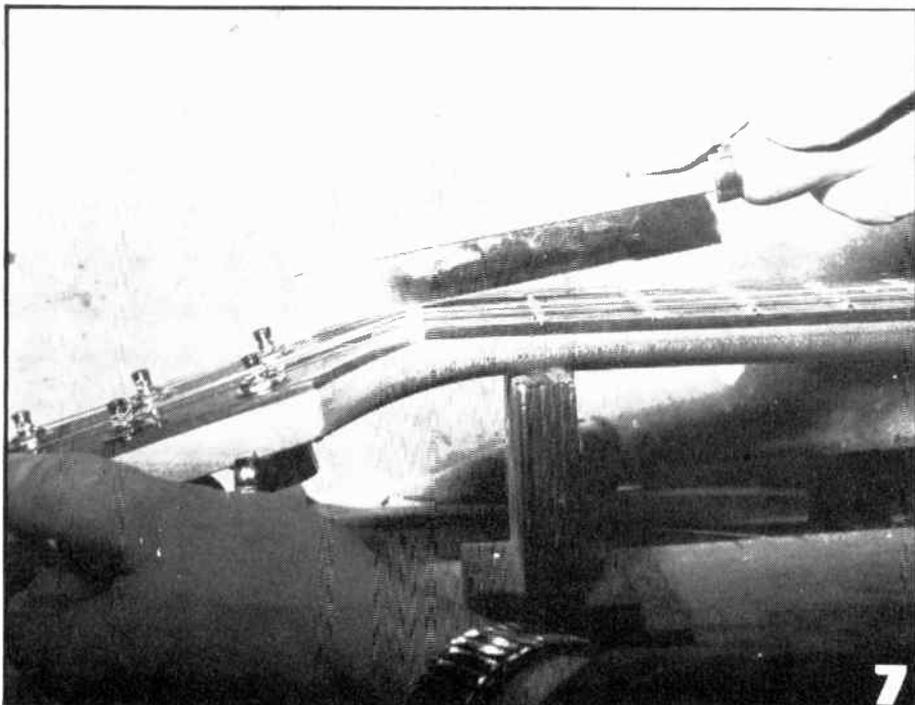
Photos 3, 4 and 5 show the fitting of Schaller or similar machine heads. This style has an extension to the gearbox which forms a bearing for the lower part of the string roller. Such machines usually require a 10 mm hole through the head, to clear this bearing, and to allow fitting of the front bushing to support the upper end of the roller. You will probably have these holes already drilled, but there may be some lacquer in the holes or they may need slight adjustment. This can be done with a gently tapering hand-reamer, working from the back of the head (**Photo 3**). The machine heads should just slip into place with fingertip pressure only. If they are very tight, they may split the head later ▶



If they push in, fit them *fully* before marking out and drilling the screw pilot holes at the back of the head.

If the bushes *screw* in, fasten them finger-tight before marking and drilling the pilot holes. Unscrew them to remove the machines and drill the holes, and then replace them finger-tight before putting the fixing screws into the back of the head. Tighten these screws first and then the front screw-in bushes. In the case of Schallers, the small fixing screws are rather brittle, and should be tightened carefully until their heads just touch the lugs on the machine heads. They do not need to be any tighter than this, the casting usually has spikes underneath it, and in any case, the screw-in bush will almost hold the machine head by itself.

Photo No. 6 shows the fitting of the bridge support sockets into the front of the body. The holes will probably need to be opened out with the same drill used originally, held in a carpenter's brace. The plain part of the socket should just slide in, so that only the knurled part has to be hammered into place, with a block of wood to protect the plating. Hold the guitar on a pile of telephone directories or on a hard cushion so that the neck and head do *not* rest on anything while you are hammering. The neck may, for convenience, be held gently by another person.



Before fitting the treble-side socket you will need to drill a small hole from inside the mounting hole in the front of the guitar, to meet the control cavity. This needs a long drill and a careful aim. It is probably safest to start from the front and aim for the middle of the nearest part of the control cavity. If this bothers you, you can drill from the bridge mounting hole, into the bottom of the nearest part of the bridge pick-up recess. A hole of 1.5 mm or 1/16 inch is ample, but it could be up to 2 mm or perhaps 1/8 inch. Feed about 200 mm of solid tinned copper wire, approximately 1 mm diameter, through the hole and into the control cavity. (If necessary, via the pick-up recess and the pick-up wiring tunnel). Turn down the end of the wire in the bridge mounting hole so that it bends sharply downwards and extends about 3/4 of the way down the hole.

If the guitar body is made from maple, rosewood or other very hard wood, you will need to cut a vee-groove for the wire, as far down as the bottom of the knurling on the socket will be when it is fully in place. The vee-groove should take about 1/2 the thickness of the wire. On soft woods it is not necessary. A small piece of 1 mm copper wire can often be obtained from people who break electric motors for scrap, or ▶

on.

Photo 4 shows the machines being screwed to the back of the head. You will need pilot holes of the correct size and some soap on the screws.

Photo 5 shows the tubular spanner used for tightening the front bushes: on most Schallers and some Japanese

copies, they screw in, and form an important part of the machine head fixing. The spanner is a 10 mm "Draper" which is a fairly cheap imported brand. The blue painted ones seem to fit better than the metal-plated ones. Don't use pliers, they are likely to slip and they will certainly damage the plating on the bushes.

preferably, from people who re-wind motors. You can scrape off the varnish and tin it yourself, with 'cored' solder suitable for electronic wiring, and a medium-sized electrical soldering iron. You will soon need these anyway, for wiring the pick-ups. Alternatively you can use a piece of a new, shiny medium gauge plain third guitar string. Anywhere between 14 and 18 thou. will do. This is so thin it will not need a vee-groove, even in hard wood. When the wire is in place you can hammer the treble bridge support gently into place, trapping the wire alongside the metal socket in the hole. It should now be possible to fit the bridge in place.

All that remains to be made is the nut. One of the standard sizes of Japanese moulded nuts will fit reasonably well if you are impatient, or unable to make a nut, but you will still have to adjust it to give the right string heights. Alternatively, you will need a piece of ivory, bone, acrylic Micarta or brass about 10 mm by 4.5 or 5 mm, by a little more than the width of the fingerboard where the nut is to fit. Cut the head facing away, if necessary, to make a flat shelf, a little narrower than the base of the nut, and then deepen and widen this into a shallow recess to take the bottom of the nut. The bottom of the nut should be level with the bottom of the fingerboard and one face of the nut should fit cleanly against the end of the fingerboard. It may be necessary to peel a thin film of unwanted lacquer from the end of the fingerboard before finally fitting the nut.

Photo No. 7 shows a suitable saw for cutting the nut slots, and the right sort of angle to ensure that the strings don't buzz. Keep the handle end of the saw over the fingerboard, not over the head. Hold the nut in place, and lightly cut the string slots. You can clean the slots, or make them wider, with sandpaper folded over the edge of a credit card. Hold at same angle as the saw. The nut should be much too high, allowing some opportunity to re-adjust the spacing of the slots. When they seem right, you can deepen them a little and then fit the strings. Any light gauge electric round-wound strings will do for the moment: they will be ruined by constant tuning and untuning anyway.

Adjust the slots with saw and sandpaper, until the strings clear the first fret by about 0.5 mm. That will be quite close enough for the moment. When you have done this, mark where the nut overlaps the neck each side,

remove it, trim it to size, take off most of the unnecessary depth of the slots, and polish the nut with fine abrasive paper and a little oil. It can then be wiped clean and replaced with a few spots of gum or weak glue. Just enough to stop it falling out. Your guitar should now play, when the bridge is adjusted to roughly the right height. Next month I shall deal with the truss rod nut, wiring up and fret finishing. ■

Stephen Delft is a maker and repairer of guitars and other instruments, and a member of the Institute of Musical Instrument Technology. He is also a more than capable performer on the guitar.

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Dynamic Microphone

Shure Model 571

A couple of months ago, I looked at the Shure SM17 sub-miniature microphone. This month continuing my fascination for things small, I'm testing the SM17's slightly larger brother, the Model 571, which in size comparison only qualifies for the title of miniature. The 571 is a general purpose microphone which was developed from a popular Shure Lavalier microphone known as the 570.

The Model 571 is an omnidirectional dynamic microphone of just over 2½ inches in length and ¾ inches in diameter. One advantage of this increase in size over the SM17 is that the 571 fits into a Shure A57D microphone clip or a Beyer clip and can therefore be easily fitted onto a stand or boom. Not including its cable the mike weighs about 2oz. The finish is a satin-matt grey type with a stainless steel grill.

The 571 supplies with 30 feet of 4mm two-core screened cable which enters the rear of the microphone and is secured by a screw at the side of the base and is not easily detachable. Any repair job would, I expect, require it to be returned to Shure or an agent of theirs. In the packing, the microphone is supplied with this cable coiled and this caused a tangle and presented a lot of nuisance. If I bought one of these microphones, the first thing I would do is to hang it up by the cable for a few days to try and remove some of these coils which in a cable of this length are a real difficulty.

I found the 571 to be a little too small for comfortable hand held use although it is quite possible as it is reasonably resistant to handling noise. There is a Lavalier adaptor available to fit the 571.

The 571 is omnidirectional and maintains a uniform sounding polar response with a gradual attenuation of the high



and low frequencies towards the rear of the microphone. The overall level of the microphone is maintained until approximately 160 degrees off axis where it falls off steeply. The "flat" response area in front of the microphone is quite large and so placing it is not very critical in relation to the axis.

The microphone was first tried on voice and I found it to be a very pleasant sound — present with no trace of sibilance even when I tried to provoke it. The bass response gave the voice a full sound without the amount of deep bass you would expect from a "recognized" vocal mike used very close, but what was there is quite definite (not boomy) and so could be EQ'd. For nor-

mal speech recording the sound close when used close is very good showing a marked improvement in smoothness over the SM17 for really what is only a fairly small increase in diaphragm diameter. The mike will "pop" but is less prone to this than many microphones used for similar purposes.

On instruments, I found it to be useful. The 571 shared most of the benefits of the SM17, its small size enabling positioning in the ideal position without interfering with the player. The sound from an acoustic guitar was full but not boomy with plenty of brightness which you can get from really close miking of the strings. Percussion recorded well, but would require some experimenting to find the ideal technique for

small mikes — a cardioid response is generally to be preferred for close miking a full drum kit. Some microphones have a great deal of problems with bells, glockenspiels etc. where the sound is high level high frequency and need to be moved back to quite a distance before a clear clean sound can be achieved. The 571 was quite clean even within six inches of a usually troublesome hand bell. This may somehow be connected with a general observation I made from using the 571 in that I felt a lack of dynamics in the sound, a sort of gentle compression of the output so that louder notes, although giving more level output did not seem to the ear to be a real increase in volume. What causes this I have no idea except it may be as some function of its small size. This should not be seen as a criticism of the microphone but more as a description of its character. The inventive engineer will always find ways of using the "deficiencies" of a microphone to work for him — some benefit can be gained from every microphone if you know how. Every studio requires some general purpose microphones that are fairly good at everything but also some that may not be used to often but give good sound in the right situation. This part of the reason I have been looking for unusual and different microphones to encourage diversity in choice of microphones and experimentation with recording techniques — not always the easy way out.

The Shure Model 571 is a microphone that is more of a general purpose unit than the SM17 having a smooth and full response for a microphone of its type. Again, this is a mike I would recommend to the creatively minded user.

Keith Spencer-Allen

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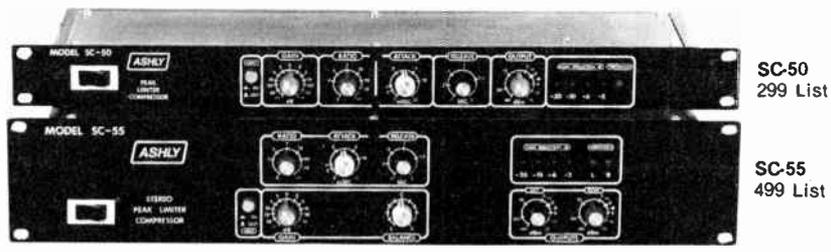
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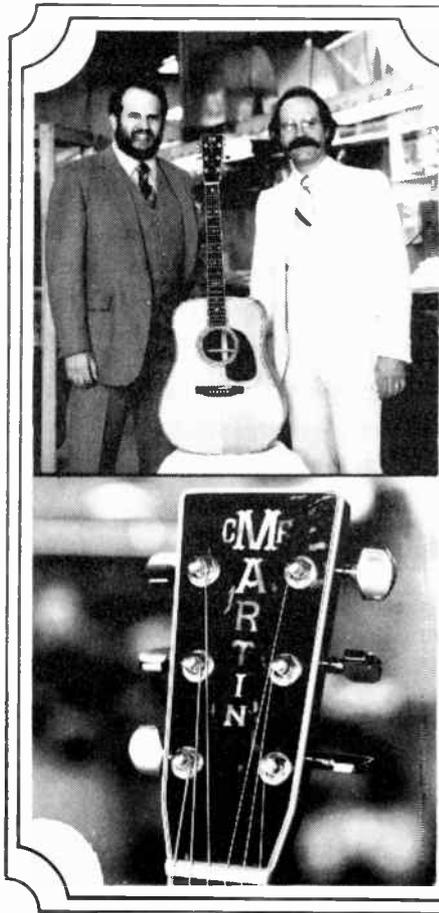
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Mobile One

Having been in operation for 12-18 months, built and owned by Radio Clyde in Scotland, Mobile One is run by Barry Ainsworth — a man eminently qualified for the job since he has now been working in mobile recording for about 14 years. His career started with the Pye Mobile, and after that he worked as a freelance engineer operating other people's mobiles. Mobile One came about when he decided that he wanted to build his own truck. This can be a very costly business and, eventually, in order to avoid cutting any corners (the mobile being worth over half a million dollars) Barry joined forces with Radio Clyde who financed his dream.

The acoustics were designed by Eastlake and the majority of the basic equipment is MCI. They are as fully equipped as any studio should be, carrying for instance, a full complement of mikes. Barry emphasizes the point that it is a Mobile *studio*, not a Mobile Recording Unit. The truck has its own vocal booth so that it is not even essential to have a room to play in. Thus, the truck can operate totally independently.

They started off with a bang, the first assignment being "Yes Live at Wembley", and they appear to have landed



fairly and squarely on their feet in the European market. This is largely due to the fact that they have an agent in Paris (Ferner Studios) who take care of all the European side of things for them.

The mobile's work is varied. For instance, they had just got back from Switzerland where they were recording an album for Rick Wakeman in his home. Recent spring jobs have involved all sorts of bands — Steve Hackett, Third World, UK Subs and Sham 69. European tours include a 24-gig European tour with Supertramp, AC/DC in Paris and then on to Yugoslavia where they worked

for a record company who never before had access to the type of sophisticated modern recording studio which the mobile could provide. They are equipped with two 24-track machines and therefore are capable of working with anything up to 46 tracks.

The studio goes on the road with three engineers — one balance, one maintenance and one assistant. With such complex equipment, it is essential to carry a maintenance engineer on board, especially in a mobile. The equipment receives maintenance treatment once a week, and of

course, any necessary repairs can be carried out on the spot. They also carry a big spares range. They have yet to encounter a problem, which has caused a major problem — and that's quite an achievement. This was one of the reasons for choosing to install MCI equipment because, not only is it very reliable, but spares are readily available virtually throughout the world. So, should a problem arise that they had not foreseen, they should be able to do something about it quickly and with ease.

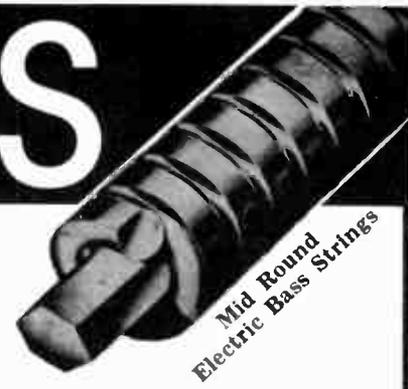
One would imagine that travelling on the Continent might present problems. Customs are generally okay as long as you are organised and can present them with a pre-printed equipment list (called "88 Carnet") which you can tick off and get through without any trouble.

Mobile One have been involved in a lot of film work and television, although the majority of their time is occupied recording albums and gigs. The vocal booth can be a great advantage for overdubbing on live recordings — for example if the artist decides that he is not happy with the voice they can simply overdub the vocal track in the truck.

The tremendous advantage of a mobile is that it can be taken almost anywhere — the recent work at Rick Wakeman's home was done half way up a mountain! Working with a mobile unit can be expensive, but often people prefer to work in their own environment. Sometimes a band will have been using a rehearsal room and got used to the sound and feel of the room and want to do their recording there. It may also, in some cases, be *cheaper* to have the mobile come to you.

Janet Angus

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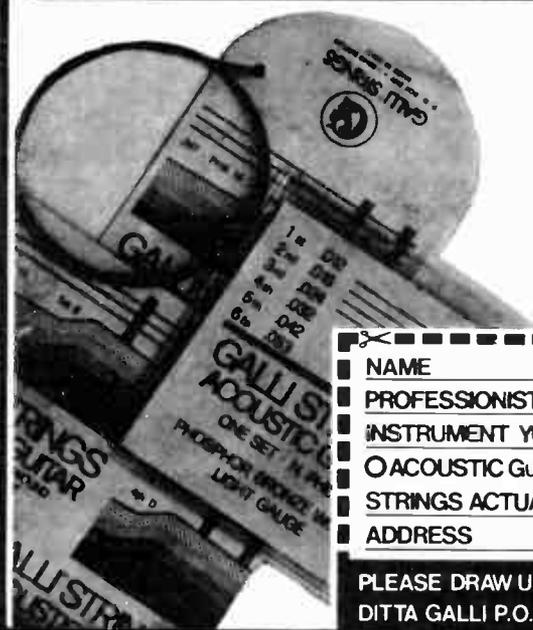
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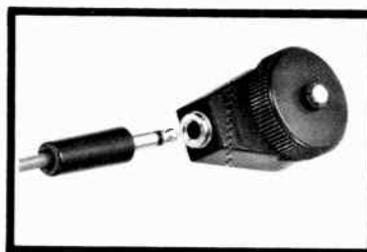
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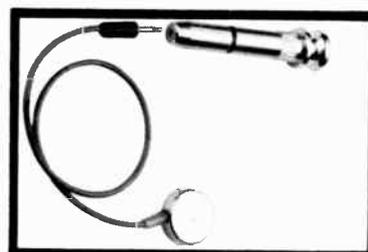
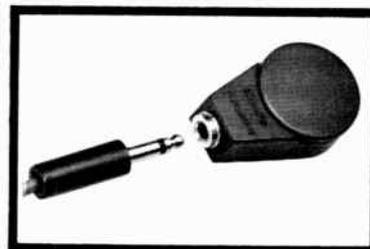


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