

INTERNATIONAL MUSICIAN AND RECORDING WORLD

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Editorial

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NAMM GETS MICKEY MOUSE ROCKIN'

One thing distinguished the National Association of Music Merchants' (NAMM) winter exhibition from most other trade shows both nationally and internationally: music.

At best, musical instrument fairs tend to border on the dull, spilling over into the mundane with company reps pushing products and salesmen doing their hustle: after all, that's what they're all about. But anything located in the Disneyland Hotel not far from the heart of America's music industry can't help but have a touch of the comic and a tendency toward the entertaining.

The main exhibit hall in the convention center rang with a cacophony of sounds throughout the three-day fair. Classical music overlapped with a dirty guitar sound spilling over onto a bizarre synthesizer noise until the result became something like a cosmic orchestra tuning up. But, within the mixture, the individual ingredients came through.

On the Polytone stand Ray Brown jammed with Herb Ellis and a couple of others filling up the aisles with listeners while providing a great deal of entertainment with their music. Lol Creme showed his style while demonstrating the new Gizmotron that he and Kevin Godley are about to unleash on an unsuspecting market.

There were a few other luminaries demonstrating around the stands such as Jaco Pastorius on the Acoustic Control booth and an incredible guitar duo was performed by Bruce Bolen and Mike Elliot on the Gibson stand. A few others in and around the premises were Billy Cobham, Chester Thompson and Leon Russell, to name but a few.

Of course, the stars came out at night and under them Louie Bellson and his big band played an invigorating set despite a bad sound mix and despite the fact that Ed Shaughnessy and his band Energy Force were providing quite a bit of excitement in the tent right next door at the same time.

Mickey Mouse's ears must have been ringing as the Disneyland Hotel was transformed into a musical playground, but the NAMM winter market provides more than a musical stage and the opportunity for winter-weary executives to escape to the sunny climes of California. It is the showcase for what's new, exciting and inventive in the musical instrument industry.

Synare, for example, unveiled a

new black box (only finished two weeks previous to the show) that attaches to the rim of a snare transforming it immediately into a synth drum producing anything from a chime to the ultimate in synthesized distortion. Just one example in the multitude of electronic products being displayed, it characterized the inventiveness that is apparent in today's musical instruments.

In the vast array of guitars, there wasn't a company that didn't have something new on the stand and those needed to be played to be appreciated. If anything, the guitar lines seemed to be placing a little more emphasis on the full-bodied electrics, typifying the jazz sound that's becoming more popular.

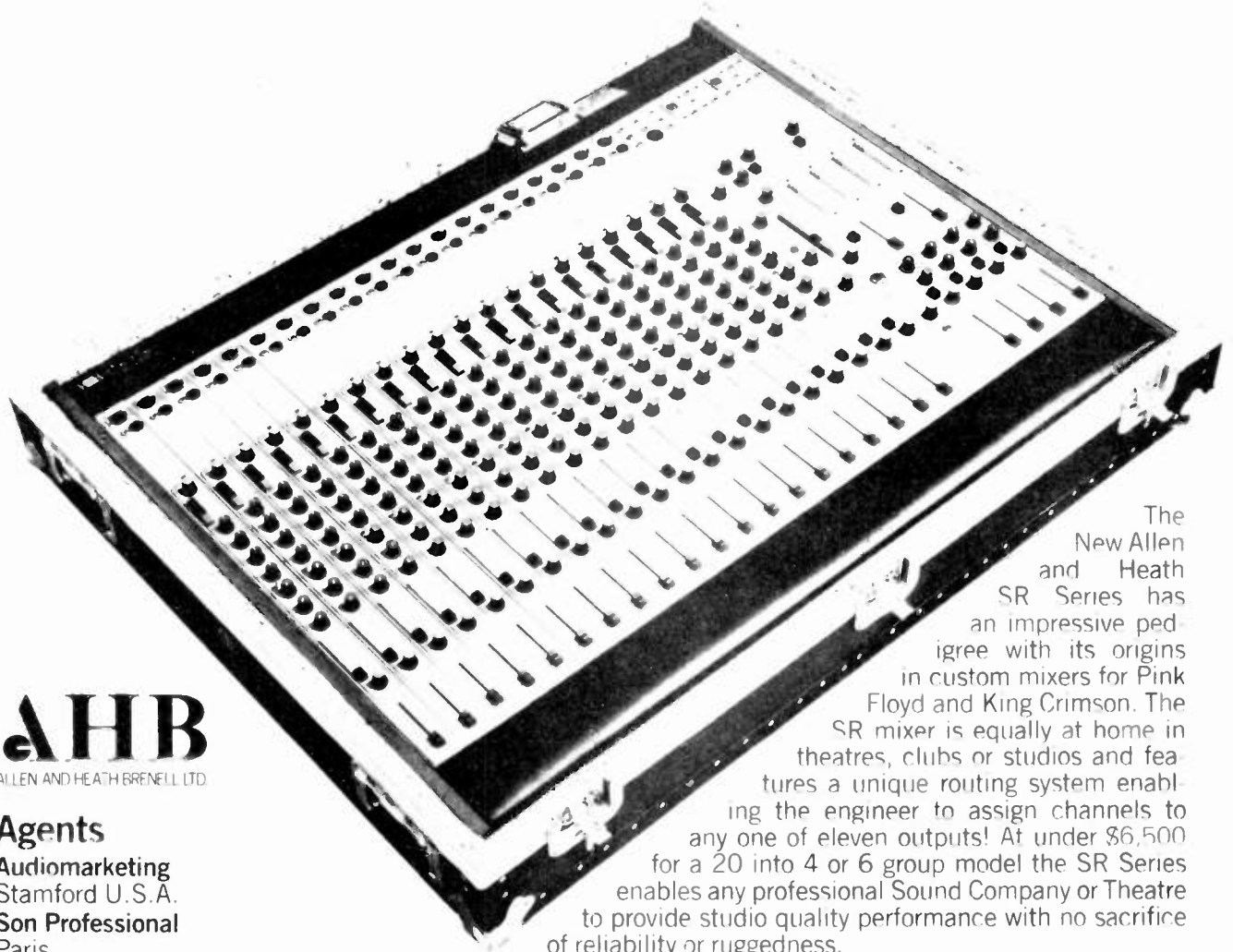
The NAMM exhibit held a lot more, but anyone visiting a music store in the near future will soon find out what the show had to offer.

Oh, there was one other new item at the exhibit - International Musician and Recording World. The magazine made its debut to the trade and public with the first American issue and, judging from the response, it won't be the last.



SR 20 and SR 28

MIXING BUSINESS WITH PLEASURE



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The New Allen and Heath SR Series has an impressive pedigree with its origins in custom mixers for Pink Floyd and King Crimson. The SR mixer is equally at home in theatres, clubs or studios and features a unique routing system enabling the engineer to assign channels to any one of eleven outputs! At under \$6,500 for a 20 into 4 or 6 group model the SR Series enables any professional Sound Company or Theatre to provide studio quality performance with no sacrifice of reliability or ruggedness.

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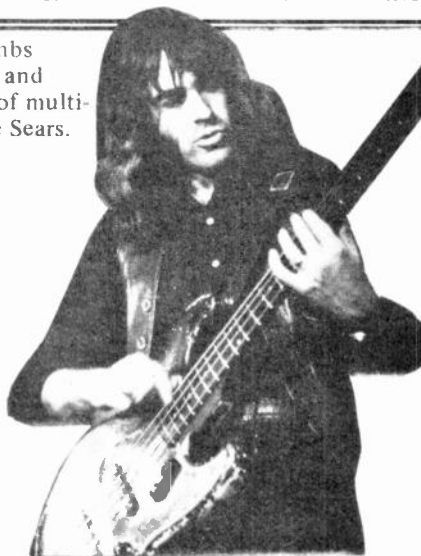
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One of Britain's premier punk outfits are soon to be unleashed on American audiences. Don't judge until you read what David Lawrenson has to say.



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Mixer hiss

Dear Editor: Congratulations on a fine magazine. Your first issue looked real good. Maybe you can help me with a problem I have. I'm a songwriter and a guitarist and I recently bought a small mixer which is battery-powered to use with my tape deck for recording. The problem I'm getting is there's a lot of hiss after I use the mixer. Is this because of incompatibility or could something be wrong with the tape deck or the mixer?

*George Wish
Oakland, Ca.*

Small battery-powered mixers always present a problem when used with good quality recording equipment. From what you say, we'd guess that you've bought a mixer that's really intended for simple PA use and isn't really good enough for recording. The hiss you mention is described as the signal-to-noise ratio, and the level of hiss (noise) against your singing or playing (signal) is related to how good the electronics in the mixer are. Battery units are best avoided for recording situations and, if you're getting good results with the microphone plugged in directly, then it's the mixer that's to blame.

Real players

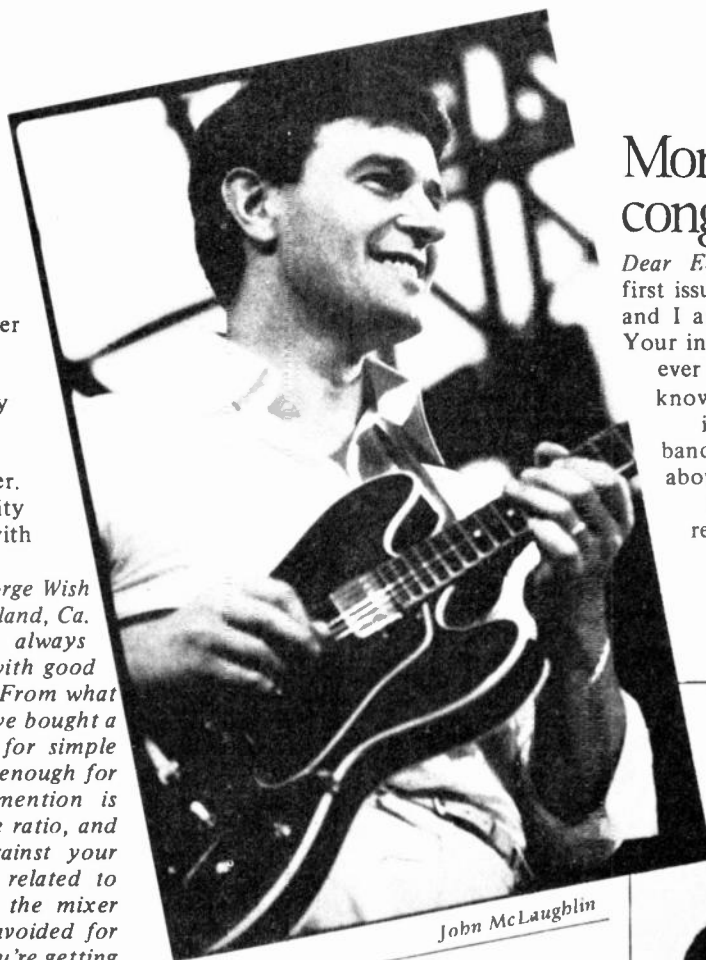
Dear Editor: A few words of praise for your magazine. It's something we've needed for a long time and the first issue was excellent. I particularly liked the guitar reviews and I'd like to see more. Also the story on John McLaughlin was nice. It's good to read about real players and their instruments. How's about Carlos Santana and Jeff Beck?

*James Sullivan
Crookston, Minn.*

Country cousin

Dear Editor: Thanks for a fine magazine. I first saw the English version in Canada last year and have had trouble picking them up lately so it's great to see you boys have moved into the States. I really liked the McLaughlin interview but not the Uhrig one — let's face it, who wants to read about a bass player in a country band? Their four to the bar eat-shit bass playing isn't exactly inventive. It'd be nice to read about Stanley Clarke and Jaco Pastorius, players who really mean business.

*D.D. Forman
Seattle, Washington.*



John McLaughlin

Don't forget jazzers

Dear Editor: It was nice to see your first issue appear and I look forward to buying it every month. It's good to read about instruments and equipment in such detail. However, unlike most of your readers, I guess, I'm not a rock and roller. I play in a lounge trio and prefer listening to Wes Montgomery rather than Led Zeppelin. I hope your book is going to cater for musicians other than rock players. There are a lot of middle-aged musicians like me who work the lounges, don't listen to rock much, but are equally interested in their hardware i.e. guitars and amplifiers. Don't forget us jazzers, huh?

*Mike Valente
Beaverdam, Wisc.*

How long?

Dear Editor. I was very interested to see your new magazine. It looks really good so I wish you every success. I was particularly interested in the story about building an electric guitar because I intend to build a custom instrument from scratch. I know Part One in your first issue was just the introduction, but I wondered how long the series will run?

*Pete Weatherall
Pittsburgh, Penn.*

For about 20 months — so be patient!

More congratulations

Dear Editor: Congratulations on your first issue. It was very enjoyable to read and I am waiting eagerly for the second. Your instrument reviews are the best I've ever seen and your guitar guy really knows what he's doing. I'm interested in setting up a small studio for my band to use but don't know too much about the equipment to buy. Do you have plans to feature an article on recording equipment? If so, when?

*Jerry Erskine
Chicago, Ill.*

Yes. Soon. OK?



John McVie with John Mayall

More Bluesbreakers trivia

Dear Editor: I've been buying International Musician in the English edition wherever I can so I'm real pleased to see the new US issue. It was great and I hope you'll be able to keep up that high standard. Like Tom Swan, who wrote to ask about Clapton's equipment on the Bluesbreakers album, I'm an ardent Clapton fan, although I feel he played better on a Les Paul than he does now with the Fender. I wish he'd go back and listen to the sound on the Bluesbreakers album and play like that. Incidentally, I bet you don't know what amp and guitar John McVie used on that album.

*Paul Levy
Springfield, Miss.*

Sure we do. He played a Fender Jazz bass through a Marshall 50 watt bass combo.

Why you should own the MX-880 duosonic synthesizer



Chuck Leavell of Sea Level, Capricorn recording artists

Absolutely for live performance. . .

One thing that I like about the 880 is the fact that it is a preset synthesizer. I don't have to spend a lot of time searching for a sound.

The presets are easily accessible which is very important, on a seconds notice you can change or alter your sound. Controls are in a good place, easy to reach. With many synthesizers you really have to search for a sound, that's not the case with the Multivox.

It's got a fat sound, and that's important. If it had only one oscillator it couldn't get that kind of sound. You can get octaves, you can tune it to fifths, you can get a unison sound.

One of the features that I really love on the 880 is the touch sensitive control. You can bend pitch or add various effects that are second touch activated. It's the first instrument that uses touch sensitivity effectively.



Wayne George of Arc, Lifesong recording artists

I really like the idea of a duosonic synthesizer where you can get the thirds, fifths, or any interval. So many other synthesizers have been limited to playing one note.

The MX-880 is the best as an effects instrument. I like being able to achieve sounds without making all kinds of adjustments. The portamento control is as good as anything I've played.

The violin setting gives you the sound of a synthesized string section when you combine the filter section and a variable second note.

With the LFO trigger I can lock into playing sixteenth notes . . . I can really whale.

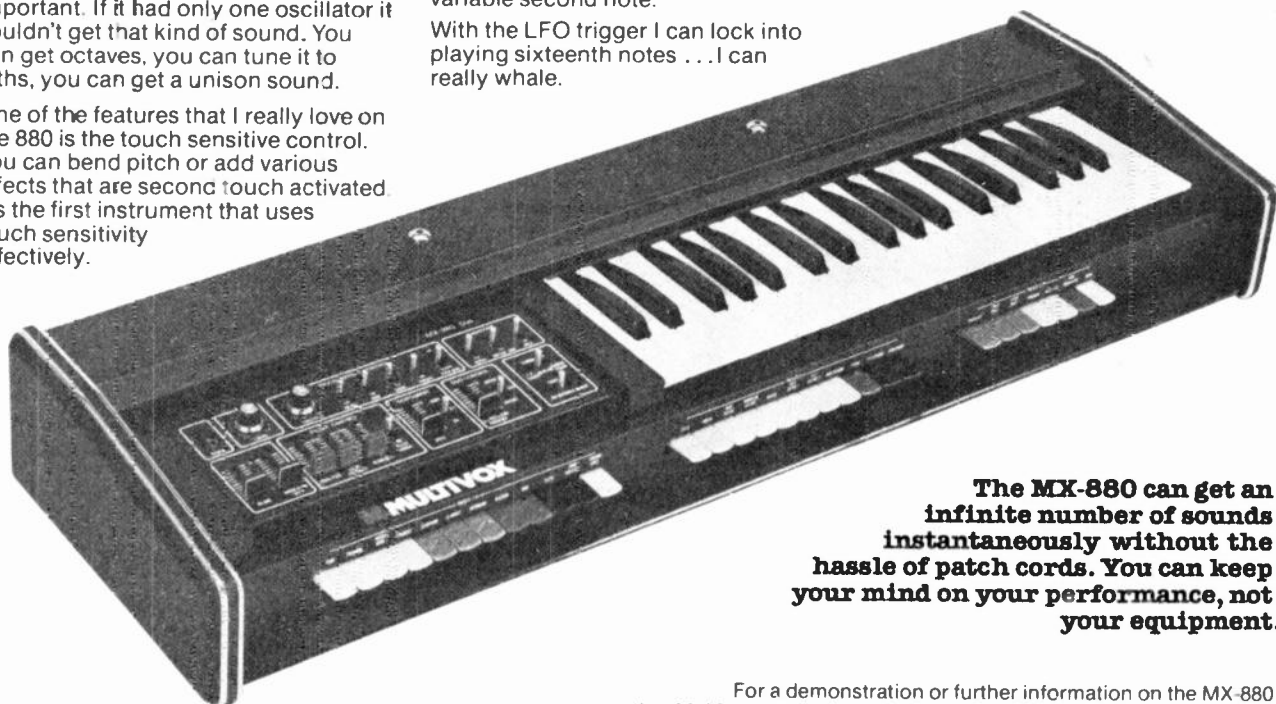


Billy Alessi of Alessi, A&M recording artists

For live, it's very practical. I'm using it to double solos with guitars. With the vibrato I can get some nice solo sounds.

That things been in fifty cities. One thing that's great is that it's really holding up, that's really important. I've got a lot of confidence in the 880.

Among the many keyboards needed for our type of show, I made sure I took a Multivox. For basic good synthesizer sounds it can cut it as well as any other.



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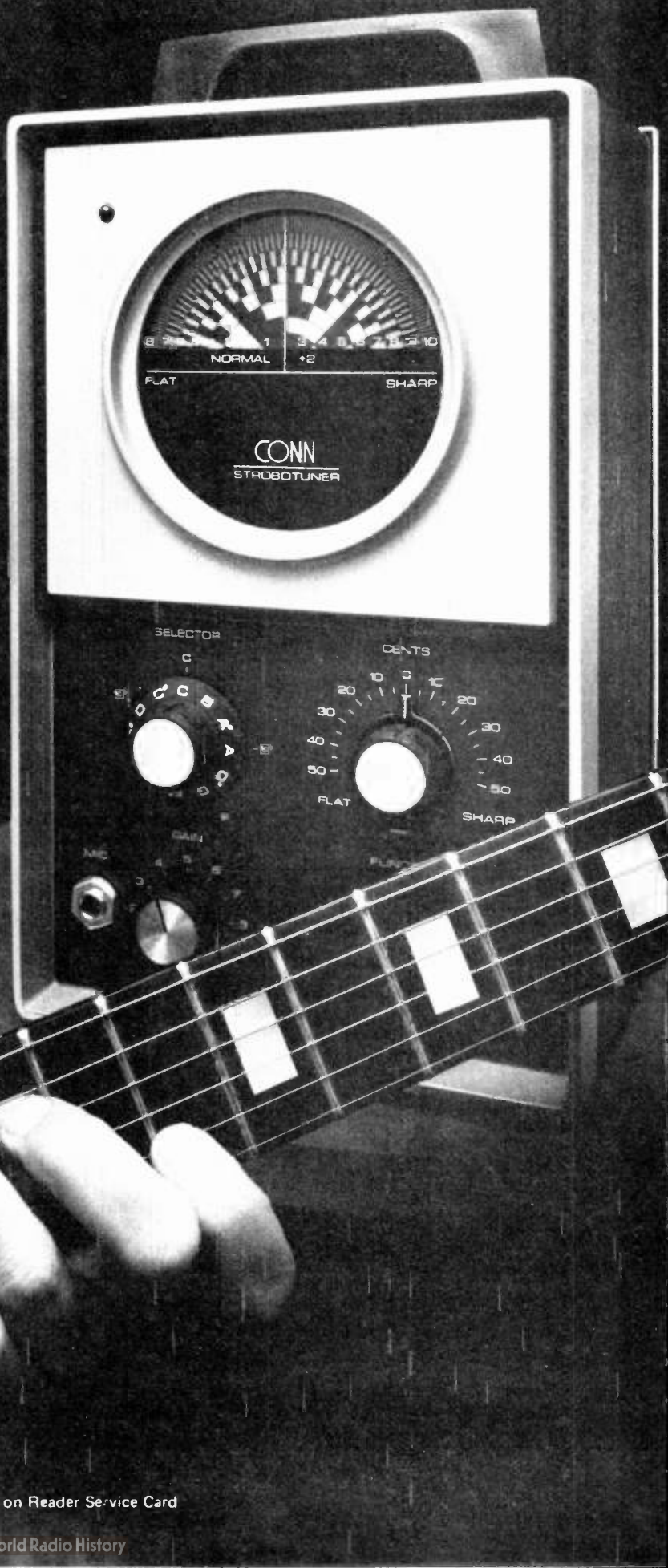
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On Guitar: Mitch Holder

One of the most interesting aspects of the guitar is its ability to achieve many musical identities. You can find it in rock bands, country and country-rock bands, jazz and jazz-rock bands, blues and funk bands, symphony orchestras or all by itself in any number of musical styles. This element presents a challenge to the guitarist in that in many instances he or she may be called upon to play different styles of music.

When we talk about all of these styles, what are we really talking about? One might say we're talking about geographical, cultural and emotional elements as they relate

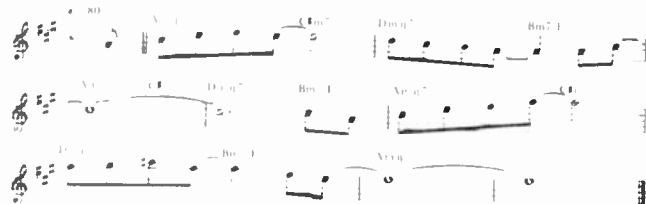


to music. Since we all can't live in every environment known to mankind, how does one go about getting acquainted with different styles of music? By hearing music, both recorded and live, you can expose yourself to music you may not understand, but if you study the basic rhythms and sound, you can come up with a reasonable facsimile yourself.

Guitaristically, there are many things to consider when learning styles. For instance, sounds of certain music are instantly recognizable by the type of instrument, whether it be acoustic, classical or electric. The most important thing to try to capture is the feel of a particular style, the bends, slurs, hammer-ons, hammer-offs, etc. that characterize the music.

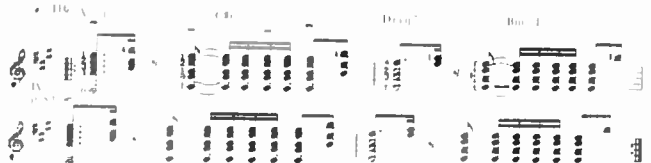
Let's take a simple musical example and investigate the elements of style in rhythm playing. Example 1 is a short musical phrase.

EXAMPLE 1



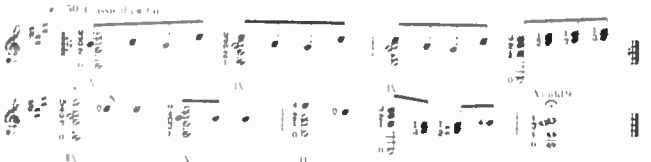
Now, remembering that you're the rhythm player, the leader tells everyone that he wants to play this piece as a disco. What would you play? Disco is really nothing more than repeated patterns of sixteenth note patterns. Example 2 is an illustration of a disco rhythm pattern.

EXAMPLE 2 DISCO



If the bandleader wanted the tune to be a slow ballad, how might you play that? Let's take a look at the same tune played as a ballad on a classical guitar (Example 3).

EXAMPLE 3 BALLAD



Are you starting to see and hear what style is all about? It's a matter of inflecting a feel, a rhythm and a sound.

Continued on page 127

Mitch Holder is a guitarist with experience covering television, recording and touring. He is much in demand as a session player having worked with top name artists such as Barry Manilow, Barbra Streisand and Billy Davis. He is also the author of "Quadrophonic Fingering."

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On Drums: Chester Thompson

I would like to discuss the delicate subject of swinging, AKA grooving or just plain making it feel good. In order to play anything effectively, it should be clear in your mind what you are supposed to be doing. This is why it is important occasionally to listen to recordings of rehearsals or actual jobs that you do. Swinging is almost impossible to discuss fully because it has to be experienced to be understood. Still, there are certain basics which apply, most of the time.

What to do with the bass drum is the first area we'll consider. It's no problem of course if you're doing a disco gig, but even there, an occasional and very slight deviation can add a little lift to the whole thing. An extra eighth note or a dotted quarter-eighth note figure once or twice (or more if it feels especially good) can sometimes add to the groove.

To move all the way to the other side of the spectrum, let's look at jazz or a "straight four" or "swing" feel. In a big band situation, quarter notes played very lightly on the bass drum add nice punch provided you're locked in with the bass player. But at almost no other time would that be the case. You really don't want to play downbeats all the time (one on every bar). In fact, with more modern groups you might play on the downbeat only during ensemble parts or at the beginning of a chorus. The reason being that a downbeat has an air of finality to it, where "pushbeats" lean into the next bar, sort of flowing over the bar line instead of ending on it. In general, space and simplicity on the bass drum keep things light and moving.

If there is one thing that is constant through most of the changes in our music over the last 50 plus years, it's the backbeat. Not only does it hang around, but it's one of the most important aspects of modern western music — from a drummer's viewpoint. Even in music where it would not normally be played all the way through such as some jazz or jazz/rock, a good strong backbeat for a chorus or so can really help things to cook. When a backbeat is the thing to play, it is very important that it is placed in accordance with the felling of the music being played, i.e. you wouldn't usually play behind the beat on an up-tempo song or way ahead of the beat on a really laid back one. This in thinking in terms of 4/4 of course, but you can't beat it (backbeat) for 6/8 or 3/4 (played on 2 or 3). It is at least usable in practically any time signature.

The logical thing to discuss next is cymbal work. Cymbal, I feel, should be played rhythmically, not taken for granted and just banged on. When things get really intense it is sometimes hard to not let everything go. The danger is that some cymbals are so lively they tend to wash out the sound of everything else that's going on around you. The result is a loss in communication that does not help a band to swing.

It was mentioned earlier about playing with space, the use of which is crucial to good swinging. This is not saying that you should never play busy or complicated patterns. The deciding factor has to be the music itself and what the rest of the band is playing. I mean space in the sense of knowing what not to play. Very often, this is what dis-

Continued on page 127

Chester Thompson currently tours with Genesis and has worked/recorded with Frank Zappa, Weather Report, Curtis Mayfield, George Duke and the Pointer Sisters, to name a few.



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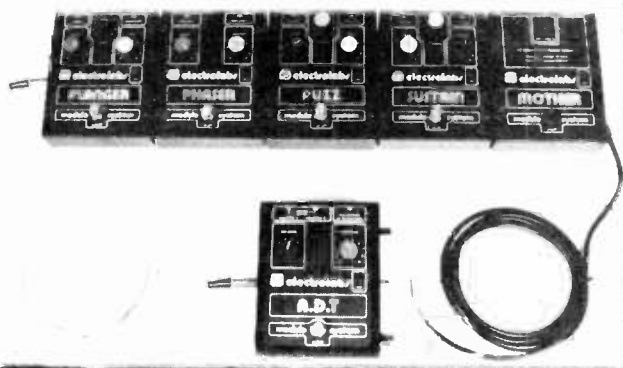
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On Sax and Flute: Alan Holmes



At the root of a powerful sound and long confident phrases is a good air supply. A motor source which actually powers the horn is the group of muscles in the abdomen slung across the body between the hip bones. These control the movement of the diaphragm which is another sheet of muscle separating the abdomen with its intestines from the rib cage and the lungs. Movement outwards of the abdomen sucks the diaphragm down, which has the effect of expanding the rib cage cavity and, combined with breathing in, this is how the bag of air is filled. This bag of air can be compared to the bagpipes. The pipes are operated by the arm squeezing the sack of air so that a steady pressure causes the reeds to vibrate. In the case of a horn, the pressure is applied by squeezing in the distended abdomen. This in turn causes the diaphragm to squeeze the lungs and creates the steady, powerful flow necessary to activate the reed.

This type of breathing is known as "diaphragmatic" and can be easily checked watching the shoulders. When you breath with the correct diaphragm action, the shoulders do not move at all up or down, as they do when breathing from the chest only. Lie flat on your back on the floor and place a heavy book or similar object on your abdomen. As you breath slowly in and out you can feel these muscles working and raising the object with little effort. Once you have located the muscles and felt them working, the next stage is to strengthen them.

None of these exercises should be done until two hours after a meal: the effect of moving the abdomen repeated on a full stomach is to empty it. Continue the exercise using a weight on the abdomen and without worrying about the breathing at this stage. Just move the weight up and down as far as you can until the muscles start to ache.

Stand up and practice the same movement while the muscles are still sore, as this will enable you to locate them. This can be continued in a sitting position - in the car, for instance - on a daily basis for a week initially and then in conjunction with breathing.

The process of blowing a wind instrument reverses the natural rhythm in that air is taken in quickly and released slowly. The body's needs still have to be catered for regarding oxygen to the blood stream and it is very advantageous to be physically fit. Running short of breath will interfere with the requirements of the air supply to the horn, for the body's need for oxygen overrides everything. Cycling and jogging are good ways of increasing the body's capacity in this respect.

(Continued on page 126)

Alan Holmes is a top British session reedman who plays soprano, alto and tenor saxes, flute and alto flute, piccolo, oboe, clarinet and cor Anglais. He played on the Beatles' Sgt. Pepper album and for four years was a member of the Kinks. He now leads his own jazz rock group.

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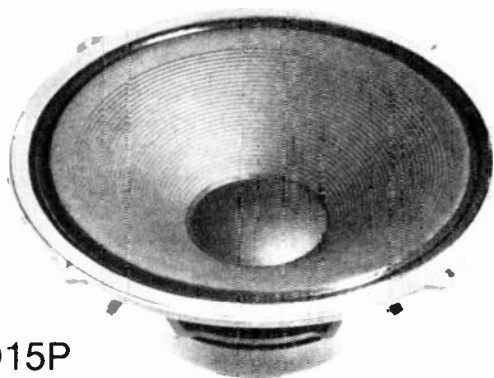


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On Synthesizer:

Robin Lumley



This month I'd like to chatter on for a while about synthesizers in relation to all other musical instruments. A bit philosophical, perhaps, but the way in which a player *thinks* about an instrument I consider vital to the way in which he ends up playing and, hopefully, communicating on it.

I think it is fair to say that all musical instruments throughout the ages have been reflections, both in design and sophistication, of the technology of their age. To expand, the family tree of keyboard instruments began to grow from harpsichords and clavichords into the pianoforte at a rate directly comparable to the revolution in industrial processing and design, and the use of new materials and technology in manufacture. Thus, what we call the Old World, before much significant advance occurred in the New, was the obvious place for this process to happen, and is why the traditionally accepted families of "classical" instruments are nearly all European in their origins. "What on earth has this got to do with synthesizers?" you may well be asking. All this is entirely relevant as retaliatory thought to the hidebound, blinkered attitude that some traditionalists hold towards synthesizers. I'm sure you are familiar with some of these opinions and criticisms: "synthesizers are unnatural because they're electronic" or "they do not allow a feel to develop between themselves and their players" or even "they're just complicated imitations of existing instrumental sounds."

But if the reasons for the synthesizer's existence and its origins in technology are thought over, as I'm trying to do here, all those "arguments against" become revealed for the shallow inaccuracies they really are.

Most classical instruments were a product of the Old World and its level of industrialization, but the first really new source of controllable sound is a New World conception, directly related to the growth of electronics and micro-circuitry in the USA over the past years. Perhaps at first the musical application of this knowledge was a sideline to initial applications in weapons systems and space programs, but it nevertheless occurred. Therefore, the crux of what I am trying to explain is that synthesizers are just as equally *valid* and natural, within the context of their times, as any other new instrument that has appeared in its own time in history.

So let's be done with any clumsy realms of thought about what you've got under your hands when you're playing a synthesizer, and begin to think in a fundamentally new, albeit obvious, way. You are simply playing and using a very young musical instrument that has appeared during your lifetime as a player, and for this we should be thankful. There are few times in history when creative musicians are exposed to brand new instruments; it hasn't really happened for over 100 years and it's up to us to plunge in and explore what we've had laid on us. You can be sure that musicians 100 years on will be very critical students of our early blunderings. Let us ensure that we start off the right way, in the same way as we look back on other innovators presented with new instruments in the past, for example, Chopin and Liszt, and their musical development work with the piano.

Robin Lumley is a record producer and keyboard player who has won international recognition through his work with David Bowie's Spiders From Mars, Brand X and wide variety of production credits. He now divides his time between freelance producing and session playing both in Britain and the US.

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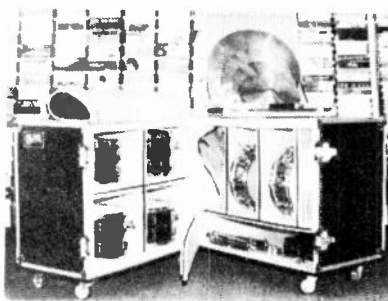
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On Keyboards: David Sancious

In the last column I suggested that those with some experience with keyboard sets ask themselves three questions: (1) Is my set comfortable to play? (2) Does it give the full range of sound that I want? (3) Are there any musical possibilities that I can't play because of the way my set is constructed? Question number one has already been answered by my last column and your own experience. Now, as promised, we will confront questions two and three.

Whether or not your keyboard set gives the full range of sound that you desire is a question only you can answer. Depending on what type of music you're performing, what you hear with your musical ear and how much money you have to spend on equipment, your answer will be either yes, no or not quite. There are a wide variety of keyboards available today. Some are expensive, and some are less expensive. (Keyboards are rarely, if ever, inexpensive.) A thorough investigation into the space and special capabilities of the instrument you are interested in will help you make the right decision suited to your needs.

Whether there are any musical possibilities that you can't play depends partly on which keyboards you are using but largely on how you have chosen to position the instrument itself. Physically speaking, the most comfortable position in which any musical possibility could be expected would be a stacked position, where all the keyboards are directly in front of you. This allows for normal position of the wrist as well as spontaneous and flexible playing. This concept is a throwback to pipe organ design which employs three manuals plus a set of bass pedals. If you have ever seen a performance by a skilled organist using a three-manual organ, no doubt you have marveled at the magnitude of sound (produced by one person) and the apparent ease with which it can be accomplished.

Part of the reason for this is that all the keyboards and controls are directly in front of the player and easily within his reach. Therefore, one can accomplish rapid and dramatic changes in sound with a minimum of body movement.

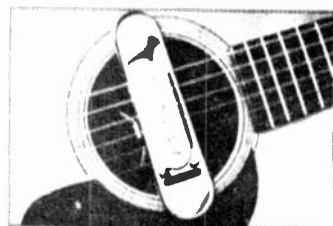
I have come to the conclusion that the future of multiple keyboard playing will find us taking more and more lessons from pipe organ design. Some of the manufacturers are taking steps in this direction already and in the next three years we will see a vast increase in instrument design and capability.



Continued on page 128

David Sancious worked as a session musician and toured with Bruce Springsteen before forming his own band. His recent album is "True Stories".

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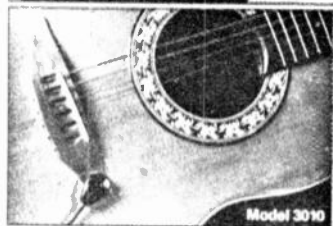
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On Bass: Jim Rodford



I am starting this month's article with what might seem a strange statement: "Go and book some piano lessons." I arrived at the decision to begin this way after long deliberation as to how to approach the "advice on playing" side of my column. I know the three years tuition I had as a child helped me enormously when I first started playing in bands.

The advantages this basic training gave me were unconscious at the time and only later, as I became involved in more serious and diverse musical fusions and styles, did I realize how glad I was of the benefits gained from this knowledge.

Rock music in its broadest sense has progressed so quickly over 25 years or so, and taken in and fused so many other musical forms, that I believe any musician who wishes to progress and fully understand what he is doing must at least be aware of the rudiments of music. Bass playing in particular has, I feel, advanced quicker than any other instrument, with the excellent American music college system being largely responsible for this in recent years.

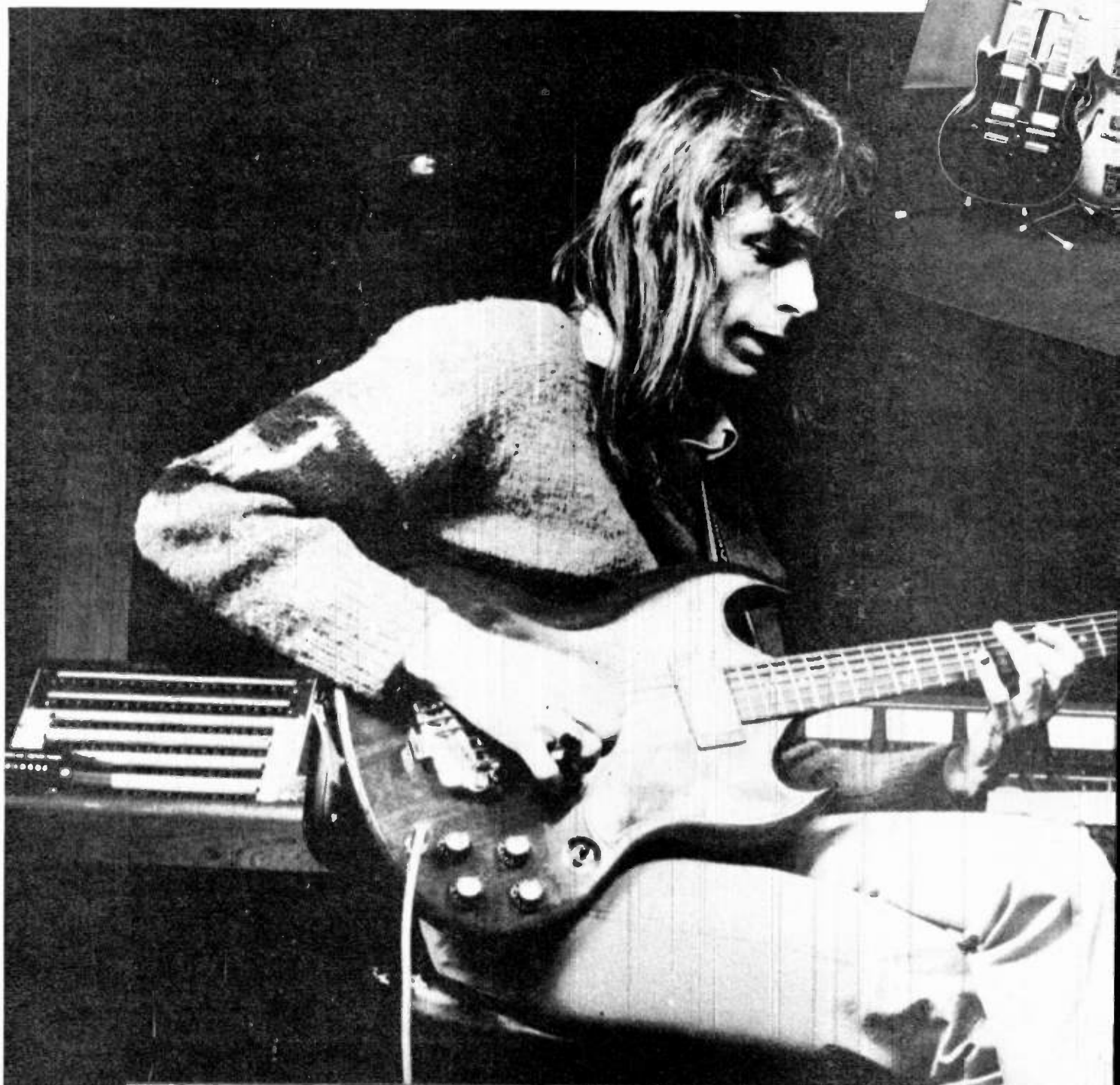
The piano is, in my view, the best instrument to be taught musical rudiments on. From it you obtain a knowledge of harmony, melody, chord structure and progressions, all vital to good, expressive and interesting bass playing. It also teaches you independence and rhythmic feel and understanding, making it the best basic instrument of the lot for any instrumentalist or singer to have a working knowledge of.

I've had the good fortune to have worked with some top-class keyboard players in my time and from each one I've gained a deeper insight and understanding of how to integrate more interesting bass lines against the ensemble work of the rest of the band. If you are lucky enough to work with, or know, a good pianist/keyboard player, listen hard, and watch and you'll notice very interesting and different bass line ideas thrown in with the chords and rhythms of the left hand.

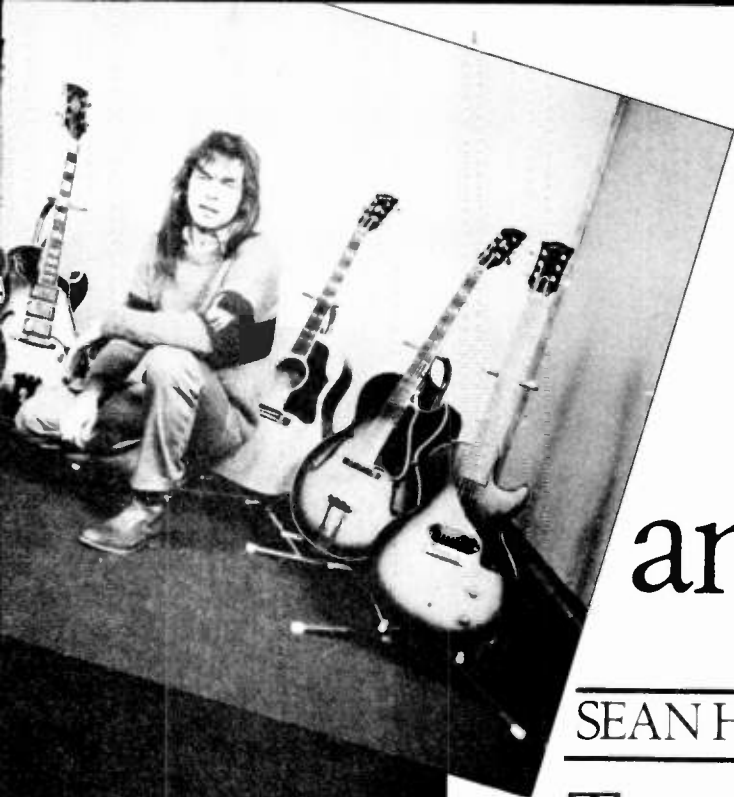
A lot of this is to do with the way melodic passages naturally "fall" under the fingers of the left hand on a piano, as opposed to the left hand on a bass. But the main reason good keyboardists are able to call on so many interesting and unusual bass lines is their thorough training, and understanding of chord arpeggios and their many permutations and uses.

A knowledge of guitar is also important and useful here, because of its obvious, direct relationship to the bass. If you already know a few chords on guitar, arpeggiate them; that is, play the notes in the chord individually, in succession, while at the same time identifying them. In theory, this gives the choice of any of these notes, to play against the chord. Any one of them could be termed musically correct but the level of experiment and adventure in the music should determine how far out to go. Rock 'n' roll, of course, has to be "rooted." The very essence of the music, and simple, strong lines around the base of the chords are all that is necessary for maximum effect. But, if you're playing songs with more complex chords and structures, chord arpeggio knowledge is really important.

Jim Rodford is a versatile and experienced bass man. His professional career started with the Mike Cotton Sound, and progressed through Argent to Phoenix. He has recently joined the Kinks as their regular bassist.



“There are so many preconceived ideas about the way everybody lives, thinks, talks. When I found music, I said to myself, I’m not having anybody tell me how to do this. Even if I do it terribly, even if it takes me to disaster it’s something I want to do myself. So I didn’t have lessons, I thought that was really the only way to learn. I didn’t know I was missing anything because I was learning – by myself. That was more exciting for me than the whole approach of being taught, which was just like school, which was everything I didn’t want. In that way music gave me freedom.”



The Howe and why of YES

SEAN HOGBEN meets a man with 115 guitars

The speaker is Steve Howe, now acclaimed as one of the world's best rock guitarists. In some ways, Howe epitomizes guitarists from the teach-yourself school. His uncompromising approach to playing and his composing skill have helped make Yes the consistently surprising band that it is. Their originality and commitment to non-commercial album projects have brought them much praise, and at the same time criticism. Whatever the critics might think, Steve Howe has consistently been supported by his fans – they have voted him “Best Guitarist” in innumerable polls.

Steve considered the achievements of Yes and his own album work before saying about awards: “There have been a lot and it's really nice, it's really amazing. I sat for many years at number five or number six and for many years before that, not in the chart at all, thinking, well, I'd like to be top of that chart. I thought it would be a bit like winning a prize. It's not something you need but something you want. I saw it as an opportunity to pull the stops out. That's when I opened up as a guitarist, I thought it was the important step, the key in the keyhole.”

Steve's start as a player in rock bands was very modest. He claims that most of his success he owes to years of paying dues. But he does not deny that he is lucky – lucky enough to be able to play Vivaldi by ear.

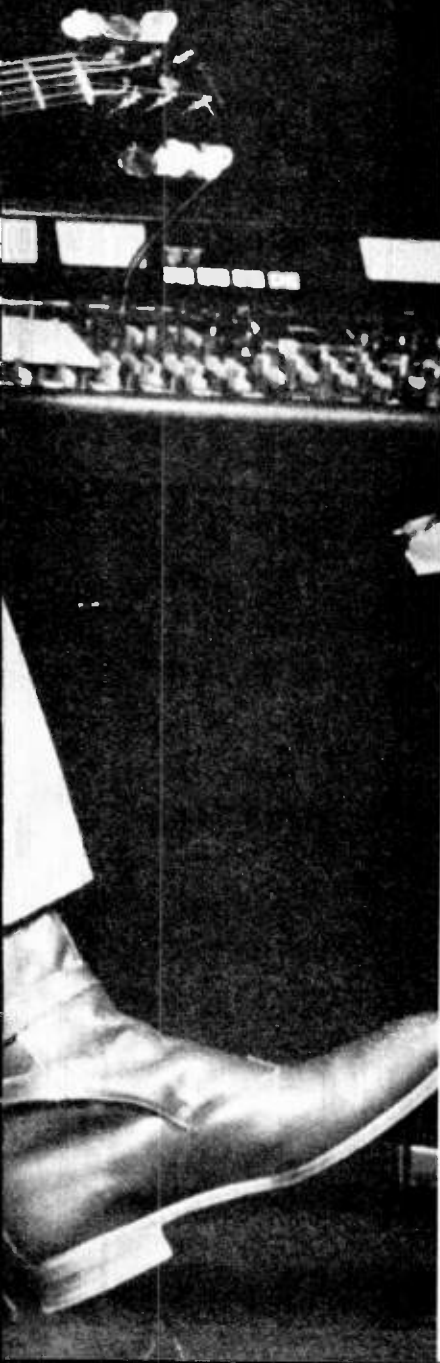
“I don't think I'm lucky with everything. If I was a successful guitarist at age 17, I would have said I was very lucky. I had the flair for it but didn't have the knowledge or the position. But I have waited and worked and done all that touring around England – I don't know how many times, but it was great, all that. When I was young I thought myself very average in thinking and not very good at lots of things. But because I felt confident with the guitar, none of it

mattered. It's a bit like an ailment: if you get something wrong, other parts of you get strong. If you get something strong going through your system and you work on it, the weak things seem insignificant.”

No-one would doubt the strength of Steve Howe's playing. It is one of the most powerful aspects of the Yes stage performance and the provider of many scintillating recorded moments. Howe has helped Yes come back from a period where their musical aims were nebulous and their “concept” album, “Tales of Topographic Oceans,” had soured many possible fans. Steve said it was just a phase.

“No group or individual performer can exist for very long in a dream world about how he is doing. One is constantly reminded by the pressures inherent in our situation – you have to face the real side maybe once a week, once a month. As a group we avoided that for some time when we did manage to go for a long time without realizing or foreseeing the pressures, or the actual end product of what we were doing. You know... five albums, 10 albums, what are we doing? We have been through that stage in the last couple of years and we are not over it yet. Yes is making a transition. It's a bit like a three-year pregnancy. It is gradually sorting out and refining what we are doing and how to get the best out of it. When you are in a group for 10 years, you grow up, you suddenly want to stay home, do something different for a few weeks.

“In some ways last year was a turning point, we have more free thinking because the new stage was something that was built around us. We got on it and worked on it and it clicked. It meant that we didn't have to do any shifting about – you know, the usual stage problems, how am I going to stand under all of that? It did give us a nice, easy feeling. We went ▶▶



The Howe and why of YES

into that tour with quite a different frame of mind.

"Things had come full circle, to the point where we had the desire to have nothing — no stage at all. What we have now [the revolving stage that Yes used for the last US tour] is better for playing, better for contact and music, better for timing, it makes a lot of things better. Monitoring was getting atrocious with us. People were desperately relying on the sound mixer's capabilities to make sure they heard the other musicians, which did put a strain on things. We didn't notice it because we couldn't see it any other way."

In Steve's view, the new stage setting revitalized the band and saved them from slipping into a quagmire of attention-getting devices. "We had more control, that came out of the stage, we were a bit more commanding, more focused, rather than having to use things to focus us. The only reason Yes progressed stage-wise is that Mickey Tait has progressed stage-wise. Before that it was very much Martin and Roger Dean doing the stages. That obviously came from the album sleeves, the whole direction of the art that went with Yes. Mickey Tait has taken over more recently because he knows what we do and is more able to design things for us.

"Normally when you are playing at the end of a 20,000-seater, my God, you need a hell of a lot of lighting. The group didn't start using lights to be extravagant, it was because we needed them. The revolving stage was a good idea, not ideal but better overall. You always have to please the people who are down on the floor. When we opted for the middle we solved a lot of problems and saved expenses"

It is quite obvious that Steve regards his guitar collection very dearly. Not only is it a source of songwriting inspiration, it is an almost vital entity that will soon be the subject of a book. He claims having a 115-piece collection is a minor obsession that may pass one day but at the moment he admits: "I couldn't part with any of them".

Steve once took his obsession to the



point of spending \$900 having a \$14 guitar rebuilt because it was the same model as his first electric guitar. The job was done by Sam Li, a London luthier famous for his exacting work.

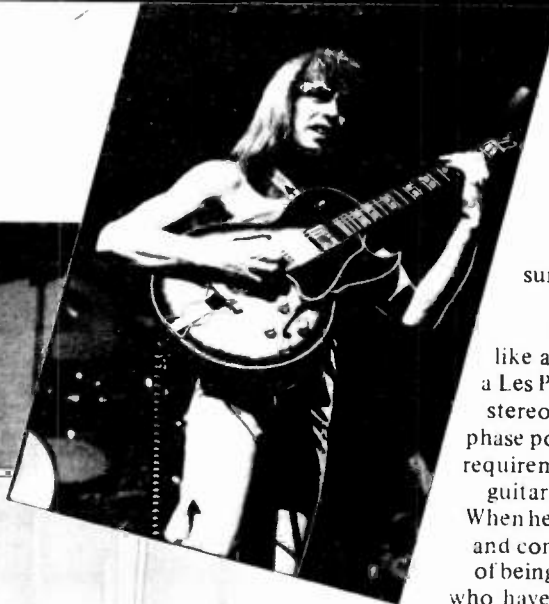
"Sam set up my guitars for many years," said Steve, "up until about two years ago. It took him nearly nine months to do that last job, it eventually cost me 50 times what the guitar was worth. It was a lovely guyatone guitar or an Antoria, I can't remember which, they are virtually the same. They sound very much like Strats but not identical. That was my first electric guitar. Somewhere along the way I traded my Antoria for a Melody Maker. It was what I thought to be a very good trade at the time.

"Before that, Sam was setting my guitars up, changing heads and bridges, occasionally putting a new neck on. He

was very good. He did a hell of a lot of things, at one stage we went through my entire collection."

Though he has fine examples of a vast range of guitars, Howe only keeps the ones he enjoys playing. He did not buy his first flat top acoustic until 1968 and still shies away from dreadnought-style bodies — "I never could play them and still can't."

One of the most notable of his guitars is a brand new custom-made "Steve Howe" model Gibson that had just arrived from the makers in Kalamazoo. Steve convinced the Gibson company that this guitar was the epitome of what he wanted in semi-acoustics. He described it this way: "This guitar was built in imitation of a Switchmaster. I found the three pickups on the Switchmaster was a very good idea. I used it a lot in the studio and on stage



suiting for what you are going to play on it. I needed it to be like a 175, a Switchmaster, a Les Paul with frets up to D, a stereo guitar with an out of phase position. They were my requirements and that was the guitar that came out of it." When he puts aside his guitars and comes back to the reality of being a member of a band who have just celebrated their

tenth year on the road, Steve regards the future with calm. He said he will never be absolutely sure of any change in his present working lifestyle because he wants to explore every facet of live performance. He would not entertain thoughts of becoming a "musical director" figure because he simply has too much fun playing gigs.

Steve Howe will go on producing his own songs and making his albums entirely solo projects because he can't find "anyone who is as knowledgeable about my music and what I'm doing with it to produce it. I am waiting for stage stage to come along. I'd like to alleviate as many responsibilities as I can. I'm not copping out or being lazy but I'm aiming for the goal of doing what I do best all of the time. You do that first and then you experiment. I don't really want to experiment — though a small part of me does. Another side of me is totally-stick-in-the-mud, it tells me to just go and play a 175 through a Fender Tremelux in a pub."

Though Yes have come back to touring with a vengeance and with "Tormato" have produced (by their standards) an unusually accessible album, Steve has continued to pursue his solo projects. Rather than making solo albums because his tastes are different, Howe does so because of "creative overflow."

He says: "Yes accelerated my possibilities and the others' possibilities but my career began a long time before I joined Yes. All that time I have worked towards the solo recording side of what I'm doing, as much as working with Yes. It's a question of ambition, if you have it then you damn well are going to try it. 'Close To The Edge' was a good time for me because I was doing so many different things, it was such a buzz. I had just recorded 'Close To The Edge' and I was doing all these other concerts, a concerto, gigs with other musicians like Stone the Crows and Terry Reid. It was good, that's how I'd like to be working. It is another side of me that is obviously raring to go. But I can't go all the time!"

He wants to continue as a solo recording artist but he does envisage a time when he will be writing and producing material for other artists. "I'm starting to see that more now. At the end of 1978, when I was doing a song with Claire

Hamill [renowned English vocalist] I appreciated the excitement of passing songs on and having other people sing them. You can become isolated with your songs, just working through them but as soon as someone else comes along and sings one, then 10 other songs come alive."

Not having ever learned to play guitar by conventional teaching methods, Steve's playing technique is purely instinctive. When it comes to playing a piece of improvised music, he does not think of a melody or borrow from a vast memory of licks — he just plays it.

"I go into that control room and listen to guitar breaks and solos and it actually takes more listening time when playing to find something that is really right. I go for it because of its strength, whether it takes up every space or leaves a lot of them. My judgement is based on the weight of what I'm playing coming through. I'm not saying you have to *compose* a solo. There is an awful lot of improvising one has to do. I never write a solo at home and come into the studio to play it. What I have done is to have a structure to work from, something to put a solo on top of."

Does that mean a chord progression or a solid arrangement, even something scored? "The only thing that I bother to write down is a chord sequence, but that is mainly on tape. These are things that I can keep at hand. Occasionally, if I'm finishing off a song or trying to get something together, I scurry through a tape to find a 'forgotten riff.' I try to use my tapes constructively".

With his fantastic 115-piece guitar collection, Steve must sometimes be inspired to write a song simply by picking up a little-used instrument. He agrees that an instrument is often his composing inspiration.

"There are different guitars with different sounds so I get a clue from that. There are lots of factors. Chord structure, whether or not you want the 13th fret... When you play a blues on three different guitars, well, you play so differently. That's what I thought when I used to look at the early Gibson catalogues — oh, to have a Stereo. Would I play like the Hollies or something? I had an image of sound. That's why I got the Gibson Barney Kessel. It is such a striking guitar and a lovely one to play on if you are used to a big guitar. I have impressions, some real and others false, hunches about what will be right. I believe everyone lives with this chance factor.

"Sometimes I am quite a blind improviser. Quite often I work inside an idea, going from a piece of improvisation into a lick that I play every night, out of the lick, back into the improvisation. When it's live, I need a steady tempo, otherwise I don't know what that hell I've played — I've just become swayed by the musical event of the night. But it is a nice point for me..."

and found it had a nice selection of sounds. I had always thought of a 175 with three pickups, partly because the Les Paul Custom has three. Nowadays there is not a custom full-bodied guitar. There is the Gibson Super 400 and the L5 but they are really big guitars. I wanted the smaller 175 body which I find most comfortable. The neck is identical to the '63 model 175D. As for the top, well, I always find machine heads to be too close together so I said, put the Super 400 head on it. Then we looked at the pickups. The Gibson people said, the best pickups we do now are the Super Humbuckers. So I tried them out on the new Les Paul Anniversary. I always thought that if you have a quantity of guitars, you don't need one to imitate another. I modeled this one around the songs we were doing on stage because a guitar has to be best

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PETE SEARS

The Starship's Bass

Modern pop music is a world where hot flashes, overnight wonders and worn-out clichés reign supreme, and a steady musician like Pete Sears is an anachronism. But 17 years of paying his professional dues on the stage, in the studio as a session man and as a member of the Jefferson Starship, have honed his playing style and attitudes to a precision sharpness.

Peter has played with such luminaries as Rod Stewart, Graham Bond, Long John Baldry, John Cipollina, Nick Gravenites and others, while posting an extensive list of sessions. But it's only in the last four years that he has come into his own as a multi-instrumentalist, composer and one half of the Jefferson Starship's bass/key-board duo, that consists of himself and David Freiberg.

Born in Bromley, Kent, England, Peter began his musical career at the age of 13, when after being turned on to the music of Big Bill Broonzy, Jimmy Reed, Jack Elliot and other practitioners of the folk blues idiom, he started playing the guitar.

He played in several groups in his high school, until he quit school at the age of 15 to find work in a commercial art studio. Like Keith Richard, Eric Clapton and fellow Starship crew member, Craig Chaquico, his scholastic interests leaned heavily in the direction of the world of art and artists. He quit the job soon after, not liking the daily routine, and joined a semi-pro band that toured England extensively, playing all the top pop hits of the day.

Today, Peter is a family man with a wife and child, and a home in Mill Valley, California. He is also a precision aerobic flier who on St. Valentine's Day, 1977, towed a banner from a bi-plane over the entire San Francisco Bay area that read, "The Jefferson Airplane Loves You." What follows is taken from a series of interviews done by Scott Kutina with Peter over the last two years.

Did your parents have any musical background?

No. My Dad used to plunk around on the piano. Sort of pop music. I guess I had some influence there. But I had classical training, when I was about eight, on the piano. I did three years of that, and then picked up the guitar and played some rhythm guitar in a local school band. We used to play blues, and some rock. We used to play some R&B as well.

How did you first come across American R & B and blues records?

There was a local music store in Bromley and the guy was a real fanatic for blues and folk. He had nothing but those kind of records in his store. And so that really was an advantage, because I really got to know him and got to hear all of that stuff through him. I started playing all of that stuff on the guitar.

Were you playing bass when you were working in the art studio?

I had played bass, but I was mainly playing guitar. But I had this little group, and I'd tell the bass player what to play. So I knew some bass work, but only on that level. When I went pro, a band needed a bass player so I started playing the bass. The group was called The Sons of Fred. We toured all over England for like two years, playing six or seven nights a week for real, real low money; driving our own truck and setting up our own equipment.

We'd get back to London every three months, and get our itinerary and go back out for another three months. And, of course, if you play two 45 minute sets per night, or two one hour sets per night, you're gonna pick up some kind of technique, whether you like it or not.

I had become a pretty firm bass player, by then. I think it takes years to become a really good bassist, because you have to have had a rich experience of different types of drummers. You have to have played to be a good bassist. You can't learn the bass just sitting at home. You need that drummer, because it becomes like an instinct to play with a guy's foot. You know, the kick drum.

Anyway, about two years after that first group, I went and did some session work. This was when I was about 17½. *What kind of session work were you doing then?*

Anything that came along, TV, radio. Anything to get by. I also had

a group with Jackie McCauley, who was originally with Them, as well as this woman named Judy, who used to be with Fairport Convention. Nothing ever became of that.

Finally I had saved up enough money over the years to get to America. I got here with five bucks in my pocket. I landed in Santa Monica, and I lived above the merry-go-round there, on Santa Monica Pier. You know, the merry-go-round they use in all the films, like *The Sting*? I listened to this weird music all day long. I was hanging out with Leigh Stevens, who was with Blue Cheer.

Then I moved up to San Francisco, and met a guy named Tom Donahue, and we got Mickey Waller over here from England, and formed Silver Meter. Then I went back to England and did *Gasoline Alley* for Rod Stewart.

Was it Martin Quittendon that got you that gig?

No, it was Mickey Waller who introduced me to Rod, and we got on together really good.

How were those sessions?

Great! We had a great time.

Was Rod easy to work with?

Yeah, he was. In the studio we always had a great time. We'd go in, and we'd just see what would happen. Then I joined Stonground, did a European tour and came back to America. I was playing bass with them and Silver Meter both. However, after I came back to America, Stoneground started to bother me, mostly because they started to take themselves too seriously.

Too much hype?

Yeah, they were sort of a great band for the stage. They were a live group. None of them could really sing, except for maybe Annie Sampson. And Sal was pretty good, Sal Valentino. But they were more of a live "energy" band. A hippy band. We were a bunch of hippies up there. Singing and dancing, and having a good time of it. And the audiences really got into it. We had some great gigs in Europe, with the audience just going crazy, and all that. When we got back to America from Europe I went back to England, after leaving Stoneground, to do *Every Picture Tells A Story* with Rod Stewart. I mainly played piano on that one. Then I joined Long John Baldry on bass, and we had a great American tour. ▶

PETE SEARS

Then I came up to San Francisco and joined up with John Cipollina. He had a group called Copperhead. I left them just before they cut their album, and went back to England, to do *Never A Dull Moment*.

While I was doing Kathi's album, I met Grace Slick in the studio. She was doing *Man Hole*, and I ended up doing that blues piano number on it, as well as playing bass.

They said they were going to get a group together at some point, and I said I was interested. I also had met Papa John Creach, and I did a session for him, on bass, for his first solo album. Then I did *Smiler* for Rod Stewart, which took a year due to a lot of record company hassles.

After the *Smiler* album, I immediately came back to San Francisco, and joined up with the Starship, and I've been here ever since.

Who are your earliest bass influences?

Well, there's Ray Brown, on jazz bass. I used to listen to him on an album with Oscar Peterson, a blues album. I used to sit there fascinated. I listened to a lot of jazz bassists. Then there was Ray Brown again, this time with Barney Kessel. The bass is really loud on the mix. It's just a trio, and it's really fascinating. Of course

I always loved to listen to all of the Motown bass players. I liked those guys a lot.

One thing I've never done, though, is sit down and pick a bass riff off a record. I've never done that.

But you get ideas from other bass players?

You get influences from all types of music. You're not really listening to one particular bass player so much as just listening to a type of music, and listening to the bass riffs in that music. You may not be sure who's playing but it's going into your head, into your subconscious.

Do you like session work as opposed to band work?

I'm very glad that I did all of that session work. It's fantastic when you get all of those influences. You are called upon to play like a piece of music, right out of the blue, when you've never heard it before, and you inject your own thing into it. It's a lot of fun to do that.

Some of it's a real drag. Some of it's boring as hell, the repetition, and all. Sometimes you ask that your name not be on the album at all, and sometimes you want your name on the album, and it doesn't appear.

Live work is like a drug to me.

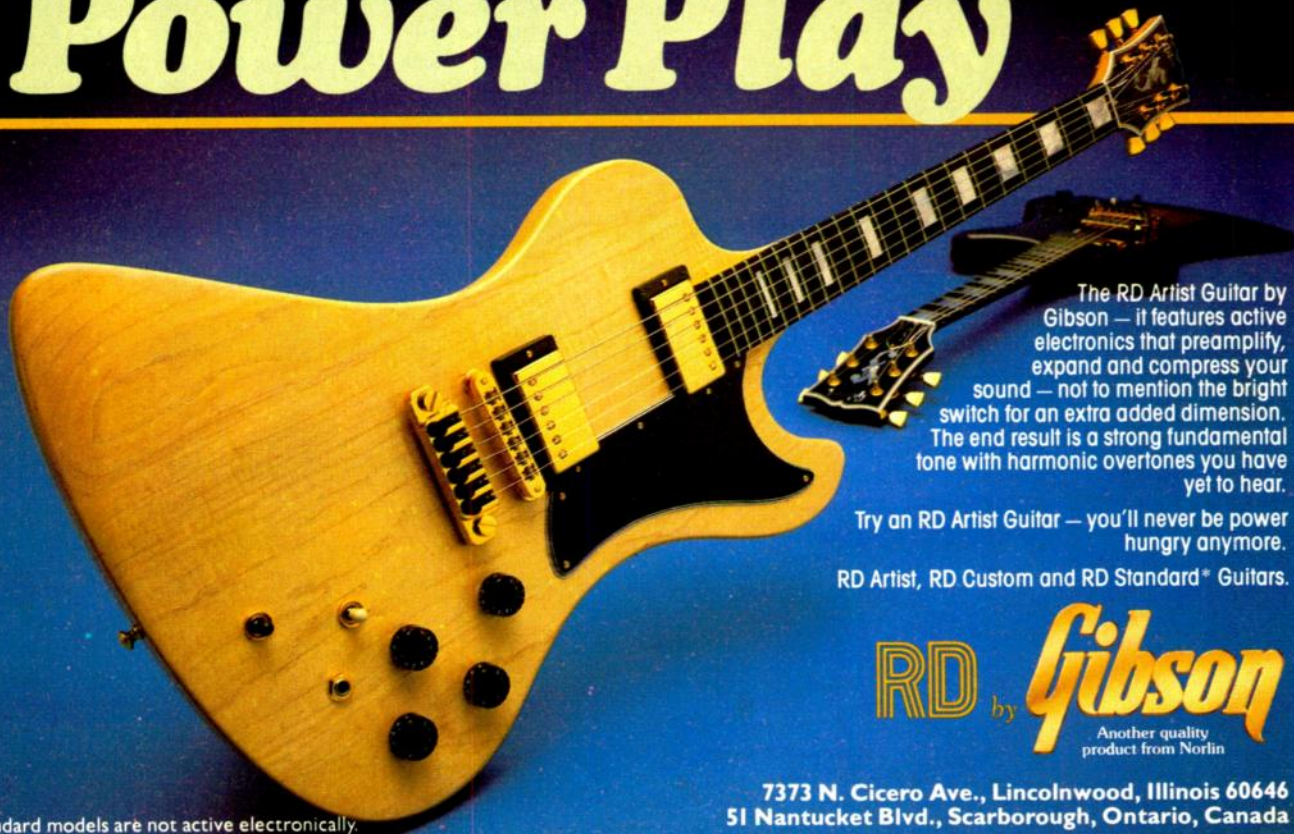
You get definite feelings from the audience. It feeds you. You can't beat the feeling of knowing they are with you, especially if you're on your own, doing a solo. It's like a drug, a rush. It's a combination of ego and pure aggression, like a primitive energy, but it's also finesse. If you feel the crowd's mood is, say, gentle, then you start playing gentle.

How about your equipment?

I used to really love the Acoustic 360 amps and Ampeg SVTs combined, but I couldn't find them when I first joined the Starship, because they stopped making Acoustic 360s. So then I bought some Peaveys. I was using two Peavey bottoms, with one Ampeg driving amp, and I was using another SVT top with two SVT bottoms.

On our last tour, we replaced the Peaveys with Alembic cabinets. We got a really great sound out of those things, but they all went up in smoke in that German debacle, along with almost everything else that we owned in the way of stage equipment. As soon as the insurance company pays off, we're thinking of buying RAM speakers with Yamaha power units, though we're really not sure quite yet.

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Was that set-up for you, or for both David and you?

Both. We'd swap back and forth. We'd plug into the same amp. He'd be playing piano and I'd be playing bass, and then we'd switch back and forth.

Do you use any pedals?

No. I don't use any effects, though I'm thinking of the possibility of using one, but it's just a basic Fender Jazz bass. I've found that I play much better when I play with my fingers. I get the loudness or the softness that I want. I use three fingers, too, which is kind of unusual, I think.

You don't use your thumb at all?

Very rarely.

Was the Fender Jazz bass your first bass?

No, it wasn't my first, actually. I started off with a Fender, then I went to a Gibson EB-3, then I went to a Fender Jazz bass, the one that was destroyed in Germany, about when I first came to America. I had it about seven years. Now I have another Jazz bass, a sort of a new, "old" bass. It's got a '63 neck, with a '68 sunburst body. I've also got a Fender Precision bass from 1965 that I use, as well as a Kramer fretless bass. I used to have a custom bass from Doug Irwin (D. Irwin Co., Santa Rosa, Ca.), but that was destroyed in Germany also. It was beautiful. It really hurt when that happened. But the Irwin people are

really nice dudes, and they're very, very good craftsmen. They made the guitar that Jerry Garcia mainly uses these days.

What kind of strings do you use?

On the Jazz bass, I use Rotosounds.

You like Rotosounds?

For this kind of music, you can't beat round wound for that dry, thumpy sound. I like them because they've got that slappy sound, for that funky stuff. On the Precision, though, I use D'Addario half-rouds.

What other guitars do you have?

I used to have a Fender Stratocaster which was sort of permanently loaned to me by David (Freiberg), but that was destroyed in Germany as well. Now I have a Gibson ES 340. I also have a Guild six-string acoustic and an upright bass. I have a Fender Twin Reverb and Polytone Bass amp for home and studio use, as well as a Minimoog, which I play the bass through sometimes. It's a lovely instrument.

You're playing guitar as well?

Yeah. I play a couple of harmony lines and rhythm parts on a couple of Marty's [Balin] tunes.

What would you consider your main instrument? Your bass or your keyboards?

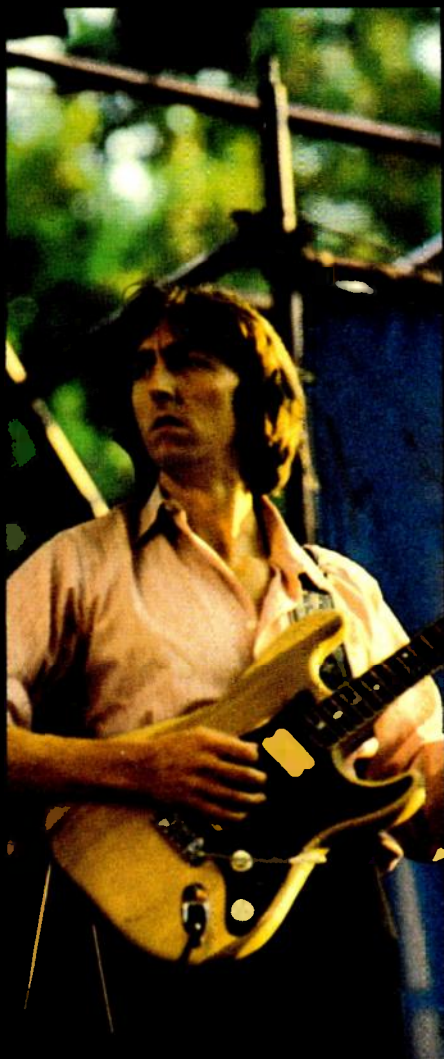
I'm really split right down the middle. I think I've probably been more a bass player through my career than I've been a piano player. But I

can't alienate the piano, because the bass is a limiting instrument. You can only go so far. I can do a 10-minute bass solo, and I have to pull practically everything out of the bag to make it exciting.

I'm not saying that I've gone as far as I can go with the bass. I'm still looking for new riffs and stuff, but the piano is a much richer instrument. I've done an awful lot of piano work, on sessions and on the Starship album. But with the Starship, I think I'm more of a bassist than a pianist, at the moment. On the album I do more piano and overdubs, but on the stage I play more bass than piano. I really enjoy the bass solos that I do on stage. They're really personally satisfying, and the crowds seem to enjoy them. I mean, that's what it's all about.

Obviously you're a committed musician. What do you see as your future?

Well, what I'll probably do, is that if and when the Starship ever breaks up, is probably start looking around, and looking up some of my old buddies, like Greg Errico or Anysley Dunbar [Anysley recently replaced Starship drummer Johnny Barbata, after Johnny was critically hurt in an automobile accident]. I would want to get around and get a band together. Like get a real hot trio happening. Or . . . I've been writing a lot of stuff like *Sandalphon* and *Hyperdrive*. Big production stuff with a more orchestral sound.



Do Allan Holdsworth and Al Di Meola really use DiMarzio pick-ups?

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There is. Real power, stunning tone, versatility: this combination pushed the

DiMarzio company into an expansion position of sheer acceleration. The thrill rubbed off on the new products and the latest things to help you "cook" your sound are the result of the adrenelin that has poured in bucketfuls through the designers.

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team are on hand to give expert technical advice; what kind of DiMarzio pick-ups would be most suitable for the artist's various guitars, and how they should be fitted.

DiMarzio in this way operates a two-way interchange between itself and its endorsers. The musicians' playing experience and knowledge of the different but equally demanding conditions of live performance and studio recording give the company invaluable insights into what musicians need and look for in their equipment. In return, the musicians have at their disposal the company's technical expertise. Musicians are not paid to use the company's products. DiMarzio's impressive list of endorsers, then, is not merely an expensive advertising ploy; rather, it is an index of the high regard which musicians all over the world have



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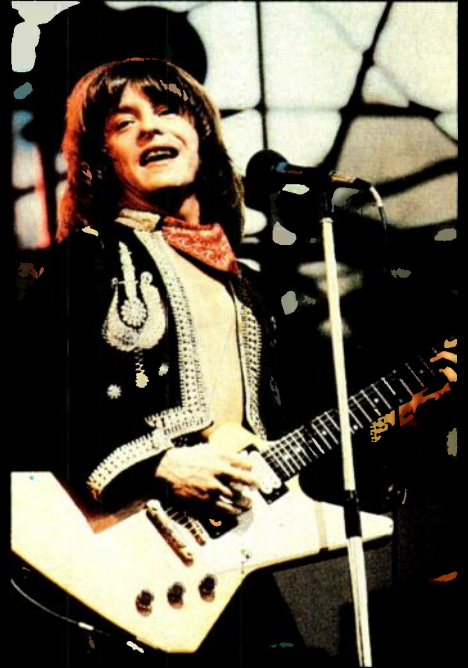
for the company's products, and reflects the company's genuine concern to provide musicians with the finest possible equipment.

The lessons learned from working closely with performing musicians is passed on directly from DiMarzio to the general public. The pick-ups used by the company's well-known endorsers are exactly the same as the pick-ups which can be bought over the counter at any DiMarzio dealer throughout the world. So there's no reason why any guitar player can't fit DiMarzios to his instrument and obtain the same sound as a big-name player using the same equipment;

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- * Bobby Cochran
- * Lol Creme
- * Rick Derringer
- * Al DiMeola
- * Dirty Angels
- * Foreigner
- * Steve Hackett
- * Allan Holdsworth
- * Prakash John
- * Danny Johnson (Axis)
- * Roger Johnson (Sanford & Townsend)
- * Carol Kaye
- * Jefferson Kewly
- * Steve Kahn
- * Kiss
- * Al Kooper
- * Albert Lee (Emmylou Harris)
- * Eddie Martinez (Nona Hendryx)
- * John Miles
- * Kimio Mizutani
- * Ronnie Montrose
- * Nazareth
- * David Nelson (Nektar)
- * Ted Nugent
- * Elliot Randall
- * Mick Ronson
- * Mike Rutherford (Genesis)
- * David Sanscious
- * Tom Scholz (Boston)
- * Earl Slick
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- * Daryl Stuermer (Genesis)
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ing far more (there's really nothing like the MS-20 in its price range), then consider what makes the MS-20 truly incomparable!

The MS-20 contains a built-in External Signal Processor module that lets any external instrument actually "play" the synthesizer! (To purchase this feature separately, you'd have to pay more than the entire purchase price of the MS-20.)

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DAVID SANCIOUS

Keyboardist David Sancious is perhaps one of the brightest rising stars on the musical scene today. Elton John called his new album, "True Stories," one of the best of 1978. Bruce Springsteen found him the consummate musician during their touring and recording time together, and audiences throughout his current solo tour (with the group Tone) have been enthusiastically responding to David's blend of driving jazz-rock, introspective impressionism and virtuoso use of synthesized and acoustic keyboards.

Onstage, not many keyboardists command the complete attention David does, but then, one immediately becomes aware that Sancious is a unique musician. Exposed to diverse musical forms at an early age (his mother played

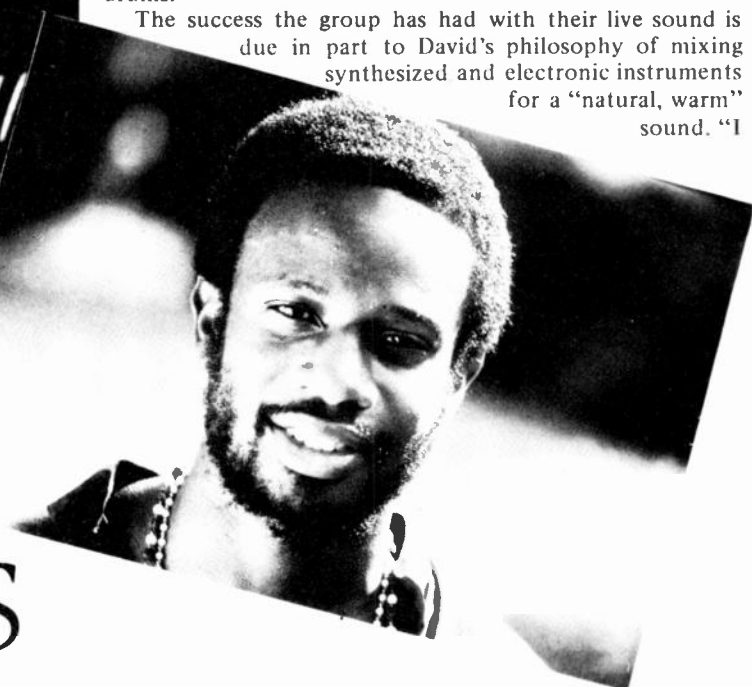
classical piano and his father was an avid listener to jazz and be-bop records), he began classical piano lessons at age seven. His dreams of a classical career took a turn to more contemporary styles when his brother introduced him to Motown, rock and jazz.

After playing in local bands between 11 and 14, Sancious met Bruce Springsteen. The two toured together and Sancious later contributed to Springsteen's recording career. He played piano and organ on "Greetings from Asbury Park, N.J.," played a multitude of instruments and arranged strings on "The Wild, the Innocent and the F Street Shuffle," and contributing the piano part on the single "Born to Run." After leaving Springsteen's group in 1974, Sancious did session work with a number of jazz artists, including Naruda Walden, Lenny White and Stanley Clarke.

In his present group, the lead vocals of Alex Ligertwood and background vocals of Gail Boggs and Brenda Madison have developed an entirely new dimension to the strong instrumental core of Sancious, Ernest Carter (drums) and bassist Gerald Carboy. Explains David: "The vocal harmonies are something we worked hard on for this tour and it's beginning to fall into place."

Touring with Springsteen was not such a burden on the keyboardist as fronting his own band, but Sancious has now logged a sufficient number of touring miles to feel comfortable in the situation. One thing he did learn on the present tour was the dearth of playable clubs. "It seems that most clubs were originally designed for some other purpose and were then converted into clubs or concert halls. Even the well-known ones are horrible, from the performer's point of view. For the audience it may be fine, but don't forget the performer has to deal with small, unventilated dressing-rooms, no direct access to the stage, poor monitor systems and so on. One positive part of this year's tour was the top-notch sound crew the band worked with. Eddy Offord and Rob Davis (who did the sound for the Rolling Stones' last tour). "Nobody this tour came up to me after the show and said, 'you were great but we couldn't hear the drums.'"

The success the group has had with their live sound is due in part to David's philosophy of mixing synthesized and electronic instruments for a "natural, warm" sound. "I



spend a lot of time with my instruments and with equalization. I try to make the electric instruments not sound electric or artificial at all." Indeed, onstage, David's instruments have a noticeably warm and animated texture, particularly the electric Yamaha grand piano which, in his hands, lives up to its billing as the equal of any "miked acoustic grand."

David explains his technique: "I find electronic instruments lack bottom, and to compensate for this I add quite a bit of bass. On the other hand, they tend to have an excess of highs, so I roll the highs. If I played the instrument with a flat response, I'd get that tinny, cold sound that synthesized instruments are noted for." He then adjusts the midrange to the needs of the particular instrument and desired texture.

David also arranges his instrumentation with that "warm sound" in mind. "I use the Polymoogs for brass sounds, string sounds and pipe organ sounds. The Minimoog which I keep on top of the two Polymoogs is used as a solo instrument. The Prophet-5 is a back-up unit. I just got it before the tour and haven't had time to experiment with it." After the tour, however, he plans to have it modified by adding a foot pedal system, including a modulation pedal.

David's introduction to electric instruments came early on, in grammar school, when he picked up the electric guitar. He quickly added a Hammond B-3 organ to his repertoire which he found in the back of an organ shop. "I was just heading for the door when I spotted it. It was used and the owner had just renovated it, so I got it for a steal."

From there, he gradually added instruments, one at a time, developing his meticulous keyboard style step by step. "The first time I actually tried to use two keyboards was when I was playing with Springsteen. I added a grand piano to my Fender Rhodes. For a time, I worked with only those two. When I left Bruce, I got my first Minimoog." Then the set-up grew to the Hammond, a grand piano, the Fender Rhodes and the Minimoog. "I used that arrangement for the period I did session work. When I started my first album, "Forest of Feelings," I added another Minimoog and a Yamaha organ."

He finds his present set-up of two Polymoogs, one Minimoog, the Yamaha electric grand and the Prophet-5 sufficient. "What I play live is basically everything I own now. Except one more piece I want to add, the Crumar T-1. I find it good for getting the Hammond organ sound without having the awkwardness of carrying around the heavy organ. It is the first electronic reproduction of the tone wheel sound which is pretty true and the Crumar's percussion section is as expansive and powerful as the B-3."

For effects, David uses an MXR Flanger and MXR Digital Delay on one Polymoog. The use of effects is, again, intentionally directed toward creating a warm sound. "The Polymoog," he explains, "has a good modulation section which gives a nice phased sound. But I find that by supplementing that phase, with the MXR flanger, I get a very convincing pipe organ." David plans to add more rack-mounted effects and after the tour, will "shop around for the quietest effects."

No matter how accomplished others may feel David is, he praises the value of "creative practice exercises" which he



has used since childhood. "I was fortunate to have a really fine piano teacher. Through classical music I came to appreciate the value of good technique as a means to an end. My teacher showed me a way to practice less minutes per day and get more results."

The valuable system utilizes the principle of creative thought. David explains: "In the usual practice system, if a student has difficulty, he'll be presented with a series of exercises designed to knock down the barrier through repetition of rote exercises. But a quicker way to approach the problem is to be sensitive to the source of the problem. Look inside of it. For example, if you have problems with a particular passage, instead of repetition, find out why you're having trouble. Perhaps, for example, your fourth finger is too weak. The answer

is to devise an exercise which will build up that finger. My teacher taught me to keep my eyes open and be imaginative with my solutions."

Right now Sancious finds composing the best source of practice for him. "When I write a piece, there is very little I can play of it without intensely practicing it. There are too many new inversions, new chord sequences and rhythms." On his first album, he developed a daily routine to learn the pieces. It consisted of getting up early every morning, playing scales to warm up and then spending time learning the piece. The routine had three beneficial results: "One, I gained in overall musical knowledge. Two, I became a better piano player; and three, I got my hands in better shape, stronger and more developed."

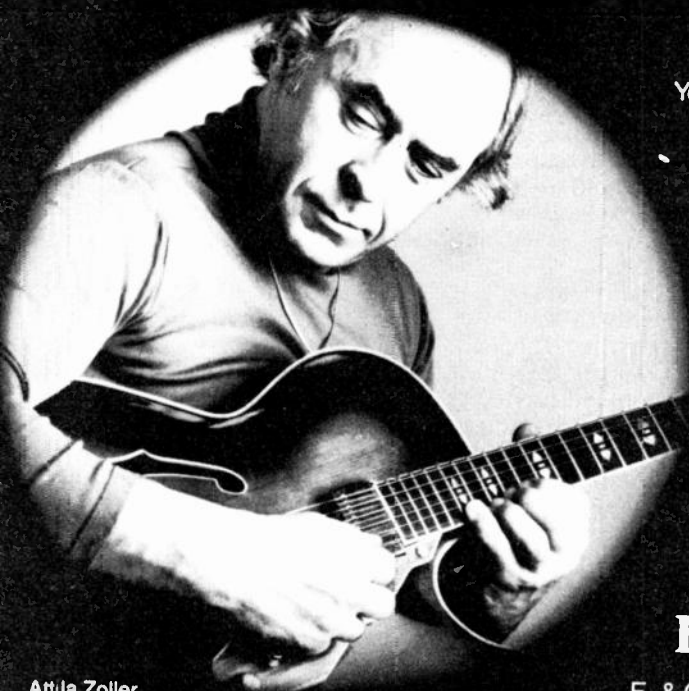
Though his compositions are more in line with jazz-rock, David draws his inspiration from his classical background and is still particularly influenced "at heart" by Beethoven. In the future, he intends to incorporate a theory of "an expanding tonal scale" as developed by Tom Stone, formerly of the California Conservatory. According to Sancious, "The system works on rediscovered ancient knowledge which utilizes the vibrations of sound more effectively as a vibrational force, than does our present 12-tone scale. It is a musical sound-vibrational system. Not many people realize the responsibility a musician has, as one who controls sounds and vibrations. Especially if one realizes the whole universe is built upon sound."

Though he has been winning a slow but steady mass appeal, it is not something Sancious strives toward deliberately. He says: "I can't see putting 20 years of your life into something and then compromising just because society's idea of what's good doesn't coincide with what you feel you must do. The music I play is what I believe in and I do my best for whoever is willing to listen. To me, that's the difference between an artist and an entertainer. The entertainer plays to the mass audience and follows the fashion. The artist makes art, regardless of what happens around him. Entertainment is, at best, entertaining as well."

To David, three bands in the Seventies stick out as having produced a unique sound. "Yes, through the first few albums, produced a fresh and unique sound combination. The other two are Shakti and Weather Report." Of Springsteen, he laughs and says, "Bruce is definitely an artist, but Bruce is an artist who also happens to be *very* entertaining."

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World Radio History

Joe Pass

Virtuoso

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

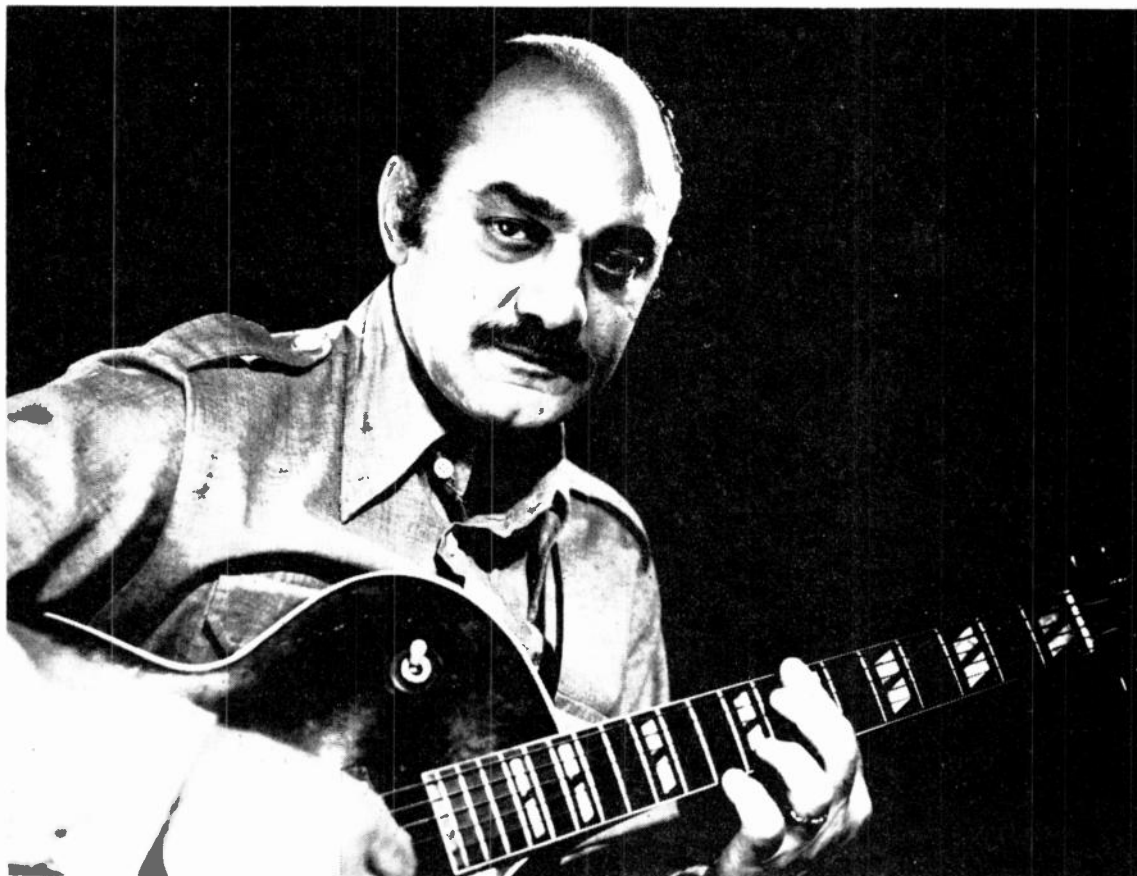
He recently toured Europe with the Oscar Peterson trio, and also found time to play some solo dates. Club audiences sit in awe-struck silence as the little man strings together solo improvisations that are bewildering in both their beauty and their brilliance of execution. But why does he choose to play gigs unaccompanied? "Well first there are the hassles involved in getting a rhythm section together – you can't always get hold of the people you'd like. Then I've been playing solo a little while, concerts as well as clubs, and it seems to be working out.

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

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

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

Joe attributes his phenomenal technique to ►►



By Jeff Pike

Joe Pass

Virtuoso

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

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

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

Around 1942, when Joe was three, his father took him to meet a jazz group who played in their hometown of Johnstown, Pennsylvania. It was a violin-led combo, based on the Hot Club de France quintet. “It seemed I could play little melodies and pick up things

That led to drugs and within a few years he had a heroin habit which put the brakes on his musical career. “I was never around when I was supposed to be, I didn’t do anything right, it just got worse and worse. I was still playing for most of that time, but every place I’d go, I’d exhaust all the people who’d try to help me, then I’d move on to another city and start all over again. I kept that up till I ran out of friends . . .”

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

That album, called “Sounds of Synanon”, was the turning point. Joe was soon making a living from studio work in Los Angeles, playing all sorts of music on all sorts of sessions. He played all sorts of guitars, too, including solids and 12-strings, according to what the session demanded. But he also started playing jazz dates, and for those he stuck to Gibson f-hole models, usually the 175. Then, about two years ago, Jimmy D’Acquisto made him a guitar to his specifications and since then he has used

“People don’t seem to mind that I’m playing without a rhythm section”

quick, so I became a member of that group, playing at dances on Saturday night. They had records of Django and that was the first time I had listened to jazz. I started hanging around the music store in town, listening to jazz records. That’s where I first heard Dizzy Gillespie, Charlie Parker, Coleman Hawkins . . . I also heard Art Tatum. He had a trio at that time, with Tiny Grimes or Oscar Moore on guitar and Slam Stewart on bass, and they really excited me.”

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

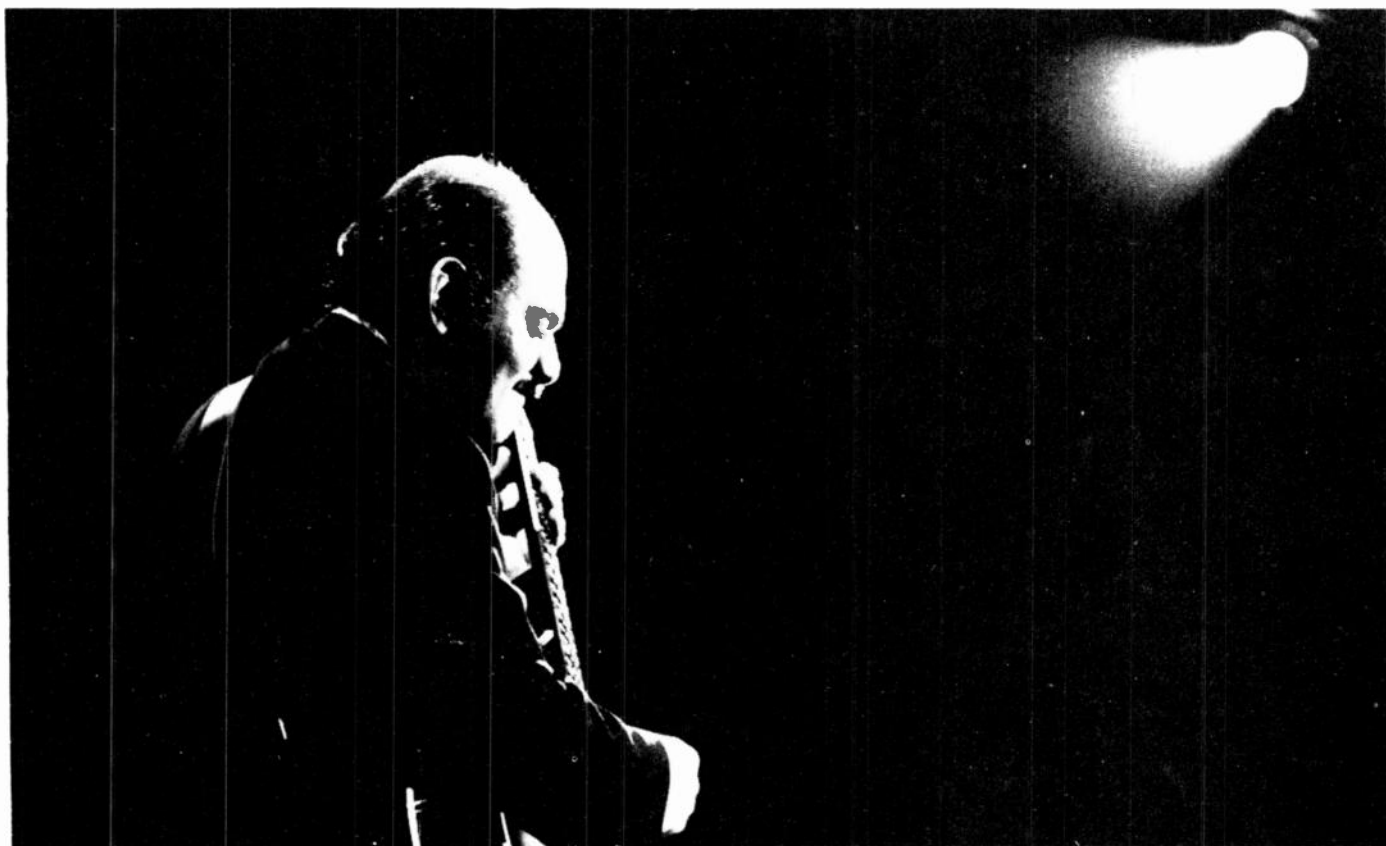
In the mid-Forties, Joe started playing gigs in New York, sitting in with different groups and sometimes going on tour with them. But around the same time, perhaps as a reaction against his strict childhood, he started drinking.

nothing else.

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

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

Onstage he uses a small Fender combo amp and is quite satisfied with the intimate sound he produces. But on record, he’s less happy. “I never get the right sound in the studio. I’ve tried lots of different studios and lots of different ways of recording — miking the amplifier,



miking the guitar and the amp, miking the guitar and not using an amp, going directly into the board. . . it never comes out how I want it. The straight, single-note electric sound I play with a group, that varies from record to record but it's always pretty much the same and satisfactory. But when it comes to solo recording, that intimate sound is hard to get.

"The nearest I've got to it so far is the last solo album. I just played quietly and acoustically in the studio and went straight into the board, but even there, as soon as it goes through any sort of amplification or electronic process, like a mixer, the sound changes."

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

Despite his apparently flawless technique, Joe claims he never practices these days. "I often start out meaning to practice but it never

lasts more than a day. I just play. I do a lot of playing on gigs, then I'll play at home when guitarists visit me, maybe for three or four hours. But sometimes I don't play for days, even weeks if I'm not working. I think that once you have the facility, you don't lose it by not playing. You get a little rough, maybe, but your hands don't forget what they can do. It's not like a horn player who needs to keep playing so as not to lose his lip

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

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

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

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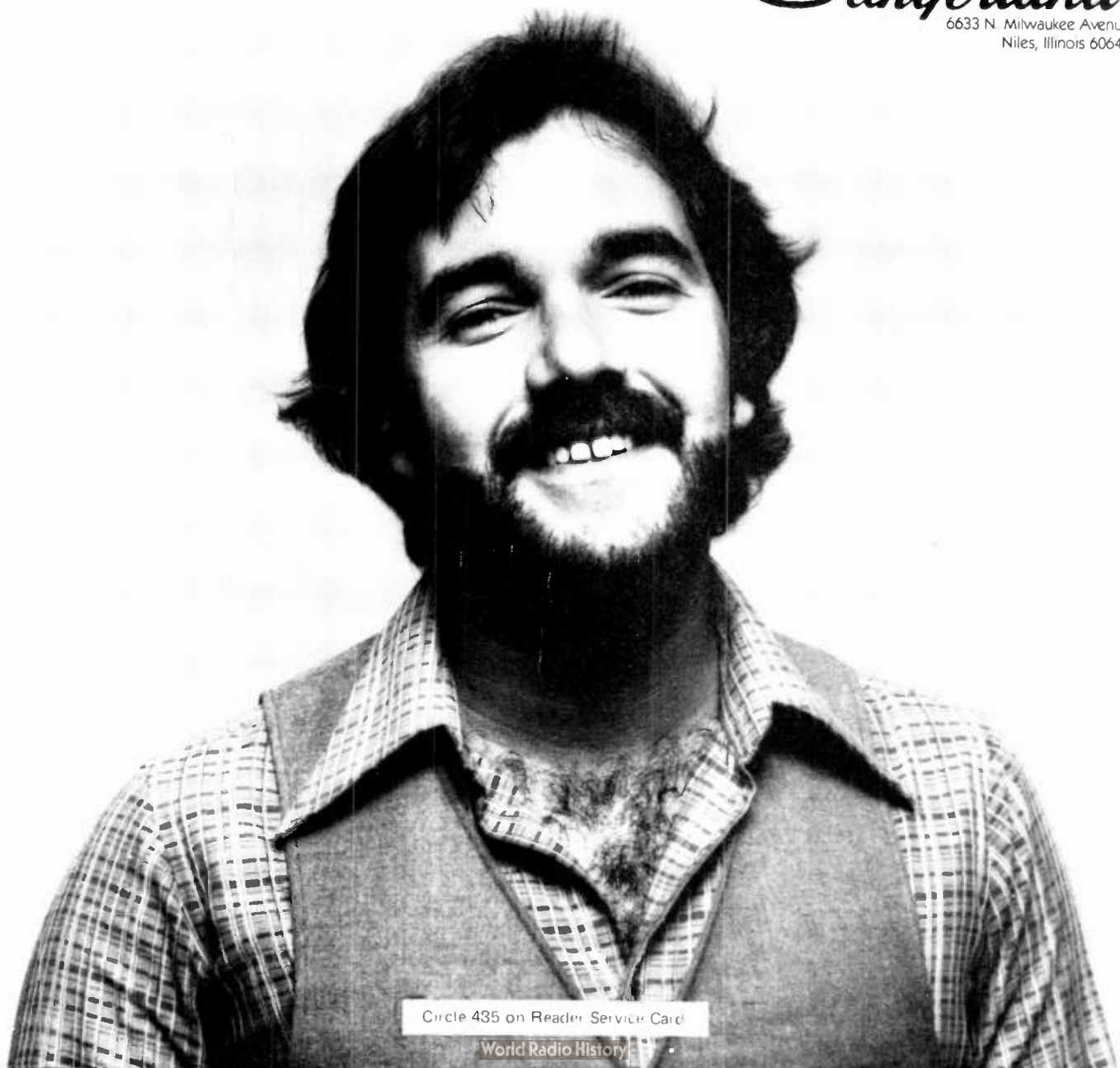
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World Radio History

Guitarcheck

Ovation
Adamas
\$2350

This guitar appears to be the latest, most advanced and probably also the most expensive acoustic in the Ovation range. Apart from the basic facts, that it has six strings, a neck and a hollow body, it breaks most of the conventions of what may be called "traditional" guitar making. It has a paraboloid back shell, a walnut fingerboard, a carbon-fiber laminate soundboard, no truss rod adjustment — at least none that I can find — a finish which uses a certain amount of gold-colored glitter, and a sneaky transparent scratchplate, which is apparently either sprayed on or cast directly on to the soundboard. It has no soundhole in the usual place. The black circles visible in the decorations at the top of the body are actually groups of smaller soundholes.

It should be obvious from the above paragraph, and a quick look at the photographs, that we are not dealing with an ordinary sort of guitar. For that matter, we are not dealing with an ordinary sort of guitar company either. The Ovation company has by now quite a reputation for innovation in the design and manufacture of acoustic and electric guitars.

Those of our readers who are also members of the Catgut Acoustical Society, and receive its publication, will probably know that there has been considerable research into the possibilities of using laminates of carbon or graphite fibers, and other materials, for the manufacture of musical instrument soundboards and that Ovation are not the only company who have shown an interest in this idea. Whatever the combination of factors which has promoted this research, one cannot ignore the fact that good spruce timber for soundboards is becoming increasingly scarce and increasingly expensive. The classic C.A.S. paper on the application of graphite-epoxy laminates for guitar soundboards refers to the use of an inner layer of an unspecified material, similar to paper or pulpboard, between outer carbon-reinforced layers.

I refer interested readers to the Society mentioned above. Although its name may seem a bit wild on first encounter, it is a perfectly serious and fairly high-powered group of people, who are working towards better quality, consistency and understanding of acoustic instruments.

I think it is fair to say that the use of a man-made laminated soundboard on a guitar in this elevated price range represents quite a big step, even for Ovation. They have been making laminated back shells for years, but always with a spruce front. A "plastic" soundboard is something else entirely. On the other hand, people said just the same things about their "plastic" backs when they first became available. By now it is quite obvious that a guitar with a "plastic" rounded back shell is a viable and useful instrument. So why not a guitar with a synthetic front?

Of course, the lid on Ovation's new box is not entirely synthetic. It appears to be made from a thin layer of wood, probably maple, with graphite-epoxy inner and outer skins. The cross-section diagram shows approximately how the soundboard is made up. The graphite-epoxy skin which can be seen on the outside of the instrument has a ridged surface similar in appearance to the growth ring patterns in quarter-cut spruce. This may indicate that this outer skin has some unidirectional properties in the same way as natural soundboard wood, or it may be for the sake of appearances.

The Ovation instruments made with plastic backs and wooden fronts are popular and effective instruments, but I think they do sound quite different from most "traditional" acoustic guitars. My impression of the new Adamas model is that it is also an effective instrument, but sounds different again. It seems to possess that happy compromise, where the sound out in front is loud and penetrating, while the sound to the player's ears has less middle and more bass, and is generally more mellow-sounding. My sample is fitted with the Ovation transducer-bridge system, with volume and tone controls fitted on the side of the back shell, and it would not normally be necessary to use an additional microphone for amplification or recording. However, miking the guitar appears to present no serious problems (once one has decided where to point the microphone!). A Beyer M160, for example, worked well when placed a few inches in front of the treble-side group of soundholes. The M160 is a miniature twin-ribbon mike which has a good bass response and also a bass-rise proximity effect. It is a beautiful vocal mike but would not be my first choice for close-miking an acoustic guitar by the soundhole: I would normally expect booming and/or low frequency feedback under these circumstances. I chose this mike on this occasion to illustrate that the



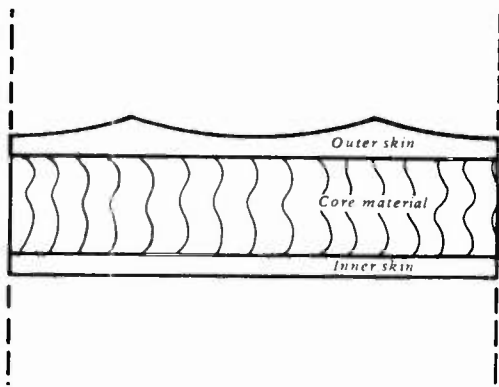
Adamas has less of the bass boom which can occur when close-miking steel-string acoustics. Perhaps the use of multiple small holes instead of one large one has some slight acoustic damping properties.

It might be said that this guitar sounds a bit lacking at the bass end. Some players who have excellent guitars of traditional design may like to hear a bit of boom or resonance at the bottom end, and have become accustomed to it. By comparison, the tone of the Adamas may seem a bit hard. It could also be said that this type of guitar is most likely to be played on stage in a big hall, with an adequate to excellent sound system, and often with other electric instruments. Under these conditions, acoustic guitars with a slightly attenuated bass often reproduce better than those which sound nice and mellow in a small quiet room at home. In any case, the balance between bass, middle and treble ranges is usually in the hands of the sound mixer, whether one uses the internal bridge transducer or an outside mike, or both.

Ovation sound" then I think the Adamas has even more of it than other Ovation guitars.

On the other hand, I could not honestly say that my sample was the most beautiful sounding acoustic guitar I have played. It would appear to have been designed for power rather than for subtlety. I notice that most of the sound seems to come from the two groups of soundholes, and it is difficult to find any high-range sounds coming from the lower half of the soundboard. The better "traditional design" acoustic guitars usually have several noticeable vibration modes in various parts of the soundboard and a rather ragged sound radiation pattern at high frequencies. There are variations in both phase and amplitude at different frequencies and different listening angles. Although from simple acoustic theory, this might be considered a fault or a weakness in performance, I prefer the traditional sort of instrument with its slight random variations. Some very clever people have spent a lot of time trying to put these random variations *back* into the sound of certain electric instruments, so I don't think my preference is unique. It is possible that this guitar may have been designed from the beginning as an electro-acoustic instrument. The composite soundboard seems to have rather more internal damping than is usually found with natural wooden ones, and this may make the instrument even less liable to feedback than other Ovation guitars (which are already very good in this respect). Unfortunately, I can offer no opinion on whether, or in what way, the instrument will "play in" as I have no previous experience of such composite soundboards over several years' playing.

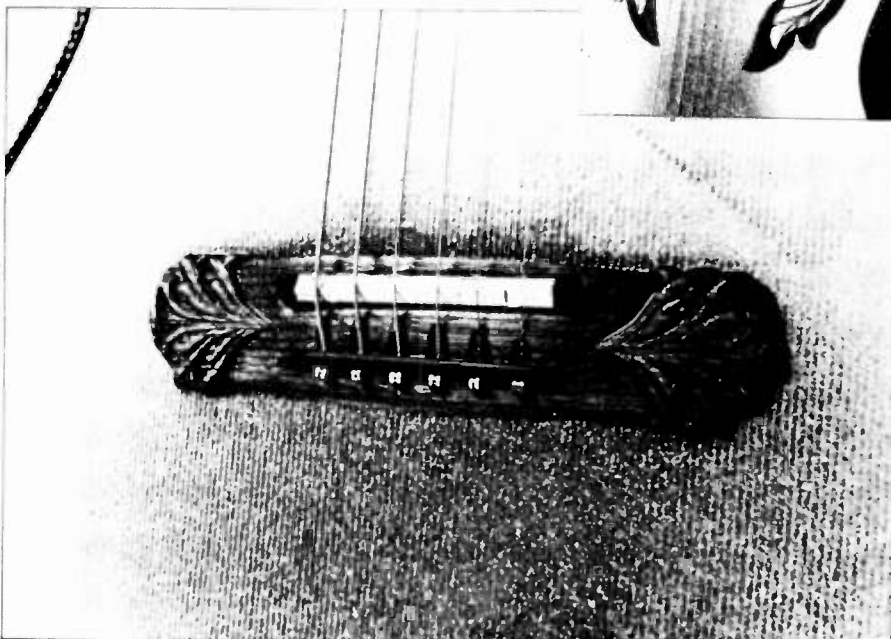
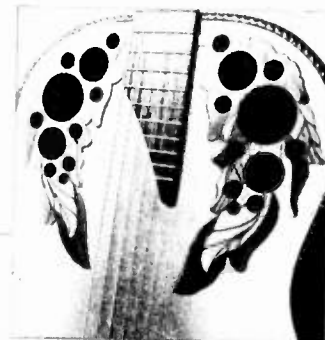
So what does it look like and how does it feel? Unfortunately, even the best photo reproduction is unlikely to do the Adamas justice. I am sure that it must be intended as an on-stage guitar, and as such, it is right that it has a non-glossy finish and rather bold decoration. You can see the general design idea from the photographs. I suspect some people will love it and some will dislike it. This is not a traditional instrument, and I think it can make its own rules. Theater make-up is a bit excessive when seen close up. It must be exaggerated so that it may appear "real" to the (distant) audience. Instruments for use in stage performances may also usefully have exaggerated design details, so that they retain some visual interest for the audience. This is not a



Probable cross-section of Adamas soundboard

What is essential is that an amplified acoustic guitar on stage does not cause feedback problems and does not require the performer to stand still in front of a mike, any more than is actually essential for picking up his/her vocals. This is really Ovation's strong point. Their internal bridge transducer system works better than most, and gives the performer more freedom of movement than is usually possible with a microphone for the instrument. Incidentally, I wonder why this instrument is fitted with the "mono" version of the Ovation bridge pickup, when there is an alternative mono and stereo version fitted to some of the Legend models from the same company. I hardly think cost is an important factor in this case. The Adamas is something of an Ovation showpiece, and I think it might as well have the more versatile "stereo" pickup system.

There is another distinctive feature of the tone of this instrument. Tone quality is a very subjective matter, and I can only express my own opinions, but I have found Ovation acoustic guitars in general to be less suitable for delicate legato playing, and more suitable for punchy rhythmic playing. They seem to combine some of the sound and feel of acoustic and electric guitars and are particularly good for music which needs a tight sound with damped, or partly damped notes. It can be very difficult to play partially-damped rhythms on some otherwise excellent "traditional design" acoustics without losing the voicing or the melody line under a wash of thuds and clicks. There is something about the Ovation sound which allows a damped note to remain relatively clear and recognizable, and some artists appear to have recognized and exploited this possibility. If this is one aspect of "the



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Guitarcheck

criticism of the Adamas, it is just a basic fact of theater technique. Another advantage of a distinctive-looking instrument appears when a television producer is deciding who shall be at the front of the stage, well lit and featured in closeups, and who shall be back there in the shadows!

The guitar *feels* very nice. Once again, neck shape is a subjective thing. Tastes differ, but it is still possible to sort out the good necks and the bad ones, leaving some doubtful ones in the middle. This is certainly a comfortable and well finished neck. It suits the rest of the guitar, it suits my hands and I am sure a majority of players will find it acceptable. The frets are well finished and the action and intonation adjustments seem to be just about right for the strings supplied. I have some doubts about the durability of the fingerboard material. It may wear rather quickly. I don't see Ovation making really large numbers of this guitar at its present price so perhaps they could supply something a bit harder for the fingerboard. If they want to keep the same colour, there are some pale "rosewood" type woods which are resistant to wear. While on the subject of fingerboards and frets, some of the frets on my sample are glued in with what appears to be epoxy glue. If my guess is right, this may be very convenient for the maker, but what about the poor soul who will have to do the refret job?

For fast picking *and* finger-style playing the string spacing near the bridge, and the relative string heights, seem to be just about ideal. They are not too far apart for fast chords, and not so close that they cramp your fingers. I also find the action about right for the strings supplied. If you wish to change it, the usual method on these guitars is to lift out the string support assembly from the bridge (carefully) and add or remove shims underneath it.

I can't quite explain or define this, but I found it particularly easy to play fast runs with a pick on this instrument. The pick seemed to bounce off the strings immediately, instead of being dragged for a moment. I am reluctant to believe that this is really what happens, but fast picking is certainly cleaner sounding and generally tidier – and I have not miraculously improved overnight, so it must be the guitar. I wouldn't buy it for its looks, or for its tone, but I would be tempted to buy one for its ease in playing.

I am not sure how the neck stays straight, but it seems to do so without difficulty. It is possible that it contains more of those fancy black fibers. I am less happy about the bit of fingerboard over the body. This is not fastened down to anything. It floats over the soundboard and on my sample it bends inwards, away from the strings. Sooner or later, the end will just touch the soundboard and then the guitar will probably have a buzz on some notes. This should have received more care in design and/or assembly. A bit of white glue underneath would at least prevent rattles.

Most guitarists will by now be familiar with the Ovation bridge-transducer system. Briefly, the strings rest on small angular blocks in the bridge assembly. Under these blocks are piezoelectric transducers which convert mechanical vibrations to an electrical signal. This is processed by buffer and filter circuitry inside the guitar body and is available at a jack socket mounted in the side of the body shell. Various models of guitar have volume and/or tone controls also mounted on the body shell. Power is supplied by a small 9-volt dry battery clipped inside the body. This is normally replaced via the soundhole in other Ovation models. In the case of the Adamas, access is via a removable circular panel in the back of the instrument.

The access hole is also fortunately large enough to allow most repairs to be carried out to the inside of the guitar, if one is sufficiently skilled and resourceful.

Conclusion and postscript

This is obviously a very interesting guitar. It is also expensive. Its appearance is unusual and it is certain to attract some attention wherever it appears. It should look very good on stage, and its internal bridge-pickup makes it very suitable as an acoustic guitar fronting an electric band. My sample is very nice to play and is particularly well adjusted to suite average tastes and the supplied strings. However the same pickup system and a similar playing action could be found on some other Ovation instruments at a lower price.

I have been playing this sample for several days during the writing of this review and its bass end does seem to be improving a little. However, judged as an acoustic instrument only, I find the treble strings rather harsh, and I would prefer the sound of one of the better spruce-fronted Ovation guitars. Although the use of a graphite fiber composite soundboard is an innovative move, I believe that one could make a very similar instrument with a conventional wooden front. It would be very interesting to compare the sound of the two guitars, fitted with different soundboards.

I am not happy about the "floating" fingerboard over the body and I have a suspicion that refretting could be a difficult operation, for several reasons. The neck on this sample is well-made, well finished and straight. I cannot be certain but it appears not to have any back-tension adjustment. If I am correct about this, Ovation must be very confident about its long-term stability, and it would be a nice gesture if they were to guarantee the stability of the neck for the intended working life of the instrument.

Incidentally, the review guitar was supplied in a shaped hard case with a separate outer cover. This is closed with two zip fasteners around the edge, and should be rainproof.

(Several people have asked me about the availability of guitar case outer covers as supplied with violin cases: does anyone know a supplier?) The Ovation outer case would be easier to carry if it had a shoulder-strap.

Stephen Delft

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.



Measurements on Ovation Adamas

Scale length:	643mm
String spacing at bridge:	56mm
String spacing at nut:	34.5mm
Fingerboard width at nut:	43mm
Depth of neck at 1st fret:	21mm
Depth of neck at 10th fret:	23mm
Depth of neck at 12th fret:	30mm

(heel begins at frets 11/12)

Action as supplied: 2mm treble/2.2mm bass
(It would be difficult to improve on this action for general use.)

Frets on fingerboard: 24 (under strings 1 and 2)
This is unusual. Most acoustic guitars have only 21 or 22 frets.

Body joins at 14th fret.

Circle 504 on reader service card.

Soundcheck

**Roland
GA 120 R&P
amp
\$995**

The name of Roland is synonymous with design progress in professional musical instrument electronics. The Roland Corporation of Japan is also without doubt one of the most innovative companies manufacturing guitar amplifiers. Every year brings a new batch of exciting products from Roland, one of the more recent being the GA Series of combination amplifiers launched in 1978.

The GA Series covers five basic models each with various facilities, the GA 20, GA 30, GA 50, GA 60 and GA 120. There are also two special high efficiency speaker versions, the GA 60 R&P and GA 120 R&P; and for this review we chose the GA 120 R&P which is the model at the top of the range.

The GA 120 R&P is a very sturdy and well designed combination amplifier. It is also powerful, being capable of a power delivery well in excess of 120 watts RMS into its twin 12" special high efficiency speakers (see spec. table). The amplifier has some interesting design features such as a Power Compressor control, a six-band graphic EQ, and an Overdrive control, as well as the standard range of tone controls and a reverb. The overall range of facilities and controls gives both the guitarist and keyboard man plenty to play with.

Construction

The cabinet is strongly built and gives an overall impression of ruggedness. The amplifier front panel is finished stylishly in black, silver and blue with contrasting black and silver knobs, and the speaker cloth fits into this scheme with a weave in the same colors. The

cabinet is finished in a sort of crackle-finish black PVC material and there are black plastic corner caps and good quality detachable castors. There are no corner caps, however, on the front edge above the front panel, nor are there any recessed handles on the sides of the cabinet. There is a strong strap handle positioned where you would expect to find it at the top of the cabinet, but there is a lot of amplifier to hang on that — about 88lb to be precise. The dimensions of the combo, for those interested in constructing flight cases, are 29" long x 25" high x 11½" deep.

The wide range of tone controls including the six-band graphic EQ are well laid out across the front panel of the amplifier. The graphic EQ is positioned in the centre of the panel and follows the rotary tone controls, marked in the normal way, Treble, Middle and Bass. There are approximately six octave bands on the graphic, giving ±12dB on each filter. The fader positions are marked, 100Hz, 300Hz, 600Hz, 1.2KHz, 2.5KHz and 5KHz (see spec. table for measured results). Each slider is provided with a center click setting for ease of use. The bank of six filters is followed by a master EQ level control and an On/Off switch for the graphic. At the front end of the amplifier there are two standard ¼" jack sockets giving both high and low sensitivity inputs. Between these and the graphic are ranged a series of rotary controls marked Overdrive, Volume, Treble, Middle, Bass and Reverb. There is also a pull-on Bright switch incorporated into the Volume control.

The remainder of the front panel to the right of the graphic houses the Master Volume pot, the Power Compressor (pull on) control and the On/Off polarity switch. There are also four footswitch sockets for the Reverb, Overdrive, EQ and Compressor.

The Power Compressor is an interesting control which works very effectively. As the name implies, it controls and limits the output, distorted or otherwise, by compressing the power. The control is calibrated like a VU meter (-15, 0, +3dB). With the knob set to 0, the output is geared for approximately 120 watts. With the compressor knob set to -3, the output is cut back to approximately 60 watts. Using this control with guitar produces some really deep sustain effects. We had some howling trouble using the Compressor with the Overdrive control at the same time, but you have to experiment with the two controls in order to get it right. All the tone controls except for the rotary Middle control (see spec. table) worked very well, enabling us to set up nice bass sounds to razor sharp trebles. Full bass response is limited due to the open back design of the speaker cabinet but the range is wide enough for electric guitar, pedal steel and most keyboards. The rear panel section contains two line In/Out jacks, a headphone jack, an extension speaker jack (8 ohms min.) and a fuse. The mains cable is wired into the amp.

The amplifier section is easily removable, giving immediate access to the circuitry. The electronics are well planned out and are localized on three PCBs, one for the power amplifier, one for the pre-amp and one for the graphic EQ. The power stage uses a pair of Sanken 2SC1 585 power devices driven by two NEC B628/T-D234 plastic encapsulated transistors. The



EQ module is very compact and nicely shielded designed to give about +12dB per filter. Our measurements differ slightly from the manufacturer's figures but this is not at all serious as each band center frequency is specified +3 to 10% tolerance depending on the tolerance of the components.

There is a tremendous tone range available on this combo. To my mind, the Middle control left a little to be desired but the rest worked admirably well. The equalizer section, in particular, was extremely effective and careful experimentation led to an astounding range of tones. The Distortion control was OK at high level playing, but the signal noticeably "broke up" at lower volume settings. However, the Reverb facility is nothing short of excellent. A subtle reverb effect can be obtained by setting

the control to 3 while a real Fleetwood Mac *Albatross* sound can be obtained by setting it on 7 – any more and you're into the realms of Pink Floyd effects. An excellent control range. Generally, the sound is as adaptable as any player would wish, particularly by utilizing the EQ section with the rotary tone controls.

Conclusion

A professional amplifier is every respect, as you would expect from a company of Roland's standing in the electronic music scene. The amplifier is very powerful, very well built and has a wide range of tone controls and effects. However, the unit is a little on the large side as combos go and, at 88lb., is not to be taken lightly.

Mark Sawicki



PARAMETER	RESULT	TEST CONDITION	COMMENTS
Specific power output, watts RMS Ref. 1KHz	156.25W RMS 88.77W RMS 70.85W RMS	Onset of clipping into 4 ohms Onset of clipping into 8 ohms Onset of clipping into 16 ohms	Manufacturer claims 120W RMS of output power into 4 ohms Ref. 1KHz. The GA120 amp is equipped with two 12" Roland model C1230 (120W RMS/8 ohms) loudspeakers. The amp's power stage uses a pair of Sanken 2SC 1585 silicon transistors.
Total Harmonic Distortion (THD)	0.15% 0.12% 0.09% 0.08% 0.12% 0.29% 0.38% 0.49%	@ 120W RMS @ 100W RMS @ 80W RMS @ 60W RMS @ 30W RMS @ 10W RMS @ 5W RMS @ 1W RMS	Into 4 ohms Ref. 1KHz
Input sensitivity in mV RMS for 120W RMS (21.90V RMS) Output signal Ref. 1KHz	Input 1 (high) – 25.4mV RMS Input 2 (low) – 78.1mV RMS	Ref. 1KHz/4 ohms. Tone controls set for the best square wave response: Graphic EQ off; Reverb off; Power Compressor at +3dB; Overdrive off; Master Volume @ 9.	Acceptable, however no manufacturer's figures available to compare my results. On this test Power Compressor was set at +3dB which means practically that compression action was removed in order to get nominal output level.
Tone control range (swing in dB)	22.5dB swing 6.8dB swing 28.1dB swing	Bass @ 20Hz MT – Flat Midd. @ 800Hz BT – Max. Treb. @ 5KHz M – Min; B – Flat	EQ – off Bright Switch – off
Graphic equaliser (swing in dB)	25.1dB 21.6dB 20.5dB 19.6dB 23.6dB 24.1dB	Band 1 Ref 100Hz Band 2 Ref 300Hz Band 3 Ref 600Hz Band 4 Ref 1.2KHz Band 5 Ref 2.5KHz Band 6 Ref 5.0KHz	Manufacturer claims that each slider controls by ±12dB the level of each of six approx. octave bands at 100Hz/300Hz/600Hz/1.2KHz/2.5KHz/5KHz. Each control provided with center click for easy setting. Additionally EQ level control and EQ on/off switch are also provided.
Signal/noise ratio	78.8dB	Ref. 120W RMS/4 ohms output level; Graphic EQ off; Tone control flat	IEC – Curve "A" weighted test with a true RMS reading. Nothing out of the ordinary.
Line input sensitivity	0.340V RMS	Ref. 120W RMS (21.90V RMS) output signal; 1KHz	Satisfactory.
Line output level	0.658V RMS	Ref. 120W RMS (21.90V RMS) output signal; 1KHz/600 ohms terminated.	Line output level seems a bit on the low side. Satisfactory when used with another GA-120 R&P amp. As recording output possible by connecting to a tape deck, of course.
Capacitive load test	OK	2µf non-electrolytic capacitors and 4 or 8 ohms dummy load.	A little overshoot observed, otherwise it seems that it would not create any problems.
Open circuit stability test	OK	Dummy load removed, tone controls/EQ max. Overdrive/compressor/master, max.	No problems.
Short circuit test	5 minutes	Dead short i.e. approx. "zero ohms" placed across GA-120 output terminals.	It looks like the protection works indefinitely. One of the best short circuit protection features I've seen in recent years. The short circuit operational temperature of the output transistors: absolutely normal.

Keyboardcheck

**Yamaha
YC45D
Organ
\$3450**

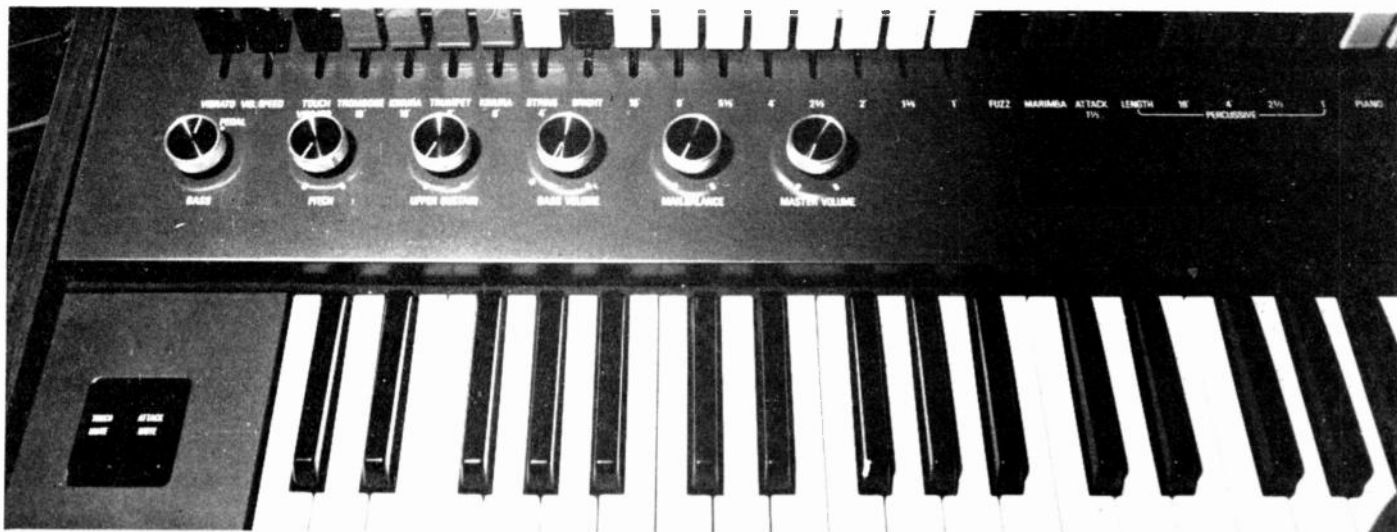
Electronic organs don't generally inspire any great feeling of love with me. Grudging respect maybe, but love . . . ? I have to tell you this right at the start so that you will know that this is a dispassionate review, unlike the last one I wrote, of an instrument that has a great deal to offer to the keyboard player who is looking for an organ that can do most of the usual things and a lot more beside. Some of the features included on the YC45D, such as Squawk and Astro portamento noises (well, you can't call them musical sounds can you?), must add to the price though they do precious little for its musical value. Forgetting such minor oddities for the moment, I will attempt a brief specification — difficult in the circumstances because there are 44 levers, eight rocker switches, six knobs, two variable preset lever banks with 14 and 20 miniature levers respectively, and the

portamento strip. There's even an on-off switch.

The appearance of the instrument is functional and tasteful and the finish is certainly superb: this one has grey leatherette surrounding the keyboard, cased in walnut, though the casing is available in black as well. The organ is mounted on a sturdy metal framework and can be tilted to suit the player's requirements — through 110 degrees according to the brochure — which will come in handy should you wish to play while suspended from the ceiling. There are two manuals, both with a generous five-octave compass (C to C⁴). The keys of the bottom octave and a fourth of the lower manual are reverse colored. Unlike the keys of another very famous organ, this denotes that you may accommodate the bass section of the organ here if you balk at spending the extra bread for the foot pedals.

The 44 levers run right across the breadth of the instrument. These are the tone selectors and they are progressive in effect though Yamaha have thoughtfully integrated three "feel" notches into each so that you may know where you are. They are color-coded — black for tone control functions such as brightness, length of sustain, etc., white for the harmonic or basic tonal element, red for the brass sonorities, yellow for piano, harpsichord and strings and green for the percussive elements. The brass come in both 4' and 8' ranks, while the harmonics come in 16', 8', 5 1/3', 4', 2 2/3', 2', 1 1/3' and 1'. These harmonics are available on both manuals (a separate group for each) but the brass only appear on the upper. The percussive stops (length of decay variable) come in 16', 4', 2 2/3' and 1' and affect the upper manual harmonics only. Already you will see that the upper manual at least contains all the elements necessary for the recreation of that "very famous organ" sound mentioned earlier. Yamaha's organ demonstrator gave me a brief rundown of the instrument before I settled down to messing about with it on my own, and when asked to make Hammond-type sounds (had to say it) he produced those sounds within seconds. Judicious mixing of harmonics and perc. and a good solid sound whaps out at you. We were listening to the organ through a Yamaha RA100 cabinet which impressed with its clean powerful delivery and its rotating speakers.

Most of the brass settings sounded a bit reedy to my ears but one stop that does have a lot of appeal is the Kinura (8' and 4'), an icy sort of sound and one of the best effects on the organ. Passing briefly over the 4' string stop, we



come to three preset sounds which will override all other settings – piano, harpsichord and vibraphone – all sounding a lot more clangorous than the instruments they are imitating. Did I mention the Marimba? An attractive sound that consists of an octave tremolo, speed variable naturally, with which, if you flick in the sustain switch to the right of the lower manual, you may perform all sorts of unlikely arabesques. By the way, the sustain is available on all the upper manual 4' and 8' stops and you can vary its length with one of the six knobs mentioned earlier.

There is an attack lever which will affect all the top manual sounds, apart from Pno, Hrps and Vbs, and this has the unusual characteristic of continually renewing itself – i.e. even if you are already holding notes down on that manual you will still hear the attack on any more notes you play. The fuzz lever, which will affect all top manual sounds apart from vibes, thickens the tone. Again, you may grade it to taste.

Fortunately, some might say, the lower manual boasts rather fewer facilities. Just the basic harmonies – 16', 8', 4', 2 2/3', 2' – and brightness control, so it is very much the accompanying partner.

The bass section which, as I mentioned before, may be played either with your feet or on the bottom part of the lower manual, consists of 16' and 8' harmonics, Tromba and Bass Guitar, this last being a particularly good sound. There is variable sustain for all these. By the way, the bass section will only sound the highest note being played.

The keyboards feel fine – just the right amount of weighting and a firm positive action. So positive, in fact, that you would never guess that the top manual is touch sensitive. I emphasize the word "positive" because the vibrato effects are obtained by lateral movement of the keys. If you pull in the Touch Vibrato lever, depress a note or a chord and move your hand from side to side, the sound will vibrate pitchwise accordingly. There is also a Touch Mute switch which, if you follow the motions described above, will give the VCF type of vib that you get on a synth. If all this were not

enough, you may have good old simple Touch Response on the upper 8' and 4' stops, which means that you have finger tip control over dynamics. It works too! Let us not forget the Attack Mute. This sounds a bit like an envelope follower. Oh yes, there's the Attack Glide switch – press the key and the note will glide up to it from about a semitone below. Personally I'd avoid that one like the plague but that's just a matter of taste. The six rotary controls just in front of the upper manual tone selectors are (from left to right) bass to manual or pedal; pitch control (plus/minus rather less than a semitone); length of sustain; bass volume; balance between manuals; master volume (remembering that there is also a volume pedal).

Last and certainly least is the Portamento strip. Select the sound you require from the following exotica: Slide Trombone (could do with a new embouchure); Squawk (there must be some mistake); Birds (quite pretty really); Astro (someone going totally crazy on a Mickey Mouse Ring Modulator). Now run your finger along the seemingly innocuous felt strip. The resulting sound will follow every twitch of your palsied hand as it sweeps up and down. You can heap injury upon injury by switching in the Automute (a wah-wah vibrato) but that's quite enough of that and anyway a few gimmicks do not a musical instrument spoil.

I know I've made a few cracks about it along the way but this really is a serious instrument and I wouldn't want you to think otherwise. You can switch the preset rank 1 into the upper manual or preset 2 into both. This means that you have in effect, as the makers rightly say, a three-manual instrument. It has all the traditional electronic organ virtues and these, plus all the special sounds, make it a formidable beast indeed.

A lot of hands are using the YC45D. It is far too well made to fall apart on you. It costs a lot but it has to be worth it. I'd rush out and buy one tomorrow – it's just that electronic organs don't generally inspire any great feelings of love with me. Grudging respect maybe . . . but wait a minute, isn't this where we came in?

Tony Hymas

Tony Hymas is a keyboard player and composer with experience in rock, jazz and classical music. He has played with groups ranging from the Jack Bruce Band to the London Symphony Orchestra, and recently toured with the band fronted by Jeff Beck and Stanley Clarke.



Synthcheck

**Korg VC 10
Vocoder
\$1299**

Those of you who are into synthesizers will no doubt at least have already heard of, if not heard, Vocoder. For example, check out the recent Herbie Hancock album, which contains Vcoded vocals. Now, Vcoders as a family have been around in various stages of development and sophistication for some years, but have until recently been restricted to studio-type applications, because of their prohibitively high costs and complexity of operation. In contrast, this new unit from Korg, the VC10, is the first and only self-contained unit with a built-in polyphonic keyboard sound source, and isn't too expensive.

In case you don't know, a Vocoder is a sort of voice synthesizer, in that it receives your spoken or sung words and adds, through standard synth components and processes, the same sorts of sound parameters, including pitch, as a normal synthesizer — in effect, a kind of super Sparky's Magic Piano. The input of this original vox humana information is via a microphone, plugged directly into the machine, and on speaking or playing, the desired tonality of the word is obtained by playing the keyboard; either as a single note, or as a chord. I can make this clearer by describing the Vocoder as I review it, and by the end, you'll either know about Vcoders, or will have torn these pages out for an airgun target.

Robin Lumley is a record producer and keyboard player who has won international recognition through his work with David Bowie's Spiders From Mars, Brand X and wide variety of production credits. He now divides his time between freelance producing and session playing both in Britain and the US.

This Korg version comes with a 32-note keyboard, with a pitchbend wheel sited to the left. On the panel above are lots of knobs and sockets which make the whole unit look familiarly like a synthesizer anyway, including, at top left, a tuning knob. Underneath the tuner is an octave control selector, which can move the range of the instrument up or down one full octave. To operate the machine, the microphone supplied is plugged into a socket on the top and brought around in front of your mouth to a comfortable position, thanks to the goose-neck on which it is mounted. As the unit is to be fed through the usual amplifier/PA system, it is liable to feedback effects if you sit too much in front of, or near, the speakers you are using. The manufacturers also stress careful separation from other sound sources in a band or group, so that only the desired vocal information goes down the mike-line, and not any extraneous program as well. Common sense, really. Anyway, with the mike plugged in, the instrument has next to be "set up." There's a VU meter mounted on the panel, and this reads out according to a select switch. Turn this to the right (MIC) and sing or talk into the microphone, adjusting the mike level knob so that the meter peaks at around zero — none of this smashing over to plus 5 and bending the needle, because the unit doesn't like it. As you're doing this, turn the final volume knob up until your voice becomes audible through the amp. What you've done so far is simply adjust levels so that you can comfortably trigger this box of tricks.

Now, in order to monitor what goes on in future, re-select the VU meter switch to the left ▶



Synthcheck

and turn the input signal balance control to the Keyboard position. This now means that as you speak or sing, any keys you depress while voicing will cause the Vocoder to get it together and do something nice. Because if you now sing or talk into the machine while playing the keyboard, you'll get a sound that has the same sort of tones and characteristics as your voice, but not the same pitch. The pitch always depends on the notes that you play, but the sound quality is always determined by the characteristics of your voice. Even if you speak, rather than sing, the sound produced will make your voice seem as if you were singing. There's a bit of a technique involved in getting this to work with good clarity. You must play a split second before you speak or sing. This needs practice as in effect, you have to play out of time: fractionally ahead. This is because the human voice displays its most prominent characteristics at the beginning of each word, so you have to have the electronics together a tiny bit ahead to ensure that the Vocoder processes the whole word or syllable.

So this is the primary effect and use of a Vocoder, and this Korg version does it very well indeed. But there are further knobs and games to play on the front panel. Try the Vibrato for a start: a really nice chorus sound happens when you play and sing a chord with some vibrato added. There's a speed and depth control so you can vary to suit your own natural vocal vibrato if you choose. Meanwhile, turning on the Ensemble switch produces a fuller chorus effect, while playing more keys gives the effect of adding more voices.

The Accent Bend can add a slight waver to the pitch, progressively more noticeable as you wind the knob clockwise. It's hard to explain what this gives you — you'll have to try it to hear — but I suppose a small amount added gives a more "human" sound. The pitch bend has the same function as a normal synth pitch-bend wheel: you can bend yourself up and down a fifth. Worked by a practiced Minimoog Jan Hammer enthusiast, you can sound like the background music in an Indian restaurant.

The input signal level we have left, so far, turned fully to the keyboard position, but if this is turned further round towards the Noise position, you'll bring in the Vocoder's own sound source: a noise generator. By making sibilant sounds yourself, and mixing in the

noise generator, you'll find a whole family of strange, eerie sounds, which are all controllable by your mouth as you proceed.

There's one more source of effects that the Vocoder can use, and that's external instruments. Sockets are provided for you to process guitars, keyboards or even pre-recorded tape sounds into the instrument. So you can see, you could have a lot of fun with one of these.

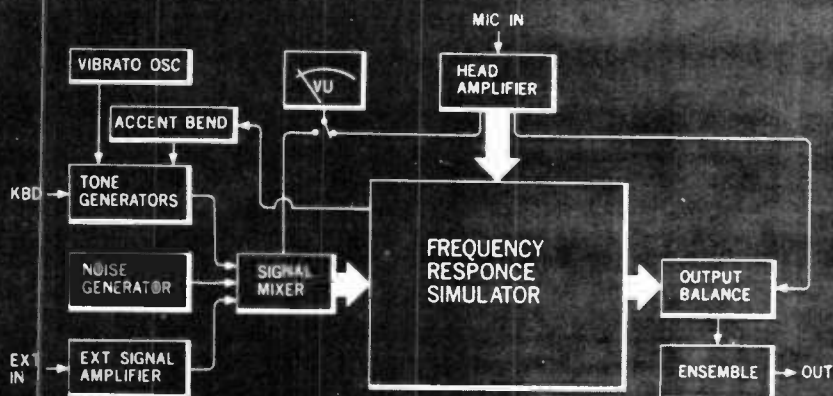
Perhaps you could fairly say that the Vocoder is a bit of a luxury instrument right now to most players, and perhaps most keyboardists would sooner spend their money getting the next love of their keyboard life, like a polyphonic, or a Stylophone, but the Vocoder is not for keyboardists alone. Any musician could get off on owning one, and as yet, the field is wide open for their creative use, both live and on record. As yet they're an untried factor — no one knows whether they'll turn out to have limited application or a whole future as an innovative instrument family. So if you buy one, you'll be out on your own, with really no-one to copy or to influence you in your usage. Which is quite exciting if you're the kind of musician who is into any kind of exploratory or experimental things. The Korg VC10 is a good one to start out with, as it works, with a bit of practice, really well indeed.

Robin Lumley

Circle 501 on Reader Service Card



KORG VOCODER



Drumcheck

Slingerland RJB 670C Kit \$1360

The Slingerland drum company was founded in 1916 by one H.H. Slingerland who started in a small factory in Niles, Illinois, which is just outside Chicago. Almost everybody has, in the past, used and endorsed these drums and one of their celebrated "Radio King" sets which had their heyday in the 'Fifties and 'Forties, can still be seen in pristine condition at Professional Percussion, Jayne Ippolito's New York shop. This particular set belonged to Gene Krupa but, as I said, at that time many drummers of note played them. Buddy Rich started off with Slingerland and as we all know, has subsequently had a love-hate relationship with them, leaving and returning from time to time. Sonny Greer used to have his mammoth sets specially made at the Chicago factory and one of them with wheels on the bass drum and numerous Cuban tom toms has also been permanently retired to the Pro-Percussion Center.

It's only within the past seven years or so that Slingerland have acquired a more modern, funky image. Up until the 'Seventies they were a (very) good drum set, perfect for all styles of jazz, but the sound was somehow too tight for rock 'n' roll. However, with the advent of modern rock, the music demanded a tighter, more contained drum sound and Slingerland have cheerfully capitalized on that demand. Lots and lots of young and not so young, hip drummers are now playing the company's product.

I bought a Slingerland set in the late 'Sixties at the start of Argent's career and, at the time, wasn't particularly interested in any specific make. All I really wanted was an American set, be it Rogers, Ludwig, Gretsch or whatever, with one stipulation — it had to have been manufactured before the beat boom (say 1962) when quality control was not such a nasty word. After much searching, the only set I could find was a Slingerland one built in 1960.

I was pleasantly surprised because its sound had the pin-point definition which I felt Argent's music demanded. The only problem I had in those days was finding spare parts (in England). The situation was so fraught then that when I stripped one tom-tom leg holder, I had to replace *all* of them with 'knobby' fittings. It was rather a drastic alternative then but I can assure you the situation is not like that anymore. Every dealer is encouraged to buy at least two of Slingerland's comprehensive parts kits.

Anyway, this month's test set is the RJB (Rock, Jazz, Blues) set No. 670C, which has 13", 14", 15", 16" and 18" tom-toms and a 24" bass drum, all with five-ply shells. There's also a 6½" deep snare drum.

According to the catalog any of the sets are available with five-ply shells as an alternative to the old three-ply ones with their solid maple glue-rings but I understand that almost everybody specifies the thicker shells these days and the originals have become something of a special order.

BASS DRUM

The "Sound King" 14 x 24 bass drum which I played had a five-ply wood shell with what I take to be maple on the inside with a 45° chamfer to produce a very small diameter bearing edge. But, as I mentioned, you can specify the three-ply mahogany maple shell with the maple glue rings though these are not available in England. The five-ply shells are constructed from two different thicknesses of material with thicker cores, numbers two and four of poplar and the others of mahogany.

The bass drum has 20 large "bullet-type" nut-boxes and two pairs of (sensibly) forward-facing extra long (14½") disappearing spike-tipped spars. These spars can be pulled out from their cast shell mount holders but more importantly have a circlip on them at their sharp end to prevent them disappearing inside the drum completely. (This would cause quite a problem to the guy with a double-headed drum and five minutes to go to showtime.) The wooden (maple or walnut) counterhoops are sprayed black and tastefully inlaid with a nicely edge-finished piece of chrome strip and the company supply a felt strip damper to go under these for both front and back heads. To be honest I am not happy about Slingerland's claws and 'T' handled tensioners — their chrome finish left something to be desired, especially by the standard of these items only five years ago. (They looked more like they were nickel-plated.) The 'T' rods themselves had very sharp edges and points which could cause untold damage to the unwary whilst tuning the drum. Come to think of it, they could also mess your trousers up too if you caught yourself on them.

The drum had a strong, round sound with the two heads on. I feel a little extra resonance was gained because it didn't have a tom-tom holder fitted to it to dampen the shell at that point. The old three-ply shells have a very contained sound without too much spread. The five-ply shells seem to have these same characteristics albeit, I suspect, with a little more balls. Unfortunately, I wasn't able to contrast both types because C.G. Conn (Slingerland's European end) do not bring the



thinner shells out of the US. I tried the drum without the front head too and much preferred the resulting 'bálly' thud.

TOM-TOMS

Five tom-toms come with RJB. The four mounted are concert drums and the floor-standing one is double-headed. My test set had a 9 x 15, 10 x 14, 12 x 15, 14 x 16 and 16 x 18 but the catalog set (admittedly double-headed) has an 8 x 12 instead of the 14 x 16. On reflection, since Slingerland sell their concert drums in high or low pitched sets of four, they obviously put the *whole* low pitched set which starts at 9 x 13 with RJB 670C.

Slingerland were the first manufacturers to produce tuneable toms and I have always been a fan of their unique double-headed, almost timbale-like sound. (It didn't seem to matter which make of heads you used on them – they still sounded the same). I hadn't tried the single-headers myself although I had heard Bev Bevan's used to good effect with the ELO. I must say I wasn't disappointed. They had a lot of tone and 'balls' but strangely lacked the latin sound I used to know and love.

I personally do not like the hybrid mixture of single and doubled-headed tom-toms in the same set, since sound-wise I find them incompatible. The doubled-headers have a far rounder sound whereas the concert drums are much 'flatter'. "Of course," I hear you say, "you can always remove the bottom head of the floor drum and get it to sound the same as the others." This is of course what we would all do – but wouldn't it make more sense to actually sell 670C with a single-headed 16 x 18 in the first place. Cheaper too, I shouldn't doubt.

The smallest concert tom has six square-headed tensioners and all the others have eight including the floor drum which of course has eight at the bottom too. There used to be, and according to my 1978 catalog, still are, two optional variations of Slingerland's forged steel hoops. One has a small radius at the top and the other, filled as standard, has a straight edge finished off with a slight flanged bend to strengthen it and save on stick wear. These rims are evidently guaranteed for life and have been thoughtfully designed with proper right angles at each bend to give more support to the flesh-hoop and so allow the head itself to fit more uniformly.

All Slingerland drums are extremely well-finished with several coats of hot lacquer applied to their insides, and all the nuts or screws have cup-type washers. There's no longer a date stamped on the shell which is a bit inconvenient for anyone buying a second-hand set but there is of course a number on the oval badge so possibly the company might let you know when it was built. 'Slingerland' is, however, ink-stamped inside. The concert tom holders (more of this later) is unobtrusively fixed to the shell with the help of a neat strengthening plate.

Allow me one small criticism: the cast leg holder 'T' screws, or for that matter the spar holder screws, are tapped directly into the casting. This means if you strip its thread, you will either need a new holder or have to tap the hole oversize. The answer to this is the more durable 'eye-bolt' used by the greater majority of the other manufacturers which sits inside the

casting and is easily replaceable if the thread strips. Mind you, the present holder-blocks are a great improvement on Slingerland's old internal-spring device which had a very silly little screw to retain their height adjustment settings. The bottom edges of the single-headed drums are finished off with a strip of 'L'-shaped 1/2" x 1/4" aluminium strip sensibly 'Phillips-screwed' to the shell should you ever want to remove it for whatever reason.

SNARE DRUM(S)

A couple of years ago, the engineers at Trident recording studios in London were discussing with me the relative merits of different drums and they told me they consider the 6 1/2" Slingerland brass-shell Sound King snare drum which comes as standard with RJB to be perfect for recording. At that time I'd seen these in America but never played one so was glad of any opportunity to put one through its paces. I saw (and heard) immediately what they were getting at because the drum has a very contained sound without too much over-response from the snares and with lots of depth yet without too much ring. These characteristics would indeed make it a good recording drum although I feel you would need to be in a more specialised band which 'miked-up' most of the instruments separately, including the snare drum, to fully appreciate its worth in a live situation. This is not to denigrate it because it's a bloody good drum but if you aren't in a band which amplifies the drums and want the snare drum to cut through with a 'more tóppy' sound there are, I feel, other more suitable alternatives from Slingerland which I'll talk about after a paragraph or two.

Anyway, the supplied 6 1/2" shell Sound King snare drum is cleanly finished with a chromed brass shell without a centre-bend but with an inverse-flange and slightly graduated dip for the 'snare-touch' area, flanged hoops and 10 double-ended lugs with sensible extra-length, square-headed tension-screws (to put more 'meat' inside the nut-box). It also has an internal, under-batter-head-operating damper (which I found too flimsy and inconsistent with the rest of Slingerland's fittings), a 20-strand metal snare attached with doubled-over, Scotch-type, packing tape to a 'Zoomatic' strainer. This strainer has intrigued me over the years because its *modus operandi* is not obvious without dismantling it. However, having since done so I know that it's actually a horizontal cam action snare tensioner which works through a thick, bevelled washer which spring-locates itself into a slightly graduated slot and lifts the carriage vertically when the tension is applied horizontally. The fine tuning of the snare itself is via a vertically mounted kurlled screw at the strainer end. The 'Zoomatic' has something which no other modern strainer has – I can only describe it as an outrigger at both the buff and control ends. It's part of the mechanism and is a framework which sticks out from it which moves the snare strap away from the circumference of the drum a little and helps the wires to rest parallel to the head without twisting. (Slingerland used to use these outriggers 40 years or so ago – so did Ludwig.)

Whilst I was looking at RJB I also took the opportunity of playing the newish and revolutionary "two to one" snare drum which uses ►►

the same brass shell and rim hardware as the Sound King but there the similarity ends. It has two diametrically opposed air holes, the more expensive TDR (total dynamic response) part-cast, snare strainer and 12 single nutbox and tensioners for the batter head and six for the snare head. (I was at first surprised that they didn't use the normal double-ended casings and merely tensioned every other one for the bottom head; but I eventually realised this method would not put equal tension on either side of the snares without putting one nutbox in the way of the snare strainer. (If you see what I mean. Wake up there at the back!))

The TDR strainer has a positive, more traditional sideways-operating, cam-action, on/off mechanism and also has the built-in outrigger facility which in its case carries the extra-length snares out *over* the drum's bearing edge to give greater "snare-over-head" coverage and, as I said before, match the head's plane exactly. The butt end too has this "outrigger" fitment. TDR has smoothly adjustable fine tensioning and attaches itself to its 20-strand snares like the 'Zoomatic' with the doubled-over packing tape. (By the way, I would recommend this type for slot-fixing any snare to its strainer. You simply put the tape through the slot, fold it back and stick it to itself. Because packing tape has all those strengthening threads I find it lasts longer than plastic strip or string.)

Slingerland stipulate a different method to tune their drums with the TDR mechanism. For a 10 lug drum, you tension the first two as normal diametrically across the head. Then, you miss out the next tensioner going counter-clockwise and tune the one after; then across again, miss one, etc., etc. They also recommend a looser snare head. The batter at around A4 and the snare approximately a third lower. For the 12 tensioner drum you tune in a completely different way. You tune the first two diametrically across (as before) then travel round the rim counter-clockwise *three* tension screws; then across again and round clockwise *four* screws; then across again and counter-clockwise three screws, then across and turn clockwise four more tensioners – and so on. You ultimately make three alternate moves counter-clockwise and two moves clockwise. (Any clockwise move must turn the fourth screw). I hope it works!

The "two to one" is more responsive than the Sound King and has an extremely tight sound. Obviously, the two extra tensioning positions on the batter head will give more tuning control but I think its debatable and a "moot point" to presume that the snare head does not need as much control. After all, it's the tension of this sympathetic head which will make or break the sound of the drum. We all know that it's this head which causes (or not) the snares to vibrate in the first place. Mind you, it's obviously better to have *six* screws tightened properly than a dozen which are not. Having said all this, it's full marks to Slingerland for producing the drum and perhaps my too brief acquaintance with it has done it an injustice – I would have liked the opportunity to test it in its natural live environment or in the studio to see exactly what it could do. The metal shell "two to one" is something like 40% more expensive than the Sound King and there

is, I understand, a five-ply wood shell version available. To sum up, the drum has a very open, unchoked sound which may well be exactly what you're looking for, and would certainly surprise and impress the other guys on your block.

I also tried Slingerland's Spitfire snare drums. This was Louie Ballson's actual drum fitted with 12 *gut* snares and for a couple of minutes there I actually sounded like him. (I though so anyway!) Louie's one is as far as I can see identical to the Concert King snare drum but with *four* air-holes. The five-ply wood-shell has 12 double-ended nut boxes and tension screws (top and bottom) and the TDR strainer with 12 individual screws at its butt end to separately tension each strand of gut. These four air holes are something of an innovation from Slingerland. I presume the premise is that with drums as with speakers it's important to dissipate efficiently the ensuing column of air. In the case of a drum this is possibly not only through the sound "port" but also through every other available exit like the nut box, snare-strainer or damper holes. However, with a drum it may well be that the air moving inside and causing the bottom head to resonate sympathetically, characteristically colors deepens and enhances the sound *because* it is held inside momentarily whilst searching for the quickest way out. Anyway, Slingerland have taken a logical step and are to be congratulated on possessing an "R and D" department capable of re-evaluating the designs of the drums themselves rather than just dedicating themselves to the task of designing bigger, stronger and heavier stands. The Concert King comes in three unusual sizes (by dance drum standards): 5 and 6 x 14 and 6 x 15. Slingerland nut boxes are padded with a small piece of plastic inside to stop them or their internal springs rattling or "singing" in sympathy and cast from a ferrous alloy with their shell fixing point bosses set further apart than normal. This means the lug will better resist the vertical turning force which threatens to lift it off the drum when tension is applied to the drum head.

ACCESSORIES

RJB comes with two boom cymbal stands, a Dynamo hi-hat, two double "Set-O-Matic" concert tom stands, a "yellow jacket" bass drum pedal and a Rocket snare stand. All tripod leg stands now have tubular legs.

The boom cymbal stands are substantial three section models (four if you count the boom itself), and features substantial cast-alloy, swivel blocks fixed to the top of the down tube and also a much-more-substantial-than-before, matching cast tilter. This tilter is a little reminiscent of Pearl's, but has a large (1 1/4") serrated-edge boss moving inside a cast frame and has the cymbal holder rod tapped into it. The turning movement of this boss and ultimately the angle of the cymbal is arrested by a large wing-bolt with shoulders on it larger than the slot in the framework. These shoulders pull the boss up against the side of its locking hole (in the framework) and lock it there with pressure on its outside. It's all a bit like an English sandwich: bread, filling and more bread. I feel the company could reduce wear on the large angle-arresting wing-bolt by fitting a nylon

washer to it. There is, of course, Slingerland's usual heavy adjustable counterweight fitted to the end of the solid rod fulcrum arm. Their cymbal rod itself extends far enough to put the instrument three inches from the pivot centre which means you can play it at almost any angle without it fouling its stand.

Both the cymbal stand and the tom-tom holder stand use the same tripod bases with 13" radius tripod legs braced with double flat steel stabilizing struts joined to pressed steel collars sweated to the bottom of the largest down-tube. This bottom tube has a replaceable nylon insert at its top to take the wear, but for some weird reason the top of the middle stage has an old style cast block clamp fitting tightened with a largish wing-bolt.

The concert tom-tom stands have three stages too, which is somewhat unusual – useful though, should you want to mount a pair of open ended drums really high to the right or left of your set. The holder itself uses Slingerland's plastic ball and cage principle (more of this later) which has a thick section pair of trapezium-shaped cast spade fittings set a couple of inches apart on each side of the ball. These locate into female similarly shaped, pressed steel fittings attached to the shell itself. Because of the shape of the spade (it's wider at the bottom), the tom-tom locks itself to the holder. There seems to be some lateral adjustment within this via a screw tapped into the holder itself to cure what I consider to be the bane of any concert tom holder. Eventual annoying rattle and movement once wear sets in on the spade and its female holder. Full marks to Slingerland.

RJB 70N which is the outfit with *all* double-headed tom-toms uses two of the double 'Set-O-Matic' 160 holders – which to my way of thinking hold and keep the two drums in a perfect playing position. Both drums comfortably close together at exactly the same vertical and horizontal angle.

The holder, as I said, works on the well known 'ball and cage' principle, with a nylon ball sandwiched and held in position with a drum key operated screw. The actual holder fits into a solid, locking, socket-plate mounted on the bass drum (or into a floor stone) and shaped to stop the height adjustment tube from rotating. This same 'D' shaped hole is found on the tom-tom mounted female plate to keep the drum fixed in its lateral position. This position is not adjustable horizontally but fixed solidly with another drum key fitting screw. A jubilee-type pipe clip enables the height adjustment to remain vertically consistent every time. There's also a "Super-Set-O-Matic" which allows more lateral adjustment and, if necessary, the two tom-toms can be angled vertically towards each other as well as horizontally pivoted towards the player. The Rocket snare drum stand is an adjustable-basket-action, Buck Rogers type with new tripod legs, flat stabilizing struts and a large four cornered aluminium locking-nut to tighten the rubber-tipped basket arms to the snare drum. This stand too now has a nylon insert at its height adjustment clamp.

Slingerland's Dynamo hi-hat has a very smooth action and, of course, has the new tubular steel tripod legs. (They've done away

with the adjustable spiked legs they used to have, but they still have a spur.) It has an adjustable compression spring with a heavy cast two-piece footplate which at the moment does not match the bass drum pedal's but I'm sure will do eventually. It's a very sturdy stand which extends to a reasonable height which can be locked with a jubilee clip. It has a unique hexagonal centre rod which ensures the new style turned top cymbal clutch a secure, non-slip operating position. The bottom cymbal has a tiltable nylon seating-cup.

The newest Slingerland bass pedal is the "yellow jacket" which comes as standard with this set. I understand its extremely competitively priced and presume it supercedes the old Tempo King pedal. (In 1976, the company introduced their answer to Ludwig's Speed King. It's called Super Speed and has twin adjustable internal compression springs and a metal strap/pull. Unlike the Ludwig, its spring tension is sensibly adjustable from the top.)

The "yellow jacket" has basically the same 'U' framework as the Super Speed but with a yellow crackle finish and twin expansion springs fixed as usual outside the unit. It fits to the bass drum hoop in the same ingenious way as its more sophisticated brother. When you first fit it you use the wing bolt as normal – from then on all you need to do to clamp it to the drum is move a cam lever from left to right. It's very convenient. The pedal also has a metal strip with a nylon bearing, a pair of spring loaded spiked spurs filled at the base of each post, and the spring tension knob has a "notch" machined into it to prevent the action loosening off whilst playing. The stroke adjustment on the "yellow jacket" is as on the old Tempo King – three positions (hard, medium and soft) activated by changing the cam radius. There seems to be only a split footplate available – the Super Speed had the one or two piece alternative.

Slingerland's heads are not being made at the plant at the moment but, one presumes, by Remo. There's no crown on them but the catalog lists Ambassador, Emperor or CS. They appear to have a slightly different shell fitting shape to ordinary Remos but "a rose by any other name would smell as sweet." I personally used to be concerned about the odd shiny Slingerland heads because they used to dent very easily and I felt (possibly unreasonably) that this meant they weren't too strong. Anyway, all the drums were fitted with rough coated Ambassadors although you could stipulate smooth, transparent or CS for a little more bread.

In conclusion, the finish on the drums both inside and out left little to be desired. They are smoothly multi-hot lacquer coated on the inside and the chrome plastic on the outside looked good. There are 25 different finishes available of which six I consider to be "no-nos" – the others I can live with but prefer the solid plastics and the four natural woods. (They don't seem to do blue denim anymore which I shouldn't think will worry anybody unduly.)

All in all, this is a very good drum kit who's sound has changed little over the years (except become more modern with the introduction of the five-ply shells) and whose fittings have changed immeasurably for the better. =====

Bob Henrit has been a professional drummer since the Sixties and worked with a string of top bands, including Argent and Phoenix. A busy session musician, he has recorded with Roger Daltrey and Leo Sayer among others, and has also found time to present drum clinics.

Effectscheck

Ross Pedals

Pedals, pedals and more pedals – pity the poor musician today who is faced with a baffling range of effects pedals. The only safe advice anyone could give is to try as many as you can, and that in itself can be an awesome task.

This new range from Ross Inc. of Chanute, Kansas, is well-designed and includes some of the best effects I've heard. Take for instance that old favorite the distortion unit. This Ross model is mains or battery-operated and fairly straightforward in design – an on/off footswitch, rotary controls for the amount of distortion and output level plus in and out jack sockets. Simplicity apart, the "fuzz" sound obtained is excellent – even on chords, every single note can be heard clearly, without the whole thing dissolving into a mushy mess. I've always found a good test is to put as much treble as possible on the guitar and play lead lines in a high register – if they "break up", you're backing a loser. Not so with this unit. Even the toppest sound is smooth and clear. With the distortion and level controls, you can pre-set the amount of fuzz and volume required. The other nice thing is that, like the rest of the Ross range, the rotary controls are half-recessed which means that, apart from looking a whole lot better, they are well-protected.

The Phaser, along with the Compressor which I'll come to later, is the same size as the Distortion unit, i.e. small and compact. Again, there is the footswitch, jack sockets and two rotary controls – this time for Rate and Intensity. The rate varies from a slow, subtle sweep to a rotary-cabinet sound. The sweep rate is variable from 1 - 8Hz and the sweep width covers three octaves.

The Compressor really is a beautiful little unit. This time, rotary controls for Sustain and Output are provided so you can pre-set the amount of limiting required. For those interested in exact specifications, the following figures say a lot: the output level is adjustable from 0 - 200mV, the limiting threshold from 4 - 80mV and the compression from 15 - 40dB. When testing this unit, I plugged it between guitar and tape deck and, by pre-setting the limiting threshold and watching the tape deck's VU meter, all was apparent. Ideal, in fact, for home recording in this situation.

The Ross range also includes a line of slightly larger, mains-operated effects. Their 10-band Graphic Equalizer is particularly impressive. If, like me, you'd always thought of "mini-graphics" as little more than toy replicas of their big brother studio counterparts, then think again. This unit (control range ± 12 dB) has EQ center frequencies at 31.2Hz, 62.5Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz and 16kHz. They also quote its distortion as 0.1% and its signal-to-noise ratio as greater than 85dB. Another unit that would be ideal for home recordists, this graphic's applications are virtually limitless. I only tested this unit with a mike and a guitar but was very impressed with the results. With the minimum amount of setting, it was possible to get a Kenny Burrell sound from the back pickup on a Telecaster!

The Ross Flanger is another mains-operated unit, this time with four rotary controls – Manual, Man/Auto, Rate and Recycle. The flange obtained wasn't overly impressive but the range of adjustment obtainable certainly was. The Manual control enables manual flanging and also sets the base notch spacing when the flanger is automatically flanging. The Manual/Auto control adjusts the automatic flanging width from zero to maximum. In fact, when set at zero, it is virtually in a manual mode. The Rate control (obviously) sets the

flanging rate and the Recycle knob adjusts the notch depth. There is a lot of adjustment available in delay time (from 0.5 to 15.0 msec), auto flanging rate (from 0.1 to 8Hz) and notch depth (from 20 to 40dB).

The Ross D/P Combination is a combined distortion and phase unit. There are two footswitches on this pedal – one for Phase and one for Distort – plus four rotary controls: Rate; Intensity; Distort; Output. Of these four, the first two apply to the phaser part, the latter pair to the distortion. The sounds and facilities obtainable are exactly the same as I described when I mentioned the phaser and distortion units but they can be mixed together or used separately as required. I had great fun with this unit, doing my best impersonations of Jimi Hendrix and Ernie Isley – the definitive phase/fuzz sound.

The Ross Stereo Delay is a particularly useful and effective unit. Mains-operated, its main function is that of a delay/echo unit. To this end, there is a single jack input and two outputs, each with their own Mix control. These are Remote and Local outputs. Other rotary controls are provided for Delay and Recycle. The delay control varies the signal delay time from 25 to 500 milliseconds, while the Recycle knob adjusts the echo decay (as opposed to delay) time. The Remote and Local Mix controls set the mixes of "dry" and delayed signal for their respective outputs. Turned fully counterclockwise, these controls give a dry signal, when turned clockwise, the delayed/dry signal ratio is increased. The stereo facility comes in the form of being able to connect the separate outputs to separate cabinets. In this way, the Local footswitch either bypasses the unit or runs the signal through the circuitry, while the Remote switch either runs the signal through the circuitry or shuts off completely. So, it's possible to set up two completely separate mixes and kick one or the other in for special effect. The unit is very neat, very compact and well-designed with an excellent range of delay and decay facilities.

In conclusion, a very interesting range of pedals. All are well-constructed and beautifully designed and particularly helpful is the fact that details on operation and specifications are printed on the bottom of each unit. Pick of the bunch for me would be the Stereo Delay and the Distortion units. Such pretty colors too.

Emonn Percival

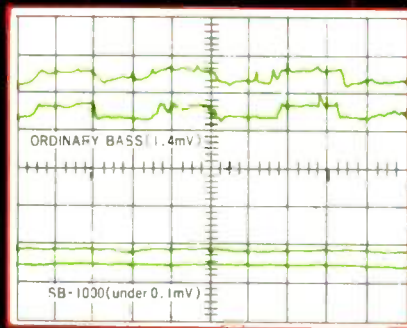
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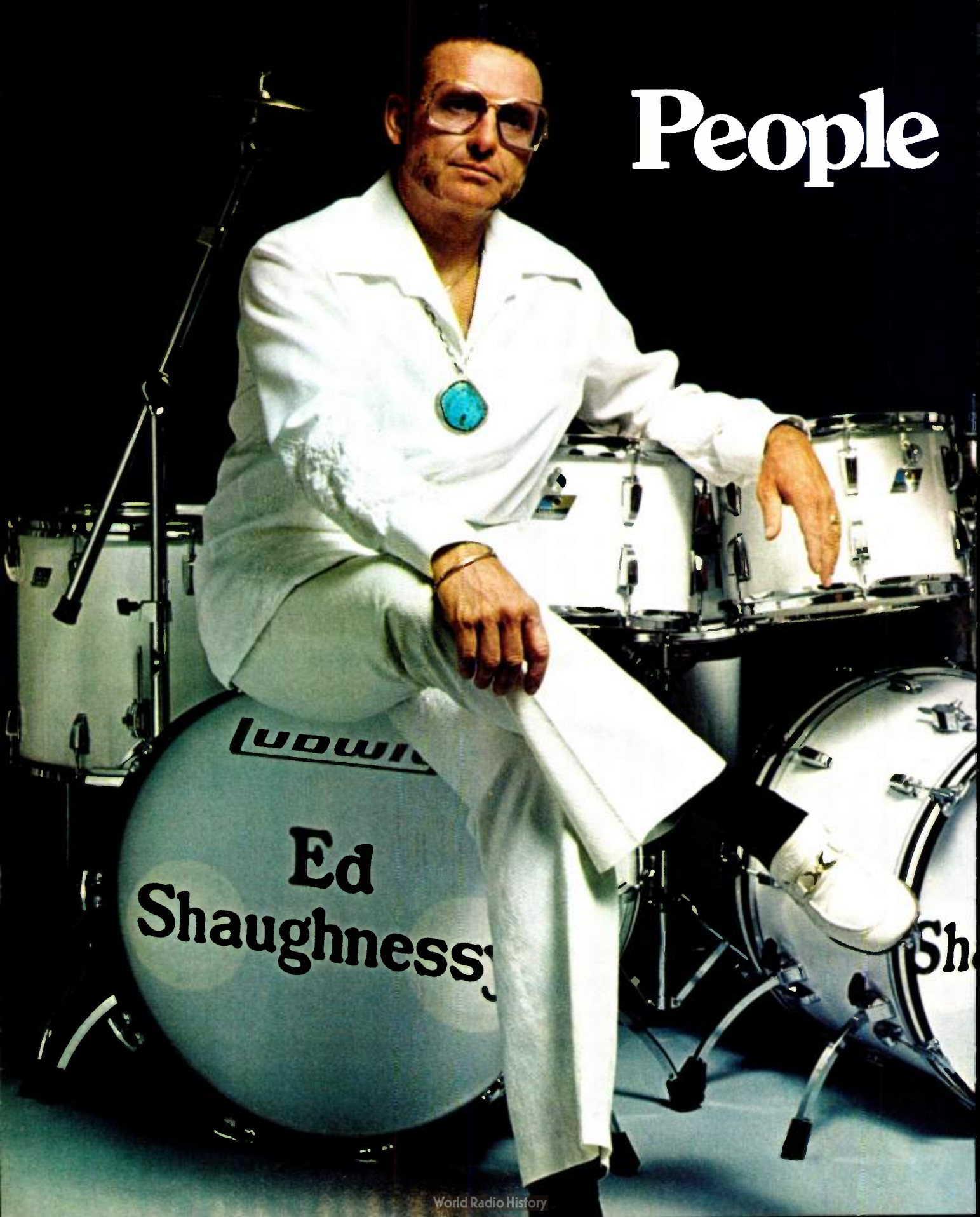
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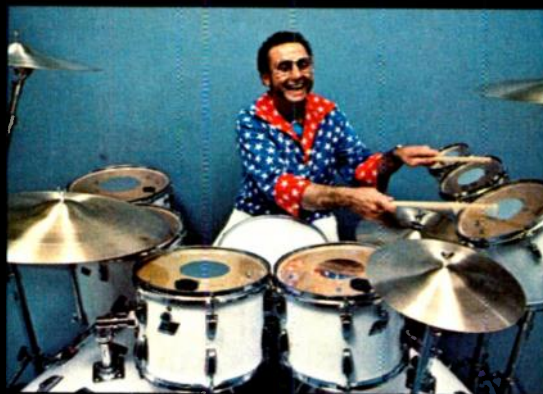


listen even when he isn't playing.

We were lucky to get him to sit down long enough to pose for a picture.

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LUDWIG

Guitarcheck:2

Gibson
Les Paul
25/50
Anniversary
\$1499



It is not very often that anyone has the opportunity to celebrate the 25th anniversary of an electric guitar: rarer still to celebrate a guitar design which started 25 years ago, and is still today a standard of reference in the music business. To celebrate the 25th anniversary of the introduction of the Les Paul guitar and coincidentally Les Paul's 50 years in the music business, Gibson have produced a special limited edition of Les Paul models, with deluxe features and fittings, and a few refinements not found on the standard issue models. (I am advised that numbers really are very limited. Anyone interested should make their enquiries as soon as possible.)

This is a very fancy guitar but it is also a delight to play. The neck is nicely shaped and is made from three layers of flamed maple with two dark wood stripes between them. Many Les Paul models have mahogany necks in one or more pieces and the older models generally have necks which are quite bulky by modern standards.

This neck still seems to have the characterisitic feel of the older necks, but it appears to be rather less deep from front to back. Possibly the greater strength of hard maple allowed a little more to be shaved off the back without causing any weakness or loss of rigidity. I can't imagine anyone throwing this sort of guitar about the stage. It is likely to be handled carefully, but just in case anything nasty should happen to it in transit, it may be of interest that a well-made maple neck is also less likely to break at the head – or anywhere else, for that matter.

The head and neck have attractive and well fitted inlays in real pearl. The "25/50" inlay in the head is not only distinctive, but also graceful and pleasing in appearance. It is easy to produce a distinctive logo, but those which are distinctive, intelligible and in good taste are rare. I suppose that sums up the whole guitar really. It is a bit flashy, but it is flashy in very good taste.

The machine heads appear to be Schaller units with the Gibson name on the back. Possibly to indicate the combined gold and silver anniversaries, the machines have gold bodies with nickel buttons, giving a gold and silver appearance. In fact this is a very sensible idea, as the gold plating would eventually wear off the buttons in patches. The "silver" finish will survive much more use before it starts to look worn.

The truss rod cover and the nut are made of polished brass, and match the gold plating on the other fittings very well. Some people say that brass nuts give a better sustain. I am not sure how this could have a significant effect on anything except the open strings, but it looks nice and it makes life a little easier for the elephants. The brass nut is nicely shaped and fitted to the neck, with no sharp edges. The string slots are set a bit high above the frets to my taste. I think one can reasonably assume that this sort of guitar is going to be adjusted to suit the person who buys it, and under these circumstances it is better that the strings are too high at the nut than too low. They can always be adjusted lower, if needed.

within the length of the fingerboard. The fretting is also of reasonable quality, but not as good as on some other expensive Gibsons I have seen. The frets are rather more square than I would like, and tend towards sharp corners in places under the first string and towards the treble edge of the fingerboard. The inlaid markers at the first and fifth positions are not placed centrally between the frets on each side. Also the bindings on the edges of the fingerboard and head have some blemishes consistent with a slightly hurried scraping job. This is also apparent at the end of the body edge binding where the neck joins the cutaway. The binding in general seems to be this guitar's least desirable feature. There are other jointing and fitting blemishes in the binding behind the neck joint.

Cleaning up binding is neither easy nor pleasant, and it tends to wear the skin off the sides of one's fingers. No-one should have to do that job for more than one or two hours per day, and I have the impression that this cleaning up job was done under some sort of pressure. I have seen one other 25/50 Anniversary model which had, if I remember correctly, very neat and clean edge bindings. I hardly think that my sample can be typical in this respect. I must publicly acknowledge the scrupulous honesty of Norlin in sending me what is obviously not a carefully pre-selected sample. I would not wish it any other way (and incidentally, I wouldn't accept it any other way, either).

The body is made in the traditional Les Paul manner, from mahogany, with a curved maple front. In common with some of the very old Les Pauls for which people will pay astonishing prices, this instrument has the front made from "book-matched" flamed maple, with a rich and subtle sunburst finish. The edges of the body, and the back of the neck are carefully tinted to match the edge of the sunburst on the front, but the back, for some reason, is finished in a light mahogany color. This doesn't match anything else on the guitar and I think it looks a bit odd.

The bridge is a conventional "Tunamatic" of the more recent type. It fits neatly on its solid support pillars, and all its adjustable string saddles appear to be quite free of rattles. (This later model Gibson Tunamatic bridge and the Yamaha bridge in a similar style seem to be about the best of their kind for consistent freedom from rattles.) The tailpiece is unusual in that it is fitted with fine tuning adjusters for each string. Regrettably, the second string adjuster on my sample is rather stiff, but in principle, I find these adjusters a great convenience. A friend tells me that some American players have bought these adjusting tailpieces and fitted them to their own Gibson guitars. Apparently, they work well and also look appropriate on the Gibson Artisan.

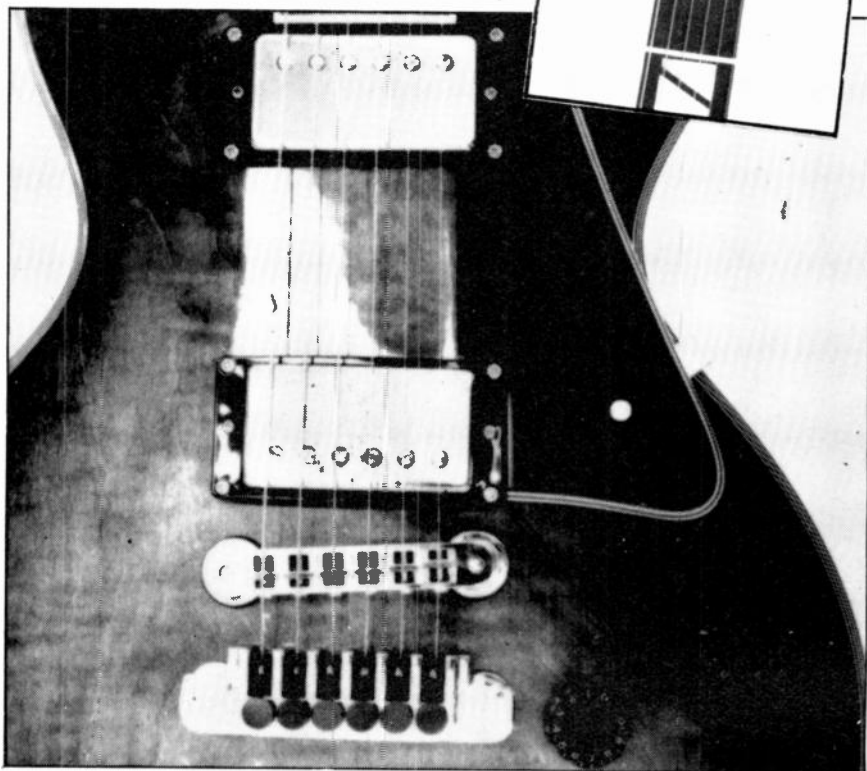
An old friend and customer who does a lot of fancy studio work suggested that the screws should be moved to the rear edge of the tailpiece bar. He found it difficult to use his normal palm damping technique, because the screw heads prevented him from resting the heel of

his hand on the tailpiece. As most of *my* time in studios seems to involve obscure instruments which no-one else will play (at least not at two in the morning) I will respect his opinion and suggest that while I am happy with the design of the tailpiece as it stands, perhaps Gibson might reconsider the position of the screws. This tailpiece is a real improvement in tuning ease and efficiency: a similar mechanism is used on instruments of the violin family, but I have not seen it before on a guitar.

This 25/50 Anniversary model has the standard "selector switch, two tones and two volumes" for the two pickups, and in addition one other switch, which appears to operate a coil tap on both pickups. The pickups are encapsulated in black epoxy, which should stop all but the most determined from removing the gold plated lids. They appear to be a slight variation between one or two of the more recent Gibson humbuckers. They have a full bass and a clear, smooth treble and I like the overall sound. They are described as the new Series VII pickups and I can't tell you much about their internal construction because they are full of black epoxy, and too recent to be on any of my lists.

The wiring inside the body is entirely shielded, either inside co-axial cables or by metal shells screwed over the control areas, but with one exception. The coil-tap switch does not fit within the larger metal shielding shell, and so it is mounted outside, unshielded, with a hole cut in the side of the shell for wiring access. This is inconsistent. Either a guitar is completely shielded at considerable trouble and expense, or it is not completely shielded. This instrument has had the trouble and expense, and is not completely shielded. Might I suggest a small tinplate hood, soldered to the hole in the side of the main shielding shell, so that it encloses the switch and its immediate wiring when the shell is screwed into place.

While I am on the subject of wiring, there is a free cord supplied with this guitar. If my sample



Superb by Definition



Bee•Gees (bē-jēz) *N.* 1. Maurice, Robin, and Barry Gibb. 2. Singers, songwriters, and musicians who have made an important impact on the music industry. 3. Professionals who have displayed an almost uncanny awareness of the directions music is travelling. (see talent, creativity, and perfectionism)

tal•ent (tal-ənt) *N.* 1. A mental or physical aptitude; specific natural or acquired ability. 2. Natural endowment of ability or superior quality. 3. Gifted people collectively.

cre•a•tiv•i•ty (krē-ā-tiv-i-tē) *N.* Characterized by originality and imagination.

per•fec•tion•ism (pər-fek-shə-niz-əm) *N.* A propensity for setting extremely high standards and being displeased with anything less. (see perfection)

per•fec•tion (pər-fek-shən) *N.* The highest degree of excellence. (see MCI Professional Recording Equipment. Designed for professionals like the Bee Gees)



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Guitar Back

can't recommend them
 and the cable are of
 solder joints are poor and
 Either re-solder both
 the cable away. Gibson
 and it is nice of them to
 but *somebody* made it, and
 likely of.

is anything
 for reliability
 good qu
 en.

is a beautiful guitar to play,
 as good as my own standard
 is sort of guitar: an early Les
 particularly good sound.
 new guitars of any age or make can
 favorably with this standard. The
 Paul 25/50 Anniversary sent for review
 does produce a comparable performance, it
 has the best Les Paul-type sustain I have heard
 from a new guitar in years and all its tones are
 different and useful. At least to my standards
 it must be said to work very well indeed. You
 may find that a little bass cut on the amp is a
 useful starting point. Of course it doesn't sound
 exactly the same as the old guitar. It doesn't
 have to. It doesn't look like a re-issue of the old
 model and there is no reason why it should sound
 identical. The point is that I consider its per-
 formance to be in the same class as the best of
 the old Les Pauls.

I am not quite so happy about the *appearance*
 of the sample sent for review. I appreciate that
 really careful and sensitive finishing can absorb
 a disproportionate amount of time in the con-
 struction of a fine musical instrument. However
 I would have thought that this particular limited
 edition was an appropriate occasion to *spend*
 a disproportionate amount of time on finish-
 ing each instrument to something near per-
 fection. There is also the question of wood
 selection. The front of my review sample is
 moderately flamed but it does not look as attrac-
 tive as the instrument shown in the advertise-
 ment photograph which appeared in the UK.
 If I had placed an advance order based on this
 picture, I would have been less than delighted
 with the appearance of the guitar when it arrived.
 (This applies only to the cosmetic appearance;
 my sample *plays* beautifully.) I also appreciate
 that wood is intrinsically a variable material,
 but specialist wood suppliers are quite adept
 at grading flamed violin and viola backs, so I
 don't see why the maple fronts of top quality
 electric guitars in a very limited edition should
 not be reasonably consistent.

If you consider this guitar as a fine musician's
 instrument, which I believe it is, all this about
 flames and finishing is unimportant. You have
 a well-made, reliable, great-sounding guitar.
 It is expensive, but no more so than a good "one-
 off" from an individual maker. If however,
 you consider it as a collector's item — and it is
advertised as a collector's item — then I feel that
 some collectors might criticize some of the
 finer points of detail and workmanship. Of
 course there *are* collectors who will buy any-
 thing on which they can make a profit in a few
 years' time. I believe some of them would buy
 a stuffed pig, if they knew it was a limited
 edition. There are others for whom at least
 part of the pleasure of collecting fine instru-
 ments comes from owning, and possibly also
 playing, representative examples of historic
 instruments, and representatives samples of the

best of modern craftsmanship. While the
 25/50 Anniversary guitar is certainly a historic
 instrument, and is very likely to appreciate in
 value, I do not feel that my sample represents
 the peak of guitar making craftsmanship in the
 late 1970s. It is very good, but it is not quite
 perfect, and for such a prestigious celebration,
 perhaps they should all have been perfect.

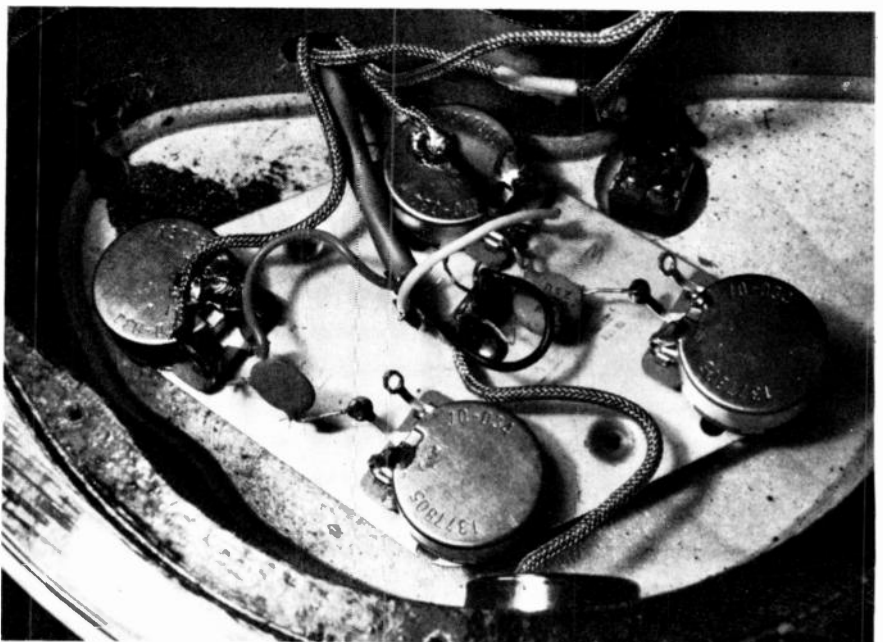
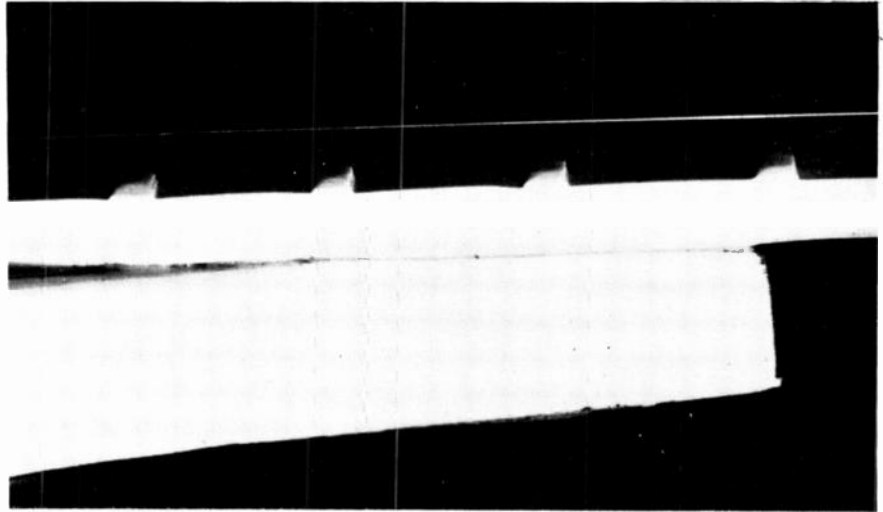
Stephen Delft

Measurements on Gibson Les Paul

- 25/50 Anniversary**
- Ser. No. 725 78041**
- Scale length *625mm*
- String spacing at bridge *52mm*
- String spacing at nut *36mm*
- Fingerboard width at nut *43mm*
- Action as supplied *1.4mm* treble/*2.2mm* bass
- Lowest "standard conditions" action *1.3mm*
treble/2.4mm bass
- Depth of neck at first fret *20.5mm*
- Depth of neck at 12th fret *25mm*
- Depth of neck at 15th fret *n/a* (heel begins at
13/14)
- Frets on fingerboard *22*
- Body joints at *16th* fret

Check 502 on Reader Service Card

Poorly cleaned binding



Internal wiring

Creative Expansion

Expanding the potential of your instrument



Super Distortion™ Humbucker

The SDHP is the pickup that first put the word 'hot' in the guitarists' dictionary. For the rock guitarist, the SDHP does it all—at full volume, it provides the most powerful, sustained sound your guitar is capable of. At lower volume, the SDHP becomes clear and warm, useful for all playing styles. This is accomplished without squeal or unwanted hum, and without any loss of frequency range, as is common in other "hot" pickups.



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The PAF is a special pickup with a special sound. It is the sound of the "patent application for" pickup made in 1957. This sound is not one of sheer power, but of a warm tone, and a singing sustain. It has only been available until now to the limited number of players able to acquire old instruments.



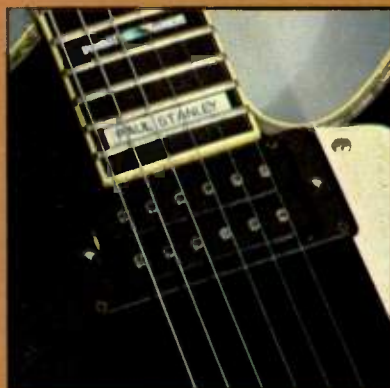
Dual Sound™ Humbucker

Everything written about the SDHP is also true of the Dual Sound—it's the same pickup, with the added option of a second sound, available at the flick of a switch. This allows the guitarist to go instantly from the sound of the Super Distortion to a clean, bright sound similar to that found in Stratocasters and Firebirds. No increase in noise is experienced, and, unlike other companies' 'split coil' pickups, the Dual Sound pickup is humbucking in both modes.



FS-I™ & Pre B-I™

The FS-I & Pre B-I are direct replacement pickups for Stratocasters and Telecasters. The Pre B-I is made for installation in the bridge position of Telecasters, as shown in the insert photo. The FS-I can be used in all positions on Stratocasters, but is especially recommended for use in the bridge position. Both pickups mount with no modification to the guitar. The FS-I and Pre B-I enhance the basic qualities of the guitars they mount in by offering increased output and greater midrange response.



Super II™

Any guitarist who has had trouble cutting through, or has a guitar that sounds dull, will appreciate the Super II. It offers slightly less output than the Super Distortion, but has increased treble response. Combining this performance with low cost gives a pickup ideal for guitarists looking to upgrade their present equipment.



SDS-I™

The SDS-I is a Stratocaster replacement pickup like nothing you've ever seen or heard before. It is the first Strat replacement pickup with fully adjustable pole pieces. It is the first pickup of its kind powerful enough to let Strats compete with the hottest guitars on the market. The power of the SDS-I is not weakened by the double tones and out-of-tuneness common to other Strat-type pickups, because it has 50% less string pull.

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Model I™ Bass Pickup

The Model I fits directly in EB-0 basses, as well as in the bass position of the EB-1, 2, and 3. It produces the sound the owners of these basses have always wanted—powerful, yet crystal clear. Every note down to the lowest can be heard distinctly. A miniature switch is

included with the Model One. Installation of this switch lets the Model One produce two distinct sounds. One is similar to that made by the Fender Precision, while the other has a Rickenbacker-type sound. The switch is optional; it can be omitted, with either sound available alone.



Acoustic Model II™

The Acoustic Model II is a humbucking, magnetic pickup for steel string acoustic guitars. A simple, sliding rail arrangement gives the Model II the unique ability to tune any acoustic guitar for harmonic balance—the player can emphasize overtones, or fundamentals, in any proportion he chooses.



DiMarzio Model P™ Bass Pickup

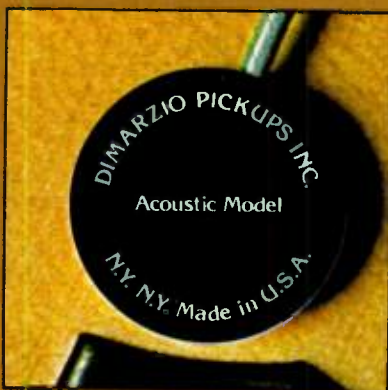
The DiMarzio Model P offers several major advances not previously available to Precision players. It has adjustable pole pieces for each string. It has a magnet structure which eliminates distortion and double-tones, and yet has noticeably increased out-

put. The effect of this is to give the bass a brilliant sound, with punch and clarity on every note of the bass.



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Complete humbucking pickup hardware. 500K and 250K potentiometers. Five-way pickup selector switches. Double-throw miniature switches, identical to those included with our Dual Sound and Model One Pickups. Brass Hardware—Solid brass tunomatic bridges, Stratocaster replacement bridge pieces, brass nuts for Fender style guitars and basses, and Gibson-style guitars. Combination acoustic jack end-pin. Fret Wire. Creme neck and body binding material. Electric Bass strings in round and flat wound sets.



Acoustic Model™

The Acoustic Model is a high-efficiency contact pickup which can be used with round hole guitars, as well as banjos, mandolins, and upright basses. Low noise and high output make this pickup outstanding—no pre-amp is required.



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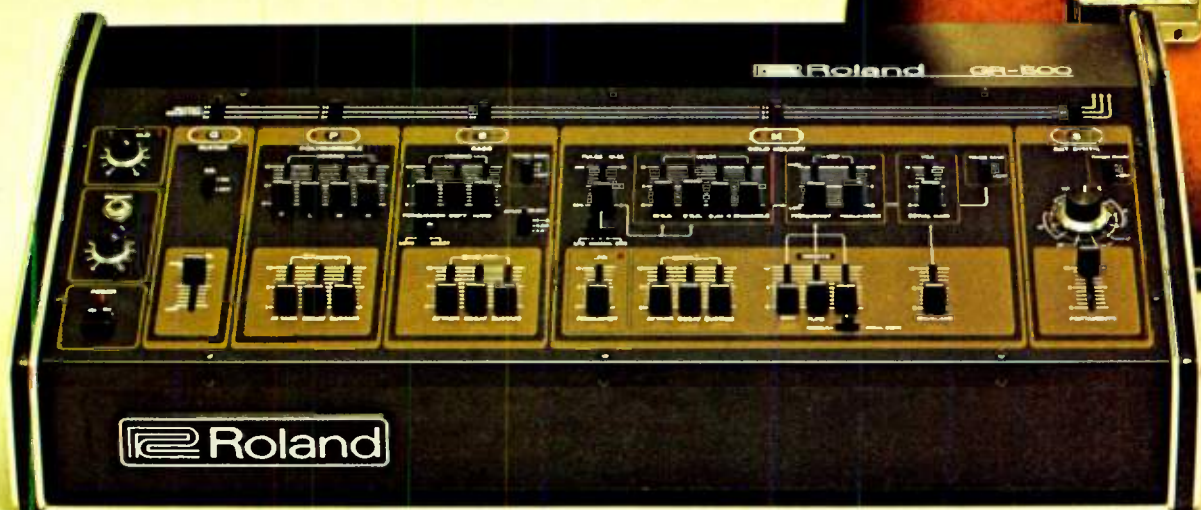
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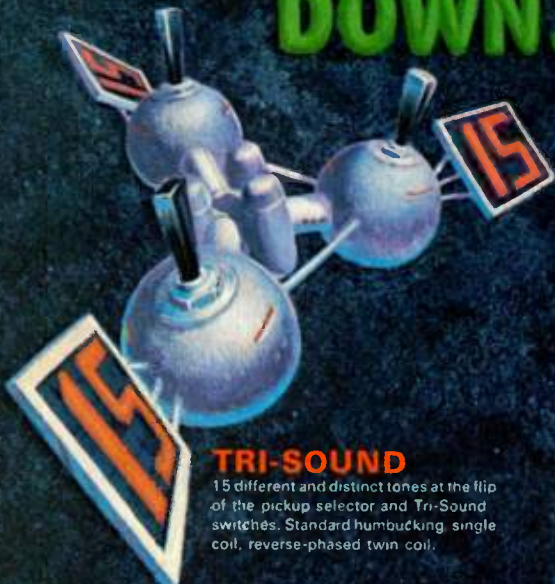


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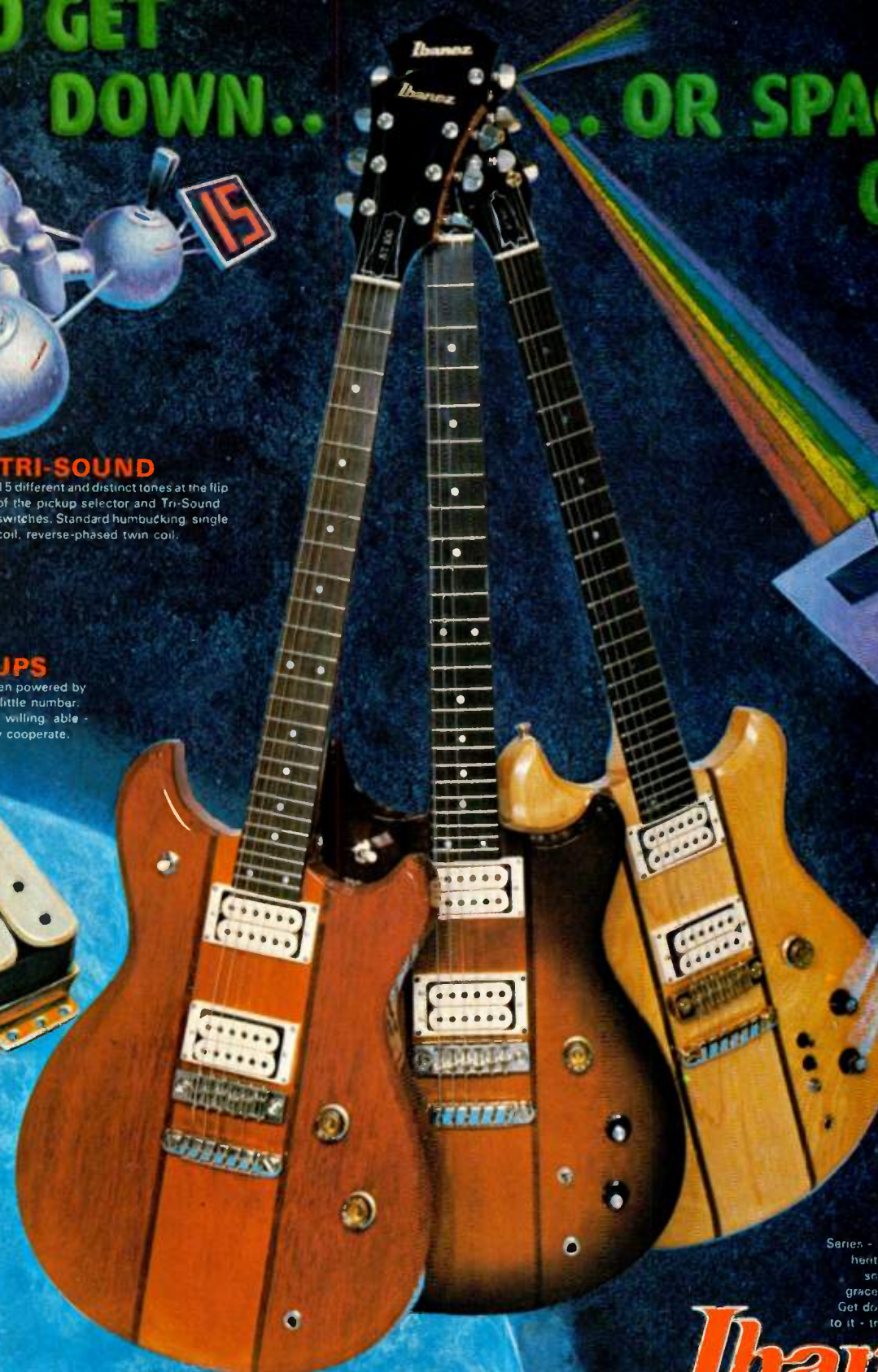


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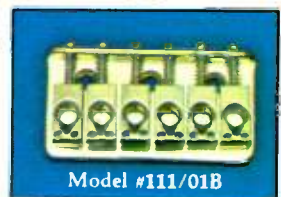
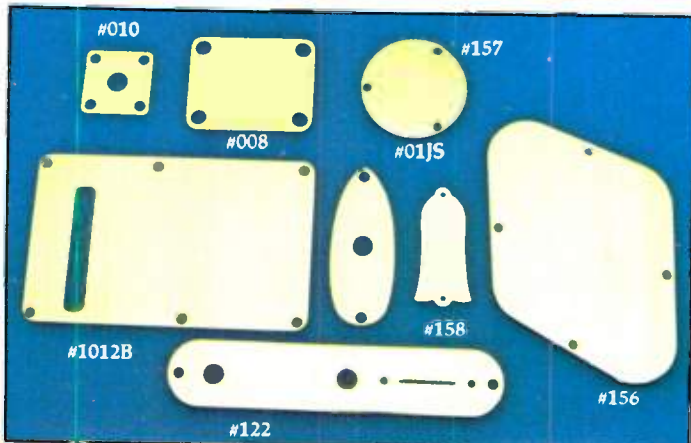
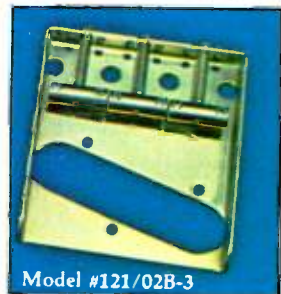
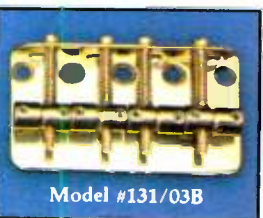
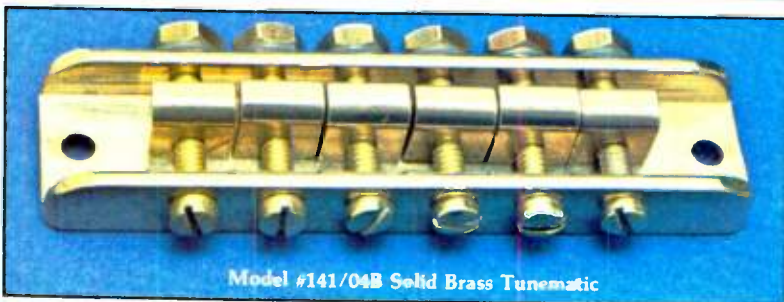
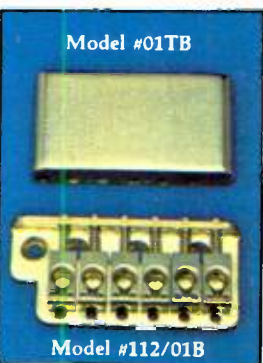
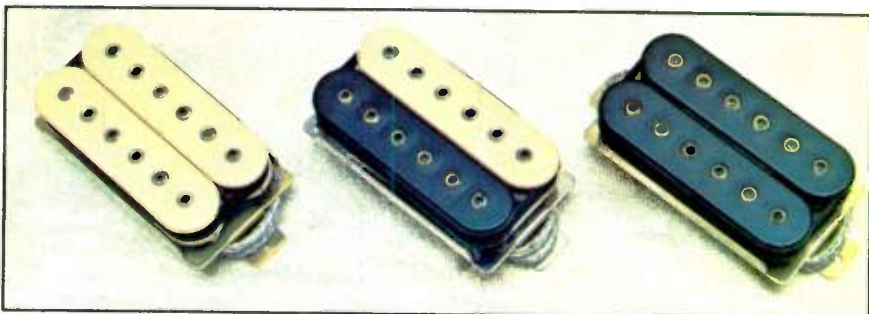
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Frequency response	20 Hz to 20 kHz ± 1 dB
Distortion	Less than .1%
Signal to noise ratio	Greater than 85 dB
Gain with control settings at 0	Unity
Maximum output level	+ 15 dBm (ref: 1 mW/600 ohm), 8 V rms into 10 kohms
Output impedance	50 ohm
Maximum input level	12 volts peak
Input impedance	500 kohms
EQ control range	± 12 dB
EQ center frequencies	31.2Hz, 62.5Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz, 16kHz
Filter Q	2.3
Power requirements	105-125 V a.c., 50-60 Hz, 50 mA
Suggested List	\$119.95

FLANGER SPECIFICATIONS

Input impedance	500 kohms
Output impedance	1 kohm
Maximum input level	2.5 V peak
Gain	Unity
Bandwidth	20 kHz
Dynamic range	85 dB
Delay time	Variable from .5-15.0 msec
Auto flanging rate	Variable from .1-8 Hz
Notch depth	Variable from 20-40 dB
Power requirements	105-125 V a.c., 50-60 Hz, 10 mA.
Suggested List	\$169.95

STEREO DELAY SPECIFICATIONS

Input impedance	500 kohms
Output impedance (all outputs)	100 ohms
Maximum input level	2.5 V peak
Gain	Unity
Dynamic Range	80 dB
Delay time	Variable from 25-500 msec
Bandwidth, dry	20 kHz
Bandwidth, delay	Variable from 1-10 kHz, dependant on delay setting
Signal recycle	Variable from 0-100%
Power requirements	105-125 V a.c., 50-60 Hz, 15 mA
Suggested List	\$299.95

D/P COMBINATION SPECIFICATIONS

Input impedance	500 kohm
Output impedance	Designed to operate into a high impedance load (50 Kohm or greater)
Maximum input level	5 dBV
PHASER bandwidth	20 kHz
PHASER dynamic range	100 dB
PHASER sweep rate	Variable from .1 to 8 Hz
PHASER Sweep width	Selectable to either 4 octaves or 1.6 octaves.
PHASER recycle	Selectable to either 0% or 70%
DISTORTION available gain	40 dB
DISTORTION limiting threshold	1.5 mV peak input
Power requirements	105-125 V a.c., 50-60 Hz, 10 mA
Suggested List	\$149.95

DISTORTION SPECIFICATIONS

Input impedance	500 kohms
Output impedance	Designed to operate into a high impedance (50 kohms or greater)
Maximum output level	200 mV rms
Maximum available gain	40 dB
Limiting threshold (DISTORTION control set at maximum)	1.5 mV peak input
Power requirements	9 V d.c., 1.4 mA
Battery Life	Approximately 1 yr
Suggested List	\$49.95

COMPRESSOR SPECIFICATIONS

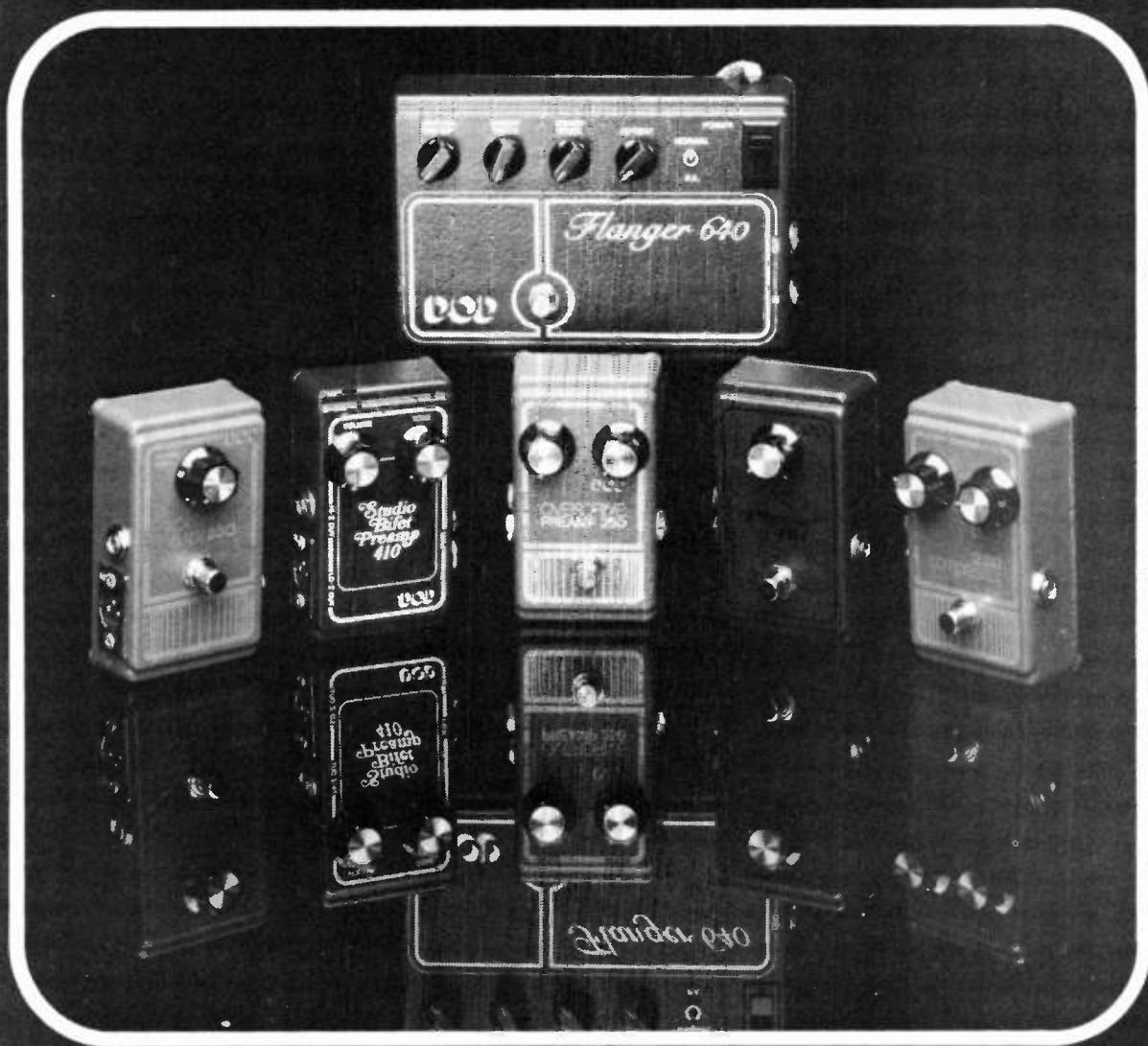
Input impedance	500 kohms
Output impedance	Designed to drive 50 kohms or greater load
Maximum input level	400 mV (-8 dBV)
Output level (limiting)	Adjustable
Limiting threshold	from 0-200 mV 4-80 mV
Compression	Adjustable from 15-40 dB
Attack time	4 msec
Decay time	1.2 sec
EIN (input shorted)	-98 dBV
Power requirements	9 V d.c., 1.5 mA
Battery life	Approximately 1 yr.
Suggested List	\$69.95

PHASER SPECIFICATIONS

Input impedance	500 kohm
Output impedance	Designed to operate into a high impedance load (10 kohm or greater)
Gain	Unity
Bandwidth	20 kHz
Dynamic range	90 dB
Sweep rate	Variable from .1-8 Hz
Sweep width	3 octaves
Signal recycle	Variable from 0-80%
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Guitar Workshop

IM&RW's resident guitar expert Stephen Delft begins a series which will deal with a variety of topics concerning improving, renovating and repairing an electric guitar. In his first article Stephen discusses shielding guitars against electrical interference.

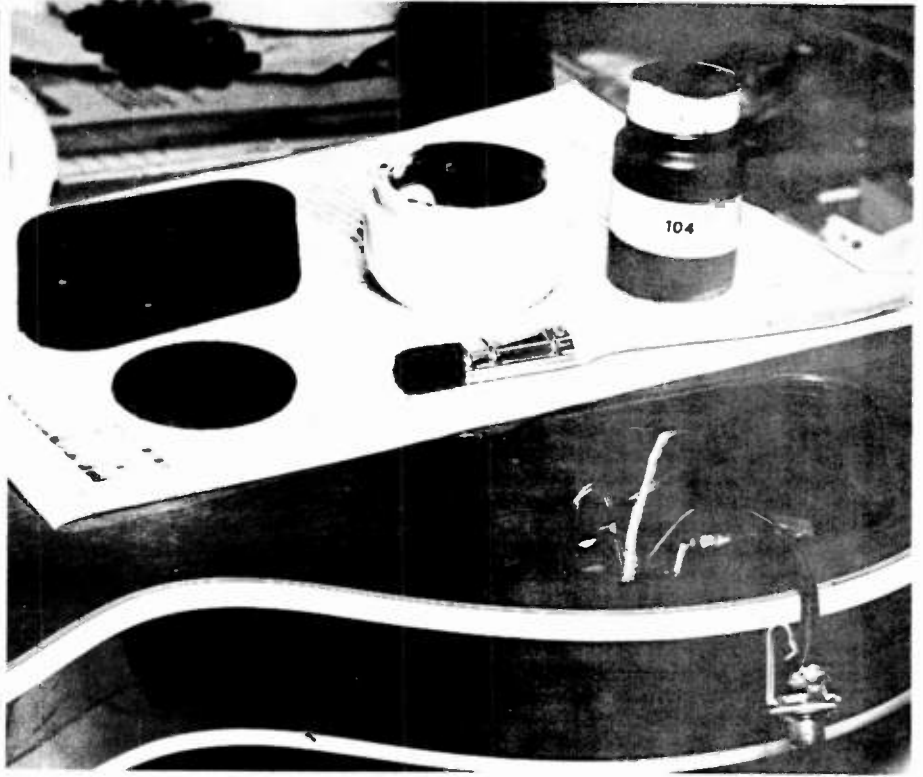
Many elderly electric guitars suffer from excessive pickup of electrical interference from such sources as mains electrical wiring or lighting supply cables when an "electronic" dimmer board is in use. Although some makes of guitar have shown considerable improvements in the internal shielding of their more recent models, it is still possible to find recently-made electric guitars, from various countries, in which the shielding around internal wiring and/or internal components is inadequate for modern on-stage conditions. There are other instruments which appear to be effectively screened against electrical interference under most circumstances, but which may exhibit problems under the more critical listening conditions of studio work, or at the occasional large and important concert. This last factor is not just perversity: large and important concerts tend to involve larger and more complicated lighting systems, and unless you are very fortunate in your choice of engineers and equipment, this is likely to increase the level of electrical interference on and around the stage.

There is also the possibility of interference from nearby private or public-service radio transmitters. If your audio equipment picks up radio transmissions, it is probably a good idea to have it checked and if necessary "RF-proofed" by an engineer with experience in this sort of work. However, you are certainly going to make the problem worse with any amplifier if you attempt to play a poorly-screened electric guitar anywhere near a high-power radio transmitter.

In either of these cases, I feel that the simplest and probably the most economic solution is to ensure that all the electrical parts of your guitar(s) are adequately shielded, and of course to use only high quality jack cords, which are known to have adequate internal shielding. There is little point in shielding the guitar and then using poorly screened cables.

You cannot easily make your own shielded cable, but if you can take a guitar apart and put it back together without damaging it, you can do your own shielding job. The first thing you should do is find out whether the instrument already has adequate screening. If it has, you are unlikely to make any real improvement and you should start chasing your interference troubles elsewhere.

Most guitars have access to the internal wiring in one of two ways. The first type, of which the Gibson Les Paul is typical,



All you need for a shielding job.

has one or more rear access panels, which may easily be removed for inspection without disturbing any other parts of the instrument. If all the body cavities are lined with metal foil or pressed metal shells, and any connections between these cavities are made with screened cables, leave well alone. If you are certain the guitar has a screening problem, look for any obvious broken wires, for instance around the jack socket, and otherwise take the instrument to a competent repairman.

If you have in the past removed the metal covers over the pickups, and your interference problems date from this time, you probably have your answer. Put the lids back, or accept the consequences of leaving them off. Some guitars shield the cavity containing the volume and tone controls, but not the one containing the selector switch. Also some instruments have shielding applied to the guitar body or the back panel(s) but not both. You need shielding on body and back panels. (The only exception I can think of concerns some Gibson guitars which have a second metal shell screwed down over the controls and wiring. This arrangement completely encloses the controls and no further shielding of this area is needed.)

The back panels are usually of some sort of plastic, and may be lined with metal foil or with a silvery paint. Either of these is effective as long as the panels make contact with some part of the body shielding when they are screwed in place. If there is a firm contact, you will not

make any improvement by over-tightening the panel fixing screws. This is likely to split the panel, or strip the thread in the holes in the body.

Some guitars are shielded internally, but with conductive paint, not metal sheet or foil. This may be the color of silver, or tarnished silver, or it may look like ordinary matt-black paint. Unfortunately, I have seen a few guitars painted inside with *real* matt-black paint, which has no conductive properties at all.

It can be very difficult to tell the difference by inspection. Any electronics serviceman or engineer who has a high-range resistance meter should be able to tell in seconds whether your black paint is conductive or not. If it reads somewhere between 1k and 1Meg between two test probes about 25mm/1" apart, it is conductive enough. (The resistance is not critical, but this should give your friendly engineer a rough idea of the range to look for.) If the paint appears to be non-conductive, assume it is not screening paint. See later for application methods.

Another common sort of electric guitar construction has all, or most, of the electric bits and wiring mounted on a removable front panel or scratchplate. One typical example would be the Fender Stratocaster. Access to this requires removal of the strings, and taping-down of any bridge or tailpiece bits which may fall off or slip out of place without the string tension. After this you will probably need to remove between 10 and 20 screws around the edge of the panel, ▶

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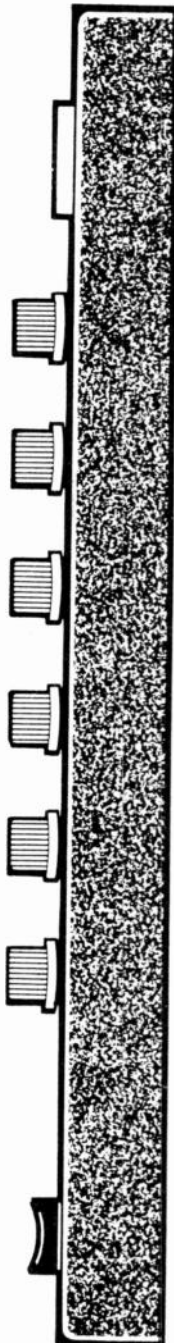
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Guitar Workshop

and perhaps also some in the centre which hold down fittings such as covers or hand rests on top of the panel. In the case of Fender guitars, and possibly others, screws immediately at each end of the pickups are for pickup height adjustment and should not be unscrewed. They are attached to the panel, not to the guitar body. You should now be able to lift up the front panel slowly and gently.

If there is a separate panel for the controls, as on a Telecaster, or if the jack socket is separate from the main panel, there will be wires joining the socket and/or panels and these may pass through tunnels in the guitar body. There should be enough spare wire inside to allow you to lift up any one panel at a time and gently place it upside-down beside the hole in the body. But take care: sometimes there is not enough slack in the inter-connecting wires to allow this without the risk of breaking something. Move each panel slowly and check that you are not straining any of the wires. If the wires are obviously too short, or if you see untidy joints covered with tape in the internal wiring, someone has probably been in there before you. It might be all right. On the other hand, if the joints are a bit doubtful, any disturbance may stop the guitar working altogether. It is probably most sensible to put everything back carefully and have the guitar professionally checked — unless you fancy taking on a comprehensive fault-finding and re-wiring job.

If you see clean, neat wiring and enough spare wire to allow you to move things about a bit, continue. On this sort of guitar, it is common to find that the only shielding precaution consists of a bit of foil stuck to the underside of the panel. On old instruments, you may find a thin metal sheet, roughly the same shape as the front panel/scratchplate. This is better, but it still leaves some room for improvement. On Fender-type guitars it is unusual to find any screening around the body cavities. It is also normal to find the internal connections to the pickups made with ordinary, unshielded twin wires. Although I appreciate that the pickups on such guitars are usually of the single-coil, unshielded, non-humbucking variety and that this places a limitation on the success of interference-proofing, I still find a significant improvement from screening the wiring and controls properly, and I think it is well worth the effort.

If you can also undertake the much trickier job of screening the pickups, or find someone to do it for you, you can gain a further improvement in hum and noise levels. This is not in my opinion a DIY job for the average musician. Ask Stars Guitars or Seymour Duncan, there are, no doubt, others who can do

the same work without spoiling the pickup or changing its characteristics. Humbucking pickups with metal covers are already screened. Humbucking pickups without covers are usually partially shielded by the choice of winding directions and by the earthing of the magnet poles and base plate.

As most of the replacement humbuckers widely advertised are constructed in this way, and they seem to be generally acceptable, one must assume that this degree of screening is a pickup unit is good enough for most people, most of the time. This does not necessarily mean that a pickup intended to have a metal cover will be satisfactory without it. Some are: some are not. Pickups of the same make but from different production batches may react differently to the removal of their metal covers. In general, I would advise that you leave pickup alterations to pickup specialists. (I may in the future describe some pickup modifications, but they all require great care and dexterity, and they are entirely at the owner's risk.)

There is a third sort of guitar construction, found in hollow and semi-hollow electric guitars. One example would be the Gibson 335 It is quite easy to get the wiring out of one of these, if you are sufficiently determined and very difficult to replace it. Also, the wiring on some of these instruments has begun to perish and any attempt to disturb the screened cables may involve a complete rewiring job. Only a few, older instruments are affected in this way, but even with wiring in good condition, replacing it all in the body is not a pleasant job. Leave this sort of guitar to professional repairers. Fortunately, a large proportion of these semi-hollow instruments had and still have, good internal screening arrangements, and are unlikely to need any improvement in this respect.

If you have followed this so far, you should have decided by now whether there would be any advantage in putting more extensive shielding in your guitar. If you think there would be an advantage in this, various methods are open to you. One involves glue and aluminium kitchen foil. Another method uses self-adhesive copper foil. This is less messy and allows soldered joints without difficulty. Unfortunately, I do not know of a supplier. All shielding methods have some disadvantages but self-adhesive copper foil is useful stuff to have if one is involved in making or repairing electric guitars.

The third method uses conductive paint, often called shielding paint. This is the method I would recommend, particularly for amateur use. I shall give addresses of paint suppliers and instructions for use next month.

CLASH:

"We're musicians"

David Lawrenson meets Topper and Mick, alias Headon and Jones

Along with the Sex Pistols and the Damned, the Clash were one of the original bands in the British punk explosion of 1976. It is a movement which has attracted much criticism, usually centered on the musicians' ability to play their instruments.

However, the fact remains that punk/New Wave has given rock music a much needed shot in the arm and the Clash have developed into one of the most potent and exciting outfits in Britain.

To some people in the rock business, the term "musician" is reserved for players who have been around a long time, amassed a huge collection of instruments or who take endless solos. Because all these criteria are largely absent from the New Wave, the implication is that it's a scene devoid of musicians.

Luckily, this narrow outlook is not universal. If it was we would have had no Beatles, Stones or the Who. Rock music is primarily concerned with expressing feelings, emotions and excitement — qualities which the New Wave has in abundance.

Mick Jones, lead guitarist with the Clash, expressed some surprise that a magazine such as IM&RW should be interested in interviewing him. Nevertheless, he is a powerful and exciting guitarist who is part of a new generation of players destined to provide inspiration for young musicians.

With a minimum of TV and radio exposure in the UK, the band's singles have consistently made the lower reaches of the charts, while their first CBS album, "The Clash", went right to number 12 and has sold consistently ever since. It has taken them 18 months to come up with a follow-up, "Give 'Em Enough Rope", which was their first release in the UK, coinciding with their tour there.

Mick Jones is 23. He started playing guitar at 16, having tried his hand at drums and bass. He blew a week's wages on a big blond F-hole Hofner acoustic which he used to mike up. "Then I got a Telecaster, a great old maple neck Tele, but I always wanted a Les Paul Junior.

"I thought they were the greatest guitars going because I'd heard both Steve Hunter and the other guitarist on the Lou Reed live album used them and I thought, 'This is what it's all about'. So I saved up for about six months and got one. It was really difficult to find, because there were none in the shops. Eventually I found one. It has been broken about four times, so it has more or less died but I've got a couple of others now.

"The guitar I'm using now is a 1952 Les Paul Standard, which got broken in Arnheim by the stage manager. It was on a guitar stand and he walked straight into it and the neck was off. I had a bit of respect for that guitar — it was older than I was! I got it fixed but it's not the same, it doesn't tune up and sustain goes. As a spare I use a Les Paul Junior, I've got a blue sparkly one and a red one. I think there are some guitars that do talk to you, you feel OK with them. If you feel good with them then they are great guitars."

Mick has very definite ideas on guitars and the way they should be treated and played. He is a firm believer in the quality instruments made by top manufacturers such as Gibson, dismissing many of the newer makes as merely "copies." "I didn't buy them when I had no money, so I'm not going to buy them now," he proclaims.

For amplification he uses a Boogie set-up. "I was using Ampeg for ages because the Stones used them, but now I've got a Boogie and it's really great, the best. I use one of those big ones with a graphic on it. If we are playing a really big hall I use a slave of a Marshall and a couple of 4 x 12s, otherwise it's just the Boogie and 4 x 12s. They're good amps except the speakers blow, but that's only because I turn it up to 10. I've got no self-control whatsoever.

"The only effect I use is an MXR phaser. It's the biggest they have. You can get about five different phases on it. We have Space Echo and that kind of stuff through the PA, and I use a wah-wah on one of the album tracks."

To many, the music of the Clash would seem crude and regressive, with guitarists such as Mick Jones definitely not qualifying as "musicians." Yet those same people would undoubtedly extol the expertise of the Stones or the Who — bands who definitely were not considered top quality musicians in their early days. It is impossible not to draw comparisons between the early Sixties and today's New Wave scene.

"It's probably just the same," says





Mick, "but it is a pity that all those people forgot about it, and forgot it was said about them. The point about our music is the spirit of the thing. You have got to communicate the spirit of what you do. When you do that, you can't really spend a lot of time respecting traditional values of what music is all about.

"I think it's nothing to do with what guitar you use, it's how you do it. I think you can do it on a Woolworth's guitar, quite truthfully. The important thing is how. Guitars are there to be used, it's a tool, you shouldn't let it play you or be your boss. Some groups you see and you say, 'Oh, the guitarist needs a good sound, he's got a tinny sound and it doesn't quite fit the music.' But really, it's only a matter of once you've got the thing that fits the music, doing it with a bit of style.

"There's lots of guitarists I really like. I think Mick Ronson's great, Keith Richards don't do much and I think he's pretty good, Jeff Beck does a lot and does nothing at the same time. There's loads of them I really like and I've got nothing against these people. I've only got something against those who . . . well, the only spirit they communicate is just taking the audience's money and giving them nothing for it — the groups with their heads in the sand."

Mick admits that he is still learning and that the group is still practicing and learning their craft. The biggest problem seems to be one of dynamics, in particular learning to turn down on stage so the vocals can be

heard. Mick writes most of the band's material along with fellow guitarist Joe Strummer. Their prolific output was one of the reasons for the delay of the album.

"We recorded it twice as demos before we actually cut down, then we recorded about 20 songs and ended up with only 10 on the album. Everything was concise and to the point, there is nothing on it that doesn't say something. Most groups are rushed into second albums almost before they've finished the first, they don't really have time to think about what they're writing, it becomes less creative and just another sales machine.

"We said we aren't going to rush, and told the record company that they would have to wait until we thought it was right. They could have had an album six months ago but it would have been dross in comparison to the first one. I think we have got a second album which is better than the first, and we're going to do a third which will be better than the second. That doesn't mean to say it will take a long time because now we're learning about producing and stuff we'll probably knock it off a bit quicker, but I'm very wary of quick decisions."

The one change in line-up between the albums has been their drummer, Nicky "Topper" Heaton. On the first album they used Terry Chimes, but soon after installed Topper in the drum chair and his contribution to the band both on stage and in the studio has been considerable. He is a powerful drummer, whose brief career has seen him gaining experience in a wide variety of styles — the type of credentials which would satisfy even the staunchest music critic. Topper began his musical career in Dover, playing drums to alleviate the boredom of six months in hospital nursing a broken leg (an injury which ended his thoughts of becoming a footballer).

His father spotted an Ajax kit in the local paper and bought it. "The bloke who suggested it was a trumpet player in a local trad jazz band. For some reason they were always short of drummers in Dover. They needed a drummer so as soon as I could hold a tempo, I was gigging. He gave me all these Louis Armstrong and Gene Krupa records so that's what I learned first.

"I was gigging regularly, getting about \$10 a gig, by the time I was 14. It was really good. The band were all about 50 and a couple of them used to be pros, they were pretty good. It taught me a lot about time keeping, just keeping it moving, keeping it swinging. When I started, just because I was straightforward — no fills or anything — they used to think it was great. Gradually I got better and they liked me less and less because I started being flash. The first lesson I learned was that other musicians appreciate a solid drummer not a flash drummer, so it influenced me a lot.

"I didn't really bother with drum tutors. I used to read the introductions and things like how to set up your kit and tune the drums. Paradiddles and triple paradiddles was as far as I got, but I never really got into reading.

"The Ajax kit was really good, I used it ▶▶



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CLASH

for about three years until I eventually realized that it wasn't so hot. Still, when I sold it to a shop I got \$80 for it. Then I worked on the ferries and saved up to get a Premier kit. Premier has become more expensive, but at that time it was the cheapest pro kit you could get and everyone had them out of London. You could go into any local music shop and get one and everyone stocked spares and fittings. That was one of the reasons I bought one.

"The one I bought was a silver finish kit — I'm really sold on silver finish kits. It was a good kit and a mate of mine is using it now with the Ian Gillan Band. It must be about six years old and it's still going strong."

Topper's next kit came when he joined the Clash. He had missed out on their first album and was just about to undertake an extensive tour, during which he would be "on probation." He insisted on a new kit for the tour, and only a few days before they hit the road, he chose a Pearl set which he still has.

The original kit consisted of a 24" bass drum, 13" x 9", 14" x 10", 16" and 18" toms. He got rid of the two small toms and brought in an extra floor tom, so he now has just three toms, the 14", 16" and 18". The cymbals are all Zildjians, 15" hi-hats, 21" rock rides, two 16" crashes and two 20" crashes. Topper uses crash cymbals as crash rides because ordinary crash rides are too thin and frequently crack.

"When I joined the Clash I noticed that the Premier didn't seem to have that volume or that kind of depth that I needed. You've got to close-mike them to get a really good sound. A lot of heavy drummers use them, like Kenny Jones and of course Keith Moon, but I couldn't get a heavy enough sound out of them.

"When I first got the Pearl I didn't like it. There were a lot of bits and pieces that I had to get together like metal rims on the bass drum. I didn't have time to mess about with them before the tour and on the tour, which was quite long, I couldn't get a good sound out of them. When I came back I changed to wood rims and that made all the difference.

"It's the little things like that that you only appreciate after a tour, so there's no

way I'll get another kit without having a good long time to try it. The only other drums I'd use would be Ludwig and Gretsch. Even then, with the Gretsch you have to change all the fittings because they're weak, but Ludwig are good. I use all Pearl fittings on my kit, with a Premier snare drum stand, Pearl hi-hat and all Trilok stands.

"The thing I like about the Pearl kit is that they're really loud drums and at the same time you can get that depth, there's no tinniness. I use the Pearl in the studio and it's great — the only time I'd get rid of it would be when it just doesn't stand up to touring any more. So far it has held up really well, it's a really strong kit."

The problems encountered by drummers are seemingly the same the world over, no matter what level you're playing at. Topper has his own drum roadie so many of these immediate problems are alleviated but he is still aware of them and remains convinced that it is an inevitable part of a drummer's life.

"I think you will always get the same problems from drummers. In order to retain a characteristic drum sound, what a drum sound is about, you've got to have individual tension rods, wooden shells, fiberglass shells. You always have to have stuff that is likely to break to get that sound.

"I use five cymbals and although I've got them pretty well set up, they are always slightly out from where I had them the night before and it takes a couple of numbers to get it right. Also the cymbals tend to slip down due to the threads going or whatever and I was thinking of getting actual welded stands in the position I want them in. It would be like the five stands on a truss and a bar coming round the kit, so you could just plop the kits on and they would always be exact.

"Most of the developments in drums don't seem to have gone into actually making things stronger. I think the only company who are really trying to improve its drums are Premier. Every six months they seem to be coming out with stronger fittings and new ideas while everyone else seems to be spending their money on electronics and new skins. The number of

different types of skins you can get now is a joke, they're all the same in principle.

"I've tried Asba drums and they are lovely and loud but you just get that ring — it's like playing in a marble room. I don't like the look or the sound of see-through drums. When I'm behind a kit, I like to feel I'm behind something solid. Synthesized drums make a nice sound for 10 minutes but then become boring, people just get the same sound out of them, which is not what they are designed for.

"The main drag I find is that everything de-tunes during the gig so I've got to tune between numbers. The snare drum takes a real hammering and I have to crank up the tension rods between every number. The only problem with a snare is you can tune it a bit too tight and it starts popping. You won't actually hear it acoustically, but as long as it's coming through your monitor you can tell it's popping and de-tune it."

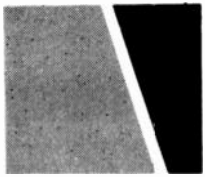
Before joining the Clash, Topper had his share of ups and downs but still managed to cram in quite a bit of drumming experience. By the time he was 17 he was playing in a band doing Miles Davis, Blood Sweat and Tears type material before joining his first fully fledged rock band. He realized that he would have to move to London if he really wanted to make it.

He did the usual round of answering ads and auditioning but found it soul-destroying. If people didn't know anyone you had played with, you were invariably immediately crossed off the list. Eventually he got a gig with a soul band from the US which was more useful experience, before he encountered Mick Jones and joined the band.

Topper describes his style as "fast and heavy". He adds: "As long as you keep it like that and don't lag, you can fill in anything you want." His influences include Simon Kirke and Terry Williams who plays with Dave Edmunds.

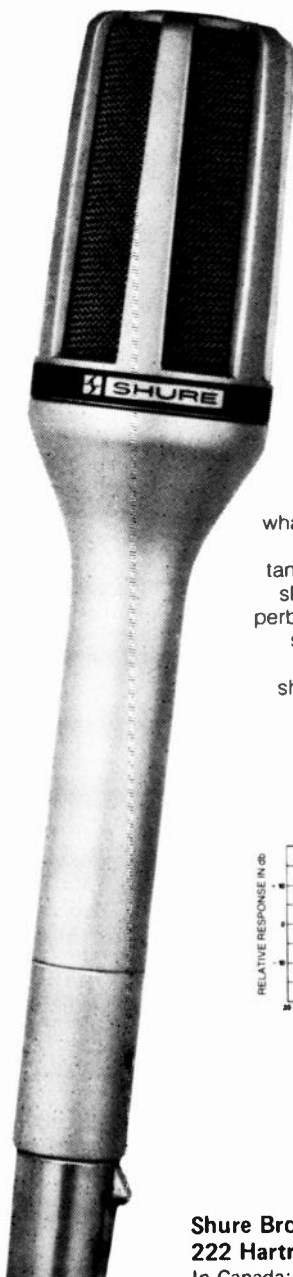
Together Mick Jones and Topper Headon represent a new wave of musicians who owe little or nothing to the "progressive" era of the late Sixties and Seventies. Instead, they hark back to a simpler and more exciting era — which is closer, perhaps, to the true spirit of rock and roll.





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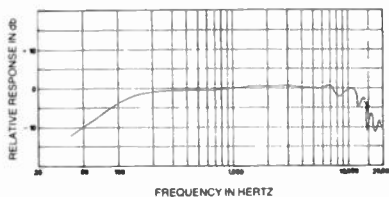
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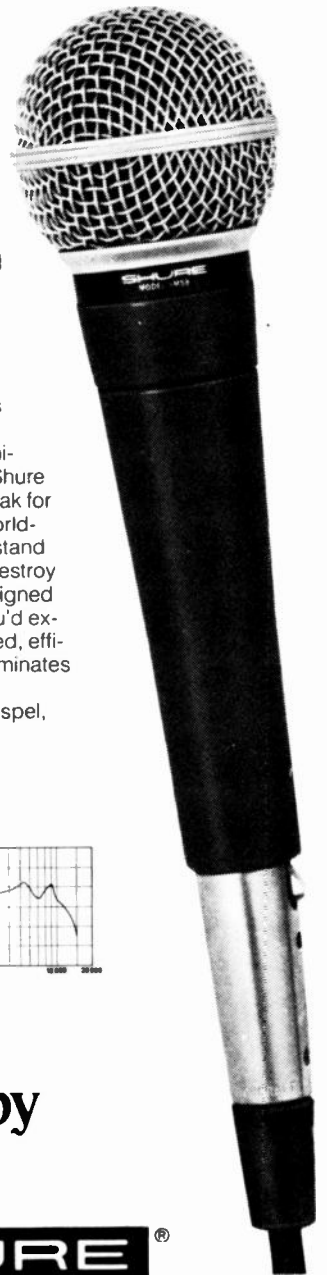
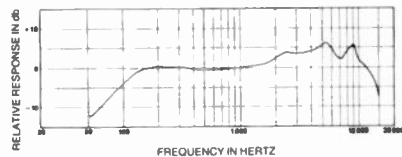
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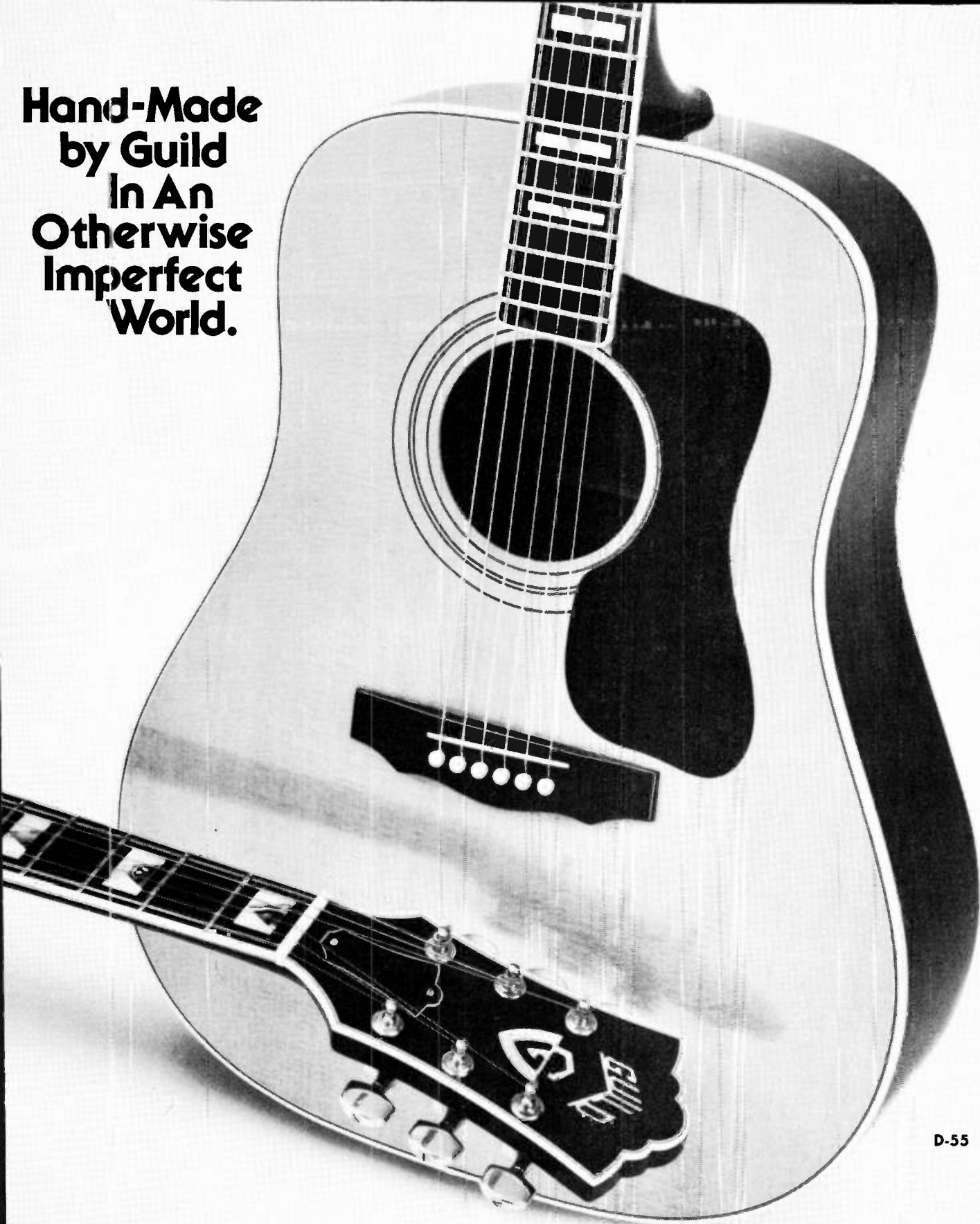
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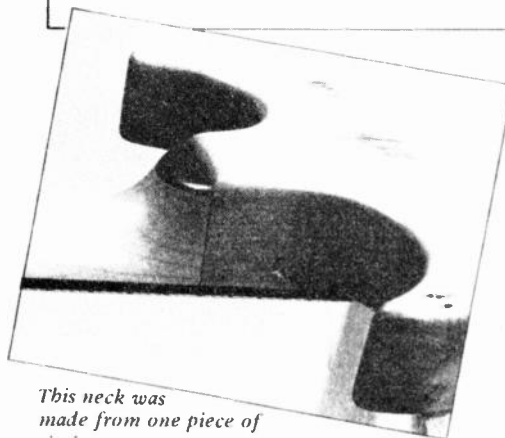
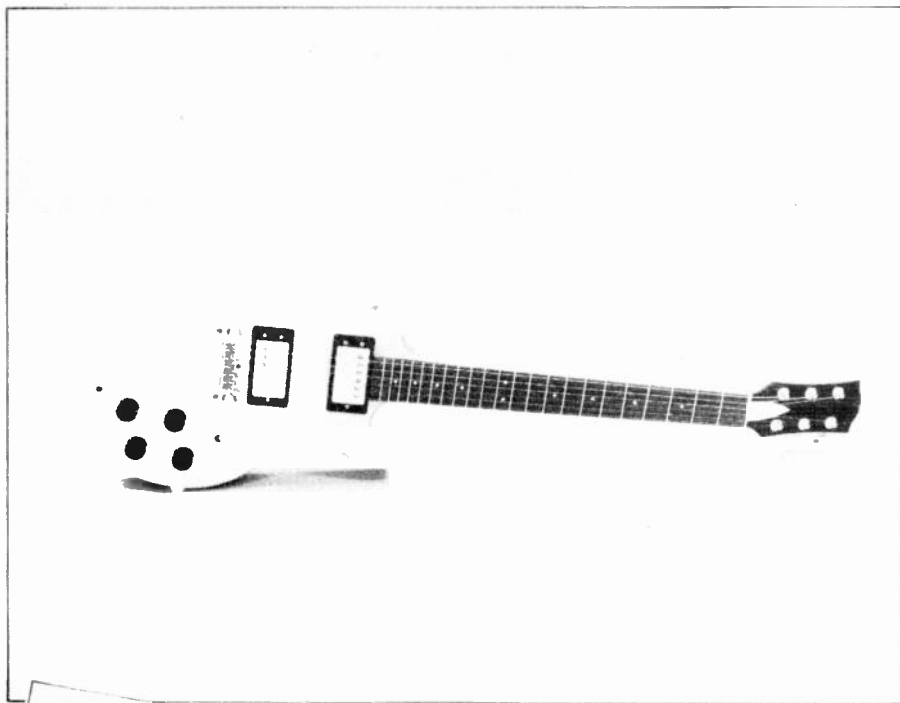
Part Two of Stephen Delft's series

Last month I used the word sustain. This term is used by musicians in several different ways. There seems to be sustain derived from saturation of the pick-up and/or amplifier (more about this later), and sustain referring to an instrument on which notes appear to remain at a relatively constant level for a relatively long time, before they begin to die away. It is this last property, which I call "natural" sustain, which is closely related to the design of an instrument and the materials chosen for its construction.

As far as I know, there has been no published research on the sustaining properties of plucked stringed instruments with relatively flexible necks (for example – the average electric guitar), and most makers work on a mixture of precedent, and trial-and-error. Detailed research requires time and equipment, an understanding of what electric guitars are for, and the ability to ask the right questions. For example, how many physicists would comprehend the difference between a good "vintage" electric, and its present day equivalent? I have even known serious research work carried out on a poor quality Japanese "copy", in order to find out the necessary properties of an electric guitar!

Any one of you, if you can discover the right questions to ask, could in your spare time, and with home-made test equipment, find the magic formula which will produce a really good instrument out of indifferent materials. In accordance with ancient tradition, there is a pot of gold at the end of the formula. However, while we await this discovery, it would help you to understand why some solid guitars have a better natural sustain than others.

As I mentioned last month, you can only put so much energy into a guitar string. This is stored as vibration, and as the energy leaks away, the string vibration gradually decays. The mathematics of this is quite well



This neck was made from one piece of timber.

understood, but you will find all the usual books assume that the string is stretched between two rigid supports – and guitars are not rigid! If you could make a perfectly rigid guitar, the string vibration would eventually decay because of small losses within the string and the small amount of air vibration (sound) which a thin string can produce by itself, but these are not significant effects in a real (and slightly flexible) electric guitar. If you play a solid guitar without an amplifier, you can usually hear some sounds and feel some vibration in the body and neck. These come from energy which has leaked away from the vibrating strings. It would be easy to say that the more rigid the guitar and the longer the sustain, the better the instrument: but what constitutes better in this case?

There is no arbitrary, "perfect" guitar sound. If anything, our standards of excellence are based on the

properties of certain vintage instruments, which were probably designed by trial-and-error until the result was musically satisfying to the maker or his advisers. We are accustomed to hearing from these old instruments (and from some of the best modern ones) the result of a string vibration which decays in a complex manner. Sometimes the sound is loud at first and then dies away quickly, sometimes there may be less impact at the beginning but the sound continues longer and the decay is more gradual, and sometimes the sound may appear to become louder *after* the start and then subsequently die away. An engineer who works with synthesizers would probably call these decay variations "Envelope Shapes." If you listen carefully, you may find that the same instrument has different qualities of sustain on different strings or in different positions.

Apart from obvious considerations such as the "feel" of the neck and frets, and the overall tone resulting from pick-up type and position, I believe it is this aspect of Envelope Shape (the subjective quality of the instrument's sustain) which gives the best solid guitars distinctive characters, more noticeable to the player than to the audience. However, this is really splitting hairs, because if you are playing an instrument which pleases you, you will probably produce better music and that will (hopefully) be appreciated by the audience. ►►

I hope some of you, who have already made several instruments, will find this of use in making the next one better still, but giving an instrument a controlled amount of flexibility requires a careful study of existing fine instruments, and a clear understanding of the vibrational properties of different woods. If you stray too far from conventions, it is easy to produce a distinctively unpleasant instrument.

If you are making your first or second electric guitar, I would suggest you make a conventional, single-cutaway instrument, with a maple neck and a mahogany body about 50mm thick. (I think, generally, that I prefer to play instruments with mahogany necks, but it is very difficult to obtain American mahogany with the correct qualities, and necks made from low-grade mahogany are too easily damaged). I have also successfully used English sycamore for necks, and English lime for bodies. Some makers use maple for fingerboards, and some players demand maple fingerboards, but I think this may be because of the lacquer which is sprayed on maple fingerboards to keep them clean. It can also be applied to rosewood fingerboards. If you can obtain well-dried rosewood or ebony for the fingerboard, it gives the truss rod something to work against, and helps to keep the neck straight.

This brings me to the subject of truss rods. I have had many requests for information on the availability and fitting of truss rods. You may be able to bypass this problem by purchasing a neck blank or partly finished neck already fitted with a truss rod. These are usually of the type which has a steel rod working within a metal channel: the whole assembly is glued inside the neck before the fingerboard is fitted. There are several other systems in use by different guitar companies, but the one I prefer to use is just a thin steel rod, set in a deep slot in the neck (under the fingerboard) so that it ends up within about 3mm of the back of the finished neck. One end is attached in the heel of the neck, brazed onto an anchor plate of some sort, and the other end is threaded to take a tension-adjustment nut in the usual pocket in the front of the head. For really slender necks, I prefer to fit a slightly curved rod into a curved channel, so that the distance from the rod to the fingerboard varies along the neck. Gibson held the original patent on adjustable truss rods. Some of their early necks were made with a variable depth slot for the truss rod



Truss rod adjustment nut

and most of those necks are still perfect. It doesn't prove that this is the only way to make good necks, but it is certainly one way! Fortunately, if you don't use soft mahogany, and don't make ultra-slim necks, a straight truss rod will do perfectly well.

The main purpose of a truss rod is to counter the forward warping of a guitar neck caused by the tension of the strings. This was originally necessary on acoustic guitars with fairly high-tension strings. The string tension (and therefore the warping) on most electric guitars is much less, but to obtain a really low action, with a conventional wooden neck, a truss rod is still advisable. If you are not a low-action fanatic, and normally use very light strings, it is perfectly possible to fill the entire truss-rod slot with a steel strip, glued in with epoxy glue. The sustain "shape" will be a little different, and the instrument will balance "neck-heavy" but there should be no troubles with neck warping.

There are some problems in obtaining a piece of stable wood large enough for a guitar neck. Most makers either make the neck from three or more layers, like a sandwich, with the layers edge-on to the fingerboard, or they cut the main part of the neck out of a piece of timber about 60mm square, and add small pieces to the bottom of the heel and the sides of the head. The "sandwich" construction (for instance from nominal 1 inch – or preferably 1 1/4 inch maple boards) is more likely to be stable if your glue joints hold. Avoid a joint on the line of the truss rod. The almost-one-piece method is less work, and allows more freedom in shaping the neck, but needs more reliable wood. You should also

carve such a neck in two stages: remove most of the waste, and then leave it in a dry room for a couple of months, so that the final carving and planing can remove any small warping which may have occurred. You may still need a few extra bits for adding to the heel and head. These pieces should also be maple but there is no mechanical reason why they should be a perfect match. By the way, remember that it is much easier to cut the truss rod slot before you start carving the neck. You need straight parallel sides to guide the cutter.

I have prepared basic plans for the guitar neck and the part of the body which carries bridge, pickups and controls. The rest of the body can be adapted, within reason, to suit your tastes.

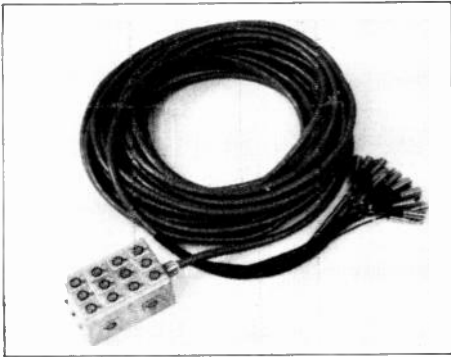
The first part of the plan, covering neck and truss rod construction is reproduced, on a much smaller scale, in this month's issue. I would strongly recommend that you obtain a full-size copy from the address listed at the end of this article. You will notice from the photograph opposite that I am making the neck from one piece of reliable timber. If you are not so fortunate, the plans include information on making a neck from about one meter of what used to be called "nominal 6 inch by 1 1/4 inch" Canadian Maple boards. Maple in these dimensions is not so difficult to find, if you are fairly determined. It is usually supplied rough-sawn (sometimes very rough), and if you can arrange for the supplier to plane the saw-marks off both sides, you will save yourself a lot of work.

If you make a laminated neck, you will need plenty of clamps to hold the pieces together while the glue sets, and you may find it easier to make only one glue joint at first and to add the other side-piece the following day. Gluing three pieces of wood at once can be a slippery business. There are many woodworking glues in common use which are not really suitable for making a stable guitar neck. I have found four successful glues for this job, and they all have disadvantages. In order of my preference, they are:

- (1) Gap-filling resin adhesive. This is a thick paste, smelling of marzipan, which is mixed with a liquid hardener. Its main disadvantage is that it seems only to be obtainable in something like 10lb. tins, and it has a limited shelf life.
- (2) Prepared guitarmakers' or cabinet makers' hide glue. This is a traditional animal glue, supplied in jelly form, ►►

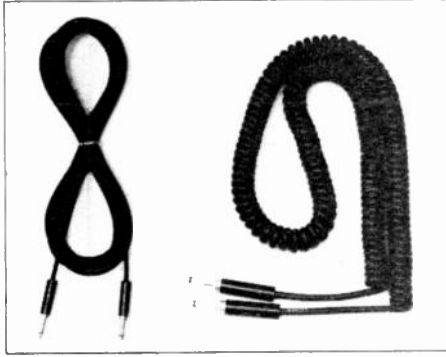
ALTERNATIVES FOR THE MUSIC INDUSTRY

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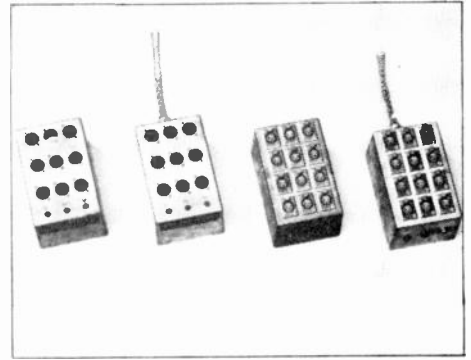
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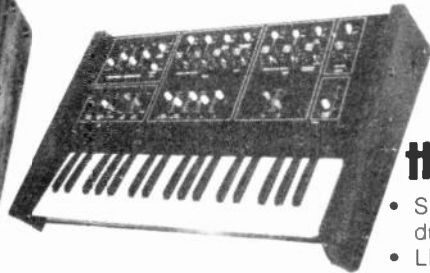
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but it has been modified so that it remains liquid for a longer time, in normal use. However, the problem remains, to a lesser extent, that the glue must be heated in a water bath to make it liquid, and applied hot, preferably to pre-warmed wood. If it cools enough to become a jelly again before the joint is lined up and all the clamps are tightened, the joint will appear sound but will break easily at some later time. In normal winter room temperatures (say below 23 degrees Centigrade), it is impractical to use this sort of glue on large or complicated joints, unless you work, as I do, under a Silica Bar radiator or something similar. This pre-heats the wood for an hour or so, and keeps me warm while I am working. In spite of the problems, I prefer to use this type of glue for most of the joints in instruments I make, and for some repairs. Once you get everything warm, it is quick, clean, and often gives stronger joints than technically better adhesives. You can estimate the available assembly time, by putting a drop of glue on the joint and timing it, until it gels. For a longer assembly time, raise wood and air temperature or add 10% hot water to the glue, if it has become too thick.

Animal glue is softened by high humidity, particularly when combined with high temperatures, and readers in hot climates might prefer to use glues based on Resourcinol or Phenol-Formaldehyde. I have not found this sensitivity to be any serious problem in temperate regions.

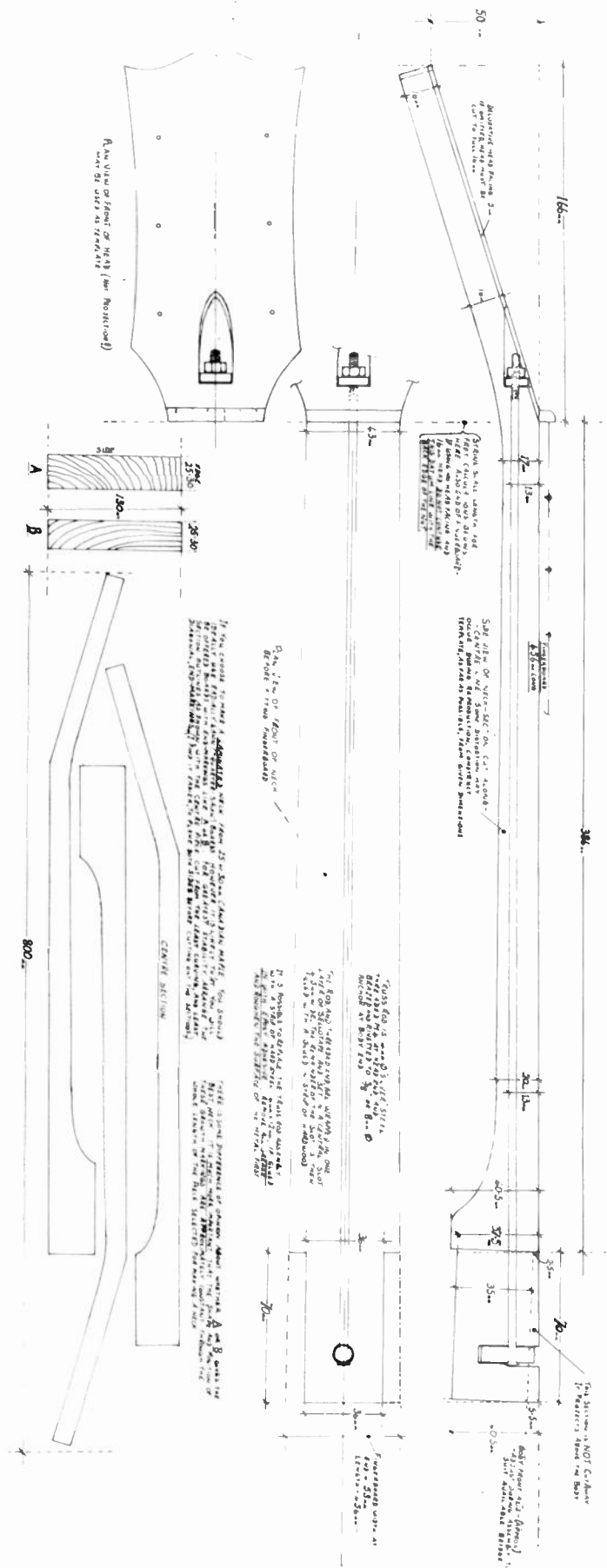
(3) Slow setting epoxy adhesive. This requires about two weeks curing time in a warm room before it is safe to put any stress on the assembled neck, and it needs perfectly clean wood surfaces. Even a trace of packing grease from the sole of a new plane can make the joint useless.

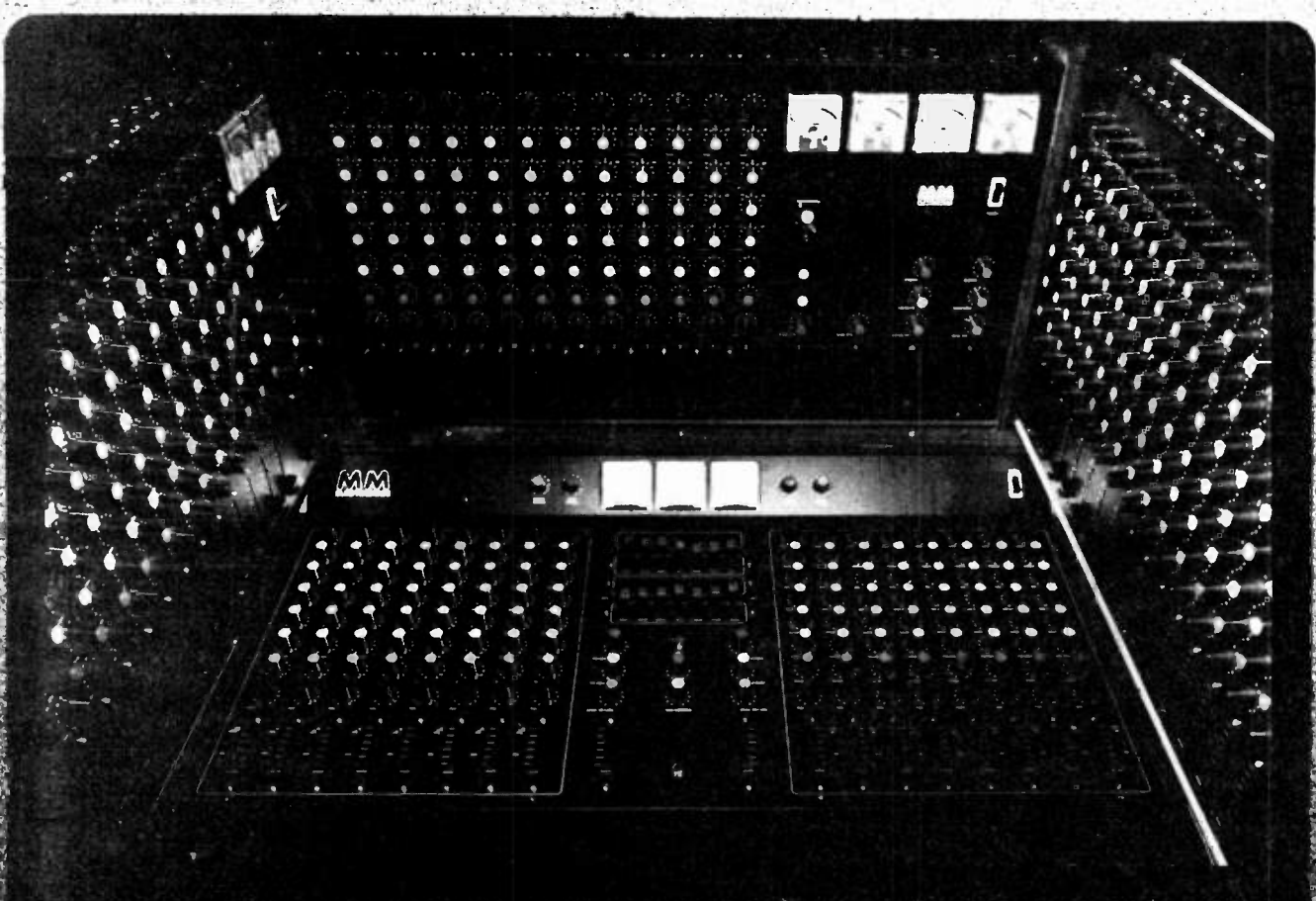
(4) Yellow Aliphatic Resin glues such as Zigbond or Titebond. These yellow aliphatic glues are very convenient. They are used straight from the bottle, in almost any temperature, and allow a reasonable assembly time, which can be extended, where a weaker joint is unimportant, by adding 10% water. Their disadvantage is high cost and reservations about the use of these resin glues for high stress joints, which must keep an accurate alignment, particularly in hot climates or central heating. Joints made with these adhesives are water-resistant but can sometimes be opened with a knife and boiling water.

Next month, I shall deal with making the truss rod and shaping the neck.

For full-scale plans write to: Guitar Plans, International Musician and Recording World, 277 Old Nyack Turnpike, PO Box 414, Spring Valley, New York, NY 10977. Specify whether you want neck or body plan, or both, and enclose \$5 for each plan.

This guitar design is based on a working string length (scale length) of 24.5 inches/622.32 mm. If you intend to buy a finished or partly-shaped neck and/or fingerboard, check that it fits the dimensions on the plan, or be prepared to modify the body joint and position of the bridge, to suit your neck. Neither I, nor the magazine, can undertake to provide advice, or modified plans, to suit different necks or fingerboards.





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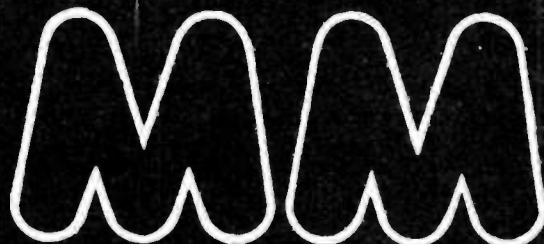
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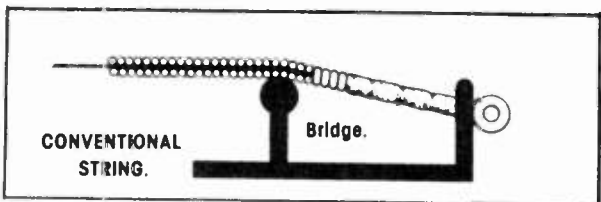
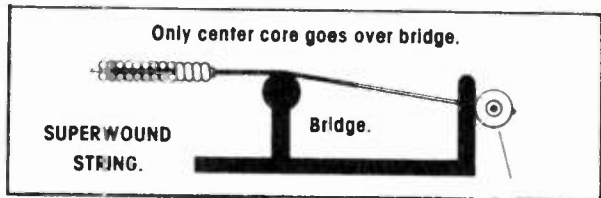
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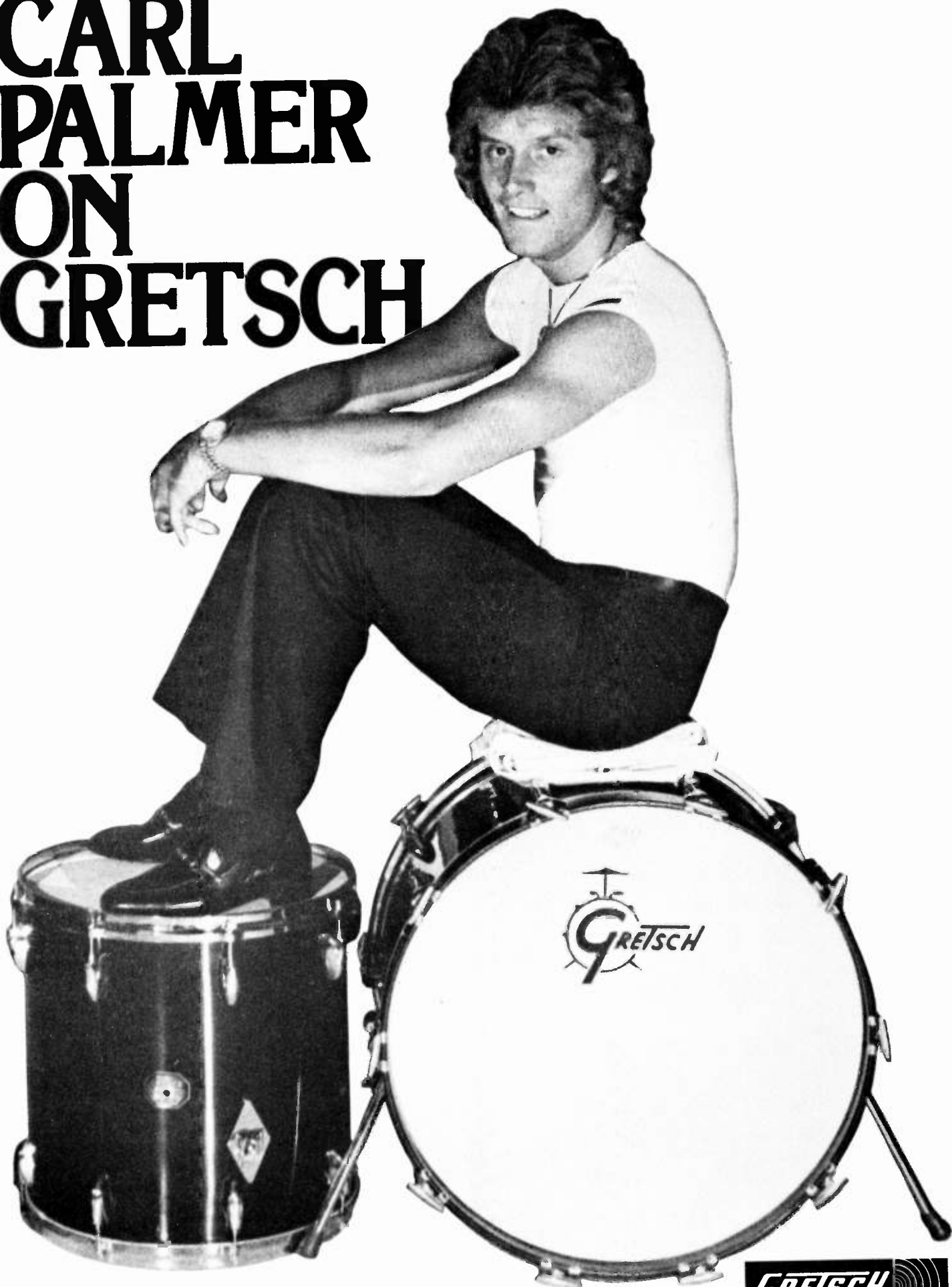
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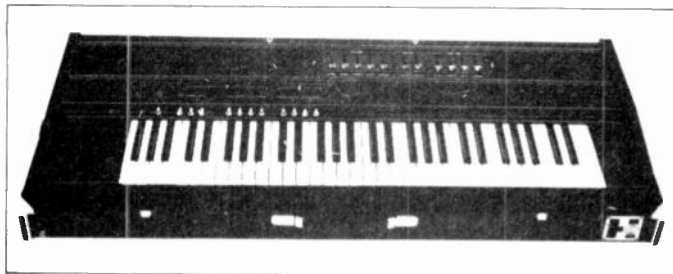


New Products

String Section

The Stringer XL is the latest in the Hohner Stringer Keyboards line. Said to be the smallest four-octave portable string synthesizer on the market, it was designed to give musicians an add-on string ensemble. The instrument incorporates a full

complement of string voicings including violin, viola, cello and ensemble. The Stringer XL also has a triple modulation system and variable decay and volume slide controls. It comes complete with volume pedal and music rack.



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New lines from Amanita

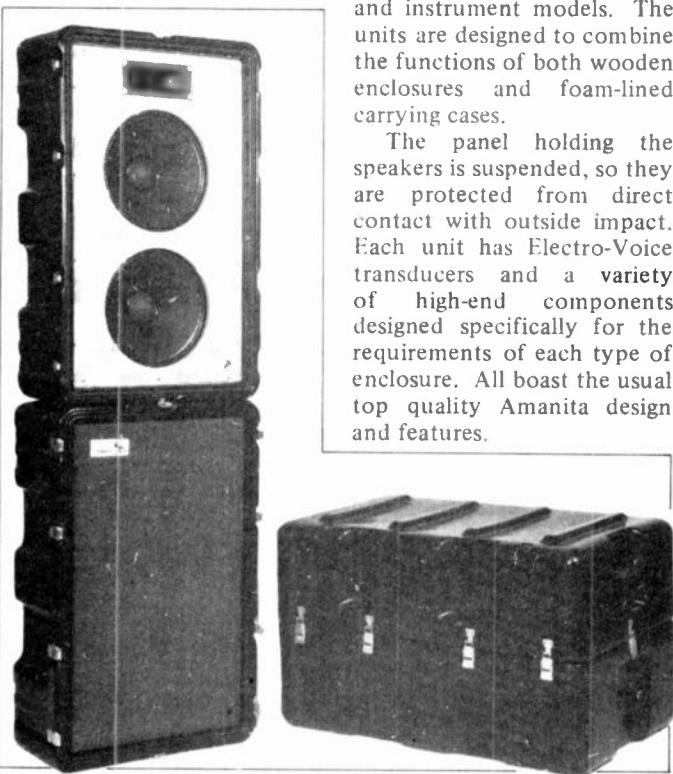
A number of new products are scheduled for release by Amanita Sound Inc., makers of protective loudspeaker enclosures. Their new model 909 PA, consists of two speaker cabinets which clasp together face to face giving maximum protection in transit.

The entire unit is equal in size to just one 3018 enclosure

each incorporating two 12 inch speakers and one 2" x 6" ceramic element horn. A new stand adapter has also been introduced which can be mounted to all Amanita monitors as well as Beyer and Dynacord loudspeaker stands.

The company is also offering a unique new line of protective loudspeaker enclosures, which includes monitors and instrument models. The units are designed to combine the functions of both wooden enclosures and foam-lined carrying cases.

The panel holding the speakers is suspended, so they are protected from direct contact with outside impact. Each unit has Electro-Voice transducers and a variety of high-end components designed specifically for the requirements of each type of enclosure. All boast the usual top quality Amanita design and features.



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Audio Marketing introduces new HH power amp

Audio Marketing Ltd., the exclusive US distributor of HH Electronics equipment, is introducing the new 500-D two channel power amplifier. The new unit, which boasts 500 watts per channel, is just 3½ inches deep which makes it ideal for PA use.

It is claimed to be 50 per cent more efficient than conventional amps, with a high damping factor to help extend speaker life by reducing overshoot and doubling. A modular output section which can be replaced in a matter of minutes, is another advantage of the 500-D.

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Speaker Stand

Ultimate Support Systems has introduced a portable speaker stand which weighs a mere 12 pounds but is claimed to be capable of supporting 300 pounds. By using spring locking systems and push-pull fasteners set-up time takes about two minutes and the system allows for two height settings with the ability to be tilted for optimum audience coverage. The stand accommodates narrow column speakers or huge base enclosures with no adjustments or modifications. Each pair comes in a waterproof nylon tote bag.

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Schecter's replacement kits

A new assembly kit, designed as a complete replacement electronics unit for Les Paul type guitars, has been introduced by Schecter. They say this latest innovation will offer a versatility and options never before available to guitarists.

The unit features the new Allen Bradley push/pull omni pots and Schecter's own Z plus humbucking pickups

New LoPrinzi



A. LoPrinzi Guitars, Inc. recently unveiled their newest guitar, the LoPrinzi TM-10. A steel string guitar, it features a solid wood spruce top and Bohemian flame top, two piece back and sides construction. The neck is carved from solid Honduras mahogany with an encapsulated, fully adjustable truss rod. The fingerboard is ebony and the bridge is rosewood. All frets are nickel silver. The finish of the TM-10 is a natural gloss finish highlighted by white binding.

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Understanding Synthesizers

Introduction

In this series of articles, I will be describing in a way which you can easily follow how synthesizers work and how they can be used to produce the sounds you are searching for. There will be at least ten articles in the series, each leading on from the one before, starting next month with simple descriptions of the individual synthesizer modules and building up gradually step by step so that, in the end, you will be able to understand the most sophisticated of synthesizer systems such as those used by Tangerine Dream and Tomita.

But before we start on the synthesizer modules themselves (I will be explaining the mysteries of voltage-controlled oscillators, keyboard voltages and gate pulses in future articles) let's have a look at some basic terms, many of which you have probably heard used countless times. Some of them you may be a bit vague about; so let's press on and relate these terms — familiar or not — to sound synthesis whenever we can.

Sound Waves

All music, speech and noise reaches you through minute variations in the pressure of the air between your ear and the source of sound. A loudspeaker is an obvious example of a sound source, the loudspeaker cone producing sound by moving in and out in response to the electric current supplied to its coil by the amplifier. The movements of the cone produce pressure variations, or sound waves, in the air which travel outwards at approximately 1100 feet per second — that's approximately 750 miles per hour. These pressure waves quickly reach your ear and produce movements of your eardrum which are very similar to the movements made by the loudspeaker cone. What we hear as sound are the rapid changes in pressure of the air near the eardrum. All this is illustrated in Fig. 1. You will see that the movements of the loudspeaker cone are along the direction of the sound itself, and for this reason sound waves are known as *longitudinal waves*.

Oscillations

Suppose we take an acoustic guitar, place a microphone in front of it and connect the microphone to an amplifier and speaker as shown in

Fig. 2. Pluck a string and, assuming all's well, we hear a note emerge from the speaker. It is worth thinking about the different types of process that have occurred:

First, a string was set into vibration by plucking it. The regular, repetitive (periodic) movements of the string back and forth can be described as "oscillations"; the string is oscillating. Secondly, the vibrations of the string were transmitted very rapidly through the bridge to the body of the guitar (pressure waves in solids and liquids travel incredibly fast — much faster than in air). Thirdly, the guitar body set the air vibrating and the sound waves traveled to the microphone. Inside the microphone is a diaphragm which vibrates when sound waves strike it, and the fourth stage of the process was the production of electrical signals from the microphone into currents sufficiently large to produce vibrations of the speaker cone . . . and you know the story from there (see Fig. 1). Don't think that "oscillation" just means the ear-splitting howl due to "feedback" in a PA system. *Oscillations are vibrations* — vibrations in solids and gases (air for example), or vibrations of the tiny particles (electrons) to the amplifier and from the amplifier to the speaker.

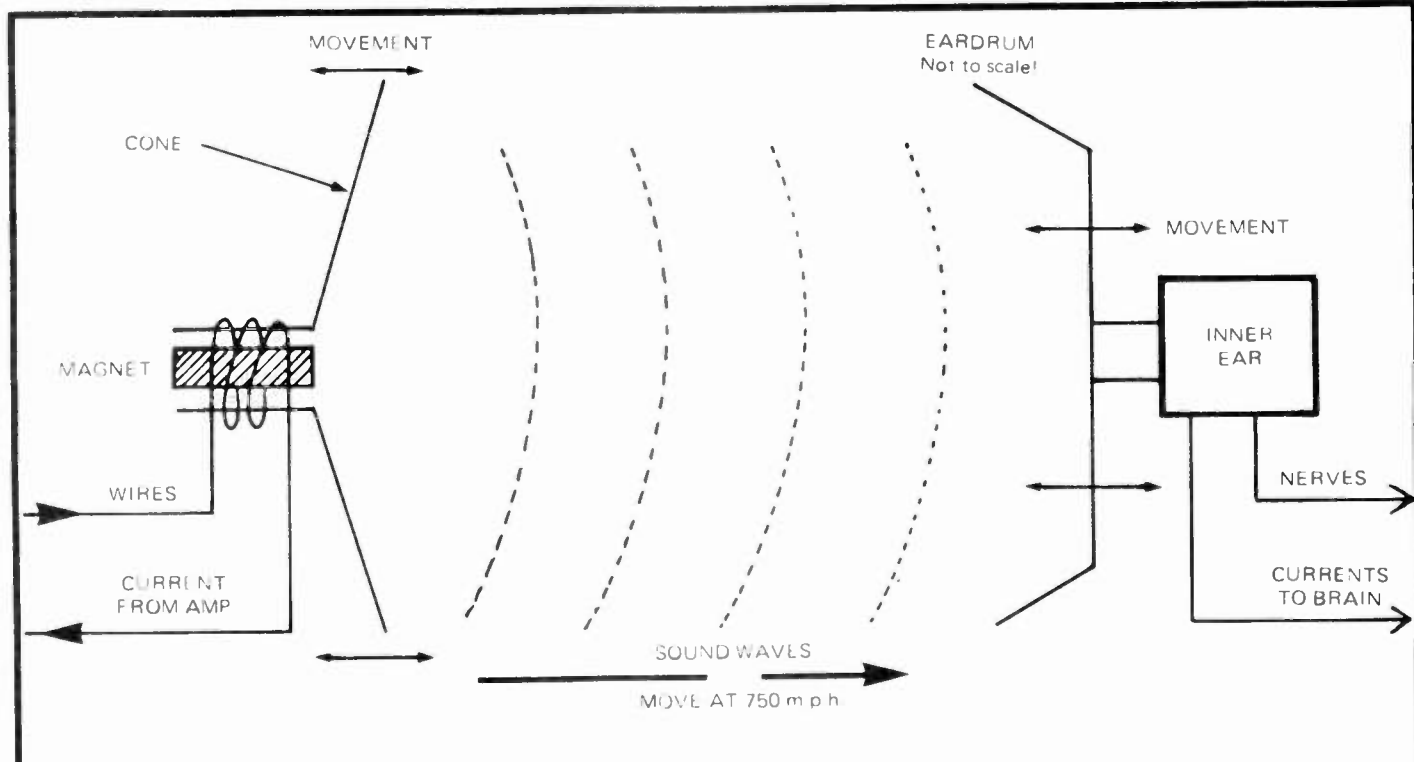


Fig 1. This diagram is definitely not to scale, but shows how the movements of the loudspeaker cone and eardrum are similar. It's a curious fact that synthesizers produce electric currents (it's the

loudspeaker that produces the sound!) and our brains detect sounds from the electric currents received down nerves from the inner ear. Do *not* attempt a direct connection!

Frequency

Let's return to the vibrating guitar string; it is oscillating back and forth very rapidly. If you could see the individual vibrations, you would find that the string is repeating a fixed cycle of events (*cycle* for short). Starting when the string is straight, it moves out to one side (getting tighter as it does so), and back again to the center. This cycle (one complete "vibration" or "oscillation") would occur about 82 times a second if the lowest E string was plucked and about 329 times a second for the highest string. Another way of putting this is to say that the lowest string *vibrates with a frequency of 82 cycles per second (c.p.s.) or 82 Hertz (Hz)* (pronounced "hurts"). Cycles per second and "Hertz" are the same thing (Hertz was a scientist). I will be using the abbreviations Hz (Hertz) and KHz (kilo-Hertz) in later paragraphs, the latter standing for "thousands of cycles per second." So, for future reference, 2KHz means a frequency of 2,000 cycles per second. By the way, the term frequency is used interchangeably with pitch: low-pitched notes have low frequencies and high-pitched notes have high frequencies. It's worth remembering that *every time the frequency doubles, the pitch rises by one octave.*

There is, of course, a direct correspondence between the movements of the guitar string in Fig. 2, the variations in air pressure around the microphone and the electrical signal generated by the microphone. Fig. 3 shows how these different types of oscillation can be represented by very similar graphs. In Fig. 3A, the first guide is marked starting at ● and ending at X. If 82 of these cycles are occurring every second (frequency = 82Hz), then one cycle takes 1/82nd second (that is the *period* of the oscillation).

Synthesizers produce the widest range of frequencies of all musical instruments, from frequencies as low as 1/10Hz (i.e. only one cycle every 10 seconds) to frequencies as high as 20KHz, which you cannot hear — a total range of more than 17 octaves! For comparison, the range of the pipe organ is about 10 octaves, the piano usually 7 octaves and the human voice only about 2 octaves.

Amplitude

We have so far considered only the pitch (frequency) of sounds, but of course there is another quality of sound — its volume — which is all-important. Referring back to Fig. 2, it is common experience that plucking the guitar string harder produces a

louder sound because the string then vibrates over a wider range. The maximum movement to right or left is called the *amplitude* of the vibration or oscillation. Just as the term "frequency" can be applied to different sorts of oscillations (e.g. mechanical vibrations or electrical signals), so the term "amplitude" applies to all types of oscillation. In Fig. 3, the maximum height of the curves above or below the horizontal line represents the amplitude of mechanical oscillations (Fig. 3A), pressure oscillations (Fig. 3B) and electrical oscillations (Fig. 3C).

Now Fig. 3 shows only about 3 cycles of each type of oscillation and it looks as though the amplitude might stay the same indefinitely. Synthesizers are one of the few instruments capable of producing oscillations at constant amplitude, but almost every other instrument produces sounds which vary in amplitude (volume or loudness). Fig. 4 shows how the amplitude of the sound produced by striking one note on the piano increases very suddenly, then decreases gradually as long as the key is held down and then decreases quite rapidly as the key is released (when the damper stops the strings vibrating). As you will be learning later in the series, synthesizers do have facilities for varying the

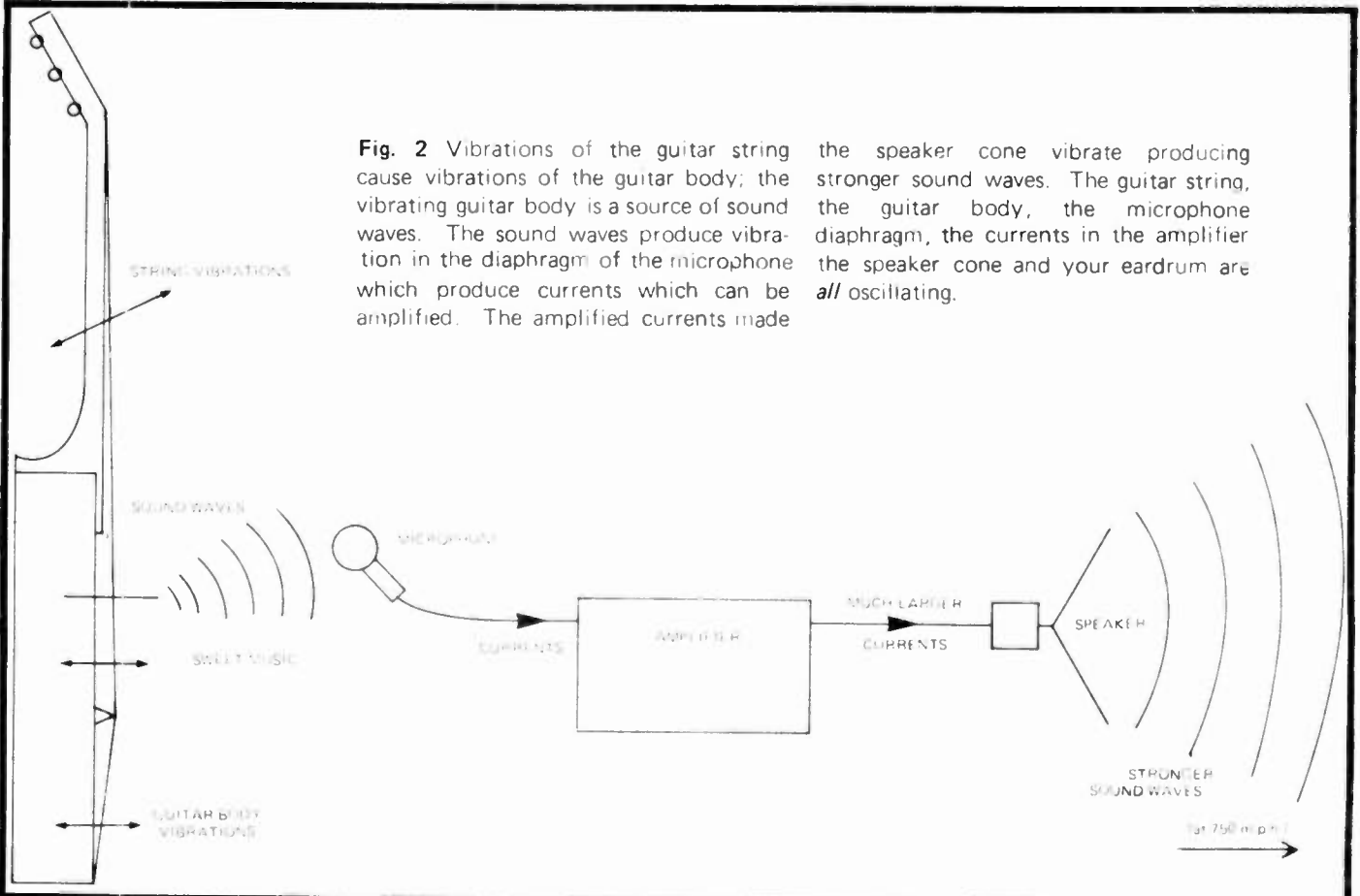


Fig. 2 Vibrations of the guitar string cause vibrations of the guitar body; the vibrating guitar body is a source of sound waves. The sound waves produce vibration in the diaphragm of the microphone which produce currents which can be amplified. The amplified currents made

the speaker cone vibrate producing stronger sound waves. The guitar string, the guitar body, the microphone diaphragm, the currents in the amplifier the speaker cone and your eardrum are *all* oscillating.

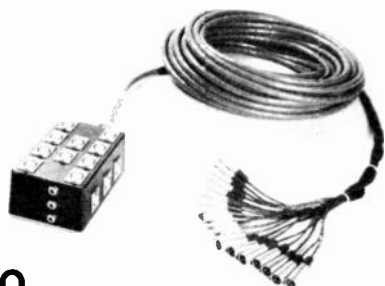
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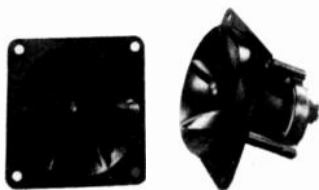
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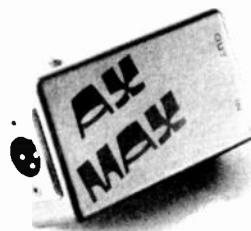
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Understanding Synthesizers

amplitude of its signals (the oscillations) and it is possible to produce very authentic piano sounds using a relatively small synthesizer.

Decibels

Whatever the type of oscillation, frequency is always measured in terms of "cycles per second" (Hertz). At first sight, you might think that amplitudes might be measured in different terms according to the type of oscillation . . . and you would be right. Distances can be measured in inches, pressures in pounds per square inch, electrical signals in terms of amps (current) or volts (voltage). But suppose we think of everything in *relative* terms? Let's imagine we have a musical genius, Fred, who can *always* pluck the guitar in Fig. 2 in exactly the same way. You come along and have a go after Fred. Now we can compare the amplitude of the string movement you produced with Fred's; *relative* to Fred, you produced, say, twice the amplitude. Relative to Fred, the microphone produced twice the output when you played - and so on. All the amplitudes for the different types of oscillation have *the same relative value* when you compare your efforts with Fred's. When amplitudes are expressed relative to some reference value, the term "*decibels*" is used. Because of the way engineers have chosen to define them mathematically, decibels (dB) have one particularly useful property, which is best illustrated with a table:

reference power is called	0dB
x 10	10dB
x 10 x 10 (100)	20dB
x 10 x 10 x 10 (1000)	30dB

Doubling the power, say 50 watts to 100 watts, is a 3dB step or increase.

However do not forget that we are dealing with volts when we are talking amplitudes and dealing with synthesizers.

Next month we will go on to discuss Aural Sensitivity, Vibrato, Tremolo and Waveforms in general.

Reference amplitude is called	0dB
x 10	+20dB
x 10 x 10 (100)	+40dB
x 10 x 10 x 10 (1000)	+60dB

Every tenfold increase relative to the reference amplitude is called an increase of 20dB. You might like to check that 120dB corresponds to 1,000,000 times the reference value, and as a useful fact for future reference, every time the amplitude doubles we say the "signal" has increased by 6dB.

Amplitude is measured in *Volts* and the above decibel scale is used to compare voltages. With synthesizers we are dealing with voltages, *not* watts. In order to clear the minds of those of you who may be a little confused about power decibels (used to compare power outputs from loudspeakers or amplifiers), the following rule applies. With power (watts):

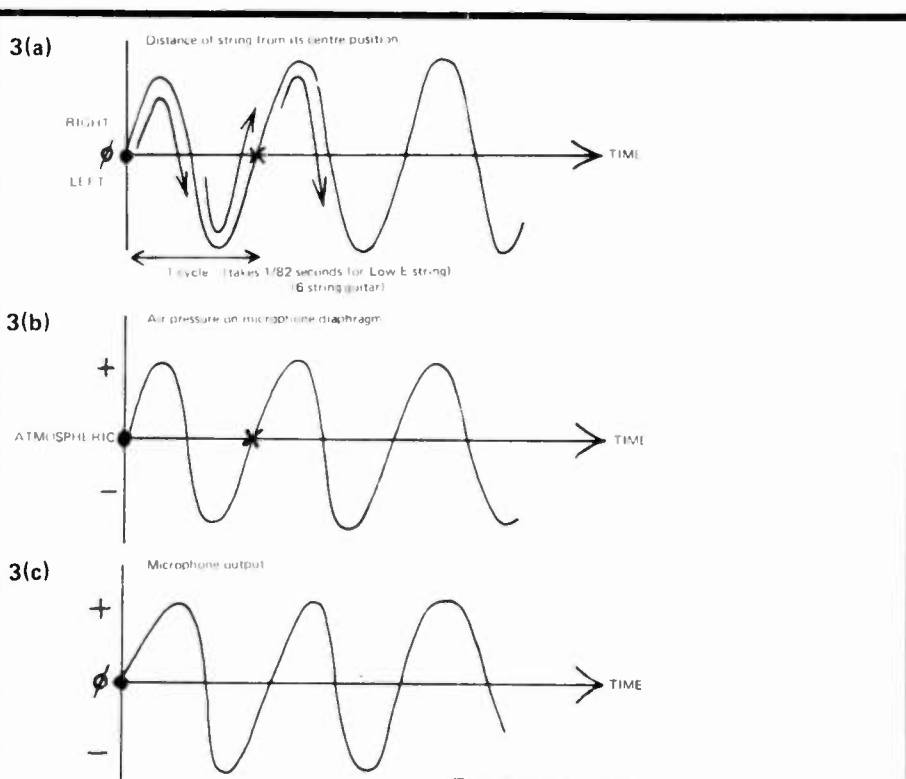


Fig. 3 These diagrams show how the position of the guitar string, the air pressure on the microphone diaphragm and the electrical output of the microphone all change in the same way as time goes by. Let your eye follow the arrows on the top diagram (A) to get the idea of how the graph represents the string's movements.

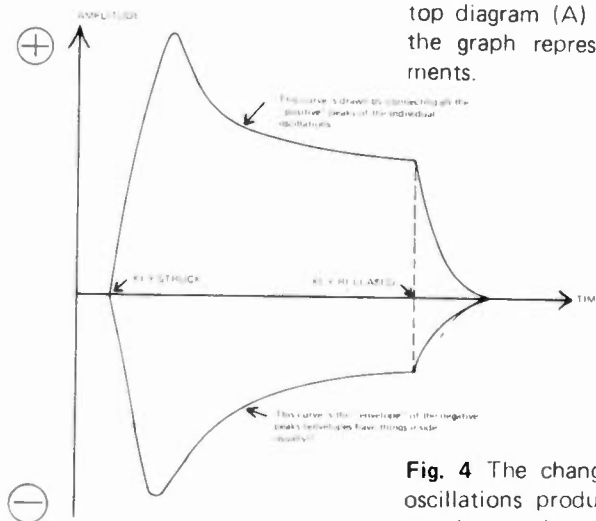
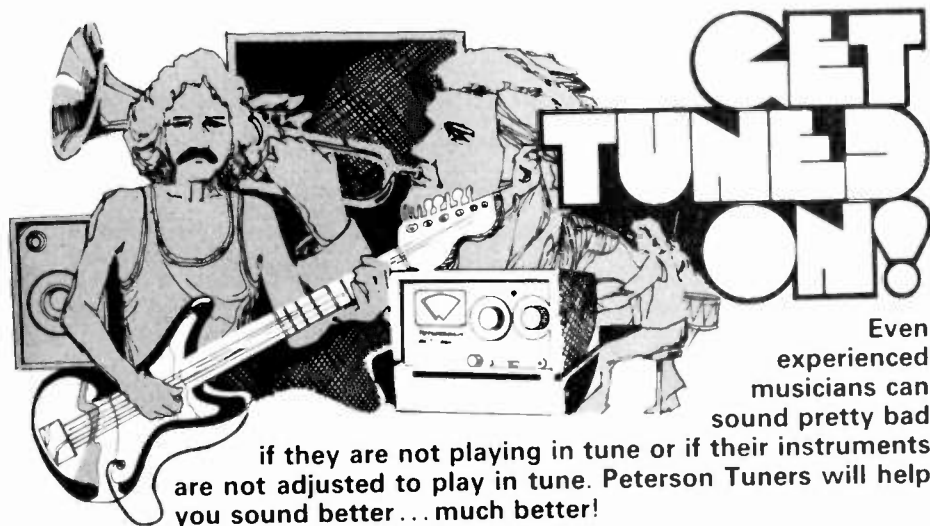


Fig. 4 The change in amplitude of the oscillations produced when one note is struck on a piano.



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The logical alternative

to those marginally-designed California drivers that regularly blow their cones and smoke their voice coils is this conservatively designed power transducer from Britain. The ATC PA-75 has rapidly become the UK and European standard, and forms the heart of Eastern Acoustic Works' extraordinary instrument: loudspeaker systems.

Built in the old world tradition of master craftsmanship from the hand-wound edgewise copper ribbon voice coil to the precision centered cone, the ATC PA-75 is available in a version optimized for every use from bass guitar to full range PA. Call or write for the "works".



Eastern Acoustic Works, Inc.

59 Fountain Street, Box 111, Framingham, Massachusetts 01701/(617) 620-1478

Circle 449 on Reader Service Card

World Radio History



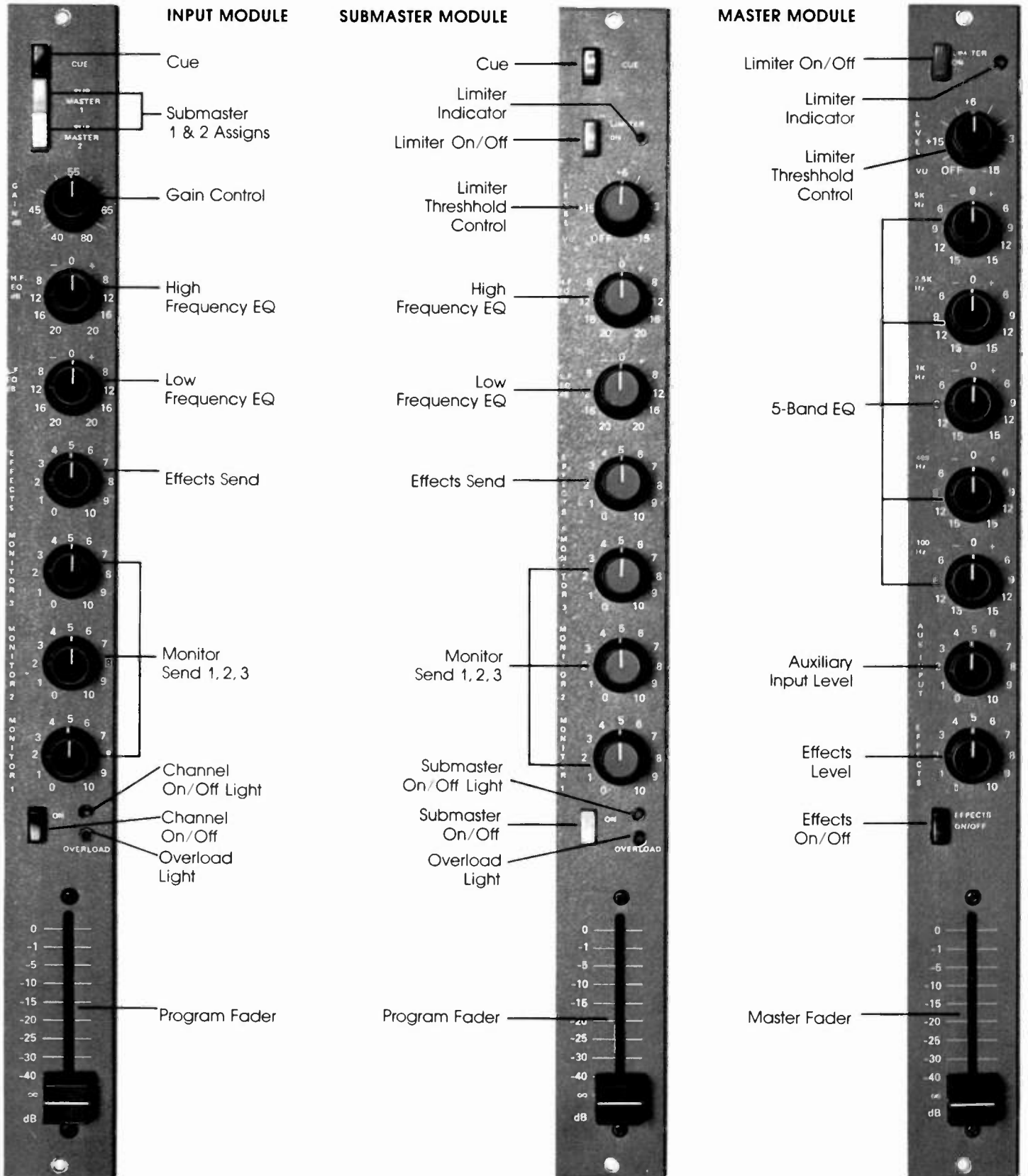
Fender M 12 Live Performance Mixer.



Fender
Professional
Sound Products
MADE IN U.S.A.

Introducing the Fender M

...designed specifically for professional sound
submasters and limiters...facilitates live



M 12 Live Performance Mixer

reinforcement with advanced features including multi-track recording on stage or in studio



CONTROLLER MODULE

Talkback
Mic Input

Earphone
Selects

Earphone
Level

Talkback
Mic Level

Talkback
Selects

Talkback
On/Off

Earphone
Outputs

Now from Fender comes a 12-channel mixer which may well be the farthest reaching professional mixer in its category, the Fender M 12 Live Performance Mixer — with features and functions you need for concert sound reinforcement. And it's ready for live track recording anywhere. All this in a rugged, portable mixer.

12 in/4 out/plus

The Fender M 12 Live Performance Mixer starts with 12 input and 4 output channels. Beyond that, it offers unequalled expansion potential because it interfaces with other mixers

Assignable submasters

The M 12's two fully assignable submasters and 4 masters let you mix combinations of channels while the remaining channels stay intact. Any signal may be assigned *anywhere* on the board — to both submasters and masters — enabling you to combine any mic or effects groupings. Mix down six drum mic inputs, for example, into one submaster output, or four keyboard inputs — mic'd or direct. Then mix your remaining channels.

Built-in output limiters

Six fast attack, slow release limiters — one for each submaster and four output busses — keep you from overdriving your power amps. Each limiter has variable threshold control and indicator LED.

No hum or noise

All lo-Z microphone input and main output channels are transformer coupled and floating, eliminating hum and noise. All main and auxiliary outputs will drive 600 ohm loads. With the M 12, you hear the performance not the mixer.

Full talkback and cueing

With the separate talkback facilities, you can communicate to the program or three monitor mixes or cue without using valuable input channels. The cueing function is independent of the program or monitor mixes, you can solo any channels via your earphones.

Hi-level in/out flexibility

Flexibility means individual channel looping is available so that the signal can be processed in a special effects device and returned to the input channel. The Fender M 12's comprehensive in/out interface allows input of any line-level source — from tape recorders to effects — into input channels, submasters and masters. You can use both reverb and echo simultaneously. That's flexibility few other professional mixers offer.

5-band equalization

5-band eq on the four master outputs provide for tone coloration of the final mix.

Peak indicating VU meters

The M 12 VU meters are calibrated in dB's for standard O VU, but can be recalibrated for other standards. Peak indicating meters are faster than averaging meters commonly used on other mixers.

Modular construction

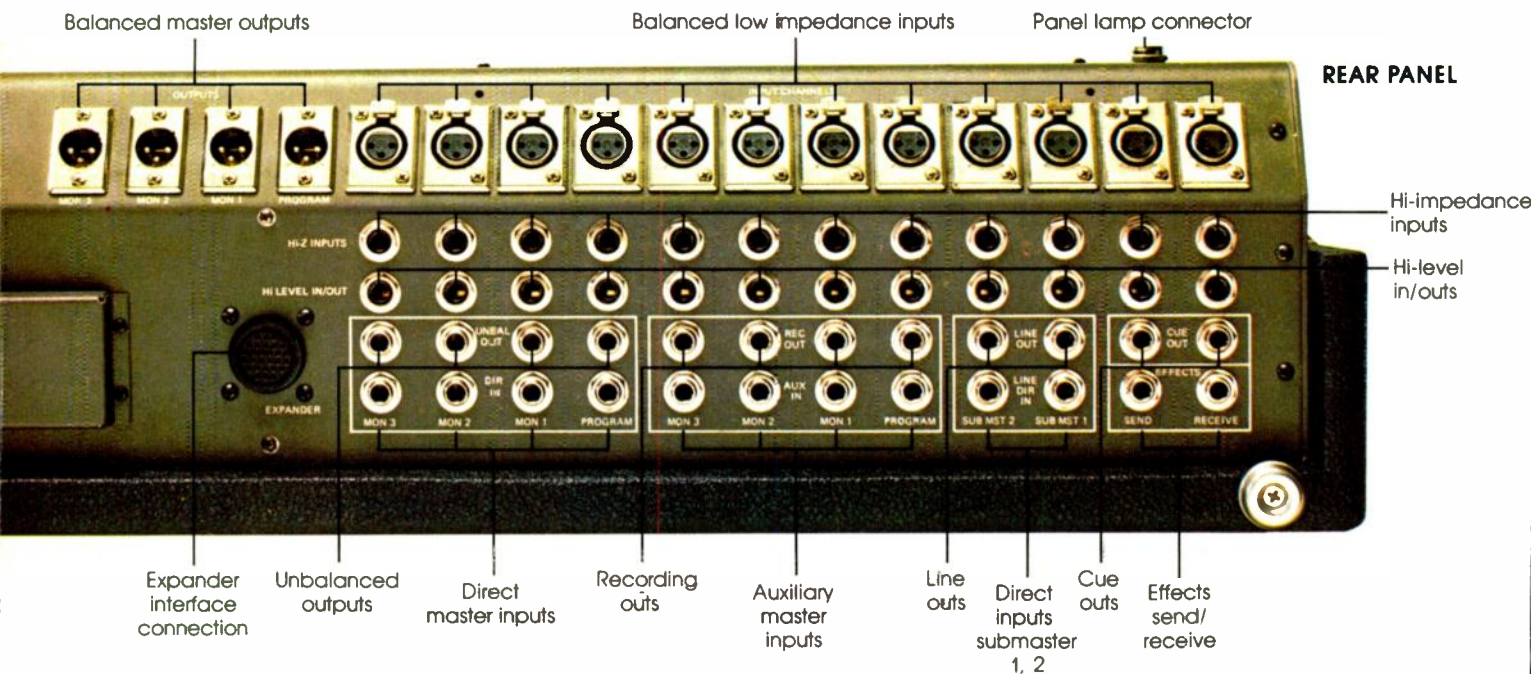
One of the appealing aspects of Fender's M 12 Live Performance Mixer is its modular construction. The individual modules are mounted on rigid extruded aluminum front panels rather than ordinary flat sheet metal; the unit is extremely strong. Overlap ridges on modules assure fit. Separate modules simplify in-field maintenance and replacement.

High performance electronics

All components are extremely quiet, low noise elements; equivalent input noise, -128 dBm. High slew rate and low noise op amps used throughout. Input transformers handle high level signals without distortion. Continuous gain controls allow input impedances to remain unaltered.

Protective circuitry

Overload LED indicators are wired post — eq providing visible control. Limiters on all output stages with variable threshold control prevent overloading.



Specifications

M12 ELECTRICAL SPECIFICATIONS

Low Impedance Balanced Input to Program Balanced Output

Frequency Response ¹	+0, -4 db, 20 Hz to 20 KHz +0, -1.5 db, 35 Hz to 20 KHz	Equalization	±15 db typical @ 100 Hz, shelving ±15 db typical @ 10 Hz, shelving
Total Harmonic Distortion	Less than 0.1%, 40 Hz to 20 KHz	Maximum Input Voltage	460 MV _{RMS} , LO-Z input (-4.5 db _m) 4.6 V _{RMS} , HI-Z input (+15.5 db _m)
Hum and Noise ²	-128 db _m , maximum equivalent input noise (150Ω source, 600Ω load, maximum gain) -80 db _m , master fader at minimum -70 db _m , master fader at -10, all input faders at minimum -70 db _m , master fader at -10, one channel at -10 with gain set to mid position	Output Voltage	0 VU = +4 db _m = 1.23 V _{RMS} (600Ω load), balanced output +19 db _m , maximum, balanced outputs, 600Ω load +20 db _m , maximum, unbalanced outputs, 600Ω load
Voltage Gain	83 ± 2 db maximum, LO impedance balanced input to balanced output 600Ω load 60 ± 2 db maximum, LO Z input to channel line level output 65 ± 2 db maximum, LO Z input to effects output 61 ± 2 db maximum, high impedance input to main outputs 16 ± 2 db maximum, auxiliary input to main outputs 16 ± 2 db maximum, effects return to main outputs 23 ± 2 db maximum, program direct input to balanced output	Size	31" (79cm) wide, 27" (68.6cm) deep, 7" (18cm) high
		Weight	65 pounds (29.5Kg)
		1	LO impedance balanced input to program balanced output loaded with 600Ω. Gain at mid position. Master at -10, input voltage = 1.5MV _{RMS} output voltage = .775MV _{RMS} (0 dbm) Equalization flat.
		2	Band limited at 30 KHz Equalization flat 150Ω source, 600Ω load, unless otherwise indicated.
			Accessories included • AC power cord Specifications subject to change without notice

CONSOLE INPUTS

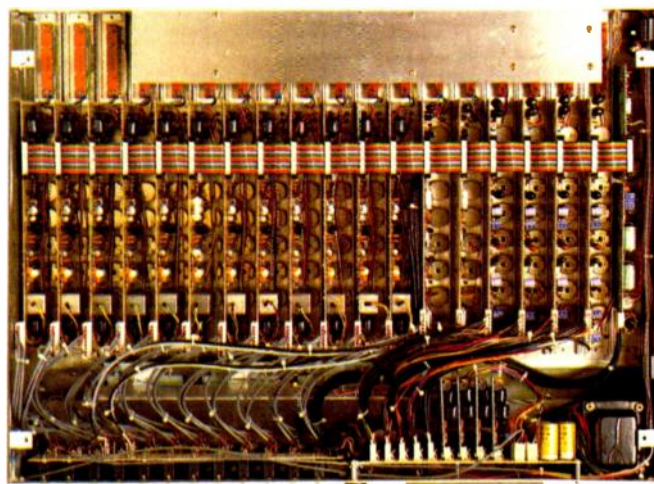
Signal (Quantity)	Nominal Source Impedance	Actual Input Impedance @1KHZ	Sensitivity At Max. Gain	Nominal Input Level	Maximum Input Before Clip	Console Connector
LO-Z Microphone (12)	150Ω	1KΩ	-79 db _m (0.11mV)	-34 db _m (15mV)	+4.5 db _m (460 mV)	XLR 3 pin
HI-Z Microphone (12)	15KΩ	100KΩ	-57 db _m (150 mV)	+14 db _m (150 mV)	+15.5 db _m (4.6V)	Phone
Auxiliary (4)	600Ω max	25KΩ min	-12 db _m	0 db _m	+25 db _m	Phone
Effects Return (1)	600Ω max	10KΩ min	-12 db _m	0 db _m	+25 db _m	Phone
Summing Direct Inputs Prog Mon 1 Mon 2 Mon 3	600Ω max	47KΩ / 100KΩ	-19 db _m / -19 db _m	-10 db _m / -10 db _m	+20 db _m / +20 db _m	Phone Phone
Channel & Sub Master High Level Input (14)	600Ω max	2.5KΩ	18 db _m	10 db _m	+25 db _m	Stereo Phone (ring connector)

¹These inputs are fed directly to a potentiometer so that there is no active element to overdrive. The noted numbers are reasonable maximum values in order to have an acceptable control range.

CONSOLE OUTPUTS

Signal (Quantity)	Rated Load Impedance	Actual Source Impedance @1KHZ	Nominal Output Level	Maximum Output Level	Console Connector	Notes
Balanced Main Outputs Prog Mon 1 Mon 2 Mon 3	600Ω minimum	150Ω	+4 db _m	+19 db _m	XLR - 3 pin	Transformer Coupled, floating
Unbal. Main Outputs Prog Mon 1 Mon 2, Mon 3	600Ω ¹ minimum	<0.5Ω	+4 db _m	+20 db _m	Phone	
Recording Outputs Prog Mon 1 Mon 2, Mon 3	600Ω minimum	<0.5Ω	+4 db _m	+20 db _m	Phone	Unbalanced
Effects Send	600Ω minimum	<0.5Ω	-15 db _m	+20 db _m	Phone	Unbalanced
Cue	600Ω minimum	<0.5Ω	-10 db _m	+20 db _m	Phone	Unbalanced
Channel & Sub Master High Level Output	600Ω minimum	<0.5Ω	-10 db _m	+20 db _m	Stereo Phone	Tip Connector
Earphone	8Ω minimum	<1Ω	1VRMS	4VRMS	Stereo Phone	2 watts Maximum Output

¹The total load on the Balance & Unbalanced outputs for a given channel



Interior view of Fender M12 Live Performance Mixer showing clean, modular construction.

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Professional
Sound Products
MADE IN U.S.A.



The right guitar for the right sound.

Ovation

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A Kaman Company
Send \$1.00 for a complete catalog.

The guitar you play depends on the music you play. No one guitar sound is right for every kind of music. That's why Ovation makes over fifteen different acoustic guitars.

Deeper bass.

If you play bluegrass, you need lots of bottom for bass runs and full chords. The A-brace gives you that full, rich tone. Because the main supports run with the grain instead of against it, the soundboard is both strong and flexible. You can get the A-brace on the Custom Legend, the Anniversary and several other models.



Ovation X

Clean, crisp treble.

Our first guitar, the Balladeer, used a simplified X-brace together with the roundback bowl. It had the sound that first drew



Ovation A

attention to Ovation: bright, crisp and clean. Three models now have the X-brace. Its projection and sustain help you articulate fast solo passages and chord voicings with clarity. If you need strong bass and treble with lots of attack, the X-brace is right for you.

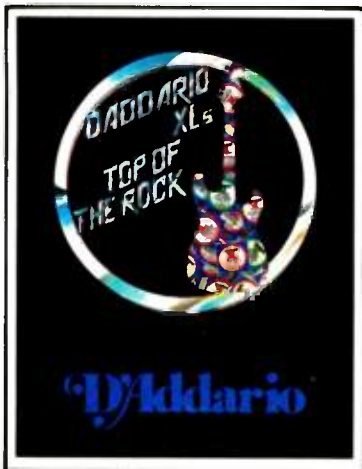
Pure tonal colors.

A good nylon-string guitar can produce a broad range of tonal colors. For the Ovation Classic, we've developed a modified fan brace: the Double Fan. With the solid Spanish Pine soundboard and deep bowl, it gives you round, pure tones, sharp pizzicato and everything in between.

Ovation offers seven different bracing patterns for different sounds. If you play 6, 12, or nylon-string acoustic guitar, try an Ovation. Get the right sound for your kind of music.



Ovation Double Fan



D'Addario

A lot goes into making D'Addario XLs the best rock strings around. For instance high magnetic output nickel alloy wrap on the finest Swedish steel cores. And D'Addario lock twists which firmly secure the ball end of each plain string against slippage. When you need top notch rock sound, it pays to begin with the best. D'Addario XLs.

The top of the rock.

Available in 11 selected gauges for rock, jazz and pedal steel guitars.

For a handsome full color T shirt reproduction of this ad, plus a free 18" X24" wall poster, send your check or money order for \$5.00 to:

D'Addario

Dept. IM, Box J, Farmingdale, NY 11735

S M L XL

Your name _____

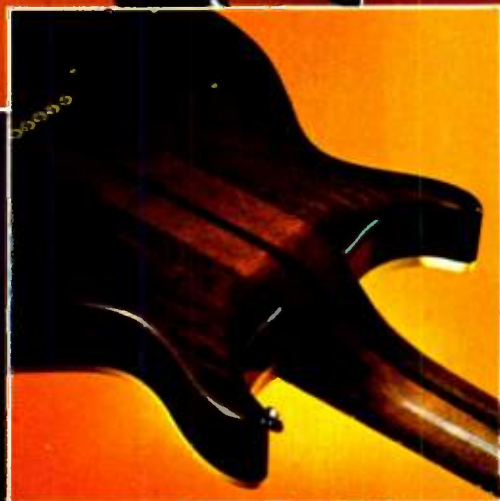
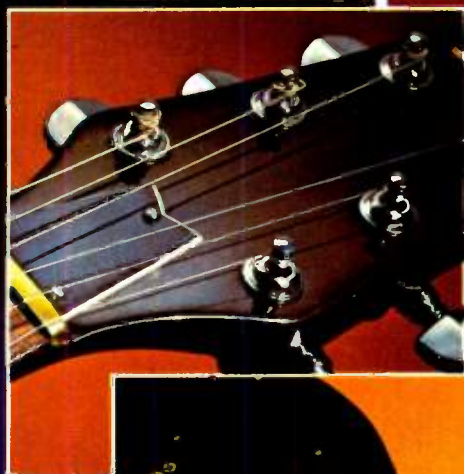
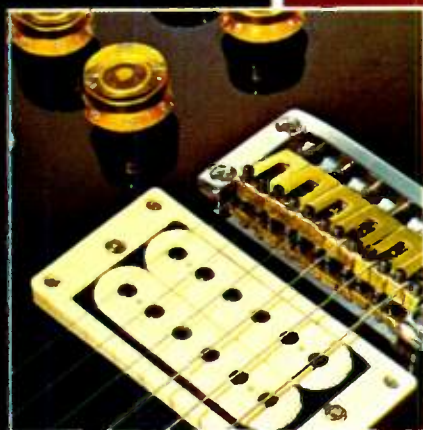
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THE HAWK combines Washburn's traditional workmanship with fine quality materials at an affordable price.

Special features include:

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- Solid ash body with carved arch-top
- Washburn "Power Sustain" humbucking pickups
- Brass bridge and nut
- Strings anchored from back of body
- Available in grained black, grained brown and tobacco sunburst finishes



“We enjoy being on the road. But when you play a hundred different rooms a year, you can have a hundred different acoustical problems. And that’s no joy. So now we use the new Fender MA 8S Stereo Sound System. We e.q. the treble, bass and midrange with the five-band graphic equalizers—and it’s like every room is identical. Then with the stereo separation, people hear us loud and live. Sound systems have come a long way since I left Jacksonville for L.A. Oh yes, they have.”

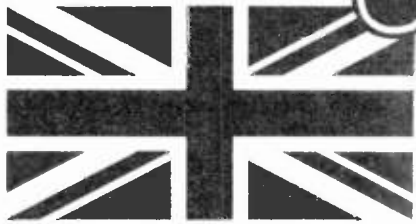
Ray Charles on Fender Stereo Sound.

Fender
MADE IN U.S.A.

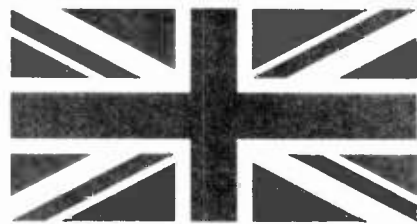
Circle 411 on Reader Service Card

World Radio History

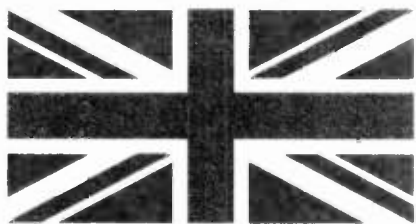
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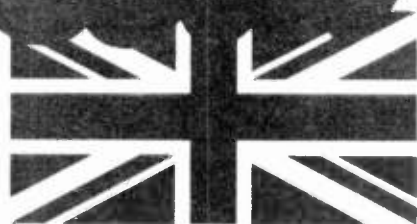
JAZZ



Rock



Soul



Sound with the British Accent of Fane Speakers

World-famous Fane 'Crescendo Series' Speakers, manufactured by Fane Acoustics, Ltd., Batley, England are now available *exclusively* in the U.S. from Sano Corporation.



Crescendo 12"



Crescendo 15"



Crescendo 18"



SANO CORPORATION

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Having set out our stall in last month's *Speakercheck*, we now get down to the business of publishing actual reviews of the performance and construction quality of component loudspeakers. For convenience, we have divided the market into two basic categories of "standard" and "special." The "standard" category is the type of general-purpose loudspeaker at the lower end of the price range, such as is likely to be found installed in a general-purpose musical instrument cabinet or in a small combo amplifier. The "special" category is the better quality units, usually of higher sensitivity, of the type that might be purchased to uprate a mass-produced cabinet or combo amplifier, or such as would be used as part of a large, three- or four-way PA rig.

This month, we got the series under way with a look at a collection of 12" units from the "standard" category. We must apologize that these are mainly of European origin, but as mentioned briefly last month, we have not yet been offered access to many American-made units of this type for testing, and as the series progresses, we hope to take another look at this aspect of the loudspeaker market with more accent on American products. You should refer to last month's issue of IM & RW in which we set out the full testing procedure and future plans for this series, and published typical performance graphs from which our results are taken. It will sometimes be difficult to obtain an accurate interpretation of our results without reference to this introductory article.

The 12" loudspeaker units tested were mounted in a specially designed,

infinite baffle enclosure of 50 liters internal volume. The enclosure is air sealed and lagged with a 75mm layer of fiberglass wool on all interior surfaces. The units are mounted from the front onto a cork gasket and retained by a thumb-screw clamping arrangement to permit a quick change-over of units between tests. For this reason, we have been unable to include in our tests certain units that cannot be mounted in this way, as the time involved in dismantling the test cabinet and bolting units in from the inside would be prohibitive. When these tests were carried out, a total of no less than 24 units were thoroughly tested in a single day at the GEC-Hirst Research Laboratory at Wembley, London, UK - thanks to the co-operation of Roy Brooker, GEC's acoustics engineer. Remember that with better acoustic loading, most of the loudspeakers tested can be expected to provide another octave of downwards response, but it is tested can be expected to provide another octave of downwards response, but is of course an impossible task for us to design the ideal enclosure for every unit submitted for test.

In reading the results we obtained, remember that it is not necessarily the watts that matter. Provided that your amplifier cannot drive the loudspeaker to destruction, it is the sensitivity figure that is important. For example, if loudspeaker 'X' can deliver 96dB of sound pressure level at an input power of 1 watt, measured at a distance of 1 meter, while loudspeaker 'Y' can deliver 99dB under the same conditions, then you will need only *half the amplifier power* for exactly the same acoustic loudness as you

would for loudspeaker 'X'. Keep in mind, a difference in sensitivity of just 3dB more or less makes a difference of double, or half the amplifier power. Similarly, a difference of 6dB will alter the amplifier power required for a given loudness by a factor of 4. So a single loudspeaker of 102dB sensitivity will produce the same sound level as a cabinet containing four loudspeakers of 96dB sensitivity, and require only one quarter of the amplifier power into the bargain.

The important point to watch in all this is that the figures relating to different products have been measured in the same way. We have adopted the European system of measuring the sound level at 1 watt input, and at a distance of 1 meter, on the central forward axis of the loudspeaker. Many of the large American corporations are now changing over to this system and it can be expected to become an international standard in due course. Meanwhile, however, many American manufacturers are using the EIA system, where levels are measured at an input power of one milliwatt, at a distance of 30 feet, while others measure at 1 watt at four feet, or 1 watt at 10 feet. *Provided that the loudspeaker is the right size for your system, and will electrically match your amplifier, then the important factor is sensitivity, not how many watts.* Remember this and you could save yourself a lot of money.

It is this factor that is probably the main difference between the loudspeakers reviewed this month and the more expensive 12" units - many from the well known American manufacturers - which will be featured in next month's *Speakercheck*.

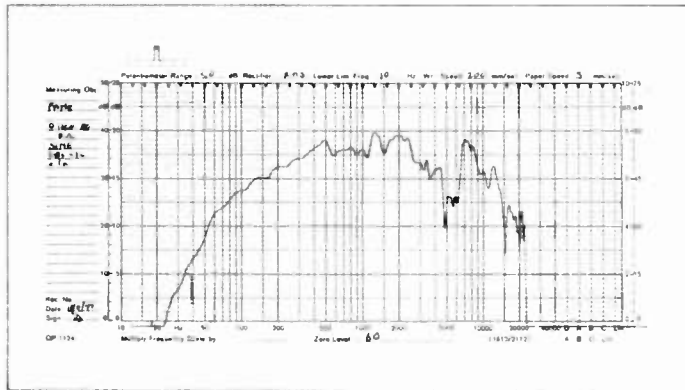
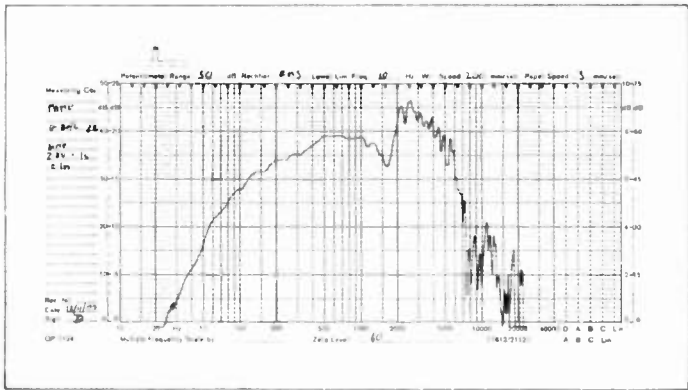
FANE ACOUSTICS Guitar 80/L

FANE ACOUSTICS Disco 80

Parameter	Manufacturer's Rating	Test Result	Parameter	Manufacturer's Rating	Test Result
Power	80w RMS	Confirmed at 80w RMS sine wave	Power	80w RMS	Confirmed at 80w RMS sine wave
Distortion	Not stated	3% at 80w as above	Distortion	Not stated	3% @ 80w as above
Sensitivity	'Unusually high'	99dB @ 1w @ 1m averaged between 400Hz and 4KHz - see graph	Sensitivity	'Unusually high'	97dB @ 1w @ 1m averaged between 400Hz and 4KHz - see graph
Resonance	90Hz free air	110Hz in 50ltr. enclosure	Resonance	55Hz free air	80Hz in 50ltr. enclosure
Impedance	8 ohm	8-22 ohms	Impedance	8 ohm	9.5-40 ohms
Useful freq. response	70Hz-9KHz unqualified	80Hz-7KHz @ -20dB - see graph	Useful freq.	50Hz-20KHz unqualified	50Hz-15KHz @ 20dB - see graph

Sensible cast chassis obviously intended for rear mounting, although front mounting would be possible with great care, using clamps instead of the bolt holes provided and with the addition of a suitable gasket. Nicely finished. Guitar 80/L has a particularly stiff cone system, the front suspension being of plastiflex treated paper and a small vented center dome is employed. According to our tests, its useful frequency response would be about 80Hz to 7KHz at -20dB points rather than the 70Hz to 9KHz claimed. Also, we cannot see how the 'Unusually High' sensitivity claimed for the units is justified, as in both cases they were hitting the norm for similar units tested. Nevertheless, both loudspeakers performed well, both were completely at ease at their rated 80

watts input power and both seemed fine at 120 watts without excessive distortion. The Disco 80 is fitted with a smooth parabolic cone, a compliant linen suspension and a parasitic HF radiator. The feed wires on our sample were found to be on the short side considering the amount of cone movement to be expected from a unit of this type and could be prone to restrict cone movement and subsequently fracture. Useful frequency response 50Hz to 15KHz at -20dB points compared with 50Hz to 20KHz claimed, although somewhat ragged as the plot below shows. These loudspeakers are an unusual combination of high power handling coupled with good sensitivity and low order distortion.



McKENZIE ACOUSTICS ST1275/GP

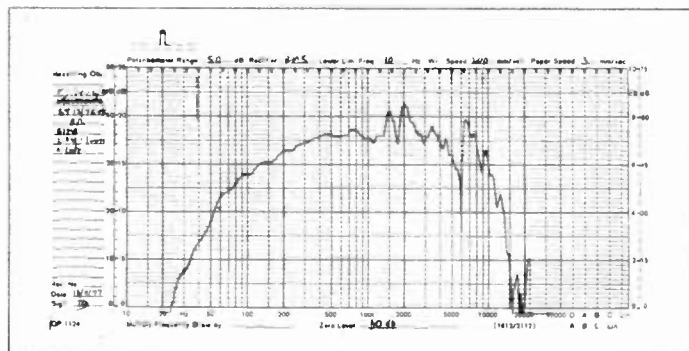
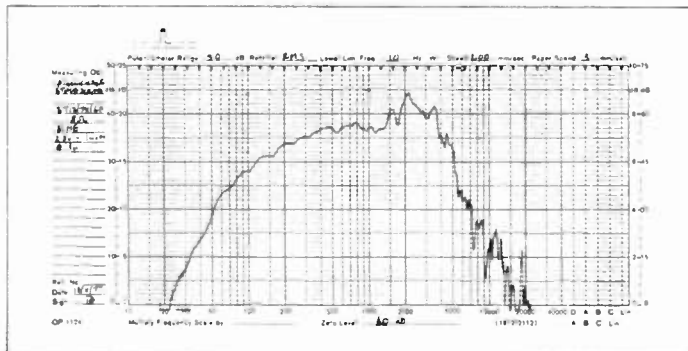
Parameter	Manufacturer's Rating	Test Result
Power	75w unspec.	Confirmed at 75w RMS sine wave
Distortion	Not stated	2% @ 75w as above
Sensitivity	Not stated	98dB @ 1w @ 1m averaged between 400Hz and 4KHz — see graph
Resonance	Not stated	90Hz in 50ltr. enclosure
Impedance	8 ohm	8-22.5 ohms
Useful freq.	40Hz-8KHz unqualified	50Hz-6KHz @ 20dB — see graph

McKENZIE ACOUSTICS ST1275/TC

Parameter	Manufacturer's Rating	Test Result
Power	75w unspec.	Confirmed at 75w RMS sine wave
Distortion	Not stated	2% @ 75w as above
Sensitivity	Not stated	96dB @ 1w @ 1m averaged between 400Hz and 8KHz — see graph
Resonance	Not stated	75Hz in 50ltr. enclosure
Impedance	8 ohm	8-5-30 ohms
Useful freq. response	40Hz-15KHz unqualified	60Hz-15KHz @ -20dB — see graph

Basic pressed chassis, suitable for front or rear mounting and gaskets fitted for both. Termination is by very small solder tags on a scrumpy paxoline panel. ST1275/GP has the usual stiff cone assembly with treated corrugated paper surround and aluminium center dome, while the TC version has a rather nice, compliant cone assembly with linen suspension and parasitic HF radiator, not unlike the Celestion G12/75 assembly. Both units performed well and met the manufacturer's 75w power rating. The GP model has a claimed useful response of 40Hz to 8KHz, but according to our tests this is somewhat

exaggerated and 70Hz to 6KHz would be more realistic at -20dB points. The TC, however, is rated at 40Hz to 15KHz and we found this to be about right. There is a notable absence of any useful labeling in these loudspeakers, the only information given being the impedance marked by hand with a ballpoint pen! Generally, a rather nice pair of loudspeakers, but somewhat utilitarian. Since these tests were conducted, however, we understand that improvements have been made to the chassis units.



SPEAKERCHECK

GOODMANS Audiom 12P/G

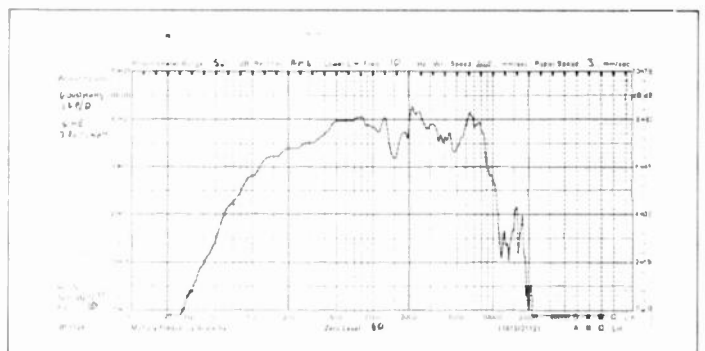
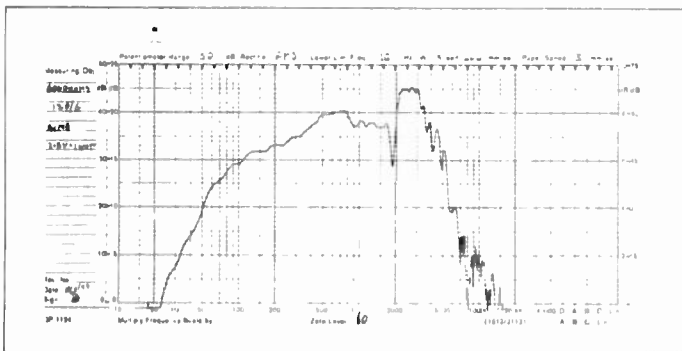
Parameter	Manufacturer's Rating	Test Result
Power	60w nominal	Confirmed at 60w RMS sine wave
Distortion	Not stated	3% @ 60w
Sensitivity	96dB @ 0.4w	99dB @ 1w @ 1m averaged between 400Hz and 4KHz see graph
Resonance	70Hz free air	90Hz in 50ltr enclosure
Impedance	8 ohm nominal	8-25 ohms
Useful freq. response	Graph given	70Hz-5.5KHz @ -20dB - see graph

GOODMANS Audiom 12P/D

Parameter	Manufacturer's Rating	Test Result
Power	60w nominal	Confirmed at 60w RMS sine wave
Distortion	Not stated	3% at 60w
Sensitivity	96dB @ 0.6w	99dB @ 1w @ 1m averaged between 400Hz and 8KHz - see graph
Resonance	55Hz free air	100Hz in 50ltr enclosure
Impedance	8 ohm nominal	7-28 ohms
Useful freq. response	Graph given	60Hz-11KHz @ -20dB - see graph

Very basic pressed 18 swg steel chassis intended for rear mounting, but could easily be front mounted with additional gasket - not supplied. Simple solder tag terminals. 12P/G has a deep ribbed cone with stiff doped paper surround and dural center dome for midrange 'bite'. 12P/D has parabolic plain cone, slightly more compliant doped paper surround and is fitted with a parasitic HF radiator to extend the high frequencies and provide better dispersion characteristics (see text and polar response plot). Both performed well, manufacturer's power

rating and sensitivity figures were confirmed although the manufacturer's frequency response plot was found to be somewhat idealized. Useful frequency response is 70Hz to 6KHz for the 12P/G and 60Hz to 11KHz for the 12P/D at -20dB points according to our results. The in-cabinet resonance for the 12P/D is double the claimed free air resonance and is probably accounted for by the particularly pliant suspension employed.



CELESTION G12/H

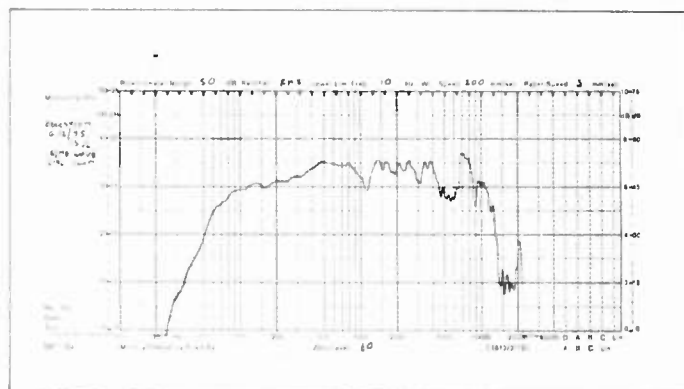
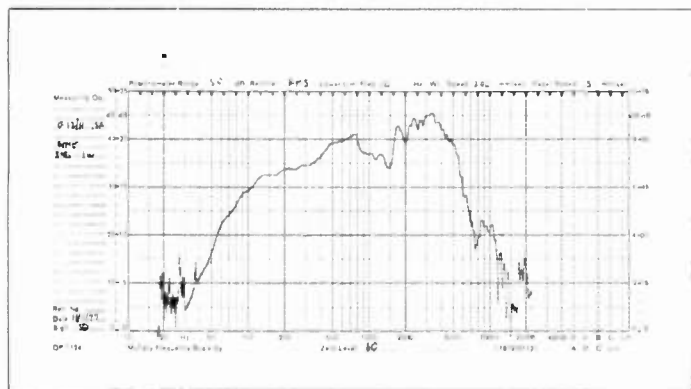
Parameter	Manufacturer's Rating	Test Result
Power	30w RMS	Confirmed at 30w RMS sine wave
Distortion	Not stated	5% @ 30w as above
Sensitivity	Not stated	99dB @ 1w @ 1m averaged between 400Hz and 4KHz - see graph
Resonance	75Hz free air	100Hz in 50ltr enclosure
Impedance	15 ohm	15.5-45 ohms
Useful freq. response	40Hz-8KHz unqualified	70Hz-7KHz @ -20dB - see graph

CELESTION G12/75

Parameter	Manufacturer's Rating	Test Result
Power	75w RMS	Confirmed at 75w RMS sine wave
Distortion	Not stated	3% @ 75w as above
Sensitivity	Not stated	94dB @ 1w @ 1m averaged between 400Hz and 8KHz
Resonance	35Hz free air	70Hz in 50ltr enclosure
Impedance	15 ohm	15.5-45 ohms
Useful freq. response	30Hz-12KHz unqualified	40Hz-15KHz @ -20dB - see graph

As pressed steel chassis go, these are probably of the best, with rolled edges for additional bracing and rigidity and nicely finished. Obviously designed before front mounting came into vogue, but this can be arranged with care and an additional gasket. Solder tag terminals. Feed wires look rather fragile and have a brittle feel — could be a source of trouble. G12/H has a heavily doped paper suspension system resulting in a particularly stiff cone with linen dust cover. Manufacturer's power rating confirmed and claimed frequency response of 40Hz to 8KHz is not too far out — 70Hz to 7KHz would be more realistic from our tests and this is at -20dB points. It is interesting to note that this is

the only unit tested that is not fitted with an aluminium type center dome, but it has as good, if not better, mid-range response when compared with its counterparts that are fitted with domes. The G12/75 has a much softer, heavier cone system with a 'concertina' type linen suspension and parasitic HF radiator — would probably benefit from a reflex type enclosure. This unit has a nice 'feel' about it and although noticeably less sensitive than its competition, it has usefully smooth response over a range of 40Hz to 15KHz at -20dB points. In view of its particularly low distortion at the rated power, we re-ran the test at 100 watts and the loudspeaker was fine at this level.



RCF L12/10

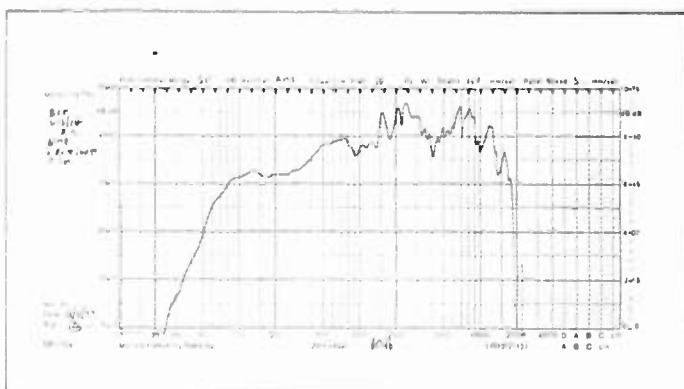
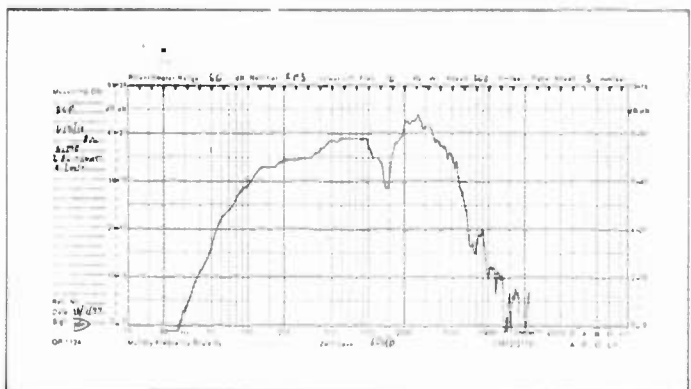
Parameter	Manufacturer's Rating	Test Result
Power	40w unspec.	Just confirmed at 40w RMS sine wave
Distortion	Not stated	6% @ 40w as above
Sensitivity	Not stated	98dB @ 1w @ 1m averaged between 400Hz and 4KHz — see graph
Resonance	70Hz free air	110Hz in 50ltr. enclosure
Impedance	8 ohms	8.5-30 ohms
Useful freq. response	70Hz-6KHz unqualified	60Hz-7KHz @ 20dB — see graph

RCF L12/31

Parameter	Manufacturer's Rating	Test Result
Power	30w unspec.	30w RMS sine wave
Distortion	Not stated	2% @ 30w as above
Sensitivity	Not stated	101dB @ 1w — 1m averaged between 400Hz and 8KHz — see graph
Resonance	50Hz free air	90Hz in 50ltr. enclosure
Impedance	8 ohm	6.5-12.5 ohms
Useful freq. response	50Hz-15KHz unqualified	60Hz-18KHz @ 20dB — see graph

Substantial cast aluminium spoked chassis of exceptional quality and finish for a loudspeaker in the 'standard' price bracket. Suitable for front or rear mounting but gasket (unusually of felt instead of cork) only fitted for conventional mounting. Sensible solder tag terminals. The L12/10 has a light ribbed cone with stiff doped corrugated paper suspension and vented alloy dome. The unit performed well, was reasonably sound at its rated 40w power input and actually exceeded the manufacturer's frequency response figures by returning a respectable 60Hz to 7KHz at -20dB points instead of the 70Hz to 6KHz claimed. The L12/31 is of particular interest as it is totally different from its competitors. The cone is a very light, smooth assembly with stiff doped paper suspension and an unusual type of parasitic HF radiator

that I have not seen before. It has an unusually smooth frequency response for this type of loudspeaker over a range of 60Hz to 18KHz (50Hz-15KHz claimed) and an amazing sensitivity figure of 101dB at 1 watt. Also, it is virtually a constant impedance transducer, with its impedance rising to only 12.5 ohms as compared to anything up to 40 ohms from other manufacturers. While both units confirmed the manufacturer's power ratings, the L12/31 showed very little distortion and on a re-test at 50 watts, this particular unit still showed a lower distortion figure than most of its competitors at the normal rated power level. A superbly made pair of loudspeakers and in the case of the L12/31, capable of outstanding performance.



SPEAKERCHECK

RICHARD ALLAN HD12/P

Parameter	Manufacturers Rating	Test Result
Power	100w RMS	Confirmed at 100w RMS sine wave
Distortion	Not stated	4% at 100w as above
Sensitivity	99db @ 1w @ 1m	95db @ 1w @ 1m averaged between 300Hz and 3KHz
Resonance	95Hz free air	110Hz in 50ltr I.B. enclosure
Impedance	8 ohms nominal	7.5-40 ohms estimated upper value
Useful Freq. Response	Graph given	50Hz-5.5KHz @ -20db see graph

ISOPHON PS30/50

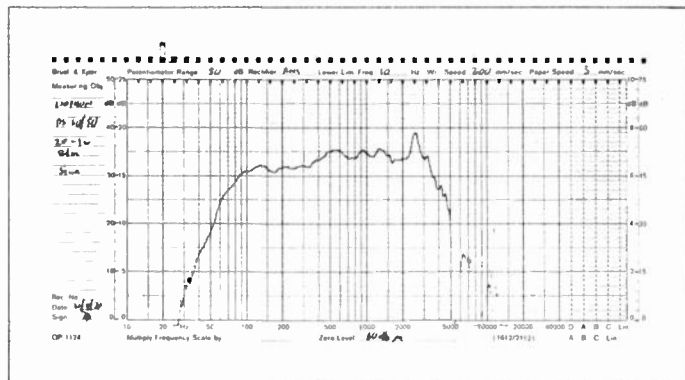
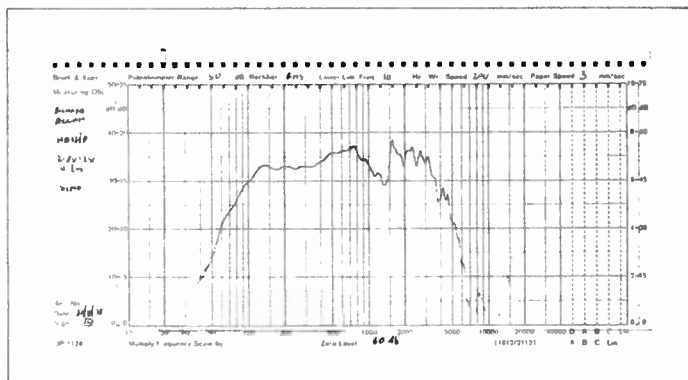
Parameter	Manufacturers Rating	Test Result
Power	70w Music 50w DIN	Confirmed at 50w RMS sine wave
Distortion	Not stated	3% at 50w as above
Sensitivity	Not stated	95db @ 1w @ 1m averaged between 300Hz and 3KHz
Resonance	45Hz free air	90Hz in 50ltr I.B. enclosure
Impedance	4 ohms	3.5-14 ohms
Useful Freq. Response	30Hz-6KHz graph given	50Hz-5KHz @ -20db see graph

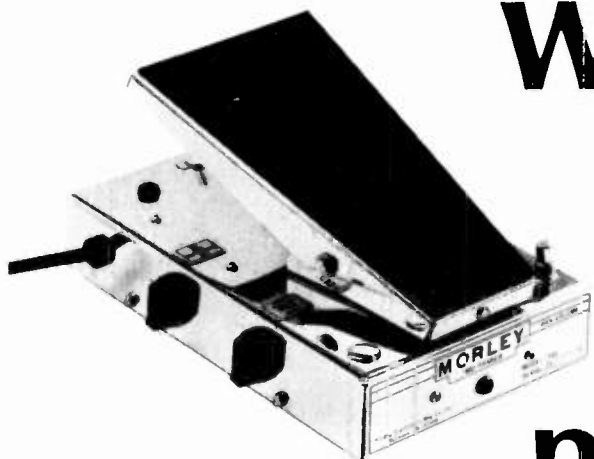
This is a new loudspeaker with a cast alloy chassis of a particularly open design and of adequate strength and rigidity to carry the moderately heavy, ceramic magnet assembly. The whole unit is nicely finished in a black stove enamel and is readily identified by the four mounting flanges protruding from the front rim, and by a bright red front gasket. A small roll of gasket strip is included in the delivery to facilitate front loading, and the voice coil is terminated at a pair of color-coded plastic terminals. A particularly stiff, lightweight, deep cone is carried by an exceptionally stiff, doped paper suspension and is fitted with a linen dust cover over the 51 mm diameter voice coil.

It is unusual to find a loudspeaker in the 'standard' category with a genuine 100w power rating, but the HD12/P has proved to be the exception, and showed a distortion of only 4% at full sine wave power. In fact, the makers tell me that the unit is subject to full sine wave power for 30 minutes in their own testing schedules. The sensitivity is not high, and is not in agreement with the maker's figure, but is nevertheless about average for this type of unit and in this price bracket. Altogether, I rather liked this loudspeaker. It has a tight, unfussy feel about it, is nicely made and presented, and gave a good account of itself under test.

This rather unusual looking loudspeaker is built on a chassis fabricated from a number of pressed steel sections and has an overall aspect that is not dissimilar to the chassis used for the Celestion G12 range. A small, ceramic magnet is fitted. Termination is unusually by means of a tag-strip at the rear of the unit the insulated feed wires being brought out through grommets in the back plate of the chassis. No mounting gaskets are fitted at all, but the unit looks as though it is intended to be mounted from the front of the baffle panel, and a set of special clamps are supplied to facilitate this. When delivered, these clamps were held to the side of the magnet in a neat arrangement by the magnetic field and looked like an unusual retaining clip arrangement for the magnet assembly. It was quite by accident that I discovered that these were the mounting clamps for the loudspeaker itself - so beware! A deep, smooth, lightweight cone is carried by a stiff, doped paper suspension. A dural center dome is fitted, beneath which is a series of ventilation holes punched through the side of the cone, just above where the voice coil former is joined to the cone.

As the results table above shows, the unit gave a creditable performance indeed. It would seem that the somewhat unclear power rating can be safely interpreted as a 50w RMS rating, and the measured distortion was just 3% at this level. Even at 100w, distortion did not rise above 6%, although some heating of the voice coil was in evidence after this admittedly severe test on a unit in the standard category. Note also that the unit is only available in a 4 ohm impedance.





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Albums

Kim Fowley

Les McCann

Robert Johnson

Alice Cooper

Kim Fowley

Visions of The Future (Capitol)

Though he has written and produced songs for artists as various as Kiss and Cat Stevens, Kim Fowley's music is an acquired taste.

The near-legendary Californian music biz figure who produced *Papa Oom Mow Mow* and Gene Vincent has at last had a compilation of his striking songs released. They range from surprising and spare New Wave songs (recorded in 1972) to pleasant and melancholy ballads. The choice was Fowley's, and it was an excellent one.

Hollywood Confidential, *Shine Like A Radio* and *Visions of The Future* are what the writer calls "instant slime classics". They have a spare arrangement that, coupled with tense, metallic guitar, sound as modern as today. Key words like "underworld" and "fabulous" characterize the lyric of *Shine Like A Radio*. However malevolent Fowley can sound, his superb, confident arrangements have achieved beautiful ballads in *ESP Reader*, *Mom and Dad* and *International Heroes* — a teen classic

Sean Hogben

Produced by Kim Fowley and Jeff Cheen, engineered by Dave Hassinger, Paul Grupp and Mike Ross.

Les McCann

The Man (A&M)

If George Benson can do it, why not Les McCann? Do what? Crossover is one way of describing the change in approach. Sell out is another. The truth lies somewhere in between. When an accomplished and inventive jazz musician turns out a collection of disco-slanted tracks, with wet sub-soul vocals and stuffy strings swirling in the background, one can't help feeling that commercialism has played its part in the artistic process. But then again... compared with most of the disco jingles flooding today's market, this is classy stuff indeed. Neatly played, immaculately produced, nicely paced, tastefully arranged, yawn.

Kim Fowley



Alice Cooper

Les McCann is — or was — a robust pianist with a lusty left hand and a reliable flow of ideas. But there's not much evidence of it here, just the odd snatch of gentle tinkling on clavinet or Fender Rhodes. His voice doesn't carry much conviction either. I know he has to pay the rent and feed his wife and kids, but I still wish he'd go back to what he does best — cooking seriously with a hard-driving rhythm section — and leave this up-market muzak to lesser talents.

Jeff Pike

Produced by Paul Riser, engineered by Barney Perkins. Recorded at A & M Studios, Hollywood and Kendum Recorders, Burbank.

Robert Johnson

Close Personal Friend (Ensign)

Not a collection of classics by the King of the Delta Blues, more's the pity. This Robert Johnson is a youngster from Memphis who has apparently played session guitar for Isaac Hayes, Ann Peebles and others. His first album under his own name suggests that he should stick to session work until he has something more interesting to say.

Johnson's not a bad guitarist. At least, he has plenty of technique, but his sound is thin and his licks are all too familiar. He wrote all the songs on this album too, which was another mistake, 'cause they're just very derivative. Maybe that's the idea. Maybe this flimsy trio (David Cochran, bass, Blair Cunningham, drums) playing corny blues-rock riffs is supposed to be tongue in cheek, a sort of light metal. There's one track, *Leslie*, which is an obvious, self-conscious pastiche of an early Beatles-style number (Lennon, not McCartney). Very droll and very clever. The rest all sound the same — new wave-ish without the fire or the surprise, heavy metal-ish without the relentless energy, rock and roll without the soul.

Jeff Pike

Produced and mixed by Robert Johnson and William C. Brown III, engineered by David Thoener, Greg Caruso and Rod O'Brien. Recorded at the Record Plant, New York.

Alice Cooper

From The Inside (WEA)

There's no doubt that Alice Cooper has been through the horrors. Beer stories of Alice are legend and whenever he has appeared for a chat or a photograph, an ever-present can of Budweiser has been at his side. His latest recorded work is an unashamed testimony to his fight to give up booze and so is one of the sincerest works he has ever completed.

From The Inside gives various insights into Alice's life on the road and the false camaraderie that makes having "just one more drink" so easy. Musically, it comes nowhere near his previous works, like *Lace and Whiskey*, for the depth and diversity of compositions but it seems by far his most honest recorded work.

Dick Wagner and Bernie Taupin are Alice's main collaborators and Wagner is the main instrumentalist. He contributes powerful, flashy guitar work on *Wish I Were Born In Beverly Hills*, which has a fine lyric about the gilded life of a Hollywood wastrel. *Serious* and *The Quiet*

Room share some strafing, distorted guitar work and *Secrets* backs up with a strong vocal chorus, a hard rocker in the traditional Cooper vein.

Remarks: *Thankfully, Johnny and How You Could See Me Now* allow Ahee to be a very intelligent writer of lyrics. I'm glad he could see his way out of the asylum. This record makes powerful statements and the lyrics prick one's conscience. Every song sounds like good therapy.

Sean Hogben

Produced by David Foster, no other details available.

Roy Ayers & Wayne Henderson

Step In To Our Life (Polydor)

A summation of the musical expertise of *liber* player Roy Ayers and trombonist Wayne Henderson, and also of their recently developed production capabilities. Both have lately found considerable success with their respective production companies. Ayers with his own product including a couple of disco hits and Henderson more with his protégé saxophonist Ronnie Laws.

However, no-one can accuse Henderson of turning to disco-orientated funk in the hope of the fast buck. After all, he spent an incredible 20 years with the Crusaders. Like much Crusaders material, and indeed fusion music in general, Henderson on this album tends to play in a faultless, economic but rather uninspiring fashion.

The disco tracks are sub-standard, but the jazzier side of the album is another matter. George Del Barrio's strings provide a superb atmospheric surround for the title track and the excellent *Lovers Should Always Be Together*, both interesting compositions featuring delightfully restrained vibes from Ayers.

An inconsistent album, but a highly promising collaboration and almost worth buying just for the first half of Side Two which represents fusion music at its best.

David Lawrenson

Produced by Roy Ayers and Wayne Henderson. Recorded at Automated Sound, NY, Sigma Sound, NY and Oceanway, Santa Monica, California.

Lenny White

Oregon

Roy Ayers & Wayne Henderson

Lenny White

Streamline (Elektra)

Drummer Lenny White began his career with Miles Davis on *Bitches Brew* and was one of the founder members of Chick Corea's *Return To Forever*. Since then he has trodden the well-worn path of modern jazz musicians by appearing on a variety of jazz/funk albums and working with all the top players.

Inevitably, thoughts turn to a solo album, and *Streamline* is his second. It is a tremendously strong and exciting album, containing much fine playing from a variety of top musicians but never becoming over indulgent. With Larry Dunn (Earth, Wind and Fire's producer) co-producing, the album has a commercial funky edge, but it never degenerates into mindless disco material. Stand-out track is the opener *Struttin'*, which includes Beck-type guitar from Jamie Glaser, while there is an interesting treatment of *Lady Madonna* with Chaka Khan on lead vocals.

David Lawrenson

Oregon

Out Of The Woods (Elektra)

It's strange, and rather sad, that Oregon aren't better known, even famous. They've been playing together for around 10 years, have made eight excellent albums, play music that nobody else even dares to try and play it well, yet ... Oregon who?

Here's who: Ralph Towner on classical and 12-string guitar, piano and flugelhorn; Glen Moore on double bass and occasional flutes, piano and violin; Colin Walcott on sitar and tabla; and Paul McCandless on oboe and cor anglais. If you can't imagine what all that sounds like, it's understandable, but it's just another reason why you should listen to Oregon. They mix rock, raga, baroque counterpoint and jazz in a unique way that is never precious, never overly contrived.

Most remarkable of all, there are some wonderful tunes amid all the electric improvisation. *Dance To The Morning Star*, for instance, is a vehicle for dancing oboe solos by McCandless and frantic interplay between bass and 12 string guitar, but at the heart of it is a cute little melody that you find yourself whistling after one hearing. Clever, charming, unique music. Oregon deserve to be famous.

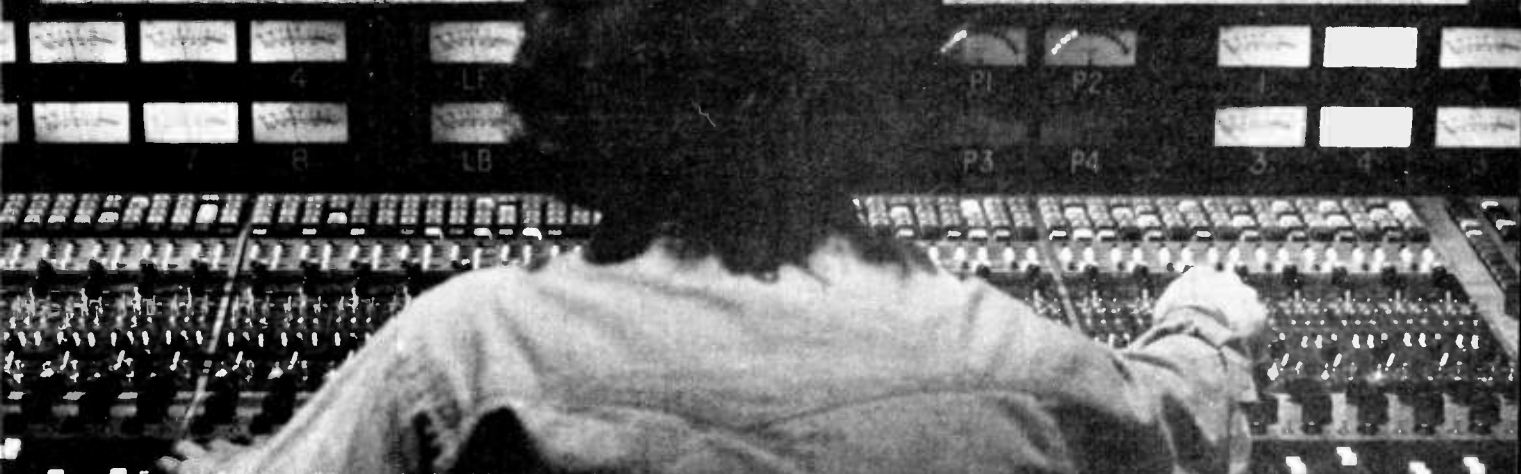
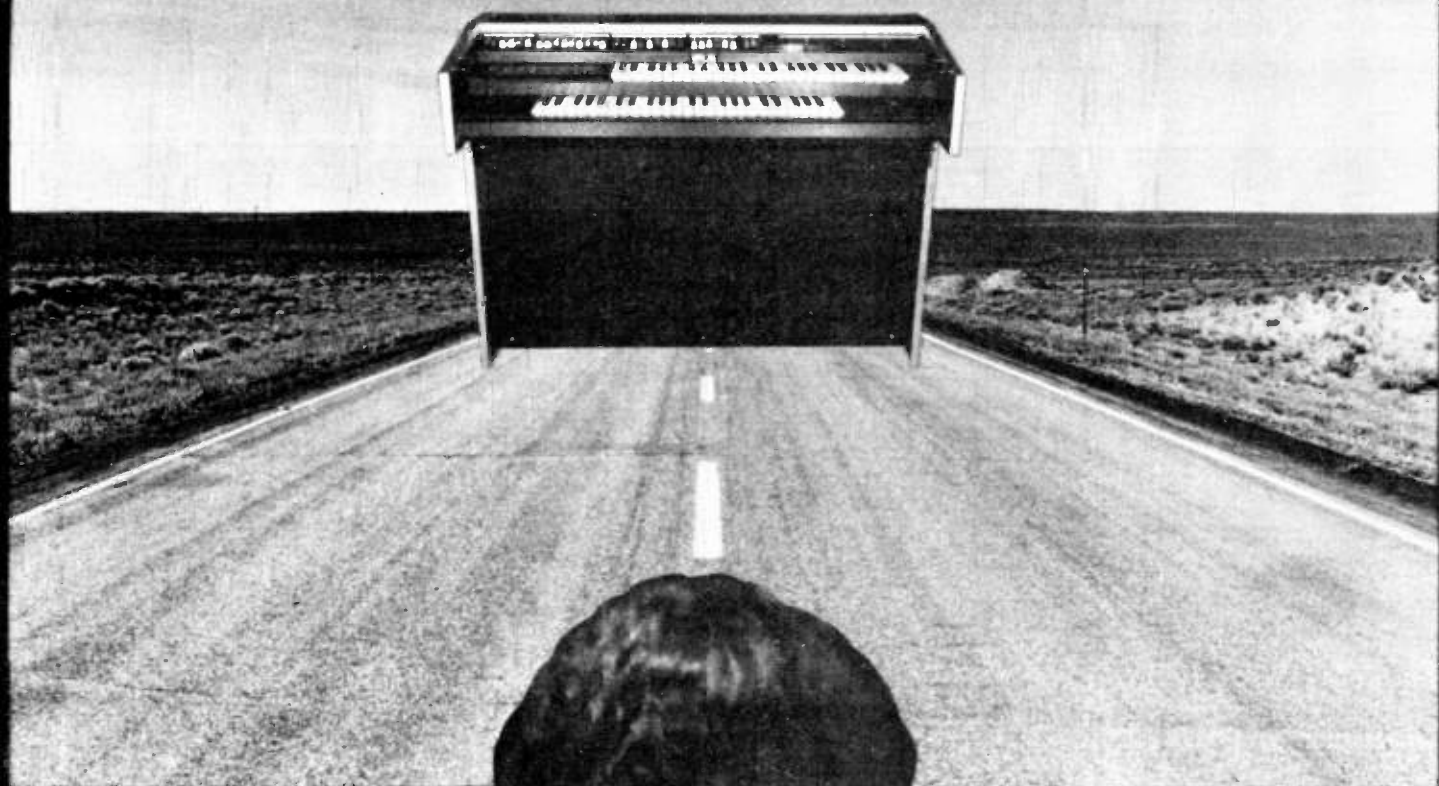
Jeff Pike

Produced by Oregon, engineered by David Greene and Jesse Henderson. Recorded at Long View Farms, Massachusetts and Soundmixers, New York.



Lenny White

WLM makes the road feel like home.



For studio recording or playing big concerts, there used to be only one organ capable of delivering that "tone wheel" sound. But it was far too cumbersome to practically take it on the road.

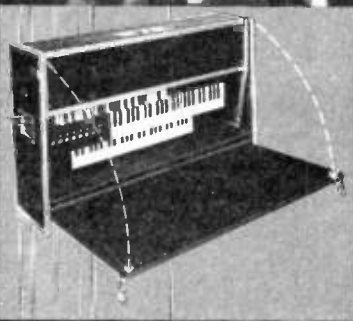
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RECORDING WORLD

New York

Electric Lady Studios, always a busy place, was recently in the local news when they hosted a star-studded (Blondie, Chris Stein, Lenny White) party for Kevin Godley and Lol Creme's amazing new Gizmotron. The former members of 10cc and inventors of the new guitar "bowing device" were on hand to demonstrate their wares. Now if they could only get the thing out on the market! Californians Lee Ritenour and Earl Klugh have also been using the facilities and Kiss guitarist Paul Stanley is still hard at work on a solo LP and a Kiss LP while producing a new band called New England. Also in: Roy Ayers, Angela Bofill, the Persuasions and Jeremy Steig and Eddie Gomez.

Atlantic Records' revamped studios have recently hosted the whole Taylor clan (James and sister Kate) and now Carly Simon is working on a new album with Arif Mardin. Various members of the Average White Band have been in and out, working on individual projects and a new group LP. It is rumored that Chuck Berry, recently signed to Atlantic through the good auspices of Rolling Stones lead guitarist Keith Richards, may also be in to record.

Over at Regent Sound, Joel Dorn has recently completed album projects with Jess Roden, Bonnie Koloc and Asleep At The Wheel and producer Bill Fish has wrapped up an Idris Muhammad album.

Nashville

Surely the highlight of recent survey activity in Nashville has been the six-week "homesteading" of the Charlie Daniels Band at Woodland. The project at hand was an album entitled "Million Mile Reflections," taken from a song in the package called "Reflections" (a tribute to Elvis Presley, Janis Joplin and Ronnie Van Zandt); it also marks the first recent recording in Nashville by the CDB and their first studio venture with producer John Boyland (Ronstadt, Boston, Little River Band, et al.), who came in from LA for the project (or "party," as the point of view may be — Big Charlie sure has a lot of fun with his music to be as serious about it as he is). It probably wasn't planned, but spending six weeks in the studio was an excellent way for Charlie and the Boys to get ready for their annual Volunteer Jam

blowout Woodland Studio traffic manager Imogene Bean tells us that block booking of such length (a practice initiated at that facility with the month Kansas spent in 1977) is still out-of-the-ordinary but the CDB's last week overlapped with the first of a two-week stay in the other studio by Eddie Rabbitt,



Johnny "Guitar" Watson

producer David Malloy and company. Other acts recently putting the Woodland touch to their music include Roy Head, Slim Whitman, The Oak Ridge Boys, John Conlee and Donna Fargo, quite a workout for the new 24-track (with 32-track capability Neve board Over at Gary Paxton's Sound Stage Studio, they have been "mostly working on overdubs" with some tracks by Dillard and Boyce (are you ready for disco gospel? It's a gas!) and a Joey George album for Lifesong as the primary exception. Fun project of the month at Sound Stage seems to be a musical written by Bill Gathier and arranged by Ron Huff — title: "Kids Under Construction". Gary McSpadden of the Bill Gathier Trio is also doing a solo album Taking the fun plaudits at Soundshop is Gove Scriverener's second album for Flying Fish, which John Shulenberg describes as "showing a lot of traditional roots presented in a non-traditional manner." Co-produced by Gove and Ernie Winfrey, the sessions draw heavily on Doc Watson and a number of other friends from in and out of Nashville. Soundshop is also where Bill Anderson's new disco-oriented directions are evolving and where Joe Tex's old disco (he goes back to when they called it "R&B") efforts are continuing — they share the same producer, Buddy Killen.



Herbie Hancock

San Francisco

It's been pretty quiet in the studios around the Bay Area, but Greg Kihn and Band have started work in Wally Heider's studio A on a new album for Berserkeley, with Matthew Kaufman producing and Glenn Kolotkin and Jeffery Norman engineering. Bobby Hutcherson is also at Wally Heider's working on his latest for CBS Greg Errico, ex-drummer for Sly and the Family Stone, is in the Automatt working on a self-produced solo effort. Herbie Hancock has been at the Automatt as well, working on his new album, "Feets Don't Fail Me Now" for CBS At the Record Plant, in Sausalito, Tower of Power are still there, working on their latest, and America and Pablo Cruise are scheduled for upcoming months In the East Bay, McCoy Tyner has been in the Fantasy Record studios on the final mixes of his new album, which features among many stars, Stanley Clarke, Freddie Hubbard, Bobby Hutcherson and Jack DeJohnette. Martha Reeves is also in the studios at Fantasy, working on her latest album At the studios at 1750 Arch Street, in Berkeley, where Dennis Zeitlein recorded the sound track for the movie, "Invasion of the Body Snatchers", Mac Benson has recently finished an album of bluegrass music for Rounder Records.

Los Angeles

As always the Record Plant is busy, with Cheap Trick, Ohio Players, Paul Simon and Stephen Stills At Kendun, Jefferson Starship, Marcy Levy, Frank Zappa, Billy Preston, John Denver and Johnny "Guitar" Watson are working Van Morrison is at Wally Heider; Robin Trower is at Davlen; Crosby and Nash are at Britannia; and Al Kooper is nested at One Step Up.

On The Record

By Scott F. Kutina
Steven Rosen
Bill Littleton
J.C. Costa

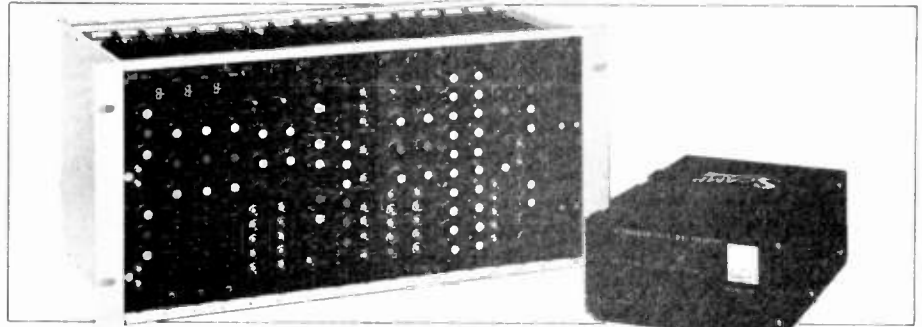
New Products

New Scamp Units

Audio and Design Recording have announced two new additions to their Scamp range of signal processing equipment. They are the S 02 Mic-Pre amp and the S 100 Dual Gate.

The S 02 has many impressive features including low noise, high pass filter 30dB PAD and Phase reverse switch. It has been specifically designed and developed to broaden the scope of Scamp system applications.

The S 100 Noise Gate offers incredible multi-gate facilities in a very small package. It is simple to operate, has



LED indicators and enjoys impressive technical specifications. Both units

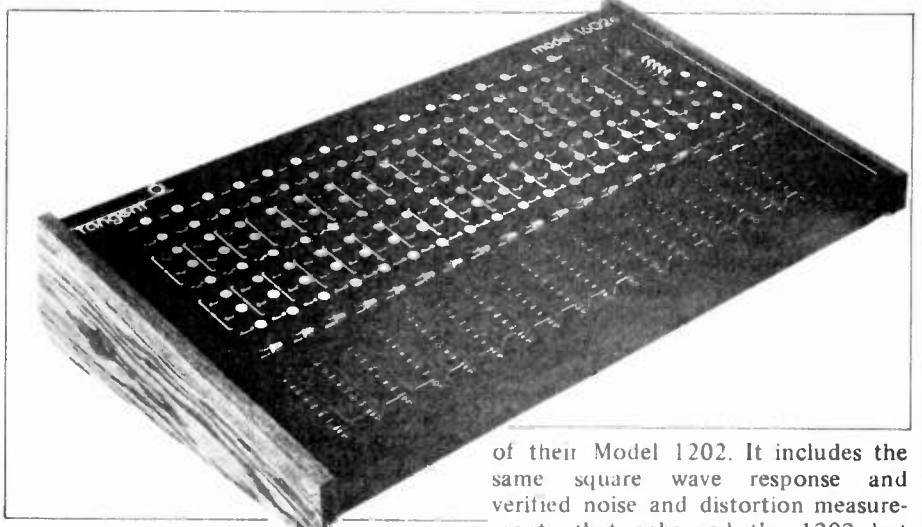
are of the usual ADR high standard of technology.

Circle 514 on reader service card

Speaker Switching

Scientific Audio Electronics, Inc. (SAE) recently introduced the Model 4200 Speaker Switching System which is designed to provide the speaker switching capabilities often absent in many mid-to-high-end separate component systems. The Model 4200 can accommodate up to three pairs of speakers, or three headphones, or a combination of any. According to Michael Joseph, Marketing Director, "The Model 4200 is the first device of its type designed to effectively handle the high power generated by today's state-of-the-art component systems."

Circle 515 on reader service card



New Tangent Desk

Tangent Systems, Inc. recently introduced the Model 1602a stereo mixing console which follows in the footsteps

of their Model 1202. It includes the same square wave response and verified noise and distortion measurements that enhanced the 1202 but with these additional features: 100mm faders, three effects sends, modularity and a reverb that features a three-spring Accutronics Type 9 chamber.

Circle 517 on reader service card

MXR Flanger/Doubler

The MXR Flanger/Doubler is the latest in the Professional Products Group. It is a signal processing device which produces a wide variety of time delay effects, and is instantly switchable between the Flanging and Doubling modes. The time delay on the Flanging mode is from 0.25 to 5 milliseconds and, on the Doubling mode, from 17.5 to 70 milliseconds. The MXR Flanger/Doubler features manual control over delay time, a Mix control, Sweep controls over both width and speed and a Regeneration control for additional intensity.

Circle 516 on reader service card

Room for Improvement

The PY-10 Acoustic Simulator has been designed by Polyfonic Sound Industries, Inc. to be used for room simulation and sound enhancement. The PY-10 can be used during live sound mixing and recorded mixes.

Circle 518 on reader service card

Specifically created to recreate actual room acoustics, it includes two channel input mixer, a graphic layout similar in operation to conventional EQ and it adjusts rooms from approximately 50-750 feet rooms.



Spectra EQ

The Spectra Sound 1000b Graphic Equalizer is the newest addition to their line. Incorporating the latest in Bi-Fet circuit technology, it has wide bandwidth, low noise and low distortion. Spectra Sound claims that it's "an intelligent addition to any recording facility, road system or application where signal processing is desired."

Circle 519 on reader service card

Perfection in the mountains... LE STUDIO, MONTREAL



Photo: Yael Brandeis

Nazareth's Darryl Sweet in front of Le Studio's glass wall, overlooking the lake.

Probably the most stunning setting for a recording complex in the world is located in the Laurentian mountains of Eastern Canada. Le Studio is situated on a 250 acre estate high up in the mountains and is surrounded by forest, trees and clean air.

The studio is the product of Canada's most famous recording technician, André Perry. André is the man largely responsible for the development of the recording industry in Eastern Canada, and is very much the granddaddy of the whole studio scene.

Cat Stevens, Nazareth, the Bee Gees and Pilot are just some of the major stars who have made the trek 40 miles north of Montreal to work at Le Studio. André Perry has obviously found the magic ingredients for success, so how did it all come about?

André explained: "After I sold my first really big studio (Les Studios André Perry), I decided to build a country home in the mountains, where Le Studio presently stands. Incidentally, that studio was housed in a beautiful old church that we remodelled to incorporate three studios. Those three rooms were running almost 24 hours per day with a staff of over 25.

"I felt that I was growing tired of being a studio administrator. There was no time left for the music anymore, so I got out of that end of it.

Nick (Blagona, chief engineer) and I built a small place where we could do our stuff and close it down when we wanted to, but the idea just became bigger and bigger.

"We wanted to be state-of-the-art, and of course that involved a great expense and then the first thing you know is that Cat Stevens walks in and stays for three months, so then we really got involved."

Chief engineer Nick, and studio manager Yael Brandeis are key people in the Le Studio set up. Another important feature has been the flexibility of the studio, which is once again down to André and his team.

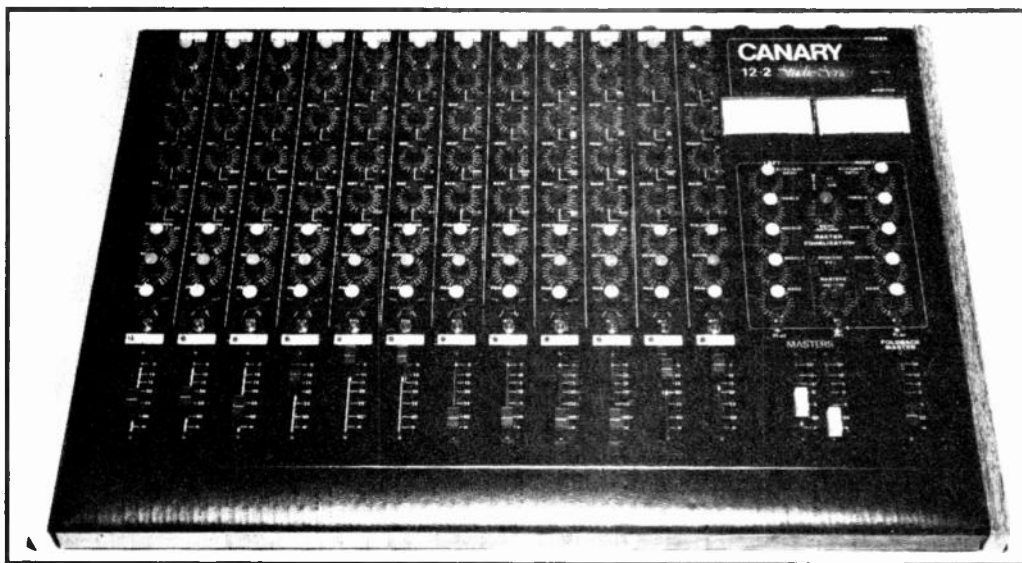
"I have built many studios in the past," André continued, "so I know about acoustics and so on. Nick Blagona holds several degrees in acoustics and so with all that experience, we really knew a bit about it. What made it different was that everything was looked at not from a technical standpoint, but mostly from a musician's standpoint. It wasn't a new principle, but the idea got lost with the years and the new technology. Really, the fact is that the better the musicians feel, the better the music will be.

"We specialize mostly in self-contained situations where groups come in here for a month and actually live here. You really have to create a natural environment. We can get

almost any sound out of this studio. In fact we are going to put together a 'studio demo tape' with different cuts of the various albums that we've recorded here . . . like about a minute of each selection. The point of all this is that there is such a difference in the sound of each product that even a professional would swear that it was done in various studios. The myth about having a Triad Console so we can only get the Trident sound is all bull really. The reason why we chose the equipment that we did was because we wanted gear that was versatile, so that we could go from a hard rock situation right into a classical set-up. We just don't give people yesterday's standard set-up with the choice of six or so drum sounds. When someone comes in here fresh to do a record, the entire staff is completely geared up in their thinking to really wrap themselves around the project that's doing to be done. Everyone here has had six or seven years of experience in studios around the world. Sometimes we go to extremes with our modifications of the monitoring systems or our boards. This enables us to give every individual their sound."

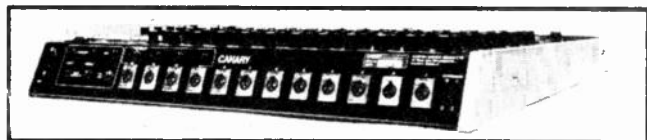
Since the studio caters for a truly international market, with most of the top artists being either British or American, it could be expected that they perhaps adopt a British or American approach to recording. ►

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RECORDING WORLD

"Actually, we use both ways of thinking," said André. "Nobody can say that we're a total British studio, but we can cut British acts very easily. We also have many American groups coming up here and they feel very much at home. I really don't think that you can get this aspect anywhere in North America but here.

"Canada in itself is not necessarily renowned for its musicians or its sound. Of course we are up to date technically and we are a part of the contemporary world but we really can't make enough noise yet to really make an identifiable sound."

The environment and personality of the studio and the involvement of the staff is something which André feels is vital. Even if the artist does not demand this kind of care and attention from large city studios, there is no feeling of "in-and-out-in-six-hours" at Le Studio.

Few people would fail to be moved by the magnificent facilities offered at the studio. When a band comes up for a long stretch of recording, they live on the premises in a huge guesthouse that includes 16 rooms designed for total comfort. The main house has six bedrooms, five bathrooms, a living room, drawing room and a dining room with a large kitchen. British acts will be pleased to note that there is a full stock of Monty Python videotapes available when light relief is required.

Inevitably, though, many of these super country recording retreats get the reputation of being more of a place where you go to relax and have a good time than to work. This is something which André has wanted to steer clear of from the beginning.

"I want the people here to be constantly productive, and I think we've succeeded in that everyone who has come up has been extremely productive, working 12 to 14 hours a day. Being out in the country just makes things easier. If you want to breath clean air, it's here and it's pure. All the facilities are contained right here. I mean you don't have to go to a hotel and have a party . . .

"I don't get into things like how many swimming pools we're going to have or how many horses or a plane or whatever and go crazy with all the toys. I think that has been a mistake with certain other studios. I mean it should all work together from the record company to the management down to the artist. They have to achieve results with the money that is being spent here. It costs a lot of money to do good records nowadays and as you know you're only as good as your last one.



Photo: Ian Cooney

André Perry



Cat Stevens at Le Studio

Photo: Henry Kahane

machines. The Triad (Trident) console has 28 inputs that can be extended to 40. There are five different echo units available as well as every kind of black box currently on the market. Musical instruments on the premises include a Polymoog, a Yamaha 9ft Concert grand piano, assorted other keyboards, amplifiers, and a set of Hayman drums.

Still, some people are never satisfied. André recalls some amusing requests: "One time as a joke, I came out with a statement like, 'Oh yeah, we're going to be putting in underground echo chambers under the lake.' Then, sure enough, we started getting calls from people specifically requesting the underground water sound! Also we once said that we were going to put up a wharf in the middle of the lake for the drums! What we have done is to put speakers in the woods to get weird echoes and all kind of resonating things happening. Also, many artists do their vocals outside.

"We can tie up two 24-track machines, interconnect nine different echo chambers, give you digital delays, everything, no problem. We are heavily into preventive maintenance. I think when you become this level of a recording studio you automatically have to have a basis of complete professionalism. That means state-of-the-art equipment and, more important, being prepared for anything. Otherwise you're in the wrong area of the recording business."

Finally, how does André explain his considerable success in the business? "I think most of it stems from our attitude and how we treat our clients. That seems more important really than the down to earth sound that you are putting on tape for the customer. You see it's not really just a technical thing, it's a human thing."

Ian Cooney

"There have been some days and some times when people do absolutely nothing but watch TV but that doesn't mean that the time was totally unproductive. Nazareth has been up here five times and I remember one time that for the first three or four days nothing was coming down at all. They were just looking at each other . . . suddenly things started happening real fast, so you can never tell.

"Usually most of the artists write their material when they get here. They create in the studio mostly. Sometimes what we do is ask people to come up a couple of days early to get a feel for the place and get relaxed, into the groove. It's very seldom that people will come up here knowing exactly what they are going to do."

Technically speaking, Le Studio has all the top recording equipment that is on the market today. Most of the tape machines are Studer, including one 24-track recorder and various two-track

RECORDING WORLD

Joel Dorn



As both a staff man for Atlantic Records and an independent producer, Joel Dorn has consistently demonstrated an uncanny ability to seek out and successfully produce the kind of artist already written off as non-commercial or "un-recordable" by more conventional business minds.

Prompted by an instinctive gut feeling for talent and a strong sense of historical continuity in contemporary American music, Dorn has produced an incredible variety of artists that include Hubert Laws, Rufus Harley (one of the few jazz bagpipe players), Rahsaan Roland Kirk, Yusef Lateef, Les McCann, David "Fathead" Newman, Max Roach, Herbie Mann, Freddie Hubbard, Ray Bryant, Marion Williams, Bette Midler and Roberta Flack. And that's just during his tenure at Atlantic. Since branching out as an independent producer in the mid-Seventies, his seemingly disparate roster of artists has included the ever-elusive Leon Redbone, Don McLean, Asleep at the Wheel, Roomful of Blues, Steve Goodman, Dory Previn and Peter Allen.

Giving this interview at his "home-base," Regent Sound, Dorn was able to talk to IM & RW while simultaneously taking care of at least 20 major deals on the telephone.

He discussed the changes in record company attitudes in the last decade, especially the major labels' general reluctance to take chances nowadays. Dorn showed no bitterness; just a mature, seasoned outlook that bespoke his years of experience in the studio.

"That doesn't happen anymore. In the old days a label would have its 'bread and butter' acts, then they'd take on a show music catalogue, a folk catalogue or a classical catalogue. There's more 'bottom line' thinking nowadays. The newer generation of record people is more media-oriented, more hit-oriented, more tour support/total merchandizing oriented. Years ago when I first came to Atlantic, the jazz operation there was a thing of love. It was Nesuhi's [Ertegun] baby. We used to sit and correct punctuation on the liner notes and make sure the color separations were perfect on an LP that we knew was legitimately gonna sell 3,000 copies. There was a commitment because they (Ahmet & Nesuhi Ertegun and Jerry Wexler) were heavily involved in the whole spectrum of black music. I'm not trying to single Atlantic out, it's just that doesn't happen in the business anymore. The John Hammonds and Goddard Liebersons and those kind of

people are gone from the day-to-day operations of a record company. The record business is a *business* now — a business in the more traditional American sense. Just like movies were magic in the beginning and now they're just a bunch of accountants."

Dorn insists that he wanted to be a producer since his early teens. In fact, he started a correspondence with Nesuhi Ertegun at that time, suggesting acts to sign or records to be made. What music provided this kind of precocious enthusiasm?

"When I was 13 I heard Ray Charles and that was the beginning of the end of my life, as it was. I was reborn in my grandmother's kitchen in West Philadelphia. My parents had gone out for the evening and I put on this disc jockey — Georgie Woods, a legend in Philly — and he played a song by Ray Charles called 'Ain't That Love.' That was it . . . all over. And from there it was all R&B, jazz and seminal rock and roll. I was fortunate — I'm 36 — to come up at a transition point in jazz when be-bop was turning into that Horace Silver, Art Blakey, Cannonball Adderley kind of thing. So I went from the end of Diz and Bird to the beginning of Miles — and at the same time rock 'n' roll was born!"

Since there was no accepted way to become a producer in those days, Dorn made the wise decision to pursue a radio career as a form of entry into record company studios. Achieving near mythic status as the legendary "Masked Announcer," he developed one of the early commercial heavies of the day like Lou Rawls, Richard "Groove" Holmes, Hank Crawford, Stanley Turrentine, Nina Simone, Gloria Lynne and Arthur Prysock with personal favorites like Curtis Mayfield, Bobby Bland, Ben Webster and Coleman Hawkins. Dorn created a program that had a significant impact on both the listening audience and the record companies. With this added leverage, he soon got the break he was looking for.

"Nesuhi told me if I could find an artist worth recording, he'd let me record him and we'd see what would happen. I was lucky. Monga Santamaria was in Philadelphia and the owner of a local jazz club called me up and said, 'There's a flute player down here, I've never heard anything like him in my life.' He knew I was looking for an artist. I had hit on some of the

bigger cats.

but I was 19 and they looked at me like I was nuts. So I went down and heard this guy, flipped out and called Nesuhi saying, 'I got the guy, let's go.' The flute player was Hubert Laws. That's not a bad way to start."

From there Dorn did an album with Bobby Timmons for Prestige Records and one for Verve with Curtis Amy. Fittingly, he was given the chance to record a rather unusual act, Rufus Harley, and the resultant LP, *Bagpipe Blues*, sold well enough to get him hired on to Atlantic as a full-time staff producer. Even though he had a few albums under his belt at that time, Dorn readily confesses to being scared stiff during those early sessions at Atlantic.

"I won't say I didn't trust my native instincts, but I didn't know what to do in the studio. I'd been going to any studio I could get into and watching people, so I didn't go in not knowing *anything*, but relative to what you would really have to know to make a record, I didn't know anything. At one point I got a little paranoid for a minute and pushed the talk-back in the middle of a take, saying 'Stop. Let's take that again.' I felt like I *had* to do something so I did that. The engineers were helpful 'cause they had been through this forty-two times before and they'd seen idiots like me come and go. So they would say things like: 'OK, good. The reason you don't hear any bass is because the bass player stopped playing.'"

Discussing influences on his approach to producing records, Dorn is categorical. "There's only *one* influence. I don't have to tell you who the influence on all living producers is. Who's the only person — I'm not that influenced by producers, I'm more influenced by photographers, writers and movie directors — that can influence the rest of the world? It's *Spector!* There's no other producer."

Although this is an attitude shared by many other record people, it seemed curious that Dorn hadn't been more influenced by the classic sound of early Atlantic jazz and R&B records,

THE PRODUCERS

RECORDING WORLD

given his correspondence with Nesuhi Ertegun.

"There was the 'R&B sound of Atlantic,' that great bass and drum sound, which is fine, but that didn't get me as much as the fact that they were working with an eight track when everybody else was using three or four. But for a *sound*, it was Spector. I still listen to his records at least once every couple of weeks. I put them on just to get my bearings."

Having dispensed with the question of influences, Dorn attempted a retrospective of his meteoric career at Atlantic — no easy task since it encompassed such a variety of artists and individual styles.

"The major acts were undoubtedly Roberta Flack and Bette Midler. I hooked up with both of them within six months to a year of each other. But the thing that really blows me out was that I was able to sign a lot of my friends, artists like Roland Kirk, Yusef, Les McCann and David Newman."

Even though he was a staff producer, Dorn was rarely assigned a specific act to produce. His rapidly emerging production aesthetic and the fact that Nesuhi Ertegun was increasingly reluctant to go into the studio left the responsibility for signing and producing jazz artists at Atlantic squarely on his shoulders. True to Dorn's nature, most of the major signings he was responsible for had unusual circumstances surrounding them. Roberta Flack, whose single "First Time Ever I Saw Your Face" was probably his biggest popular success, was no exception.

"Strangest story in the world. Got a call from Roland Kirk one day and he says, 'My bass player's wife is in Washington and she's a real good singer.' So I asked him what she sounded like and he says, 'Well, you better sign her.' So I repeat, 'What does she sound like? Give me a clue.' So he says, 'Well, she's a real nice colored lady.' So I say, 'Great Roland, but ...' He says, 'All right. I told you. Do what you want.' We never talked about it again.

"About a year later, Les McCann's playing Washington and he calls me up: 'Sight unseen man, *sign her*. Just do what I'm telling you.' I went to Nesuhi and told him that Les had just found the best singer he'd ever heard in his life. I explained that she was singing with a trio, all ballads, and I could put some strings on it. So he told me to take the shot and sign her. We made a deal without even hearing her.

"So she sends me a tape recorded in the club where she worked in D.C. A guy named Tony Taylor, a local club owner and promoter, had sent this tape to every record company in the world and she'd been turned down

by all of them, including Atlantic, which I didn't know at the time. When we went in to make the first record there was a lot of tension and nervousness and things didn't really work out. I remade the album and we titled it *First Take* because once, during the earliest sessions, she sang and I said, 'OK, we're just getting the sound down: do it again.' She looked up at me with an expression of amazement and said, 'We just did it. What was wrong with that one?'"

Even though the sequence of events leading up to Flack's signing were odd to say the least, the story behind the album and single's "delayed" mass acceptance by the public is even more bizarre.

"Quality was still a consideration at Atlantic then. All of her tunes were six or seven minutes long and we cut the LP with no real commercial intentions. We just wanted to cut it because it was pretty, or we dug it, or whatever. So Clint Eastwood is drivin' to work one day and he hears 'First Time' on KBCA, who just happened to be playing a two-year-old album by Roberta Flack. She'd sold about 130 to 140,000 albums at that point and was working her way up into an FM jazz thing. He called us on the rights to the song for a movie he was making, 'Play Misty For Me,' and we let him have it for about 500 bucks. Next thing we knew there was an *avalanche!*

"When the film came out, a Program Director from New Orleans, Bob Mitchell, went back to the album and started to break the single on his own. But the song was 5:04 and we had to get it down to 4:05 to ensure airplay. So I edited it down and sent it to him. His secretary called me back — I don't remember the lady's name, but I'd like to give her a hug and a kiss — and said, 'Look, you edited that song wrong. You killed the story — here's how you should edit it.' She told me exactly how to edit it over the phone. I had done it completely wrong. Sometimes you get much too close to a thing."

Dorn got the word about Bette Midler from several people in the business, one of whom was Doc Pomus, within the space of three days. Deemed "too visual" and therefore un-recordable by several record companies, Midler was doing a show at New York's Upstairs at The Downstairs to enthusiastic audiences. Dorn went down to see her and "it took exactly three seconds to know that I wanted to make a record with her." Although Dorn produced Midler's first album and hit single "Boogie Woogie Bugle Boy" (another unlikely choice for a hit), much of it was re-recorded by

another producer because Bette was having second thoughts about what she wanted the record to sound like. Dorn is still reticent about describing what actually went down at those sessions and when asked whether producing Midler was tough going, he passed over the subject with the terse reply: "Did you ever try and roller-skate up Mt. Everest?"

Although Dorn never really got involved with rock 'n' roll at Atlantic, he did produce one track ("Please Call Home") on the Allman Brothers' *Idlewild South* album.

"Tommy [Dowd] was producing them and Duane and I were good friends. King Curtis, Duane and I would hang out every once in a while. In fact, Duane was a Roland Kirk freak and he wanted to record with him. Anyway, the Brothers were in New York and they wanted to go into the studio but Tommy couldn't make it, so he called and asked me to do a couple of tracks with them. We did 'Please Call Home' and another tune — it was fun."

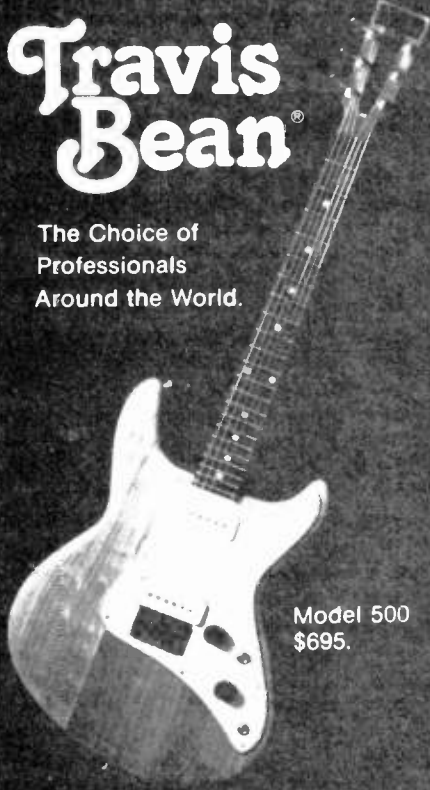
Although Dorn worked primarily with "jazz" acts at Atlantic, nothing sets him off more than people who attempt to define musicians like Rahsaan Roland Kirk and Yusef Lateef by using that narrow and oft-maligned four-letter word.

"I've always felt that Kirk and Lateef had gigantic scopes. I mean, what is 'jazz?' It's just another dumb word like 'R&B' or 'box'. What do these terms really mean? Here's Yusef Lateef who's working on a doctorate at the University of Massachusetts. He's teaching at the City College of Manhattan. His interests range from the most obscure Tagalog music of the Philippines to Coleman Hawkins, so he was open to lots of things. I tried to show the scope this man had and that he could play anything. We always had basic stuff on his records — the flute songs, the love themes, the hard-blowing tenor things, the 'out' things — but we always tried to show he had a lot more to offer than just being a 'jazz musician.' And Kirk too. Every Kirk LP was a different concept. That was thrilling for me. Those albums with Kirk and Lateef — I don't think I'll ever feel that way again. It just opened my head up, because Kirk would come in and *make* me listen to a Jelly Roll Morton cut or a Sidney Bechet cut. He showed me something I can't thank him for."

After a long and fruitful run at Atlantic, Dorn decided it was time to leave and establish himself as an independent producer. He immediately started work on Don McLean's *Homeless Brother* LP and has been producing a fascinating roster (Leon Redbone, Peter Allen, Asleep at the Wheel,

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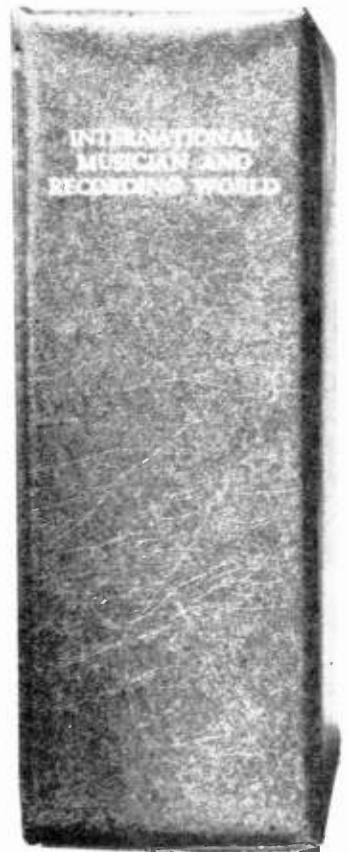
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RECORDING WORLD

Dory Previn, Bonnie Koloc, Steve Goodman and others) of artists over the last few years. Asked about his personal criteria for signing and producing a new act, his answer is both vague and specific.

"The most essential thing is the most essential thing. But it's just *something*. You take a person like Rod Stewart and maybe in the beginning of his career his material wasn't the best but his voice was. There are very few Joni Mitchells; someone with a great voice, great perspective, great material and a great sense of what to record and how to record it. It's a bonus to get all of those assets, but if you get one and the artist has the ability to adapt to the others like someone with a great voice who doesn't have a good sense of their material you just give them what they need and hope they can go."

Although Dorn has had his share of hit singles, he never really made an overt attempt to record one.

"I always hope to have a hit single but in many cases the artist I'm dealing with is not a hit singles artist. If you were a record company president and I walked into your office and said,

'Hey, I could sell a quarter of a million LPs if I have this guy Leon Redbone sing 'Shine on Harvest Moon,' you'd order up some thorzine.'

Joel has worked in the same studio (Regent) and has used the same engineers (Bob Liffin, Vince McGarry) for years. The technical side of recording is not a fascinating topic for him, something made clearer when he tries to describe his "sound."

"I have a way I like records to sound in general and, with certain things, specifically. I just did an album with Asleep at the Wheel - essentially a country swing. Bob Willis type of thing and we did one track that I wanted to sound and feel like a King Pleasure record. I have a basic sound I start with, and it's not really a 'state-of-the-art' sound. It's a sound that I hear and it's not always a 'big' sound. There's a feeling. I dig the feeling of something 'cause I've got a studio with engineers and we can work at it and get the 'big drum' or 'big bass' and stuff like that. When I'm involved in *that*, I go after *that*. I try, but sometimes there's another thing that I hear. It's a feeling, a color, a projection. Sometimes I have to use more technology

to get less of a 'state-of-the-art' sound."

Commenting on the current status of music, Joel Dorn shows sympathy for any music he claims is "hooked up," or directly tied to an ongoing music tradition. This open-minded attitude even extends to disco music: "The people are already down with it. The critics are the ones who can't handle it." Asked about the bland "middle-of-the-road" trend in jazz music today, he leans across the desk for emphasis and wraps up the interview with a characteristic flourish.

"MOR jazz ain't bad if it's balanced with the real thing. Wes Montgomery was no worse a player on 'California Dreamin' than on 'Fried Pies.' I don't mind any commercial success for anybody. What I miss is the *giant*. Keith Jarrett, Gary Burton, Chick Corea and John McLaughlin are all magnificent players. You can't fault any of those people on anything. What do I miss? I miss Bird. I miss a Trane, a Coleman Hawkins, a Prez. The Jesus who dies for everyone's sins publicly. The person who *turns it around*. That requires giving it all up."

J.C. Costa

On Guitar:

Continued from page 11

How about a country feel? Example 4 is a down home, hoedown country feel. It utilizes what has come to be known as Travis picking (after Merle Travis) with the bass line moving in roots and fifths, and muffled over the bridge with the back part of the right hand. You can play this with a flat pick, pick and fingers, thumb picks or with just the fingers.

The main emphasis in these examples is to have you understand that a particular style is achieved by understanding its feel. Figure out for yourself the musical and physical aspects on the guitar. In doing this you will also gain great insight into other avenues and people of music you hadn't thought about.

EXAMPLE IV COUNTRY



Learning to use your ears to pick things out is a very useful tool which you should utilize as much as you can. Try and be as open to as many different styles of music you can, even if you have, or think you have, no taste for the particular style of music at all. You'd be very much surprised how much you can learn from investigating the musical aspects of the music and really finding out what it's all about.

Next month, in part two of this series on styles, we will look at the same three examples that were covered in this article, and apply the same styles of music to the melody. Hopefully, you will be able to see how certain guitar techniques can be used to create melodic definition, and make the listener instantly aware of what he's listening to.

On Drums:

Chester Thompson

Continued from page 13

tinguishes the seasoned pro from the younger player out to make a name for himself (or herself... sorry, ladies).

Sometimes a complicated pattern flows better if some of it is implied rather than played - see Illustrations A and B.



We've talked about swinging with the rest of the band but it can also apply to soloing. A drum solo can be the highlight of the evening or the most boring event of the year. Believe it or not, people may not really care that you are fast and proficient at getting around the drums and can play for hours. It is much more important to have some sort of structure and all the better if it feels good. I will not try to tell you how to play a solo. I feel it should be personal. I suggest that if you can find a compromise between having great chops and swinging, the results might be very rewarding.

Here I will stop and end on an old but true saying. No matter what kind of music you play, "It don't mean a thing if it ain't got that swing".

*The push beat in example B moves across beat 3 rather than pronouncing it as in A.

On Sax and Flute:

Alan Holmes

Continued from page 15

Actual breathing exercises need to be carried out with care as they can cause giddiness. The problem with any bag of air, balloon or tyre, is that when it is full the air has high pressure when first released gradually tailing off as the bag empties. We have to control this tendency so that the "bag" is emptied at a constant pressure, providing a constant flow of air, balloon or tyre, is that when it is full the air has high a second) through the mouth, dropping the lower jaw so as to provide a really full supply followed by a controlled release which can be checked for evenness by blowing in the back of the hand. You will notice that to keep an even flow, progressively more pressure needs to be added from the abdomen as the lungs empty. Never allow *all* the air to escape, as this will cause a time-lag when refilling. Using the horn, drop the jaw away from the reed keeping, the top teeth in contact with the mouthpiece, take a very fast full breath, and then sustain a middle register note and check it for wavering. Although the wobbly tone can be caused by shaky lips, try to feel the process of squeezing the air up from the abdomen. It helps to look out of the window and fix your eyes on a distant object. Try to blow *through* the horn towards it as if you were blowing it down.

Breathing is something you can practice at any time, and ideally should be done every day. You can make up your own exercises which emphasize control. Remember, you can't expect to play well unless the horn is well supplied with air power under absolute control, so it's well worth spending some time developing a good "motor".

On Keyboards:

David Sancious

Continued from page 19

Getting back to the question of the execution of certain musical possibilities on your set. There are many types of contrapuntal passages and scales in contrary motion (which could be easily performed on stacked keyboards) that would present much difficulty on a parallel or angled keyboard set. Classical music in particular would present many difficulties on a non-stacked set. This is not to say it can't be done but we're talking about ease, comfort and spontaneity.

A good experiment to try would be to perform a piece of piano or organ music on a stacked set, they try the same piece on a parallel or angled set and see for yourself what is and is not comfortable and what can and cannot be done.

The parallel set is without a doubt the most difficult to play effectively. The angled set is more comfortable, while the stacked set provides the most ease, flexibility and spontaneity; three things essential to anyone interested in mastering multiple keyboards.

Keyboard sets arose from a desire to have control of a wide spectrum of sound. Parallel and angled sets came about because one was not always able to stack numerous keyboards, owing to their design. Some of the keyboards on the market today can do the work of two or more, because of advances in technology. So for those interested in doing so, it's becoming much easier to construct a stacked set with a wide spectrum of sound and fewer keyboards.

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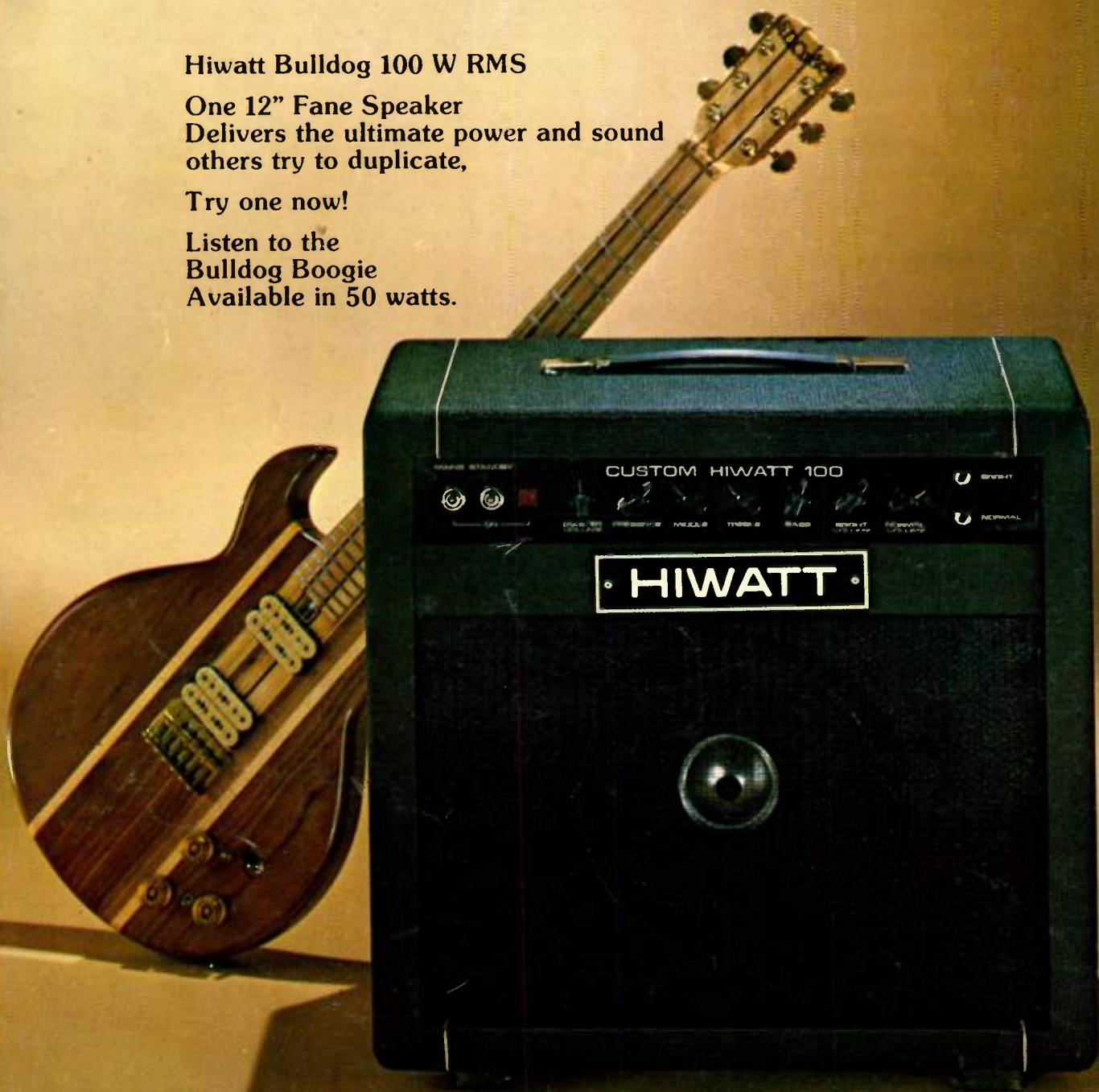
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