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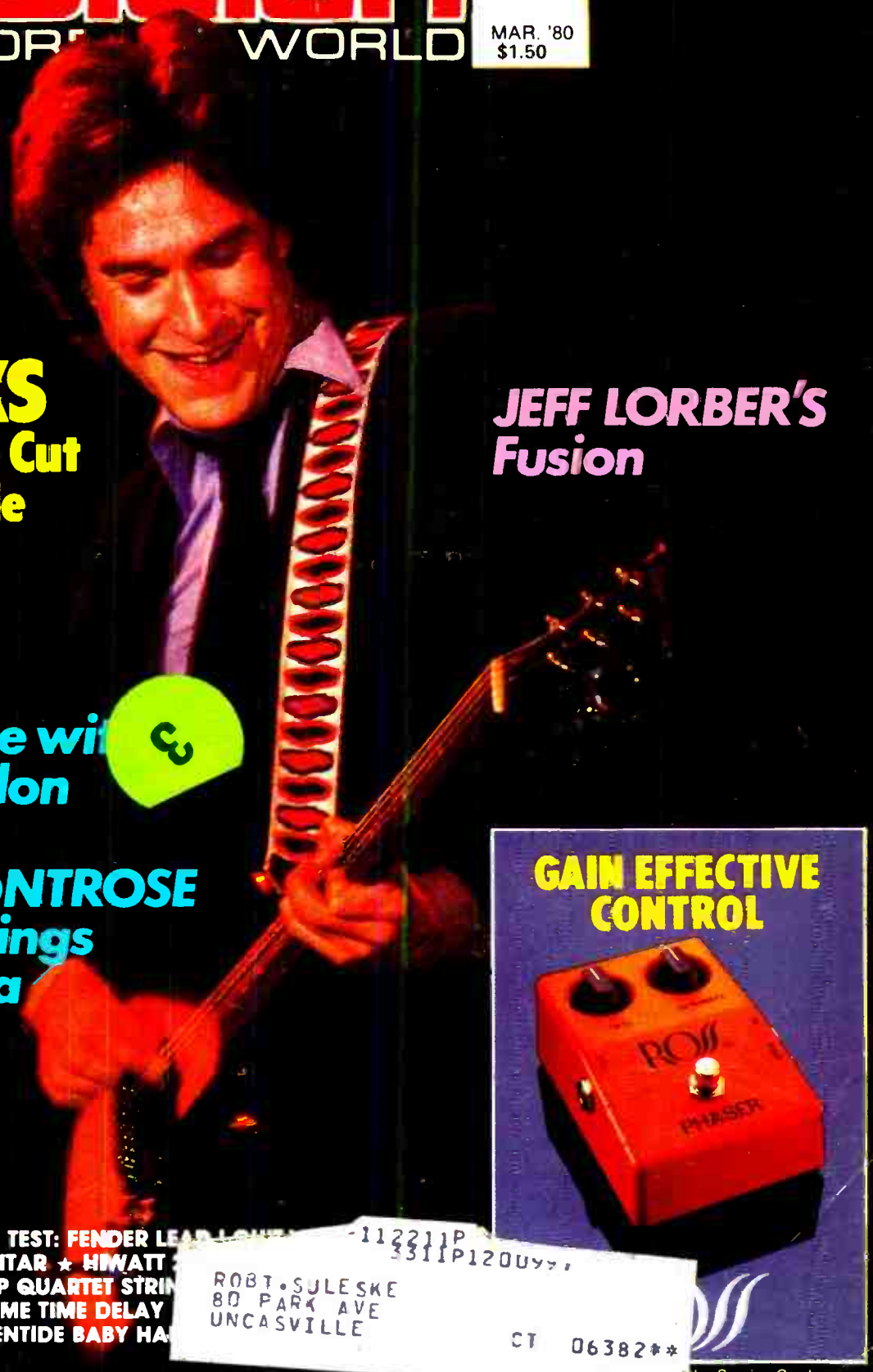

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prod·i·gy \'präd-ə-jē\ *n, pl* **-gies** [L *prodigium* omen, monster, fr. *pro-, prod-* + *-igium* (akin to *aio* I say) — more at ADAGE] **1 a** : a portentous event : OMEN **b** : something extraordinary or inexplicable **2 a** : an extraordinary, marvelous, or unusual accomplishment, deed, or event **b** : a highly talented child

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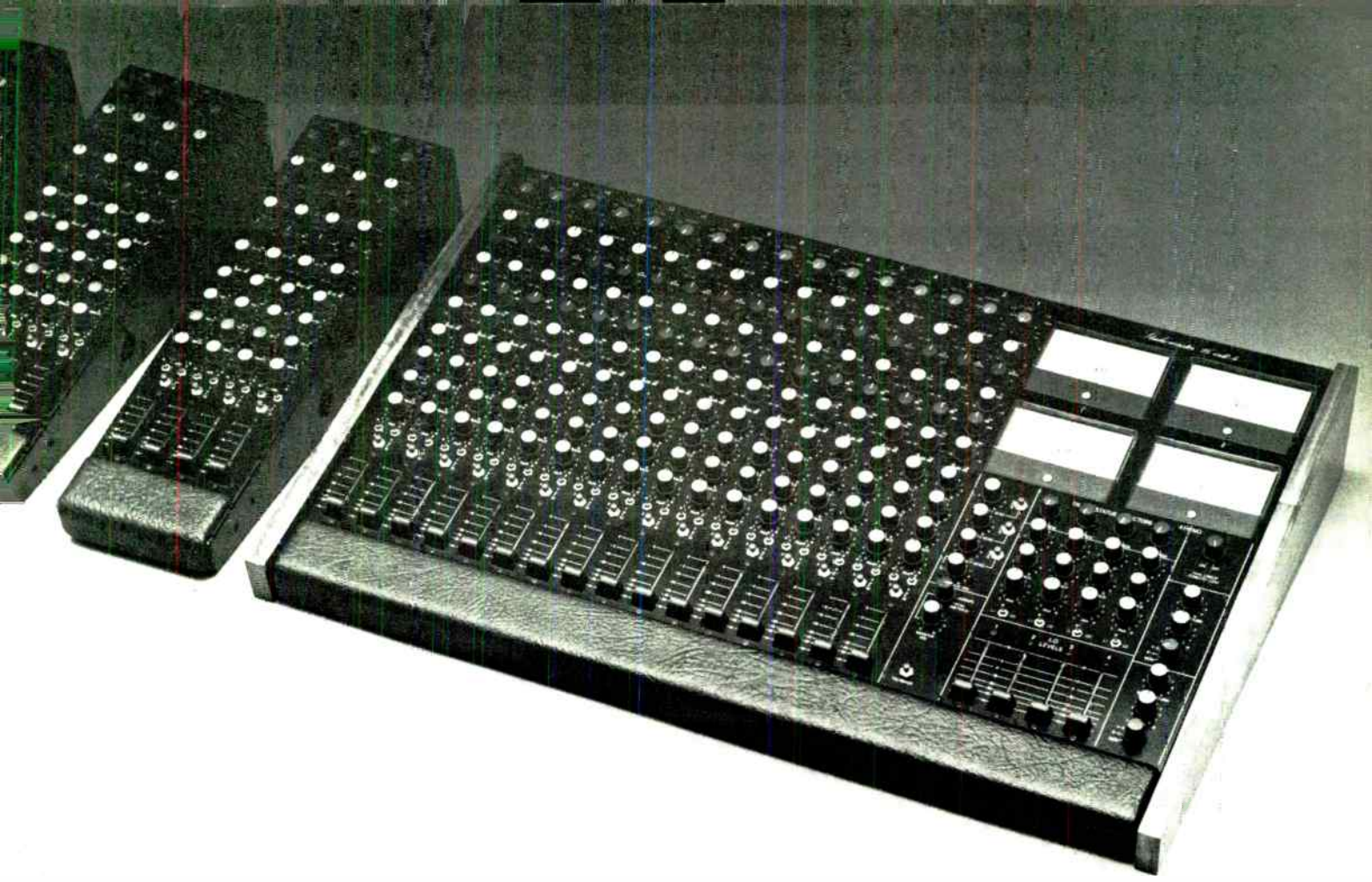

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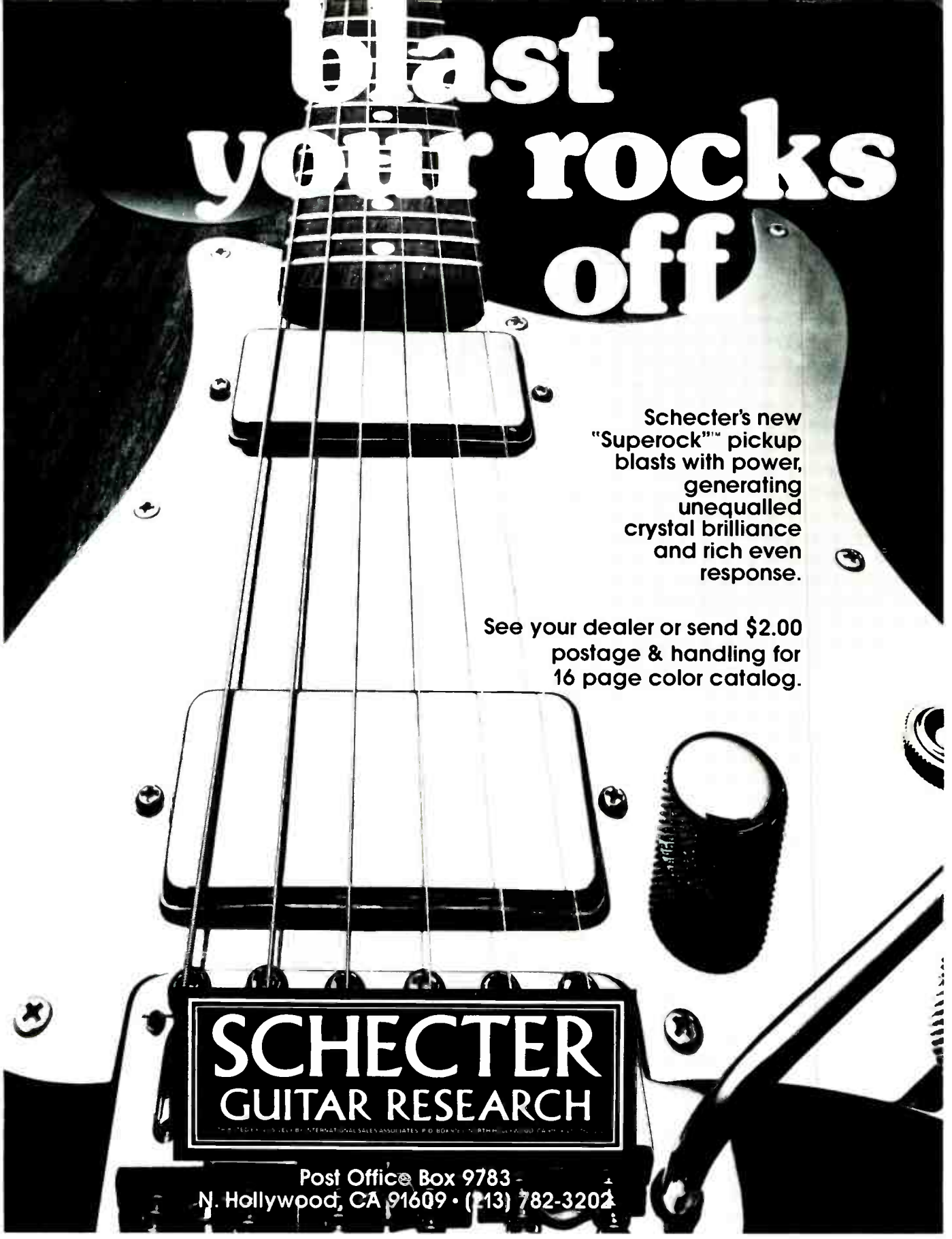

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A Personal Look At I.M.&R.W.

The fact that David Sarter is Vice President of Finance for IMRW/USA at the tender age of 32 is not so surprising when you consider that he, like many other Englishmen, first entered London's business world at the age of 16! Studying during the evenings to earn the British equivalent of a CPA certificate, Sarter first worked for a small firm of Public Accountants in London where he gained a large and varied background of experience in the accountancy profession. After this initial period of "dues-paying," he went on to an eight year stint in the accountancy department in Britain's National Union of Teachers where he acquired significant managerial and administrative experience.

From there he went on to the UK Division of the Sperry-Rand Corporation where he worked as both Accounts and Budgeting Manager and learned a lot about the way multi-national companies work. He left Sperry-Rand to work for a Greek Shipping Company — AGELEF — as Assistant Company Secretary specializing in the legal aspects of International Finance. When the Japanese-owned Casio company commenced trading in the UK, breaking away from existing agents, they raided the agencies for talent and Sarter was brought in as both Accounts and Personnel Manager with additional responsibilities in the area of stock control. In the two year period he was there, the company went through a phenomenal growth period — 0 to 5,000,000 pounds — and quickly earned a reputation as "the fastest growing company in the UK."

And what could be more logical than the fact that he would follow this stint by joining IM&RW, "the second fastest rising company in the UK" as first the Chief Accountant. Soon after joining IM&RW, he was named Company Secretary in Charge of Finance, Legal and Personnel for the IM&RW group of companies. Using his extensive knowledge of business computers acquired at Sperry-Rand and Casio, he helped bring these systems into full use at IM&RW. Recently, Sarter was named VP of Finance for IM&RW/USA responsible for all of the afore-mentioned areas vis a vis the US Edition.

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The Short-Scale Bass?

I'm a guitar player and two of my friends (a guitarist and a drummer) asked me to join their band as a bass player. So, I'm getting a bass and a bass amp. In a fan magazine I read that it is not good to buy a short-scale bass because their necks are not long enough for proper intonation. Is this true? Also, about how much would a Rickenbacker Model 3000 Bass cost new? And, finally, are there any decent, small bass amps around between 20 to 40 watts? Thanks for the US edition; your mag is the greatest thing since the Les Paul.

P.S. Would there be a good chance of blowing out my Crate amp with a bass if I set the Master about 10 and the Gain around 3?

Danny Theriot
Kenner, LA

Thanks for the kind sentiments. Be wary of anything you read about musical instruments in most of the fan magazines (except for ***Hit Parader*** *and* ***Rock Scene****), since most of the technical stuff in these mags is thrown in to provide a balance with stuff like Leif Garrett's latest pimple crisis. Intonation on a guitar (bass or lead) is determined by things like bridge and saddle adjustment, neck angle and positioning and the accuracy of the tuning machines. A short-scale bass does not* ***necessarily*** *— unless it's a cheapie where not enough care has been devoted to the accurate positioning of frets — determine proper intonation. Fender and Gibson make short-scale basses that work fine, it's simply a question of personal taste/playing comfort. The Rickenbacker Model 3000 lists for $550.00. Most of the major manufacturers have small or low-end units in the 20 to 40 watt range at a wide variety of prices — how much you want to spend pretty much determines the choice.*

PS *According to the folks at St. Louis Music, if you set the master on 10 and the gain on 3, you won't blow the Crate but you will get a thin distorted sound — something you could probably do without!*

Chet Atkins Student

I would like to congratulate you on maintaining an excellent standard in your magazine, which covers every aspect of the music scene. The article on Chet Atkins, as interviewed by Tim Fleming, must be the most informative article on Chet and his playing style. I have been a fan of Chet for the past 22 years. I have tried over the years to master Chet's technique without complete success, so would be pleased to know whether Tim Fleming conducts postal courses on the Chet Atkins method.

J.B. Harper

Tim Fleming has cassette or reel-to-reel tape courses available on Jerry Reed or Chet Atkins-style guitar playing (working with transcriptions of many of their tunes). This includes material on arranging and improvisation. For complete details write to Mr Fleming at 48 Hemnall Street, Epping, Essex, England.

Active electronics

I have been playing bass in local groups for the last three years and have become interested in obtaining the RD Active Electronic bass and six string Gibson guitars. I would like to know if there is any truth in the rumor that the "Active Electronics" in the RD is capable of ruining valve amps such as Marshall.

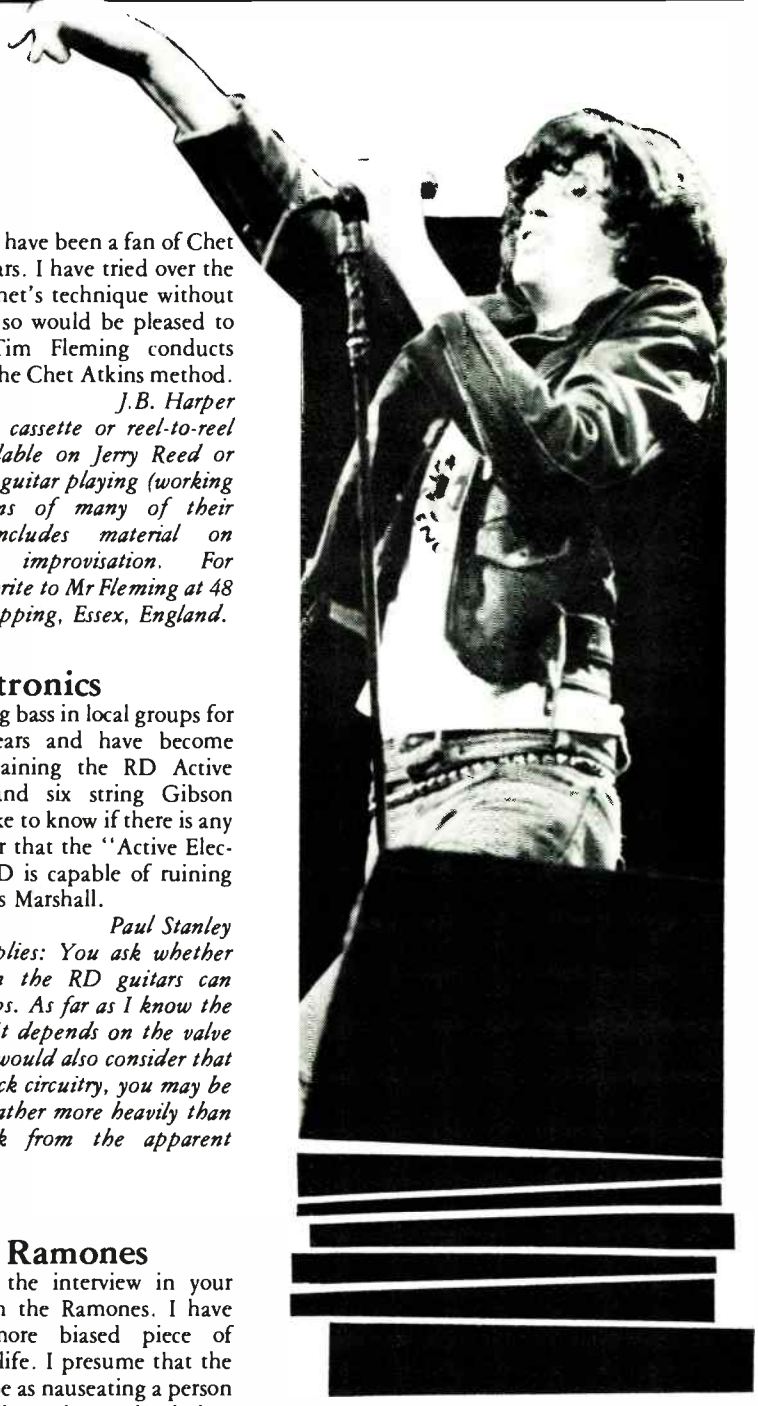
Paul Stanley

Stephen Delft replies: You ask whether the electronics in the RD guitars can damage valve amps. As far as I know the answer is "no." It depends on the valve amp, of course. I would also consider that if you use the attack circuitry, you may be driving the amp rather more heavily than you would think from the apparent loudness.

Nauseating Ramones

I have just read the interview in your January issue with the Ramones. I have never read a more biased piece of journalism in my life. I presume that the interviewer must be as nauseating a person as the Ramones themselves; who is he? Their press agent? The interviewer was disrespectful, thoroughly in favor of the Ramones and to have the cheek to say they "created" the Sex Pistols! I'm no punk, being more into Hackett, Oldfield and various areas of classical music, but I'm not standing for this. The Pistols will be remembered long after the Ramones go bald. Why is he so biased? It's just incredible. Keep rubbish like this out of an otherwise reasonable publication and give room to people who need it!

Robert James Pitcher



Entertaining Ramones

I didn't have no idear that yuz guyz over at IM&RW wuz tinkin a puttin a comidy part in yur mag. Gud laff. I tink an attitude put on by da Ramones in dat inerview putz some perspective on dis hole muzic biznis — an dat everibodi shouldn't take 'emselves so seriously. I specialy liked Dee Dee (uz bassists always know how to put things) but he can stick what he sayz 'bout Ricks.

John D. Gibbons
Orange, New Jersey

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On Bass:

Jeff Berlin

For the last several articles, I've made some strong comments about bass players, stating that most of them cannot read or write well and generally have a hard time playing accompanying bass parts in a musical fashion. I've discussed the importance of soloing, and have written several musical examples to explain how it is possible to be melodic and fluid when soloing and comping. However, I'm guilty of emphasizing soloing too much. While soloing broadens your concept of musical back-up bass playing, it may direct you too far into the "Million Notes an Hour School of Music". I've never seen it fail. We all wish to experience that euphoric sensation of successfully soloing our brains out. It's something akin to the "thrill of victory". But it's really hard to shift back into the simple and exciting world of rhythm bass playing. This is the point of this article. Simple, powerful bass playing is unbelievable in its execution.

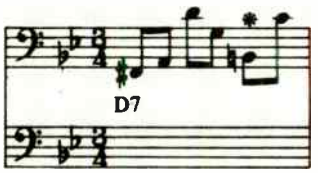
A tight rhythm section would work and earn money for years because EVERYONE understands rhythm. Music in 4/4 is universally accepted. Every lawyer, dishwasher, taxi driver and cop can hum the melody to "Midnight Hour". Every housewife and truck-driver knows "I Left My Heart in San Francisco". But why? What is the common denominator between musician and non-musician alike. It is, in a nutshell, diatonic harmony and melody, and simple rhythm in some divisional meter of 4 /3/4 or 4/4, for example). That's why bass players who emphasize the bottom in their sound, and accentuate the strong beat in each bar will work forever (or until Greek music gets into the Top 10). Rhythm is the guts of music.

Listen to Tower of Power. They are the tightest band in the land, especially when Francis Rocco Prestin played bass for them. Like their tunes or not, that group has the greatest horn section and has the greatest drummer in funk music, David Garabaldi. Every bass player into R&B bass should try to play with him. He and Prestin were the Kings of Soul in the Seventies. Listen to older records by the Tower. Also listen to anything that Jeams Jamerson (who did most of the Motwon things) played on. Listen to Regge. That music is nothing but rhythm. Listen to Ike and Tina Turner, James Brown, Aretha Franklin. If you can find "Spanish Harlem" by Aretha, you must listen to the bass on that cut. I heard that tune 10 or more years ago, and I'm still impressed with the bass on it. Dig Wilson Pickett, Otis Redding. Also check out Salsa bass playing. They mix that bass up loud and clear. Buy some Ray Baretto when he did nothing but Salsa and imagine

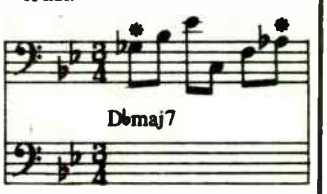
Continued on page 144

CORRECTION

There were two grammatical misprints in my intervallic example in the February edition. Bar 4 should have had a B natural instead of B sharp....



.... and bar 14 had a G natural instead of a G flat (which is okay sound - wise except that we are using modes as examples, and, this bar should be called IONIAN) and also an A natural instead of A flat.



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On Drums:
Dave Mattacks

What I'm going to do in this article is attempt a list of pointers and ideas to help the drummer going into the recording/demo studio for the first time. There will be no magic revelations — all these tips are little more than common sense — and some of the suggestions pertaining to the drums and hardware (as opposed to studio tuning tips) are applicable when you return to live work.

Because of the many moving parts of each stand and pedal, hardware invariably causes a problem at one time or another. Here are some things to check. Hopefully, you've got yourself a comfortable stool. Make sure it doesn't squeak when you turn even a fraction to one side. You'll feel pretty stupid if you get a great take of quiet number and as you reach out at the end of the take to slowly muffle a ringing cymbal . . .

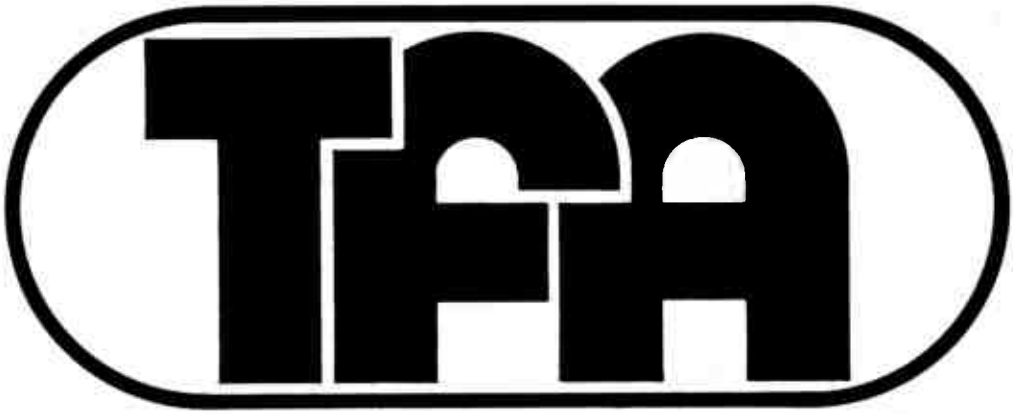
You all know about noisy bass drum pedals, I'm sure. Check the unlikely spots if you're still getting a rattle, where the beater enters the hub, for instance. It's not always the spring that's the culprit. If the pedal has metal links, a small amount of thick grease in the right place will help, and if it has a fiber or leather strap, try doubling up (one on top of the other) to safeguard against wear and breakage.

Checking the less obvious spots applies to the hi-hat pedal as well. Listen for a larger-than-life "click" when the pedal returns after being depressed. If you're getting something akin to a scraping sound, it could be that the center rod is moving against the inside of the top tube. A piece of plastic tube (similar in size to that used at the top of cymbal stands) around the center rod halfway down and a little masking tape to prevent vertical movement will help keep metal from metal. With the top cymbal of your hi-hat pair too tight, the cymbal won't vibrate. Too loose and the sound of the clutch moving against the partially immobile cymbal will be heard. Remember that in the studio your drum set is under a kind of "aural magnifying glass" and the things that you either didn't notice or did but didn't bother about are going to come under close scrutiny. Without suggesting going out and buying bedroom slippers, it's also advisable to play in a soft-soled shoe — otherwise there is the possibility of contact between foot and pedal being picked up.

Last, the cymbal stand. Hit all your cymbals on stands quietly and then gradually increase the volume — slow single beats, not a roll — with mallets. No rattles? Good. Up 10 places; collect free drum kit. Rattles? Could be one or all of a half a dozen things. Check the rivets: no loose and rattling legs? Maybe the stand is very low and tubes are rattling against tubes. If so, try loosening the wing nuts at the height adjustment stages just a little. Is the curved washer underneath the felt (underneath the cymbal) loose? If you've a metal washer and then just one thick felt underneath the cymbal, that should be sufficient, and that should also leave an ample amount of plastic tube protruding to screw the wing nut onto (to stop *that* vibrating!).

> In the studio, the drum kit is under an "aural magnifying glass".

That leads me neatly from hardware to drums and cymbals. If you think your cymbals are ringing too much, my first reaction is to say you've bought the wrong cymbal. However, I'll temper that and say that rather than try to choke it with felts, a *little* masking tape should help. (I advise masking tape or its variations on drums and cymbals because its effects aren't so severe and it doesn't leave a mess if and when removed.) If you *have* to tape your cymbals, tape them underneath and



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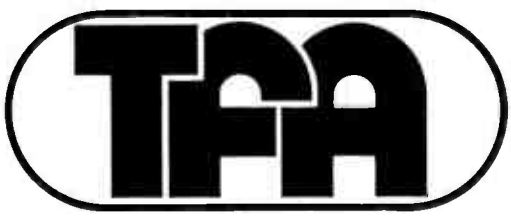

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On Drums: Dave Mattacks

rather than two or three long pieces, try four or six shorter pieces roughly the same length going out from the edge of the bell and evenly spaced (four pieces: 12, three, six and nine o'clock). This way, you'll slightly deaden the cymbal evenly as opposed to stone dead.

The drums. As likely as not, you'll set up and play and within minutes both engineer and tape op will rush out armed with enough blankets, curtains and tape to stifle China. This is where it starts to get a little difficult. Now I admit that I don't feel nearly so vitriolic toward studio engineers as I used to, mainly because I've worked with too many good ones. However, the key to your whole relationship with your first engineer is give and take. Unless you're in the middle of a huge room and just using ambience (distant) mikes (you're probably in a very small booth), the amount of ring your drums have, as they've been tuned for stage work, is excessive. Some engineers would like to remove this almost completely. The variables that affect how much ring should remain are unfortunately many. How you play, the type of music you're playing, how much you're "spilling" onto other instruments (this sometimes enhances the sound) . . . this list goes on. There is also good ring and bad ring! Bad is getting too many overtones and/or "setting off" other drums in sympathy. Judicious use of masking tape here and there will help to cut out some of these undesirable factors.

Check that the heads are on evenly; make sure that the tensioning between the top and bottom heads of your toms isn't wildly different. What I've found over the years is that if the drums sound good to me from where I sit, they should sound good in the control room. Although that may seem obvious, what I'm implying is that if one tom tom doesn't quite "fit in" with the rest, don't expect the engineer to "take care of it" on the board. Work with him; if you have the time, ask if it's possible to record a little of you playing by yourself. If so, don't flash around the kit. Play something slow and simple — four bars of rhythm on the hi-hat, then your cymbal. Do a slow fill, for example an open, simple phrase on each tom. When you go in to hear it back, you'll be able to evaluate each drum's sound. Do the toms have a similar tone or does one ring more than the other?

Although its usual for the front head to be removed from the bass drum, the tension of the remaining head and the amount of dampening affect the final sound a great deal. If the head is too tight, a lot of padding has to be used so the "note" from the drum isn't too predominant. I personally prefer a slacker playing head with just a little damping against the bottom inside the shell. Also, if you've been playing on stage with both heads on the drum and using a wooden beater, you may find that with the head off you're getting too much impact and not enough drum. Try a cork or similar mid-density beater.

Finally, the snare drum. As there seems to be about a million different recommended ways of tuning it, I think I'll say nothing here but give you a couple of general pointers about your drum and its care. These apply to whatever work you're doing, studio first time or not. General things are: (1) Make sure the damper works effectively and doesn't rattle in the on *or* off position; (2) Likewise the snare release or strainer; (3) If you suffer from tension rods working loose, try either substituting the plain washer with a serrated one or removing it altogether.

Finally, I'm going to point out a few of the cliches you always hear! Keep it simple, don't be flash, think about everyone else's parts and not just your own, etc. I hope it all goes well and if the engineer still complains about your sound, don't tell him you read this.

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On Sax:

Alan Holmes

Because the woodwind family is so large, each category (sax, flute, oboe, etc.) has three or more sizes. The pro is expected to have a large number of expensive doubles and be able to play all of them. He may look enviously at the trumpeter with just his trumpet and flugel or at the trombonist, who very often doesn't double at all. But he is expected to turn up with all his little cases and effortlessly switch between soprano, alto, tenor and baritone saxes, flute, piccolo and alto flute, clarinet and bass clarinet, possibly oboe and English Horn.

Just because an instrument is "only a double," doesn't mean it can be a cheap make because you will have enough problems switching from one to the other without having to worry about inferior instruments. Only the best will do. Nearly all intonation and finer tones are "built-in" to woodwinds. Cheaper means inferior wood and metals. For flutes, only silver has the quick warm up and responsive tone required in a doubling instrument. If you fool around with student grade oboes, you deserve all the headaches you will get. Only professional instruments and then sometimes only after expert tuning, have sufficiently good intonation to just pick up and play.

Because sax players usually learn either on alto or tenor, the fact that they have the "set" from soprano to baritone doesn't let them off from being labelled. They are either tenor players or an altoist. Tradition demands that the altoist also play baritone and the tenorist should also play soprano. This is only because altos and baritones are in E flat and tenors and sopranos are in B flat. The more obivious closeness in size of soprano and alto, and tenor and baritone (which are far easier to switch) are ignored for the sake of convenience for the copyist. Ever since the days of the great classical composers, music has always been written for the convenience of the composer and copyist, *not* the performer.

They leave bars out and put little marks to mean "repeat previous bar" instead of copying the notes properly.

We are stuck jumping from alto to baritone, and tenor to soprano with very little break. Eight bars is fairly standard. The process can be smoothed out by trying to match up the mouthpieces so there is some similarity of "feel" and tip opening if not material. Doubling baritone is made easier by using a Lawton mouthpiece. These are very easy blowing and have excellent intonation and transform a baritone into a saxophone complete with harmonic range. Anything larger than 7' or 115 thousandths of an inch will make it very unlikely that you will be able to sustain notes or phrases long enough, even using soft reeds. Baritones are very often written "soli" with the other saxes, but in their lower register which means that they are expected to breathe in the same places as the altos and tenors which are using considerably less cubic feet of air per bar.

A larger tip opening and harder reed will mean more frequent breaths, which consequently interrupts the flow of the music. Ideally, you should go for the smallest tip opening which will play the lower note with a full sound. This will depend on reed and technique. Possibly around 100-105 thousandths or 5 to 5' would allow the reed to travel far enough to play a low "B" that doesn't sound "strangled" or lacking resonance in any way.

The idea is to make the steps between the various saxes as close together as possible so that switching becomes easier. It would be over simplifying matters to just say "use a 6' on all the saxes." There is a ratio between the tip openings for baritone, alto, tenor and soprano which simplifies switching which we will investigate next month.

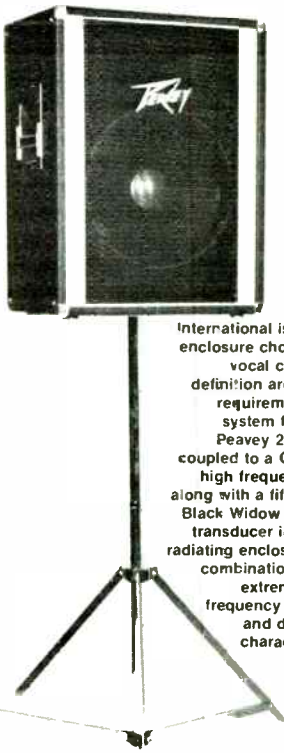
There are many ways to put together a sound system. You can spend a lot of money on mixers, equalizers, power amps, and accessories. Or, you can buy one of the new XR Series compacts from Peavey. The working musician who makes his money playing clubs, lounges, and small auditoriums will be hard pressed to find a more functional system.

The XR compacts have been designed for maximum versatility in a highly portable package offering features and specifications formerly available only with separate components. Take for example our built-in graphic equalizer that allows you to tailor the tonal response of the system to any playing environment while maintaining effective control of annoying feedback. Or, the independent monitor send controls on each channel that can be mixed and adjusted separately for each performer. Convenient patching facilities are provided for direct hookup with external power amps, effects devices, and monitor systems.

Two high impedance inputs are featured on each off the XR's channels. This means you can run as many as twelve microphones into the six channel XR-600. Using Peavey PBH microphones and cables that same setup is automatically converted to a low impedance balanced line, totally eliminating any hum or interference,...a feature usually found in much more expensive mixers.

The XR compacts are compatible with any four ohm speaker setup but, if you're after maximum performance in a portable package, our International Series enclosures are without equal. These extended range, high efficiency enclosures out perform many of the "professional" permanent installation systems that are much larger and more expensive.

Before you invest a lot of money in a sound system, stop by your Peavey Dealer and see what a great sound system a lot less money will buy.



The 115 International is an ideal enclosure choice when vocal clarity and definition are primary requirements. The system features a Peavey 22A Driver coupled to a CH Series high frequency horn along with a fifteen inch Black Widow precision transducer in a direct radiating enclosure. This combination insures extremely wide frequency response and dispersion characteristics.

Peavey PBH high impedance microphones are specially designed with a converting transformer built into the cable plug at the input of the amplifier. This advanced design retains all the interference cancelling advantages of the low impedance, balanced line setups of larger, more expensive systems.

Peavey microphones feature wide response with tight cardioid patterns for clean, realistic vocal reproduction. Each mike comes equipped with a rugged case, deluxe holder, and a twenty foot cable.

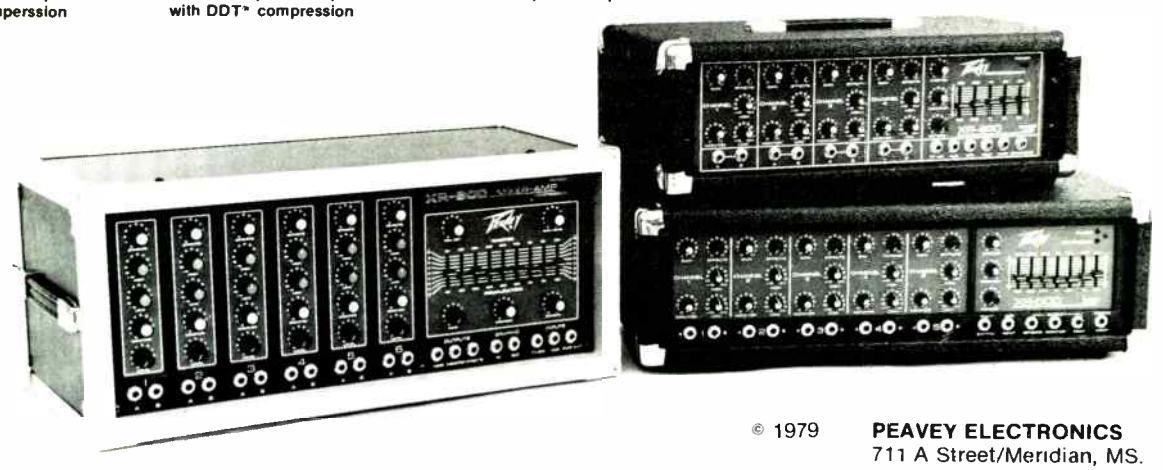
The Peavey S-1 heavy-duty speaker stand represents a vast improvement over previous speaker stands. The S-1's height adjustment utilizes a high-strength aircraft "locking pin" and does NOT depend on a "thumb screw" which can easily slip and cause the stand to collapse.

THE XR SERIES COMPACTS

XR-600
Six channels
Auxiliary input channel
Nine-band graphic equalizer
Complete patch panel
210 watts RMS power amp
with DDT* compersion

XR-500
Five channels
Auxiliary input channel
Complete patch panel
Seven-band graphic equalizer
130 watts RMS power amp
with DDT* compression

XR-400
Four channels
Auxiliary input channel
Complete patch panel
Five-band graphic equalizer
100 watts RMS power amp



 PEAVEY ELECTRONICS
711 A Street/Meridian, MS.

Grace Notes

J.C. Costa

Prior to the flood of new product information that will be undoubtedly pouring onto my desk from the just completed NAMM show at Anaheim, I'd like to mention a few items you (and we) may have overlooked in recent months.

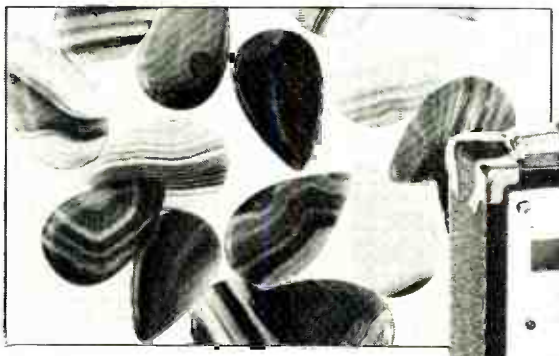
One of the first items on the IM&RW test list for the coming year is the *extremely* reasonably-priced Korg X911 Monophonic Guitar Synthesizer. Even with the lessened cost factor, the X911 features goodies like pre-programmed preset control and separate variability for each preset function, 11 mixable voices, an "advanced" design pitch to voltage converter, envelope follower functions, VCO with two sub-octaves and 11 mixable voices, footswitch operated portamento, infinite sustain, variable interval and synthesizer cancel functions, electronic solid-state switching, direct output, externally controllable pitch and filter modulation (Korg MS01 pedal) and lots of other stuff. If everything works as billed, at a suggested list of $550.00 which brings guitar synthesis within a much more realistic framework, this Korg unit is one of the first guitar synths to make sense to me, and believe it, I'm not a major fan of guitar synthesis — especially when the cost extends up into the thousands of dollars!

We'll also be taking a look at two of the newer Peterson tuners, the Strobe Tuner Model 420 and the compact Guitar Tuner Model 100, specifically designed for tuning guitars and other fretted instruments. As small as it is, the Model 100 still has the range for lead, bass and acoustic guitars, a Vernier Pitch Control, LEDs for visual display, *no* batteries to wear out, automatic compensation for variation in line voltage or temperature — and all of this weighs in at a mere 2½ pounds! More good news for the tin-ears among us.

I'd already heard of a stainless steel guitar pick manufactured by a charming gentleman in Texas whose name I can't remember, and now the Dougherty-Miller company (1219 Glenside Ave., Wilmington, Delaware 19803) is offering up a stone pick for your perusal. Yeah, you heard right, a *stone* pick (as opposed to a stoned pick), ie. *very* hard. The MIN'D PICK, "being totally firm and slightly larger than traditional picks, gives significantly more control and a cleaner, brighter sound with more power and greater playing speed. Also, "The MIN'D PICK will never wear because the stone is harder than any metal in any string." Not to be pick-ey (sorry for *that* one!), but that could also mean that your strings may end up getting chewed up and broken prematurely — or maybe it doesn't; your move. Anyway, these nice folks go on to describe how more of the finger is in contact with the pick because the pick does not bend and stays in the same position of attack, and how "the added weight and density of the stone pick aid in increasing speed by allowing the guitarist to develop torque and leverage to aid the pick in propelling itself." This last statement is a tad unclear to my mind, but I'm still willing to try it. However, I do remember from my experiences with the afore-mentioned stainless steel pick that these ultra-rigid types of picks require an extraordinary amount of precision in the right hand technique. In other words, you get better because you *have to*.

Circle 863 on Reader Service Card

Ever have the all-too-common problem during a live gig of "crashing" your valuable instrument into the microphone stand when you step up to sing a harmony part? Well I have and it's a *major* pain-in-the-ass. The Zephyr Mfg. Co. (PO Box 5973, Sherman Oaks, Ca. 91413) has theoretically put an end to that particular bugaboo by creating the Z-80 Heavy Duty Pro Stand. Lightweight (23lbs) yet "steady as a rock," the rather unique angle of this stand makes for freedom of movement without fear of unwanted collisions. The height adjustment control is located at a point where you don't have to stoop down to raise or lower the mikes and guitarists should appreciate the added footspace at the bottom to allow for pedals and EFX boards. For the mere stipend of $59.95 list, the Z-80 comes standard with a sexy black chrome finish, machined aluminium fittings and a black cast iron base.



Circle 861 on Reader Service Card

Circle 862 on Reader Service Card

Grace Notes

The Calzone Case Co. is introducing their new "Pro-Line" series of guitar and bass cases which are both a lighter-weight and less expensive version of their "Strong Arm" cases. The "Pro-Line" case is made of "Hi-impact plastic/plywood laminate" and incorporates the patented Calzone double angle aluminium edge construction and deep grooved valance. Interior-wise (whew!), the lucky and pampered instrument gets to sit "in a custom cut bed of shock-absorbent foam that is velveteen covered for beauty and long wear." Inquiries about prices may be directed to Tom Hagen, Calzone Case Company (PO Box 862, South Morwalk, Connecticut 06586).

Hopefully, this column will be able to expand from the confines of new products to unexplored area like book reviews, observations on the contemporary music scene, film reviews (when applicable) and video in the months to come. Before closing for this month, I would just like to recommend a couple of books that have come out recently. *The Heavy Guitar Bible* by Richard Daniels, because of its brilliantly unorthodox approach to guitar instruction which is keyed to the typical rock player who has learned by ear, or by copying records, or just by fumbling around on the fingerboard until it sounded right, is the first book of its kind that I actually enjoyed reading and also the first to really help define or clear up foggy areas in my technique. Attractive and intelligently laid out (Daniels also did the excellent line drawings), the book is a very useful supplement to *anyone's* existing knowledge of electric guitar playing with chapter headings like "Chords & Structure," "Heavy Riffs," "Vertical Riffs," "Off The Chord" and "The Blues." This book makes early instructional stuff like the venerable but incredibly boring Mel Bay series look like the Magna Carta. Also, if you're always at a loss when some techno-freak hits you with a blitzkrieg of technical buzz words like Fletcher-Munson curves, comb filter, compander, noise floor, slate tone, pink noise, supercardioid etc., you can get the jump on 'em by picking up a copy of the excellent *Dictionary of Creative Audio Terms* which is put out the CAMEO (Creative Audio & Music Electronics Organization) at 10 Delmar Ave., Framingham, Massachusetts 01701. For a paltry $4.95, this little gem of a glossary will explain and define (in very straightforward layman's language so as not to compound the problem) all of the afore-mentioned terms along with a host of others that keep popping up in every day conversation.

Performance

Who's Flying?

Hammersmith Odeon
Friday December 28 1979: The Who, The Specials, The Pretenders

Photo By Photographers International

With a four day string of benefit concerts for Kampuchea refugees, the Who were easily the best of a well respected gathering including Wings, the Clash, Ian Dury, and Queen to name but four. Kenny Jones has finally settled into the band well and truly, contributing a different drum sound but an aggressively attractive one nevertheless.

On previous outings, the Who seemed inferior to their more familiar four man line-up. Rabbit on keyboards, coupled with a horn section, gave a polished quality to the music which erased the band's characteristic human raunch. Pleasantly, that sound has been rediscovered, albeit slightly cleaner than before but still wonderfully raw and energetic.

From the first familiar strains of "Substitute," the crowd squeezed into one united whole adding a warm feeling to the usually cold surroundings of a rock & roll concert. But then the Who have always been *that* kind of band.

On this occasion Pete Townshend played some incredible guitar solos beginning with their revamped version of "I Can't Explain". Particularly strong was "The Punk And The Godfather" where Townshend's delicate, almost angelic voice acts as a perfect foil to Daltrey's tougher vocals.

As always, John Entwistle provided the solidarity of an anchorman, supplying flawless bass runs. All one can hope for is a new album of the *Who's Next* caliber which will inject their devistating stage show with some badly needed new numbers.

The support bands presented a nice cross-section of "new wave" music British style which meant the sounds ranged from the reggae-ska of the Specials to the stunning guitar work of the Pretenders. Fronted by female vocalist Chrissie Hynde, the Pretenders offer a rare blend of rock & roll with *taste* which promises to last long after the feedback of latent Seventies "punk" has died.

Saturday December 30, 1979
Wings, Elvis Costello and the Attractions, Rockpile with Nick Lowe and Dave Edmunds

Saturday night's audience was comprised of the more sedate Wings fans. The lack of excitement and energy, in such abundance when the Who played the previous evening, was sadly lacking, making this a rather lackluster affair. The only genuine stir of electricity came from people who fell victim to massive rumors of a Beatles reunion.

The evening kicked off superbly, however, with a tightly knit set from Rockpile. The four piece unit has gelled nicely into a premier act and they showed more established superstars just what they could do with their greatest hits stage shows.

The first surprise of the evening came when Robert Plant ambled onstage to sing "Little Sister," which the band played far better than he sang. Afterwards, Nick Lowe mumbled into the microphone, "personally I prefer Ry Cooder's version". Enough said.

Billy Bremner played fine guitar as did Dave Edmunds. With drummer Terry Williams and bassist Lowe, Rockpile would have easily showed up the Fab Four had they dared to step on the stage. Highlights were many, including "Girls Talk" and "Crawling From The Wreckage" sung by Edmunds and "Cruel To Be Kind", "Crackin' Up", and the ultimate story of the callous side to music, "They Call It Rock," fronted by Lowe.

Although Elvis Costello and his able bodied Attractions were very good, they never managed to reach the adrenilin level supplied by Rockpile. Costello previewed much of his forthcoming new album.

Keyboards are heavily featured, giving some of the tunes an appealing, funky Booker T. and the MG's sound. Especially soulful is his new single, an old Sam and Dave song, "I Can't Stand Up For Falling Down". The band sounded very good and Costello himself seemed to enjoy playing live adding some unusually cryptic *and* amusing banter.

Unfortunately Paul McCartney was neither humorous nor very interesting. Their live sound approaches that tedious kind of perfection that often causes audiences to fall asleep. Devouted Wings fans even applauded an appallingly out of tune "Cook of the House" sung by Linda.

Only Denny Laine breathed any sense of "fun" into the dry proceedings by doing a summersault on top of the piano before launching into that old chestnut "Go Now". Guitarist Lawrence Juber uses so many special effects that a rhythm machine could have easily replaced him. One highlight was when McCartney took to the guitar and belted out Eddie Cochran's "20 Flight Rock". Standards like "Yesterday", "Let It Be" and "Maybe I'm Amazed" kept the worshippers happy.

Towards the end of the set, the audience were primed for the "Beatles reunion". Instead they were treated to a massive jam on "Rockestra" which included Pete Townshend, Kenny Jones, Edmunds, Bremner, John Bonham, John Paul Jones, and Plant to name but seven. Thankfully Townshend was running on brandy. Refusing to wear ludicrous silver tails and top hats, he looked a treat in a baggy, old brown suit and sent up the entire proceedings: doing infamous windmills without playing a note during the "Let It Be" intro.

When the Rockestra took the stage, someone from the balcony let down a sign which said "Hello from New York". Maybe that was John Lennon's special way of saying he didn't want to know.

Barbara Charone

The Clash

Give 'Em Enough Rope

By Steve Brennan

Photos by Penny Smith

Turn off your mind, lie back on the couch and relax. We're going to have an association test. What do you think of when I say the Clash? Running battles with the grey forces of government? Three chord supercharged thrashes vilifying unemployment and public housing vegetation? Seething hordes of punks dancing themselves into a frenzy?

Wrong. Times have changed. Punk is now locked as firmly into the past as hippies were in the Sixties. Safety pins and bondage trousers are as passé as headbands and peace signs. The bands that characterized an era have disappeared. The Sex Pistols destroyed themselves which left the Clash.

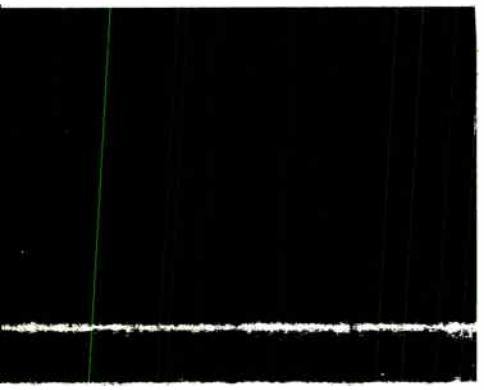
After an impressive first album and a fair second effort, their third double record recaptures the drive and energy of the first. The Clash have established themselves as the most talented band to emerge from the much vaunted new wave.

Their latest album, *London Calling*, displays considerable evolution since early days of the band. The songs are more reflective and melodic. Songwriters Joe Strummer and Mick Jones contribute heavily but to a large extent the dexterity and adapatability of drummer Topper Headon has enabled the Clash to develop their musicality.

Topper is, perhaps, the most accomplished musician of the four-man band. His early training with a variety of different music forms, from traditional jazz to soul, has provided a firm foundation for Strummer and Jones. Topper provides the matrix from which the rest of the band work.

Topper believes the Clash have survived because they have staying power, because they haven't been afraid of changing and because they weren't hesitant to branch out when they grew tired of playing frenetic chords.

"We've remained true to what we ori-



ginally believed in," declares Topper. "We still enjoy playing our own songs. We're not going through any set patterns. The basic idea has been to remain true to what we believe in and not allow ourselves to be dictated to by the industry and become CBS puppets."

They've done a deft job of staying ahead of the big business machine. "Who needs it? We wanted our double album to go out for $10 when everybody else's albums go out for a lot more. We had to fight battles to get a cheap record out. Obviously, that's not in the record company's interests. They told us it was impossible. Maybe that's why we've stayed together; we keep setting ourselves impossible tasks. It gives us drive."

Even on tour, the Clash are determined to keep prices down which certainly affects the band's take home pay. But money isn't what they want most.

"What we want is for the kids to be able to see us," Topper says.

Their attitude irrates businessmen. "If anybody does something like sneak a video of us on television, we'd split up. And CBS knows we mean business. We owe them so much money they can't afford for that to happen."

The Clash are a refreshing contrast to the kind of bands that do anything to get their name on the dotted line. From the beginning it's been a complete turnaround from the usual state of affairs that exist between band and record company. The *companies* have been chasing the Clash.

Topper joined the Clash between their first and second albums. Previously he was playing with a soul band that regularly toured Germany and British airforce bases. Regularly earning $100 a week, Headon took a cut in pay to work with The Clash. "I knew at once that it was the gig I'd been looking for. Everything came quite naturally."

By the time Topper joined the band, he was beginning to think he'd never pass an audition. Not many bands were signed before the British punk explosion. "They'd form a band for somebody from out-of-work-musicians who had been thrown out of other bands. They knew the ropes, so they wouldn't kick up a fuss because they knew they were dispensable. Everytime I went along for an audition, I was constantly beaten by drummers who had played for name bands and had 'experience.' It just went on and on like that."

Topper had been playing drums since he was 13. Drumming was a habit he picked up when he had a broken leg which halted a promising football career. His dad spotted a second-hand kit in the local paper and bought it. By 14 Headon was regularly playing with a traditional jazz band. "For some reason bands were always short of drummers."

"This jazz band," Topper recalls, "were all about 50 years old, and a couple of them were pretty good. It taught me a lot about time keeping, just keeping it moving and swinging. Just because I was straightforward — no frills or anything — they thought I was great. Gradually, I began to get better and they liked me less and less because I started to get flash. The first lesson I learned was that other musicians appreciate a solid drummer, not a flash drummer."

As far as tutoring, Topper never got past the introduction in the books. Paradiddles and triple paradiddles were as far as he got. Eventually, Headon bought a Premier kit: "At that time it was the cheapest pro kit you could get. You could go into any music store and get one. Everyone stocked spares and fittings. That was one of the reasons I bought a Premier. I'm still sold on silver kits because they look great under the lights."

A few days before his first tour with the Clash he took possession of a silver Pearl kit, which he still uses. After a bit of chopping and changing of toms, he's wound up with a 24" × 17" bass drum, 14" × 10" top tom tom, 16" × 10" and 18" × 10" floor toms, and a Ludwig Black Beauty snare drum. All the cymbals are Zildjian — two pairs of 15" Heavy Rock hi-hats, a 16" crash, an 18" crash, a 21" Rock ride, a 19" Rock crash and a 20" Rock crash, plus a little Zildjian splash cymbal attached to the top of the bass drum which he claims is driving the rest of the band mad. All the stands are Premier Lokfast Trilok stands.

"I go for a real solid kit," claims Topper, "that's why I chose Pearl and Premier. There're really solid and serviceable, no frills on them. You get a good feeling when you sit behind them because they're so workmanlike. You think, 'Great, I ain't gonna knock these over'. I use rubber mats to secure the kit on the riser.

"Although I have the kit basically the same most of the time, I do like to change it around occasionally. If I started to use wooden blocks on the riser then I'd be stuck with one position, and that can be limiting."

When it became evident that the Clash were here to stay, Topper got the chance of a new kit, which he tried but didn't rate as much. However, he did take Pearl up on the offer of a buckshee recover and recon. He expects to have his present kit for at least another five or six years, providing it doesn't get dropped or broken.

Another complaint from Topper is lack of service and spares outside London: "We've got a flight case which is like a miniature drum shop, it carries everything down to cymbal felts and spare lugs for the bass drum. We always take it with us on the road and keep it stocked.

"I begin a tour with everything I might conceivably need, and gradually I get rid of things I don't need, so the kit gets smaller as the tour goes on. Once the hi-hat busted, the spring went right inside, and it was impossible to fix. It was a Saturday night when we discovered it, and

The Clash

we had a show on Sunday. Luckily, we were able to borrow a hi-hat stand from the support band."

Topper is a man dedicated to acoustic drums. He regards synthesized drums as irrelevant: "They were alright for two weeks, then the novelty wore off. Personally, I'm exploring different areas, like percussion. I even use finger cymbals on one track of *London Calling*. But that's the way to go — into acoustic percussion. There's so much scope there that I don't know why synthesized drums were invented in the first place."

Miking up for a gig is a lot similar to miking up for the studio. Topper uses two overhead cymbal mikes, and two mikes for the double hi-hat set up he uses. The toms are all miked from the top, and the snare drum is miked from beneath. He keeps both heads on and never has anything inside the shells. Topper uses very little damping live. What damping there is, is usually on the bass drum, and always external. All damping is with gaffer tape. Topper prefers AKG mikes, but on tour they vary depending on which PA hire company is being used.

"I can go into the studio and get a good drum sound in an hour," continues Topper. Listen to the latest LP *London Calling* and you'll hear what he means. "The first time I went into the studio I was pretty green but I learned from it For *London Calling* I went straight in and knew exactly what to do. Everybody goes into the studio much more relaxed now. I use AKG mikes and everything is miked from the top except for the snare. Again I use double heads to get the boom sound, and I use room mikes to pick up the spillage, to make it sound more live without going over the top. The set up is exactly the same as I have live, really, except I don't use a bit of damping."

The biggest problem with putting out the new album were recording costs. The Clash figure that the longer they spent in the studio, the more it would cost, the more money CBS would have to put up, and consequently they'd have a greater hold over the band. The Clash even put up some of the money themselves. Eventually, they had the tape and told CBS: "You can have it if you meet our conditions." Topper admits that there are some mistakes on the album, and more than a few drum errors. That's the price to pay for the energy captured on the vinyl.

London Calling was recorded in a month, with Guy Stevens producing. That's how it's going to be in the future, Topper maintains. The second album, *Give 'Em Enough Rope*, was not as successful as either the first or the third records, and Topper blames producer Sandy Pearlman for this.

"He made it quite dull," Topper says. "He was a dull person to work with. We wanted a producer, CBS gave us a list of producers and his name was on the top. We listened to stuff he'd done with heavy metal bands, and we thought it was rubbish, but it was the production we were interested in. We wanted to get a good sound, and one complaint against the first album was that it sounded too thin. So we wanted some production that would stand up to time. So we got Pearlman. But he took so long to do it, with his perfectionism, that the prevalent feeling in the studio by the time he'd finished was boredom. When I think about recording that album I cringe."

Problems don't end in the recording studio for the Clash. For a good few years now they've had constant trouble with local districts who insist on banning punk bands from "The Establishment" which began with the infamous Sex Pistols. The daily newspapers portrayed the Clash as wreckers of society.

"We're still getting that sort of prejudice," explains Topper. "We had 16 gigs booked at various places, and then about 12 pulled out. You have to completely re-route the tour."

One hall cancelled a concert because there were too many mirrors in the place to safely allow Clash fans in: "But our fans don't smash things anymore. They do if they're told what to do, like sit down in this seat and be a good boy. That's why out of all the gigs on our British tour only two have seats in them."

Harassment from local villages takes other forms. The obligatory visit from the fire inspector often results in strict demands being laid down: "He says take that backdrop down, so we take the backdrop down, and he says erect more crash barriers, so we put up more crash barriers, he says this stage has to be rebuilt here, and you need more security. We just laugh at him and do anything he wants. Nothing can stop us playing. But they make life difficult."

As time progresses, however, the Clash are becoming more acceptable, though not more respectable, Topper hopes. He makes the point that the Clash have to pay for all the damage that's caused, so why should they promote vandalism?

Surprisingly, Topper found that the audiences in America weren't so much different to the British fans. The punk thing is realy only just beginning to happen across the pond: "They're still into safety pins," declares Topper. "It's the same as the White Riot tour here, when there were about 300 or 400 fans dancing down the front with the rest there out of curiosity. But we sold out 25 of our 28 gigs there, and that was in 3,000 and 4,000 seater auditoriums. The States is so big. LA was just a load of old hippies lazing around getting stoned in the sun. I liked Chicago best, with all the blues clubs. But we should do well over there because the USA has all the same problems as Britain except they're magnified. They have all the slums and the poverty, and more of a racial problem, too."

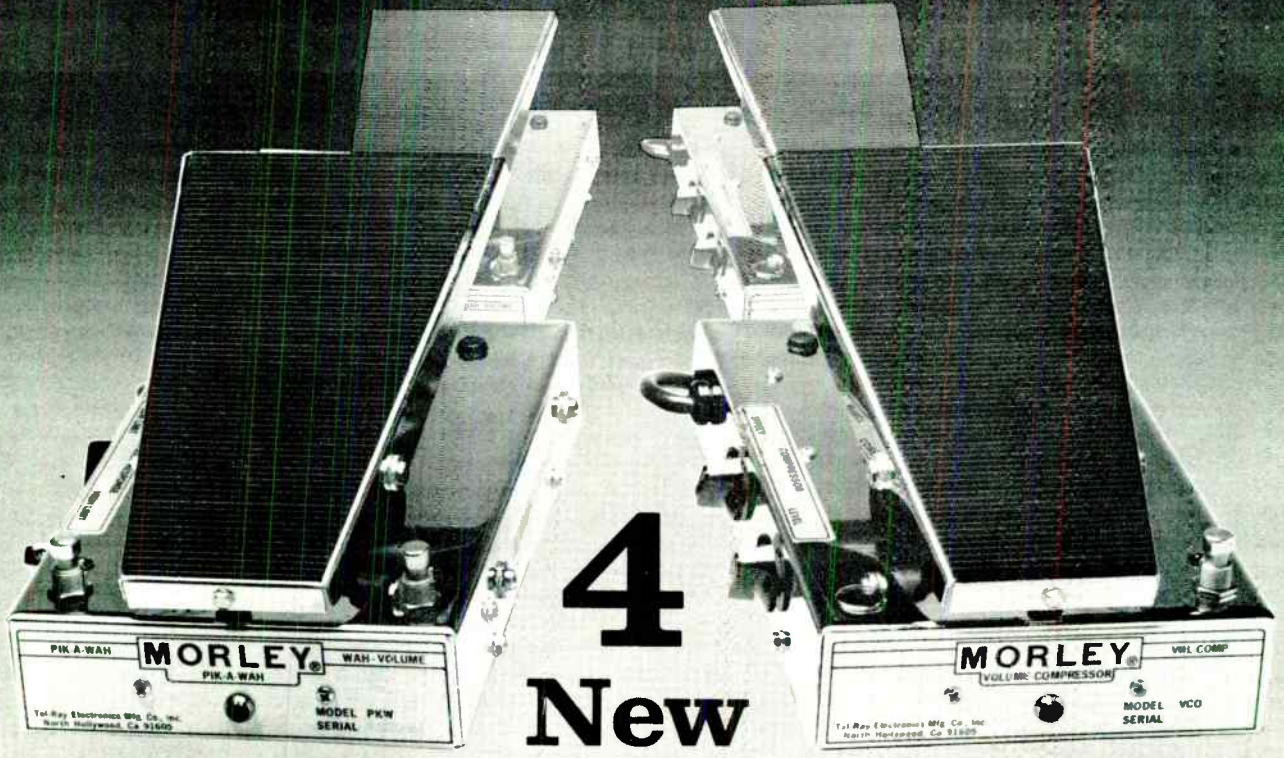
Highlighting social problems is one of the bands strong points. They should have plenty to write about in America. The Clash are political, and very definitely against racist groups.

Topper's favourite drummers come from America, such as Harvey Mason and Steve Gadd. His favorite British drummer is Terry Williams, who plays for Rockpile. Musically, his tastes are strictly black; James Brown, Otis Redding and lots of reggae, particularly The Mighty Diamonds.

America looks ripe for the Clash. They've toured there twice and soon they should start to take off now that punk has spread. The Americans have been fairly slow catching on to what the '76 British new wave was all about — perhaps they've been too wealthy for too long. With a new recession biting home, The Clash will take on new relevance to downtrodden, unemployed kids in America.

Topper's favorite drummers come establishment of musicians in Britain that once would have been unthinkable. Two years ago The Clash were vilified as not being "real" musicians. Their drive, talent and staying power has proved the cynics wrong. In general, The Clash have proved themselves to be dedicated professionals with firm ideals at heart. In particular, Topper Headon spearheads the drumming new wave with a forceful and accomplished style that can't be dismissed.

MORLEY



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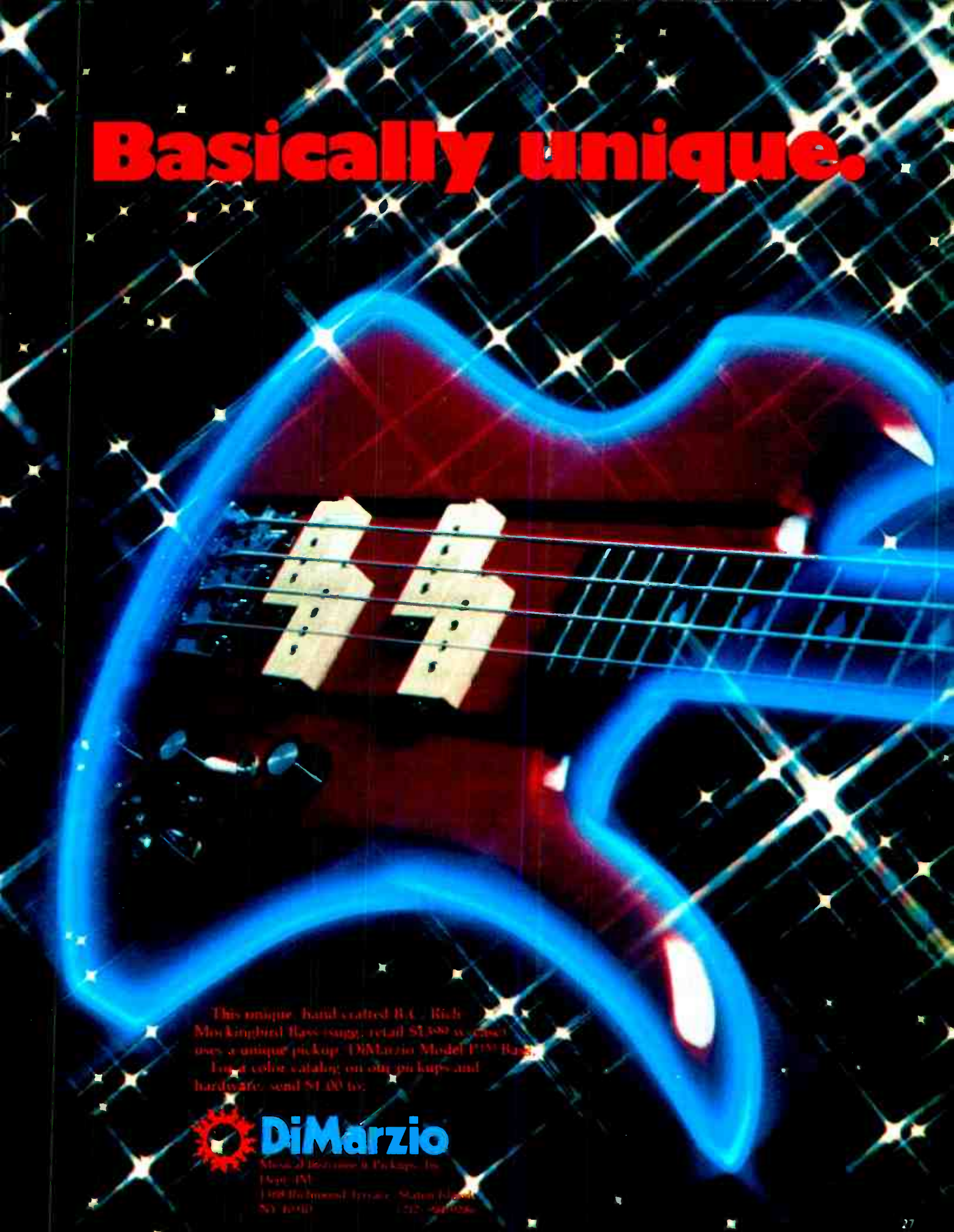

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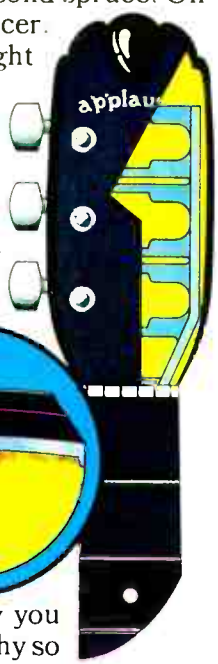

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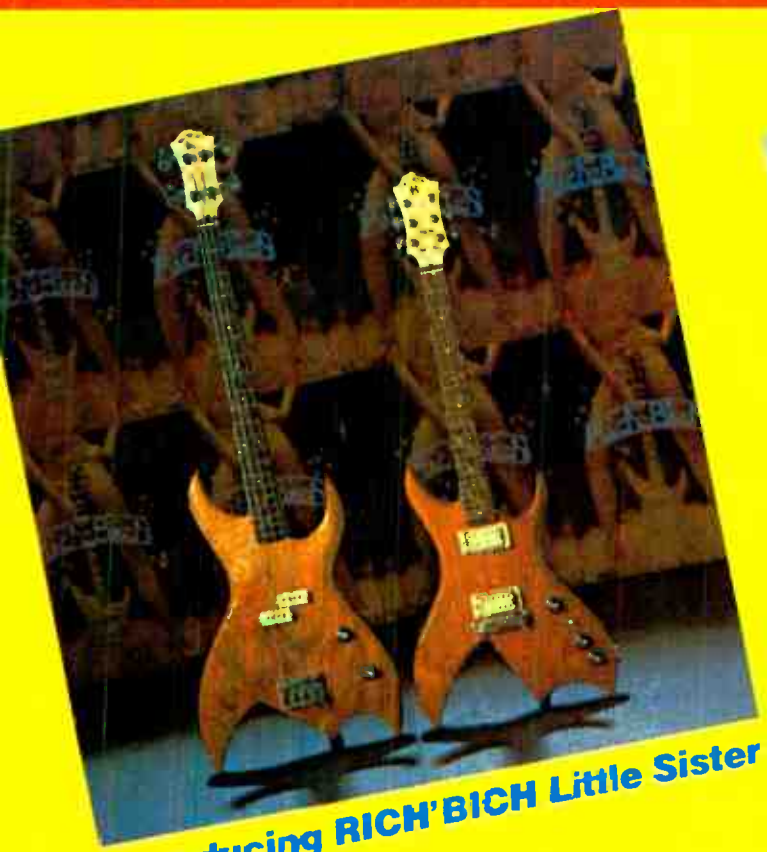

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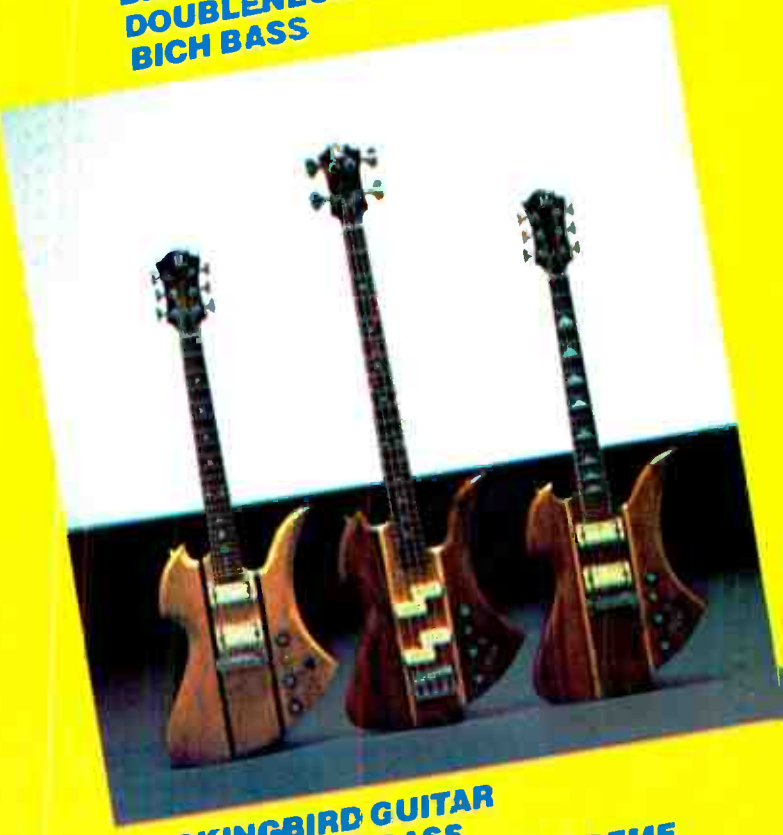

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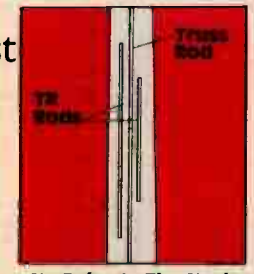

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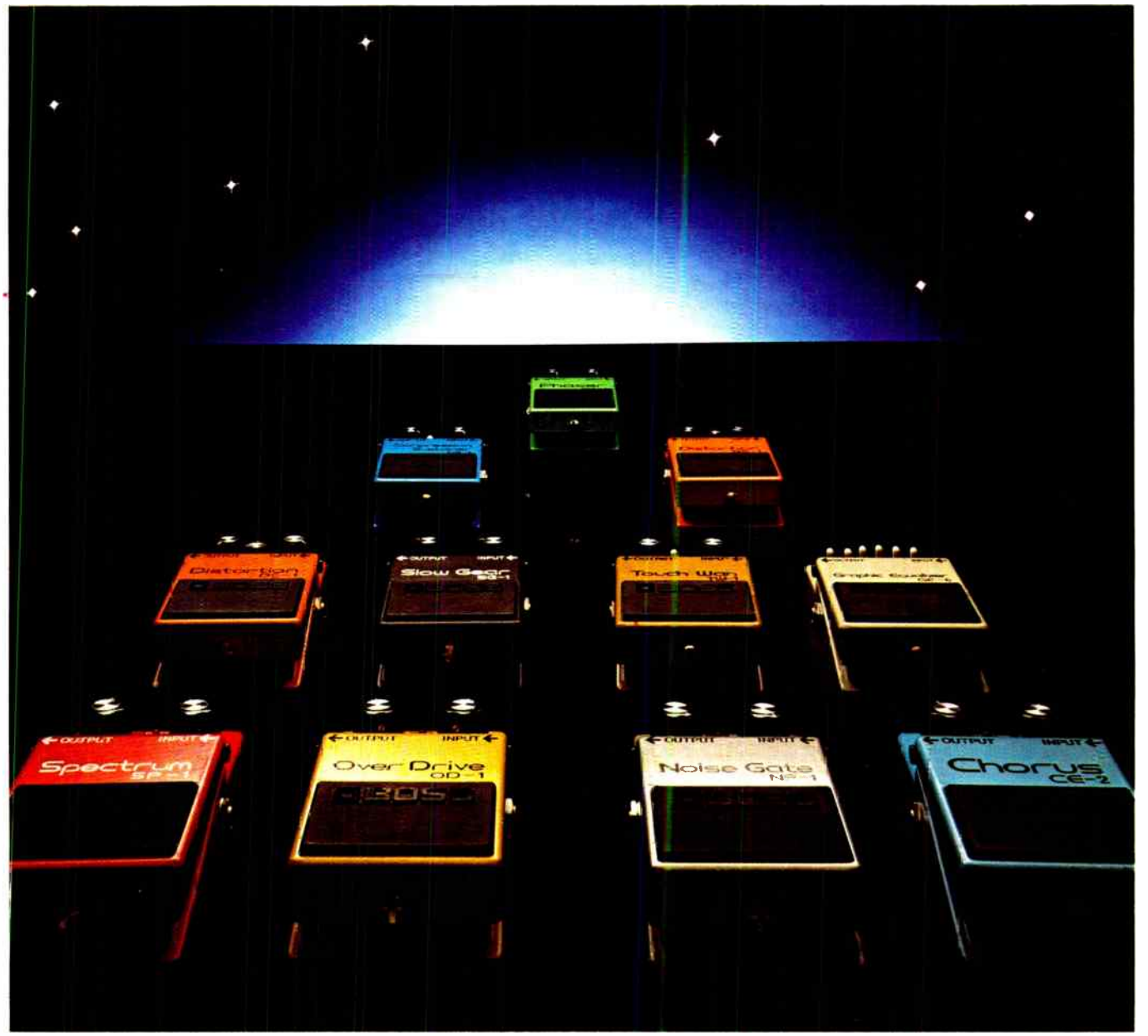

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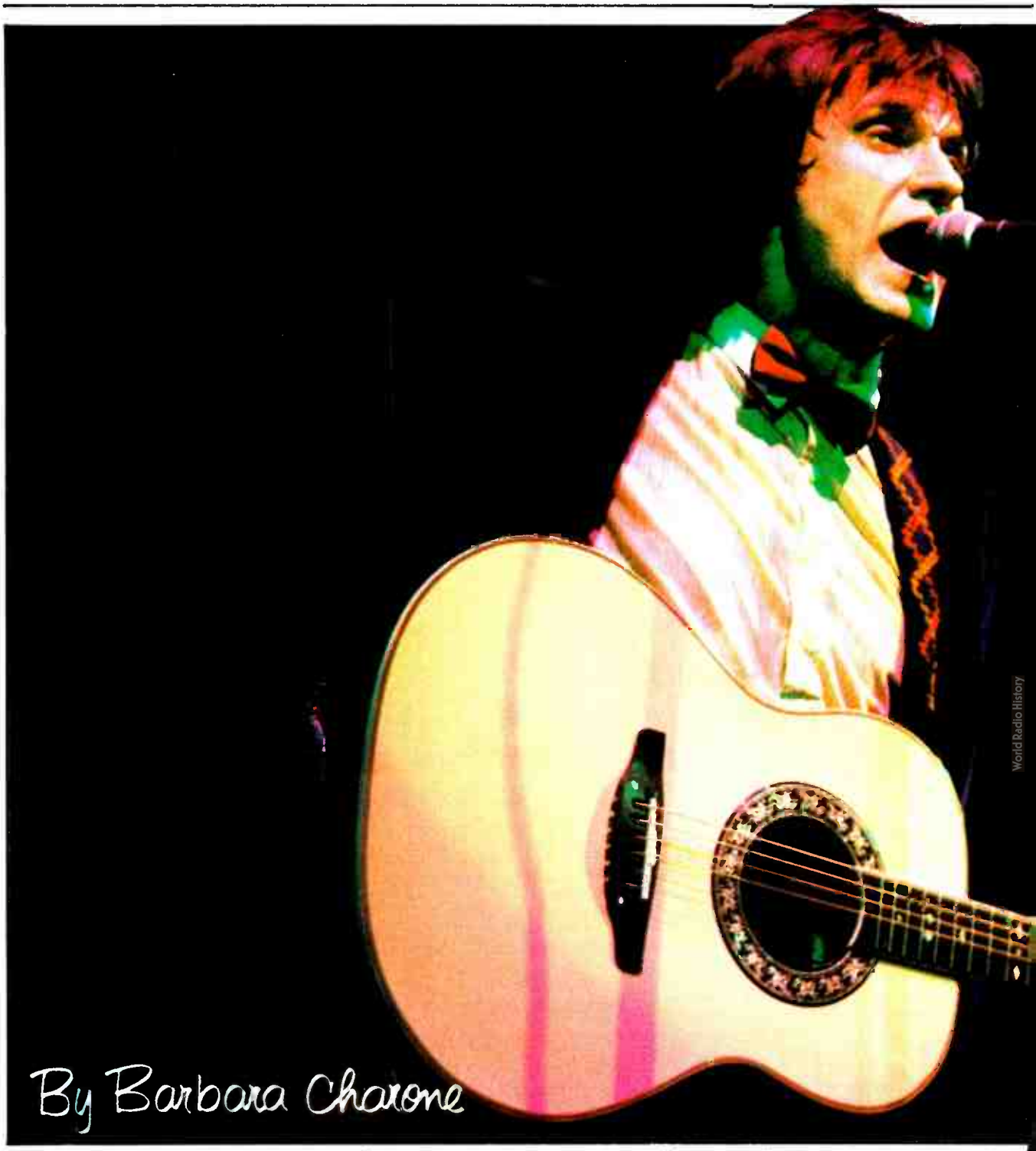


By Barbara Charone

Photo by Simon Fowler

The Noel Coward of Rock 'n' Roll

Quite often Ray Davies is approached while drinking in hotel bars following a Kinks show. As a pianist softly plays Cole Porter in the background, a fan will slowly approach the table. With trepidation they say: "Last time I saw the Kinks was 1966. I bet you're still playing the same show. Don't you think you should change?"

Although Ray Davies will smile and mumble something to the fan, it's a bit difficult to explain that the Kinks *have* changed. He no longer holds desperately onto the past but guides the Kinks with an experienced hand toward the future. He has realized that the Kinks are a rock and roll band. Consequently, concept albums have ceased.

"I realized," Ray Davies grins, "that there were easier ways of transporting a rock show around America other than carrying beds and bars." Those stage props that once featured in *Preservation, Soap Opera* and *Schoolboys in Disgrace* now remain tucked away in the Konk studio attic.

One listen to *Low Budget* confirms future Kinks hopes. Turning gold easily in America, the album took the Kinks out of their Seventies slump. Today they are poised for renewed stardom in the Eighties thanks to Ray Davies' open minded attitude.

"Take off your headphones hear what's going on," he taunts in "Attitude." "You can't live in a time zone, you gotta move on."

Five years ago Ray Davies would never have written those words. But these days his past haunts him less than ever. No longer frustrated over lack of Seventies single sales, he has stopped trying to write another "Waterloo Sunset."

"We've progressed a lot. The band has more guts now," says Davies. "You just can't give up. We've got to try and project what we are now rather than trade off the past. I get a kick out of someone requesting a *new* song rather than 'Sunny Afternoon'."

During the last decade the Kinks have called three different labels "home." Each label is treated with the same philosophy which governs Davies' intense desire to transcend the past and carve out a new future. When RCA signed the Kinks in the early Seventies he told them: "You're not purchasing the Kinks and their hits. It's more or less a new band you've got to break."

RCA weren't too successful although one could argue Davies did not give commercial product. A trilogy of "concept" albums, at times disjointed, were aimed at the dedicated. Three years ago the Kinks signed with Arista releasing another trilogy: *Sleepwalker, Misfits* and *Low Budget*. Success followed.

Onstage the Kinks differ. Old songs are injected with new life while Davies looks more like a highly energetic punk than a Sixties hero. The days of the thirty second tease are over. The set is now thoughtfully planned and the set extremely well executed.

"We were a bit embarrassed about them," Davies says, referring to abbreviated versions of staunch classics. "We were a bit proud of our *past*. We knew we had to do the new material but we didn't have the confidence."

Despite the lack of confidence, Ray Davies kept stubbornly plugging away, trying to find that vacated void of Kinks territory. He finally struck gold encouraged by a sudden interest in new bands and a move to New York City over a year ago.

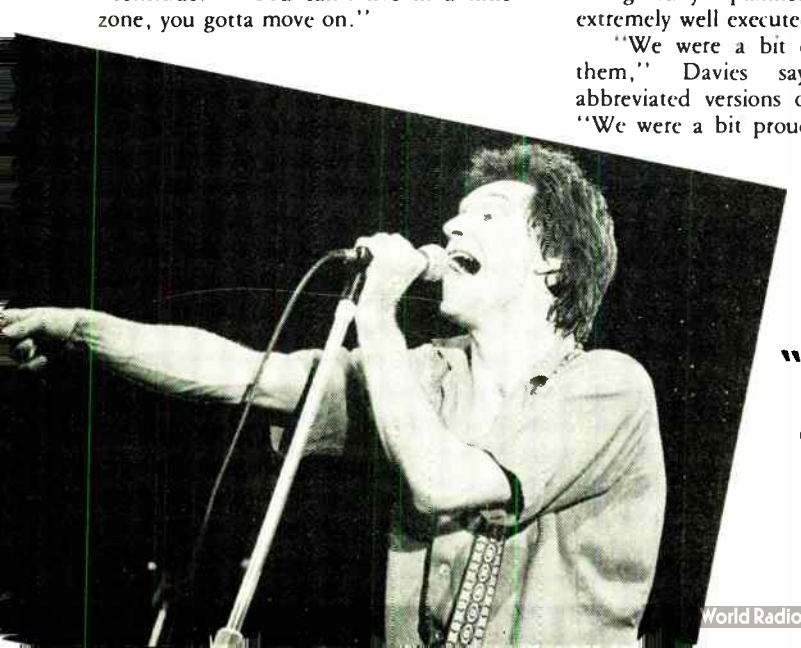
"The best thing to do is exist, to keep going. You've *got* to relate to it, you can't hide," he stresses. "You've got to fight to survive. I like fighters. I like people who struggle and in the end get something. I'll always be a fighter."

Davies has a restless charm stemming from his abundance of energy and creativity. During the lengthy British Christmas holidays, he worked fervently mixing the upcoming double live Kinks album due for spring release. In between mixing sessions he sandwiched promotional visits to Australia and France. That's not simply survival or fighter instinct. That's confidence.

"The reason I keep going is that I haven't achieved what I've set out to do," he says softly.

Some of the transistional Kinks albums were used as a vehicle for self examination and introspective thinking. "At the time of *Preservation* if I'd written a book called "Preservation" it would have been about me. I used the album as therapy."

Another form of therapy for Davies is other forms of entertainment. Although he's mingled briefly with television plays, productions of low budget Broadway styled shows, Ray Davies is a keen film enthusiast. A revealing story concerns one of his favorite films, "Bicycle Thieves" by Italian director Victoria de Sica. A closing frame remains imbedded on Davies' subconscious.



"I still haven't realized that I have to grow up"

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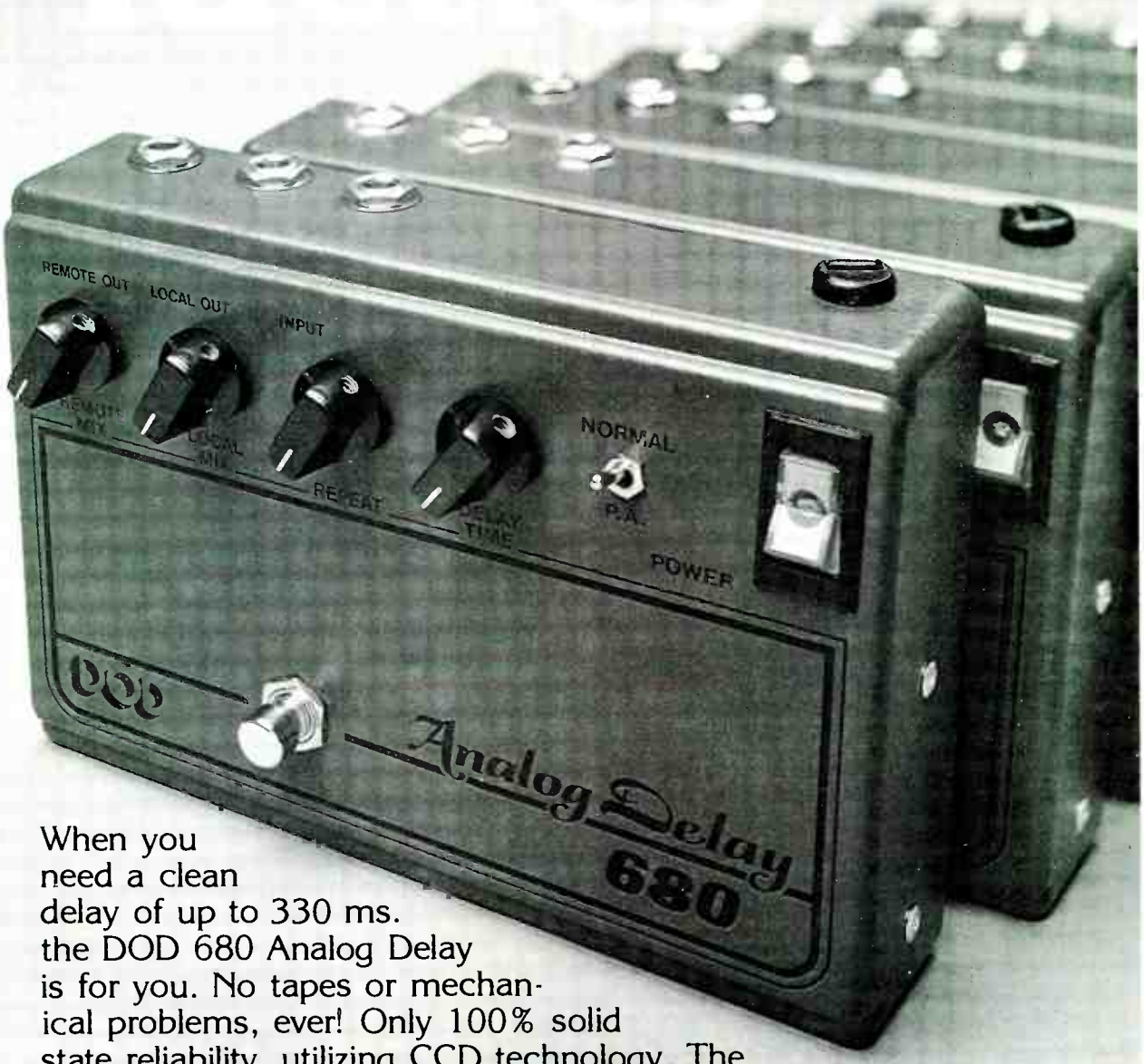

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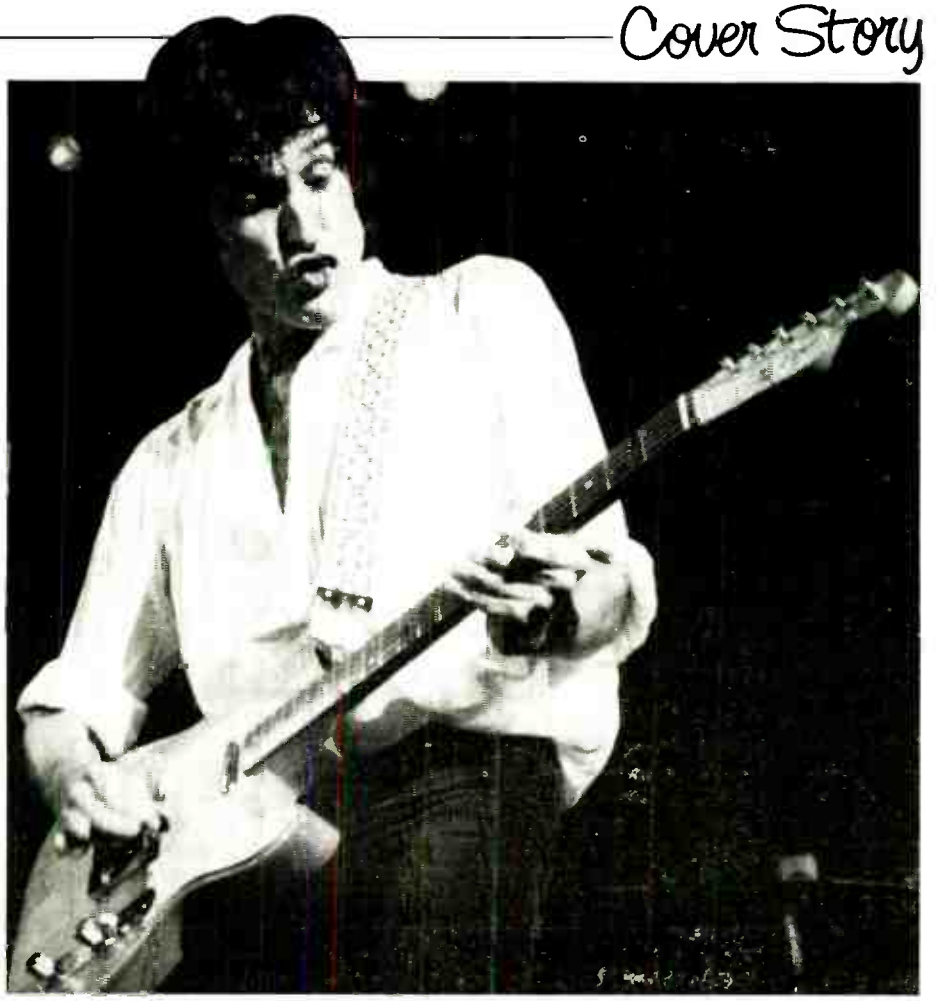


"The film is about a posterboard sticker who needs his bicycle for work. His bicycle is stolen and he spends the entire film trying to get it back. At the end he just gives up, gets his little boy and they walk into the crowd," Davies says pensively. "You can't see them as they get muddled up in the crowd. I thought that was a hard, cruel ending."

After an awkward, long pause, Davies continues. "I worry about things like that. I'd *never* like to be in a position like that. Everybody's in showbiz, everybody has got a chance to shine at something. And everybody should have that opportunity."

Although life has been good with Davies' low budget prosperity, he remembers the hard times vividly. "The old days had their shitty moments even when we had all those hit records. I was going through personal problems and couldn't enjoy it. What success we get now I *can* enjoy. We didn't even have the time to enjoy it then."

With the same gentle sensitivity he used when describing "Bicycle Thieves," he launches into an incident which took place during a seemingly endless world tour. The Kinks were in Singapore when "Tired of Waiting" reached number one in Britain. A daily newspaper called to inform Ray Davies.

"I was really lonely," he recounts. "So I got a bottle of champagne. Even though the waiter couldn't speak English I had him stay for a drink. That was a happy time. Just that moment. Little things like that are good."

Davies has a definite, though odd, sense of humor. Often when fans beseige him at various hotel bars around the world, Davies will be polite no matter what the degree of fanaticism. Only when the fans leave will the star indulge in his amusing cynicism. Leaning back, drink in hand, Ray Davies will sigh, "Ah recognition at last."

During the weather beaten Kinks' Seventies, times were hard. No matter what mood invaded his consciousness, Davies kept writing often out of a restless desperation. "It's what I feel I can do best," he admits. If pressed he might acknowledge his guitar prowess. Now firmly part of the band *again*, he no longer uses the electric guitar as a prop. He plays the instrument, a perfect foil to Dave Davies' leads. Always an integral part of the album, Ray has finally allowed his own guitar sound to audibly breathe on record. Never has this been more apparent than on *Low Budget* or the subsequent stage shows.

"I created a past for myself and I'm still trying to create a past. It was so heavy that it's difficult for me to change and make it a *new* past. It annoys me that people think the Kinks are just a revived 45 night. We are *today*."

Dave Davies is a rock & roll fanatic. When concept albums stretched into infinity, younger brother Dave grew increasingly unhappy. "The Kinks have been playing a long time and you can't stand still. 'You Really Got Me' was great in 1964 but we can't carry it to the grave," Dave says. "After playing it all these years, it's great to do something new."

Dave points to the Kinks' success in retaining old fans while adding newcomers to their growing list of supporters. He spotted some young girls at a concert seated near a "not quite middle aged" couple. When the man shouted 'Sunny Afternoon', the girls had never heard of the song.

The brothers Davies became interested in rock & roll after seeing a filmed concert of Bill Haley. "Before that rock was unobtainable," Dave says. But on film the audience participated, getting up onstage and playing the instruments long after the band had left. The Kinks have similarly depended on and enjoyed a finely honed relationship with their audience.

"Dave and I bought Elvis Presley and Eddie Cochran records. We'd play them on Saturday mornings with friends. That's how we learned our technique," says Ray. "Then people started copying us."

"It's the usual story," Dave adds. "I'd play guitar with my mates the last few years of school. We'd play nightclubs with a band of sorts. We played the debutant circuit in 1963. From there it just went on."

Ray started songwriting when the record company continued to give them mediocre material. "I just thought I could do better," Davies says. He succeeded. When recalling memories of those days, Ray says Rod Stewart tried to vocally copy Eddie Cochran while Dave tried to imitate his guitar style. "Eddie Cochran has a lot to answer for," he laughs.

As for rumors that Dave didn't play on early records, brother Ray is adamant. Jimmy Page was a session guitarist at the time and the only reason these rumors ever surfaced was because he was present at the sessions. A friend of the first Kinks producer was Shel Talmy, Page attended many sessions.

"Page actually sniggered when Dave

did his solo on "All Day And All Of The Night." Then the record came out and he wanted to take credit for the playing," Rays says annoyed at the prospect. "Dave played lead on *all* those records."

When asked for a description of himself, Ray Davies says: "I'm a character of rock & roll. I assume characters within myself rather than project my image through songs. I'm lots of different people."

Ray Davies is a dichotomy. Onstage his highly strung energy gets a complete workout. In the studio producing albums, mixing or at home writing songs, his inner self is more apparent. "Half of me is a total exhibitionist," he says, "and half of me is a serious writer."

At one time he toyed with the idea of writing films, an ambition he's yet to realize. Before the album *Everybody's In Showbiz*, there was a film which presently occupies space in Konk studio's attic. The film was never released because of a lack of confidence. Thankfully, that is no longer a problem.

"In the old days we'd just go onstage and play hit records. Now I feel much better about myself. The new songs give the earlier numbers a kick. We do them with a freshness now. It's not sloppy playing. The band believe in themselves musically."

No one could possibly be happier with this new arrangement than Dave Davies. "We always managed well in the studio but there was a period where we didn't know how to project ourselves onstage," Dave says. "It was very much everyone pulling in different directions. When Ray started coming to the fore with more theatrics, it helped carry the band."

"We didn't know what direction to pursue so a lot of the fun was missing. Now I enjoy playing again. We've managed to iron out frictions and personality clashes. There used to be a time where we'd fight terribly. Now we admit each other's failings. It took time to quiet down our personalities and get on with the music."

In addition to internal problems, the Kinks suffered the usual management conflicts. Ray Davies practically wrote the official rock & roll business handbook with their last Warner Brothers album *Lola Versus Powerman And the Moneygoround*, chronicling their misadventures.

"We had three managers and all of them worked us too hard and we lost our tempers. Inevitably, the band suffers. In fact "Moneygoround" is the truest thing I've ever written."

Ten years later, Ray Davies persistently hits personal targets, reaching out towards our own little battles and feuds. Today he uses rock & roll as a vehicle, playing it with enough energy to satisfy anyone who thinks all Sixties heroes should be taken out to pasture and shot. The Kinks are very much alive.

"When we first started we were a very commercial teenybop band but we're not any longer," Dave summizes. "We're a really good rock & roll band. We've always been a little different to other bands. We lack some of the pretensions. We tried pretentious things but they didn't seem real."

Not surprisingly Ray Davies was not the happiest adolescent while at school. "I was a very quiet kid but I knew what I wanted to do. I knew the limitations of myself and what I was good at. If I wasn't good at something I wouldn't put energy into it. I was good at making up stories, drawing pictures and running. I could invent situations. I lived in an absolute dream world," Ray Davies sighs.

College days were similar when Ray Davies went to art school like many other eventual musicians. "I always felt I could make things happen. I couldn't do it at art college so I found another way of doing it."

If the Kinks seem ageless, Ray Davies is the perennial youth living with an adult cloud hanging overhead. "I still haven't realized the fact that I've got to grow up. I still feel a bit guilty about reaching for a cigarette."

Ray Davies remains a fascinating dichotomy. Alternatively he's described himself as desperate, determined and restless. He says his songs are a cross between Noel Coward and Elvis Presley. Davies remains forever British, constant references decorate *Low Budget* but then America has always loved that very British essence of the Kinks. If the village green is dead at least Davies' love for the common man on the National Health, living in Muswell Hill with his Polo mints survives.

In the end, the music speaks for itself. While the Kinks are rapidly gaining new followers who weren't born when "Till The End Of The Day" was recorded, many old fans are now returning to the fold. Most of the reasons stem from attitude.

"The Eighties are here I know because I'm starring right in them," Ray Davies sings in "Attitude" off *Low Budget*. "But you're still waiting for nineteen-sixty to happen."

Although contemporaries remain cemented knee-deep in history, Ray Davies and the Kinks have stepped out. No more looking back.

The Kinks Kollection

The guitars of Dave Davies (and a few of brother Ray's) introduced by IM&RW's bass ace Jim Rodford — who is now, of course, a full-time member of the Kinks.

When discussing guitar collections, it would be hard to find more fascinating examples than those of Dave and Ray Davies. The Kinks were one of the bands who spearheaded the British rock invasion of the USA in the early Sixties. This exposed Dave and Ray to the then untapped vintage guitars which were available at cheap prices in small town music and pawn shops.

The rock & roll electric guitar as an instrument was still regarded as too recent a development for early models to be thought of as antiques. Battered old Les Pauls, Flying Vs and maple-neck Strats could be picked up at silly prices, and the Kinks' constant touring at that time enabled them to take advantage of the situation. This was before dealers started to realize the vast potential of the explosive demand around the world for early guitars.

Once they did, dealers began touring the country buying up all the old stock — them could find. Many early Fenders and Gibsons were bought from the cowboys who had maybe bought one on a whim, and finding it harder to play than they imagined, stored it away almost untouched for years.

Real "finds" and bargains are now almost non-existent, but Dave especially is always on the lookout for interesting instruments and is a constant target for antique guitar dealers, as I found out on our tours last year

My personal association with the Kinks goes back to 1964, when touring with them in another group on one of their earliest tours. I found them to be the most exciting and innovative new band around at that time. Ray's completely rebellious approach to songwriting and recording (with regard to commercialty) were at a complete tangent to the opinions of the record company and radio station hierarchies. Yet despite this seemingly negative force, "You Really Got Me" had sored to number one and an equally abrasive and explosive record, "All Day And Ali Of The Night," was roaring up the charts in pursuit.

Nothing quite like it had been heard before and around the country musicians felt a kind of liberation and elation at the success of these records. Indeed, even today, the hairs on the back of my neck stand on end when we perform the songs onstage.

Most active musicians of that period would agree that "You Really Got Me" was the first truly aggressive heavy record. The simple, no-nonsense structure, plus the slap-you-in-the-face stop chords were fresh and exciting. But probably the single most innovative feature was Dave's guitar sound. Now I know it's been documented in countless articles over the years how he achieved this completely revolutionary sound but, in my opinion, he has never been given the full credit he deserves for *conceiving* controlled, intended distortion and sustain, as a means of expression from the rock & roll electric guitar. It really was the first time guitar had been heard this way, and the whole music industry was kicked up the ass by both the aggression of the performance of the song and this sound.

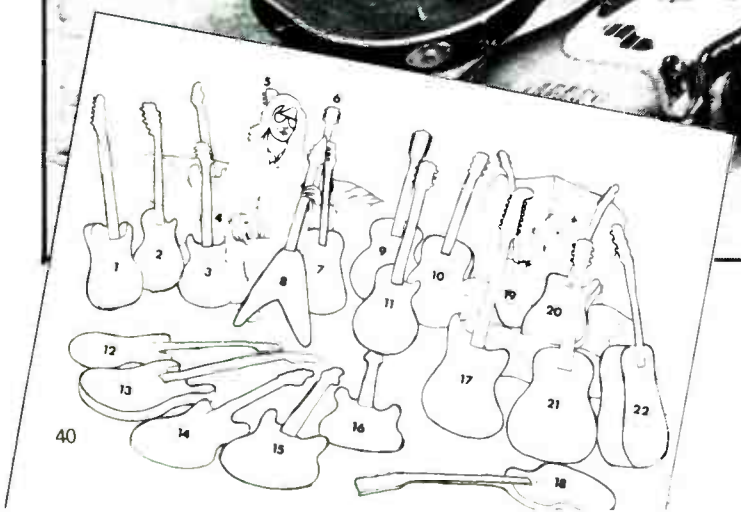
Watching them perform it night after night weeks after its release, and witnessing at first hand Dave's execution of the guitar solo, combining unexpected dexterity with the wild, exciting abandon he displayed on the recorded version, made a mockery of the ridiculous rumours that would later circulate regarding the identity of the soloist.

Even Pete Townshend had admitted in print that "You Really Got Me" influenced him tremendously and in fact the stop chord structure and the guitar sound inspired him to write the Who's first hit, "I Can't Explain."

Now, 15 years and countless evolutionary and influential tracks later, I am privileged to be a part of the musical team. Musically, the scope of the band is extremely wide, and satisfying, retaining all the old fire, aggression and raunchiness, plus the evocative melodic and social comment of Ray's songs. The resultant live show is in my experience, unparallelled in its depth and dynamics, with the added bonus, for me, of the onstage stimulus of Ray's incredible energy and showmanship, and Dave's vastly underrated, lyrical, yet sometimes brutally aggresive guitar playing. He still owns the tiny, old El-Pico amp with which he recorded "You Really Got Me," but, unfortunately, could not find it in time for the photo session. Again, unfortunately, there are many guitars of rare and valuable vintage that he had since swapped, lost or sold — but I'm sure all guitar collectors are guilty of this sacrilege.

I managed to collar both Dave and Ray for a brief chat about their guitars while Ray was mixing our single "Superman" at the Konk Studio, club and office complex, which they own. All of Dave's collection is included in the photograph, with just a few of Ray's to the right of the picture.

The Kinks Kollection



Remarks by Dave:

1. **Telecaster with back scratch plate**

"That's about 1954. In actual fact, I had another one that I sold to my nephew, Phil Palmer, and that was around about the same age. I use this one a lot in the studio for rhythm work. I used it on 'Stormy Sky' *from the* Sleepwalker *album."*

2. **Gold top Les Paul**

"I think that's around 1960. I bought it in the States as well. I used to use it on stage a lot until quite recently. Until I got the Les Paul artisan, in fact (11). I think it cost me about $800."

3. **Les Paul Junior**

"I've never used that onstage yet. I've rehearsed with it a lot. I got that in the States as well and it didn't cost much. I think it's about 1959-ish."

4. **Black Tele on sofa**

"That's a new one. I got that to use with the Avatar guitar synth. It's a good one actually, which is strange because I don't think there are as many good new Teles as there were good old ones. I used that on Sleepwalker *as well."*

5. **Ibanez**

"That's the latest addition to the collection. I was really pleased with that, the pickups are very good, very different. I used that on 'Superman.'"

6 & 11 **Gibson Artisans**

"This (6) is the one I use mostly on stage. It's slightly older than the one in the middle (11). I use them both on stage, for different tunings. Great guitar."

7. **Gibson acoustic**

"I use that a lot in the studio for overdubs. It's not particularly old, only about 14 years old.

8. **Flying V-type Gibson**

"It's slightly different shape from the Flying V because it was in fact a prototype V. The story behind it was, I used to play a Guild custom built guitar and the airlines lost it on our first American tour in '64 or '65. In those days I used to only carry oneguitar around and I had to get a replacement quick. I went into a store and they didn't have anything I liked. I saw this dusty old guitar case and I said 'What have you got in there?' He said, 'Oh, that's just some silly old guitar.' He got it out and I bought it for about $60."

9. **Guild 12-string**

"That one is quite old. It's a particularly nice one, a really good guitar. That's been on Muswell Hillbillies *and all sorts of albums. I use it a lot."*

10. **Martin**

"That's about 10 years old. Ray's got one as well but you can tell mine because it's much more knocked about."

12. **Fender Stratocaster**

"That's a 1954 Strat with a maple neck. A really nice one. I've used it a lot. I got that in New York. A guy came to a gig and he needed the money so I gave him a hundred dollars or something. I used it a lot on the Preservation *album."*

13. **Maton bass**

"That's quite a strange one actually. It reminded me of one of Ray's first stage guitars which was a Maton. It's a bit of a mystery because I don't remember where and when I got it."

14. **Mustang bass**

(Jim uses as a spare.)

15. **Music Man bass**

"Andy Pyle used that on the last couple of albums."

16. **Precision bass**

"That's about eight years old."

17. **Fender 12-string**

"I got that from the old Macari shop in the Sixties. I particularly wanted it for a session the same day. That was an early B-side called 'I'm Not Like Everybody Else.'"

18. **Gibson Custom L5**

"That's reasonably new, about three years old. A particularly good one. I used it for a while onstage but it hasn't got quite the same sort of feel for stage work as the Artisans. It's more of a studio guitar, for the more refined things. Stephen Delft reviewed that a while back and was knocked out with it. There are a few modifications on it, like different machine heads. I've done a few things like that on other guitars but I never got that deeply into it, like putting on DiMarzios or anything."

Ray and his guitars:

19. **Gibson Melody Maker**

"I bought that for $80 in Manny's in New York a few years ago, it's a really old one."

20. **Telecaster**

"I got that in Selmers for $250 in 1969. It was originally sunburst."

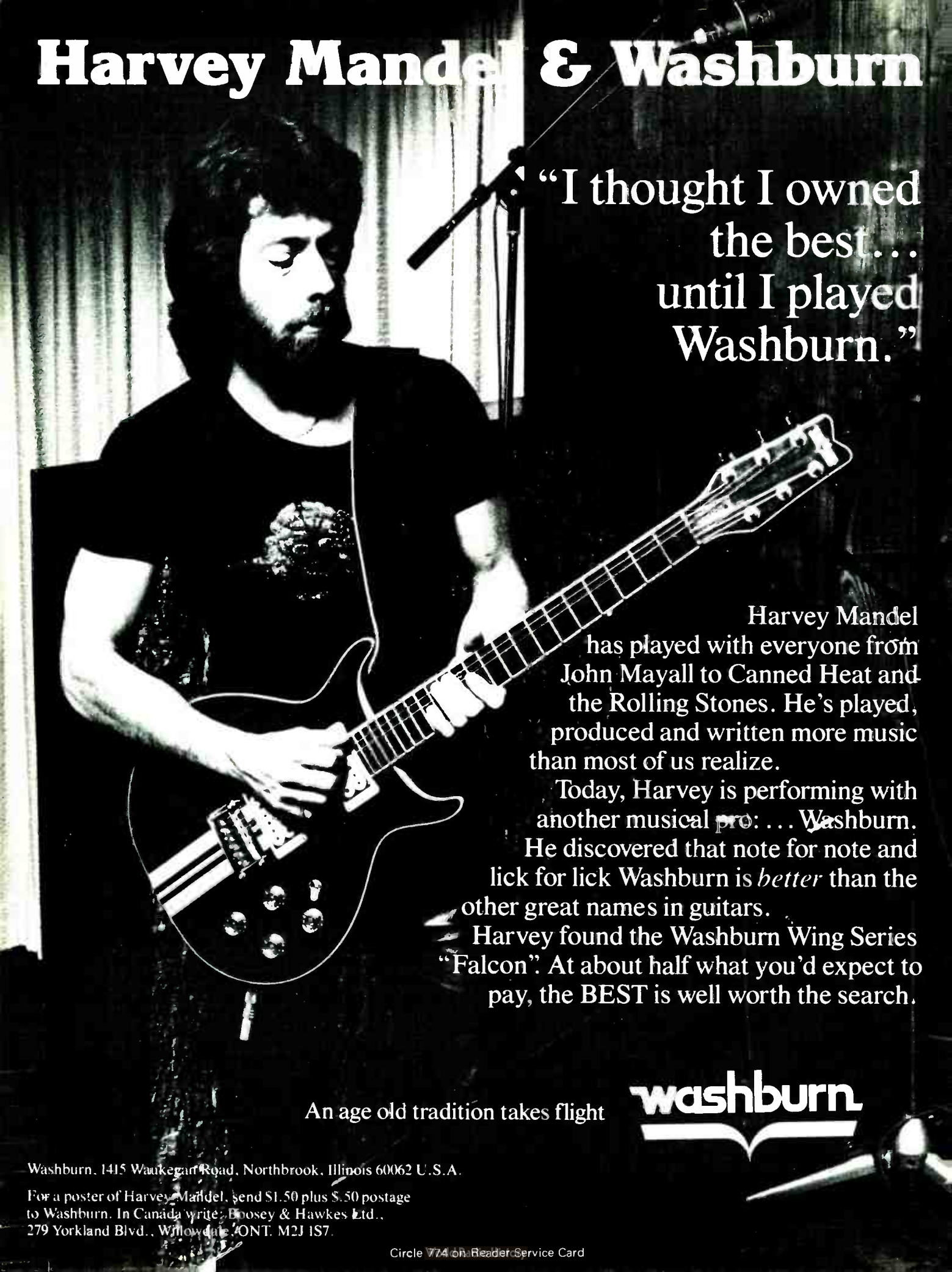
21. **Dobro**

"I got that in London for $100. I think I used it on Lola."

22. **Martin**

"That's been on a lot of records. It's quite old."

Harvey Mandel & Washburn



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How can we say that our MXD-5 is the best analog delay for your needs?

Who do you think you are. . . a musician, a PA engineer, a home recordist? What do you play. . . guitar, keyboards, a console? Are you a vocalist? We designed the MXD-5 to be the best value in analog delays for the majority of professional musical applications. The MXD-5's versatility and performance are unequaled in its price range. But whether or not you think it's the best depends on who you are and what you need from a delay device.

What do we mean by 'a majority of professional music applications'?

The MXD-5 is versatile. It will provide echo from the entire gamet of instruments and mics. With the MXD-5 individual channels for high and low level input signals make it possible to achieve a proper interface which is so important for sonic performance. We know that in order for any signal processor to work without distorting new material or adding unwanted noise there must be a correct matching of levels.

Right now you may be working on the road, tomorrow, may be in the studio. The MXD-5 is at home in either situation. A three position switch allows an optimum interface whether going into a musical instrument amplifier, recording console, or a PA mixer.

How much delay is enough?

Once again, the answer to this question depends on who you are. You may never need more than 100 ms. of delay time. The MXD-5 offers from 20 to 200 ms. of delay at an astonishing frequency range. It was developed to provide a wide range of delay times, which are practical, while the quality of the audio signal remains extremely clean. This means a remarkably quiet product with a relatively wide frequency range at all delay settings. We feel that this is a very important factor to consider.

What about, 'how little delay is enough'?

Most other analog delays offer no less than 50 ms. This limits them severely in that they cannot achieve a subtle thickening for instruments or voice. Their delay range starts at a contrived doubling. The MXD-5 can deliver delay from a thick double, to a distinct repeat; in all ranges the performance is superior.

What kinds of things comprise an echo?

In addition to a single time delay, or repeat, there are other factors which effect the way an echo sounds. The intensity of the signal is an important consideration. In many units the volume of the delayed signal is not controllable. With the MXD-5 it can be regulated from a hint to a wallop.

A multi-repeat is achieved by recirculating the delayed signal through the analog circuitry over and over again. In order to get a clean multi-repeat you've got to start with a superior delay circuit. This is what makes the MXD-5 so together.

What qualities exist in natural echo?

Echoes rarely exist in nature without some degree of reverberation. That's why we built in a high quality spring reverb. The sustain time is variable to a maximum of three seconds. The depth is independently controllable. This reverb feature further separates the MXD-5 from other delay units. The MXD-5 can achieve the illusion of natural spacial relationships.

The EQ of the echo and reverb signals are adjustable so that subtle variations of the effect are attainable without affecting the dry signal.

What makes the MXD-5 better than other competitive units for live performance. . . the road. . . the home studio?

The MXD-5 will work consistently under the most strenuous professional conditions. No matter how good a unit sounds, it would be of little value to you if it lives on a repair bench. The MXD-5 is built with the same mechanical and electronic integrity that you would expect from any professional musical product. It is standard rack mountable and an optional road case is available for the most adverse travel conditions. The MXD-5 was also designed to suit your needs on stage. Instant switching of echo and reverberation has been provided for with remote control which may be foot operated (optional) independently.

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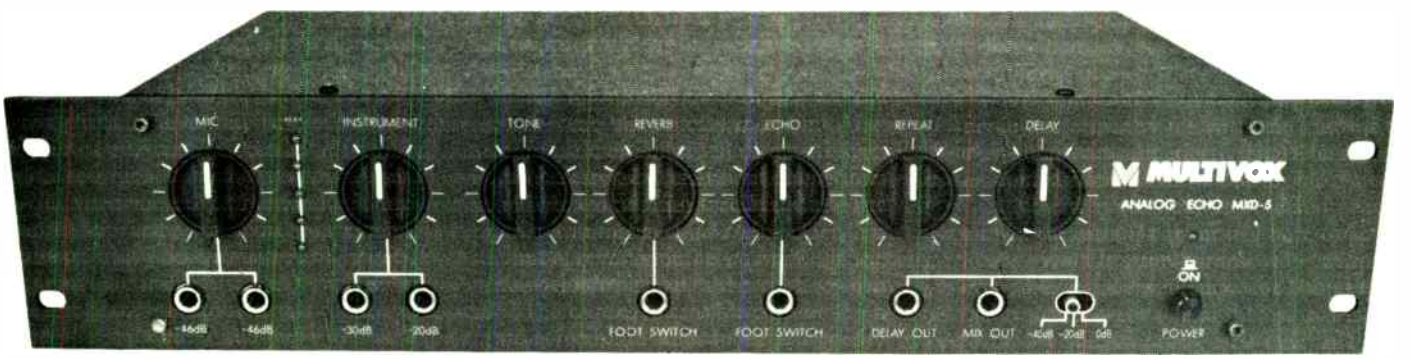

The bottom line is hearing and using the MXD-5 analog delay. For your needs, today and tomorrow; this delay line should prove to be universally better, in both flexibility and performance, than anything in its class. The **MXD-5**. . . **$399.50,** suggested retail.

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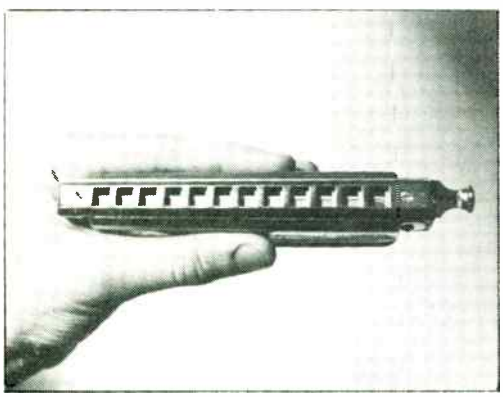
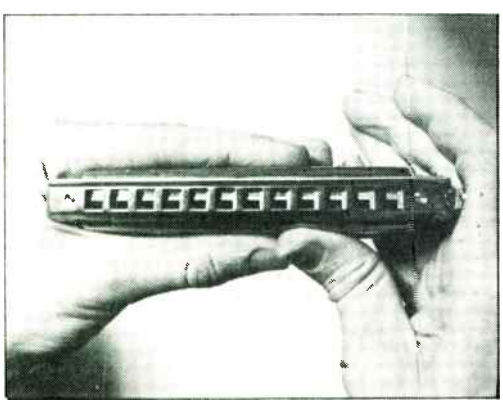




"This is an historic day for me," said Larry Adler as he opened the door of his daughter's apartment on the upper East Side. It was a rainy Friday in August, 1979, and Adler was in New York for a summer-long engagement at the Cookery in Greenwich Village.

"I'm doing the very first harmonica repair I've ever done in my life," he said as he led us in. "You see, over each reed in a harmonica is a small plastic flap. This damp weather is murder on them. They flap up, get stuck, and don't flap back. I always send my harmonica to Hohner for repair, but the man who does them, he plays too and he's on tour. I'm like George Kaufman — 'I'm not sure I understand the principle of the hammer' — but I'm gluing these silly things on myself. I've done two so far."

Two harmonicas?

"Two reeds!" said Adler.

Larry Adler, though not small, conveys an impression of lightness, an elasticity of movement that is quick, precise and quirkily individual. His head is round and capped with close-cropped grey hair, his skin is olive, and he wears thick glasses with pinkish frames. Once in the large livingroom, he alighted in a comfortably saggy chair to talk about playing the harmonica.

Lawrence Cecil Adler was born February 10, 1914 to Orthodox Jewish parents in Baltimore, Maryland. A musical kid with a quick ear, he loved Rachmaninoff but preferred playing the harmonica to studying the piano. His ambition was to be one of Borah Minevitch's Harmonica Rascals, then a top vaudeville act: at 14 he ran away to New York to audition. Minevitch told him he stank, and Adler was on his way back to Penn Station when he saw Rudy Vallee's name on the marquee of the Paramount Theater. Vallee was known for presenting new talent, so Adler slipped in and played for him. Vallee put him on that night at his own nightclub.

"I flopped because Vallee didn't give me any intro, any show business presentation. I just went out cold during a band break. But it was better than Minevitch — Vallee had noticed me."

Thus encouraged, he stayed on, living on Wheaties and milk because he didn't know what else was kosher. Another audition at the Paramount, this time for orchestra leader Paul Asch, led to a 40 week contract touring in vaudeville for $100 a week. Adler was launched. At first he performed in a ragged urchin costume that matched the harmonica's image as a boyish toy. Given the chance, he switched to a tuxedo. Playig Bach and Beethoven as well as American pop and western songs, Adler had a distinctive act, and he took it to prestige spots like Chicago's Palmer House as well as the theater circuit. Yet he was still relatively unknown when C.B. Cochran took him to England in 1934.

"That was a big break. Cochran was England's biggest producer. With him behind me I had automatic entree." *Smoke Gets in Your Eyes*, his first record, was a smash hit, and England went harmonica crazy. He married and settled there. While on tour in America the war began so he stayed on, playing at the Hollywood Canteen and on three USA tours with Jack Benny.

"Jack would play one note on his violin," Adler said and demonstrated, blowing a long tone on his harmonica, "then I'd play around it, like this," and he played a filigree of quick arpeggios. "It was a funny act." Benny wanted him to join his radio show, but Adler refused. "I didn't want to be part of his stable."

After World War II he toured for several years with dancer Paul Draper. Each had their own featured spot, then Draper would dance to Adler's improvisations in the Baroque style and to his medleys of songs requested by the audience. In the Fifties he began a world-spanning concert career, giving solo recitals and performing with symphony orchestras. He's written film and television scores (most notably *Genevieve* in 1954), and worked steadily in nightclubs, mostly in England, his adopted home. Today his records, on Pye, RCA Victor and several smaller labels, are hard-to-find collectors items, but RCA is considering several re-issues, and Adler is planning new recordings with a small jazz combo.

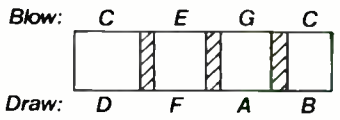
Millions play the harmonica — "Don't be a loner, get a Hohner," say the ads for the instrument's biggest manufacturer — but Larry Adler has enjoyed decades of being unique as "the greatest harmonica player in the world." This, he declares, "will give me at least a footnote in musical history." His reminiscences are peppered with the names of Jascha Heifetz, Maurice Ravel, Cole Porter and the Gershwin brothers, indicating the spheres into which he has taken the once lowly instrument. But Adler has given the harmonica more than musical poise and show business polish; he has revealed its variety of tone and nuance, its capacity for blending melody and harmony, and given it a repertory drawn from all of contemporary music.

The harmonica has been called the instrument of inspiration; unique among wind instruments, sound is made breathing in as well as breathing out. Hohner makes many different harmonicas — bass harmonicas, tremolo and octave-tuned harmonicas, the "Little

Lady'' that is 1⅛" long and the 2" long ''Forty-Eight Chord Harmonica'' — but most have the same basic elements.

A ''comb'' of wood or plastic — Adler has one custom made of a silver and steel alloy — is the frame of a harmonica. Brass plates fastened on either side of the comb make the gaps between its teeth resonating chambers that end in a horizontal row of holes. Each chamber has two reeds: a reed set inside the upper plate vibrates out on the blown-out tones; one set outside the lower plate vibrates in for the inspired or ''draw'' tones.

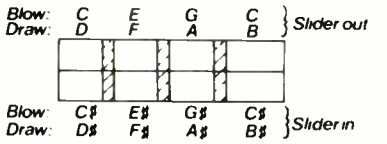
The layout of a harmonica's reeds creates the eight tones of a major scale over four adjacent holes, like this:



The diatronic harmonica — the uniquitous Marine Band and blues harp are diatronics — is this pattern, with slight modifications, over three octaves. Diatronics are available in all keys, but each has only the notes of its own major scale. They compensate for their limitations with the modifications that are ingeniously designed to emphasize the primary chords of song building. Novices can play the melody and harmony of simple songs with relative ease, and a skilled player can create a wide variety of tonal effects. Bob Dylan is probably the best known diatonic harmonic player today, and he built his style from the magnificent accomplishments of the great blues harmonica players — Sonny Boy Williamson, Little Walter, Jimmy Reed, Sonny Terry and many others.

The chromatic harmonica, on the other hand, has all the notes, sharps and flats included, and can play any melody. This is Larry Adler's instrument. ''I started on a chromatic, wouldn't have been interested if there hadn't been a chromatic. There's too much missing on the diatonic instrument. Sonny Terry gets marvellous sounds, but I wouldn't want a career like Sonny Terry's. There's so much music I'd want to play that I couldn't.''

A chromatic harmonica is like two diatronics, one on top of the other. Its comb is larger and divided horizontally so that it has upper and lower chambers for the same hole. A slider leaves the upper row of chambers open and the bottom row closed when it is at rest, and closes the top row and opens the bottom when pushed in. The top diatonic is like the one pictured above, the bottom one has the same pattern but a half tone higher. Together they look like this:



One can play the major scale and also, by pushing in the slider, create any other interval desired. Because E sharp and F, B sharp and C are the same tone with different names, the can be made either blow or draw. Using these alternates when necessary, the experienced player can do all his breathing through the instrument, creating an unbroken phrasing impossible on other wind instruments. Adler says that only on one Bach Prelude does he find the blow/draw balance difficult. ''So much is inhaled and inhaled for a long time that I tend to get winded.''

Chromatics come in three or four octave models, starting either at middle C and going up — the same range as a flute — or with one lower octave added below middle C. Adler plays the three octave harmonica. The four octave, he says, is too big for his hands to cup completely. ''And, for that lower octave, the reeds seem to be awkward and thick. I can't control the sound. I can't shape it. A note

Photographs by Ellen Mandel

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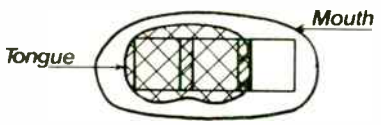
I can't shape is to me not worth playing. I want to be able to shape the entire phrase. I can do it on the three octave. I've got complete control on that."

What the harmonica, with its horizontal layout, can do that the flute can not, is play chords as well as melody — thats why Adler likes to call the instrument a "mouth organ", even though it is far more limited than its namesake. "When Vaughan Williams wrote for me," Adler recalled, "he wrote an interval of F and C to be played together. I said, 'Dr. Williams, I haven't learned to inhale and exhale at the same time' — though Dizzy Gillespie tells me it's possible! You see, you've only got four chords on the mouth organ, C major blowing out and D minor sixth coming in, and the C sharp major and D sharp minor when you push the slider. Whatever you get has to be a combination of these."

These four chords, as Adler's playing makes evident, are really only the beginning of a harmonica's chordal possibilities. Two holes played together, either blow or draw, create various major and minor thirds that can be parts of many triads and diminished chords. The three holes EGC exhaled can be E minor sixth; the four holes BDFA inhaled is G ninth without the tonic — and all this is without using the slider.

Moreover, any harmonica player worth his salt is adept at using his tongue to block certain holes and increase his possibilities. "Tongue blocking" begins with covering three holes with the mouth and blocking the left two with the tongue, like this:



This is an efficient way of playing one hole at a time, what Adler calls the first step in playing the harmonica. The mouth can be pursed up to cover just one hole, and Adler plays melody that way often. "I get the most force that way, and by exerting a muscular grip with my lips, increase the resonance of my tone." But there is an evenness and accuracy to the tongue blocking method that makes it essential to basic techniques. By alternately blocking with and lifting off the tongue, melody and chords can be combined.

Then comes advanced tongue blocking. If the mouth covers five holes and the tongue blocks the middle three, melodies can be played an octave apart simultaneously. If the mouth covers four holes and the tongue blocks the middle two, a melody can be played over much of the harmonica with the harmony of a supporting sixth. Adler uses all these techniques, particularly on classical pieces, creating several melodies that blend contrapuntually.

By now, Adler says, his tongueing is instinctive, and he gives no conscious thought to the harmonies he seeks. "My sense of harmony is one of natural assets," he said, "If I tried to figure out what I was doing, it would be like a centipede trying to figure out how he walks. I go for the *sound* I want without stopping to think of what's a component part of what chord."

Sound — here the little mouth organ comes closer to rivalling the resources of a true organ. In performance at the Cookery, accompanied by pianist Hal Schaefer, Adler nightly demonstrated his mastery in drawing a kaleidescope of sonic color from his instrument. For Bach Gavottes he got a clean piping sound; playing the blues he bent his notes like B.B. King. On the big chords of the Malaguena, he fluttered his tongue for a sound like a strummed guitar. His improvisations were deft and his beat swinging on jazz standards like "How High the Moon" and "I Got Rhythm", but it was the quick sequence of textures that dazzled: throaty sax, straight-out

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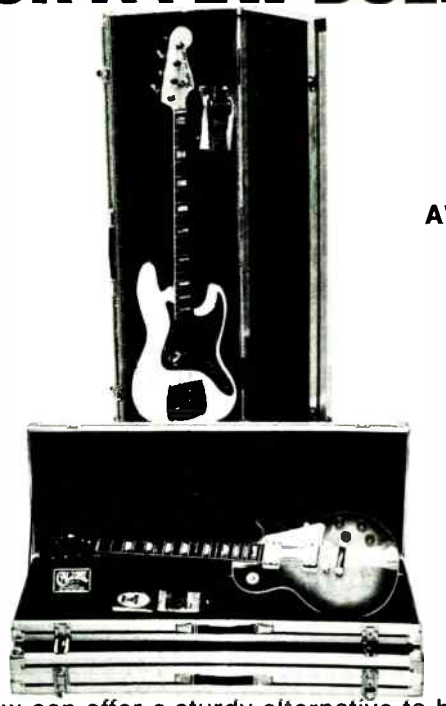

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trumpet or reedy flights of pure harmonica.

Adler stood nearly still in the club's amber light, bobbing a bit from the waist to and from the microphone to get just the right touch of amplification. His hands were constantly in motion, fanning the harmonica, leaping away from it, or coming together with the palms delicately arched to create sound boxes of many shapes and sizes that opened and closed for slow crescendos and diminuendos or wah-wah effects of many speeds. Sometimes the harmonica lay flat against one cheek or the other, at others it seemed barely to touch his lips. With each change of angle he got a different nuane of sizzle, buzz or wail.

"It's the piece itself that makes me think of the sound for it," Adler said. "For seven or eight years I kept working on 'L'Apres-Midi D'un Faun' by Debussy. Technically it wasn't difficult, but I couldn't get the sound I wanted. Then one day at rehearsal it was there!"

Adler has neither imitators nor competitors, but there are numerous other successful chromatic harmonica players in contemporary music. Jerry Murad's Harmonicats are heirs to the harmonica band tradition of Borah Minevitch. Toots Thielemans has toured with pianist George Shearing and his owm jazz ensembles, been a featured soloist in the film scores of *Midnight Cowboy* and *The Getaway*, and has recorded extensively — recently with pianist Bili Evans. For Stevie Wonder, playing the chromatic has been only one facet of his musical career. On his hit records his harmonica usually contributes brief solos, but he released one aibum, *Eivets Rednow*, that is all harmonica set against lush arrangements of pop ballads.

Tommy Morgan in Los Angeles and Blackie Schackner in New York are the best known of the studio harmonicists wh do the seldom credited work for television: Morgan plays in Mike Post's and Pete Carpenter's ensemble for *The Rockford Files*, and Schackner does many commercials. Charley McCoy has played on countless records made in Nashville. Lee Oskar blends with the horn section on most of War's powerful records, but he's become soloist and the group sidemen on several albums that feature his own compositions.

Cham-Ber Huang has continued the harmonica's purely classical tradition established by John Sebastian, and, as a consultant to Hohner, he has designed a new chromatic that has become the company's top-of-the-line model — the 2016 CBH. The CBH's layout of reeds is like the older chromatics, but the comb and mouthpiece are cast from space age plastics rom DuPont, and the slider, of stick-free Teflon, is at the rear of the instrument — farther from the saliva that, as it dries, makes a gummy film needing frequent cleaning. Opinion is still divided on the CBH. Some players have taken it up eagerly, but when Schackner came to the Cookery one night to hear Adler play, the two seasoned pros agreed that they preferred the instruments they were used to. "Cham-Ber and I are friends," said Adler, "but I don't like his instrument. I've *played* it, but I couldn't *perform* with it."

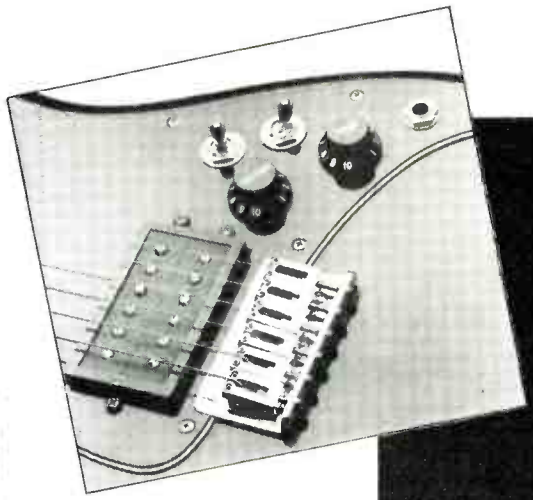
Adler respects his fellow harmonicists — "I admire anybody like Toots or Stevie Wonder who get their own sound, whose playing is unmistakeable" — but criticizes their lack of variety. "Now I don't play jazz as well as Toots, but he can play only the one kind of sound. Stevie Wonder's pop touch is great, but I couldn't listen to a whole album of it, it's too similar. Lee Oskar, again, not enough variety of sound."

Yet even for Adler, the goal of his lifetime with his instrument has been single: "a singing tone". "The mouth organ," he said, "can be an incredible vox humana. You can get a more intimate, more emotional tone on it than on almost any other instrument. When I'm really in form, really playing well, I feel that's what I'm getting. If you can ge a singing tone in your playing, that's as far as you can go. Miles Davis does it on the trumpet, Johnny Hodges did it on the saxophone. That's what I loved about Rachmaninoff when I heard him play the piano when I was a kid in Baltimore.

"One time, years ago, I played 'Sophisticated Lady' with Duke Ellington and his band at a club. Billie Holiday was there, and afterwards Duke introduced me to her at her table. She said, 'You don't play that fucking thing, man, you sing it.' Now I can't think of a better epitaph than that!"

Guitarcheck

Fender Lead I $479



One of the guitars which has remained in my mind since the last Atlanta NAMM show is the Fender Lead 1. I suppose the idea of a totally new Fender solid-body guitar with just one humbucking pickup next to the bridge (and that pickup a large black humbucker) is sufficiently against previous tradition that it *would* stick in the mind. Actually, I saw two new Fender models at the show: there was also a Lead 2, with two single-coil pickups, but otherwise similar to the Lead 1. While I was on Fenders display stand, I tried both guitars as well as I could under the rather noisy and busy circumstances. I instantly disliked the Lead 1 and almost as instantly, took a liking to the Lead 2.

Of the two samples sent for review, I find that I am not very impressed by the Lead 2 after all, and I am much more interested in the sound and the neck of the Lead 1. So either the two models have been changed around a bit since Atlanta or it is a fine example of why you should not buy a guitar at an exhibition. Exhibitions are great places to see all the new products and possibly to make up a short list of interesting instruments . . . but not perhaps, to make the final choice.

The Fender Lead 1 has a heavy ash wood body finished in a semi-transparent high gloss red lacquer. You can see the wood grain distinctly, but it can look a bit "washed-out" if lit from the wrong angle. Under most circumstances, it looks pretty good.

The neck and fingerboard are made in one peice, from maple, and finished in hard clear lacquer. The frets are smoothly finished on top and at the end. I did not find any sharp edges under my fingers and string bending had a silky smoothness without any of the fret scratch or fingerboard stickiness which one sometimes finds on new guitars. This is partly because of the lacquered fingerboard and partly because someone has bothered to polish out any scratches or roughness in the frets. (This takes rather more time than just buffing the frets so they *appear* to have a mirror-finish.) The neck on this sample is reasonably straight. It *could* probably be adjusted by the truss rod to give slightly better playing conditions. However, on this sample the truss rod adjustment is at the body end of the neck and the scratchplate does not allow enough clearance for a reasonable sized screwdriver.

I have met this problem before: I usually remove the scratchplate and cut the relief notch in the edge larger, until there *is* enough room to adjust the truss rod. If you are not bothered about appearances, you can leave the plate where it is, and hack out a larger notch with a strong craft knife and sandpaper wrapped round a pencil. Of course, it really shoudn'tbe necessary. Fender have been making guitars for a long time and I would like to think that they have got such things right by now. I have had some difficulty in obtaining

samples of Lead 1 and Lead 2 for this review, and I suspect that the two which I have, may be from very early production, intended as assessment samples. If this is so, then later instruments, intended for sale in music shops, may be finished and adjusted more consistently.

On our sample of Lead 1, the treble strings sometimes catch on the frets during heavy string bending, "choking" the note. I think that some slight adjustment to bridge and truss rod would allow the guitar to work without any choking of bent strings, and at a reasonable action. It is only the work of a few minutes. (. . . or it *would* be only a few minutes if I could get at the end of the truss rod).

The machine heads are the usual solid but fairly simple type used by Fender. They feel slightly sticky when first moved, but they all work smoothly and accurately. They are still almost unused and I would expect the initial stickiness to disappear with a little more use.

The nut on this sample is not well adjusted. The strings five and six are sitting in v-grooves which are too narrow for the diameter of the string. Consequently, they are wedged, part-way down into the slot. Slight wear or small change in string gauges, is likely to change the string clearance over the first few frets. I would estimate that the 6th string will be rattling on the first fret before it wears down to the bottom of its groove in the nut.

It looks as though the slots for the three bass strings have been cut to almost the same shape with the same v-shaped file. Fender *make* strings: they should know that strings come in different thicknesses. They may not know that a large round string in a narrow, v-shaped slot is not a particularly stable proposition, but I gladly offer the information without charge. It may be quite a good thing for Fender to have a couple of genuinely new guitar models available at the moment. I believe it is unlikely to attract some attention and it also offers the Fender enthusiasts a wider choice of instruments. This Lead 1 is potentially more than just an attention-grabber. I believe it will stand the best chance of success and survival if every single instrument is set up so that it works well and will continue to work well without giving unnecessary trouble.

In common with most Fender instruments, the Lead 1 and Lead 2 have bolt-on necks. In this case, Fender seem to have returned to the orginal four-screw fixing, without the neck tilt device. Although initial setting up may take a little longer, I think this is generally a more rigid arrangement than the three-screw system used on other instruments. At some stage in its evolution, the four-screw back plate acquired a plastic washer underneath. This does not seem to make the neck joint any better or any worse, but it probably stops the lacquer cracking around the corners of the plate. As supplied, the neck was a bit loose, but most new bolt on necks need some re-tightening when they are unpacked. I tightened the four screws with moderate force and the neck is now held quite solidly to the body.

The electronics of this guitar are most unusual for a Fender solid, but the system works, and it will probably delight Van Halen fans. We have here a guitar with a good long sustain, a (very) solid body like a modernized Strat and one powerful humbucking pickup next to the bridge. The pickup looks unlike any other company's products and is probably made by (or for) Fender. It has 12 adjustable pole-screws and even with the screws level, the top string is loud enough to balance with the others. The magnetic field falls off rapidly between the pairs of screws, but as the pickup is right by the bridge, even heavily bent strings never move very far from their usual positions and the volume level stays fairly constant.

The guitar has one volume and one standard tone control, both of which work well. There are also two toggle switches, which select different single-coil and twin coil pickup arrangements. Although the controls are packed close together, I found them conveniently placed. It is just possible to pick the strings, palm-damp them over the bridge and wind the volume control up and down at the same time. I can't think offhand why anyone should need to carry out all three maneuvers at the same time, but if you want to you can do it.

CONCLUSION

This is not exactly a subtle instrument, but there is not a lot of subtle music around at the moment, so that should be alright. It is a solid, meaty guitar with a loud and powerful sound when you turn the amp up. At lower levels, and with some careful picking it can also sound like the guitar parts in some recent TV and movie productions. Our review sample was neither adjusted, nor checked, as well as it should have been but I think the design is probably about right for the 1980s.

Stephen Delft

Scale length	648mm
String spacing at bridge	52mm
Fingerboard width at nut	40.5mm
String spacing at nut	33m
Depth of neck at fret 1	22mm
Depth of neck at fret 10	mm
Depth of neck at fret 12	24mm
Depth of neck at fret 15	26mm
Action on supplied treble	1.4mm
Lowest recommended action under our conditions treble	1.3mm bass Standard 1.4mm 1.8mm bass

21 frets on fingerboard; body joins at fret 20 on treble side. Heel starts at/around fret(a) 16.

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Soundcheck

Hiwatt Tube State 200R Power Amp $1140

Hiwatt Equipment Ltd., has become wellknown since it's early beginning in1964, mainly for it's valve and, more recently, solid state amplification equipment. It's latest catalog includes 14 pages of various musical gear and you will find such things as: all-purpose valve amplifiers, covering a power range from 50-400 watts (models 504, 103, 201, 405); graphic EQ solid state amps (model NCA 108), speaker columns — 4x12, 2x12, 2x15, etc., with standard tuned reflex enclosures; combination valve amplifiers (models SA112, SA112 FL, SA115 FL, SA212) covering an RMS power range from 50-100 watts; with built-in reverb and vibrato (SA 212R); PA quasi-modular mixers with a special construction enabling the system to be used with various channel crossovers and foldback monitors; slave power amps, and many more. The Hiwatt Tube State 200 valve PA slave amp is the one under review this month.

The Tube 200 Hiwatt "all valve" power slave amplifier is designed for a 19" rack mounting and its dimensions are 13cm high by 34cm deep, weighing in at 26kg. The amp is rated at 200 watts RMS and is intended for all-purpose PA use. On this occasion we shall be delving into a well tried electronic circuit, which has been on the road now for approximately 10 years, but with a slight modification incorporated specifically for PA work. Hiwatt claim to have advance orders from the music industry for the stereo version in hand, but availability is delayed until the NAMM show of this year.

The Tube State 200R's control panel is quite simple i.e. Input/Output XLR Cannons, simple Gain potentiometer, output 4/8/16 ohms selector and a pair of Power/Standby red illuminated rectangular switches. For overall flexibility, a pair of one male and one female Cannons is used on the input side and the mains lead are mounted horizontally and replacement access is provided from the rear, on simply removing the metal plate screwed to the rear panel. The pre-amp section's valves are screened magnetically and proper ventilation is provided from both upper/lower sides of the chassis. Wiring is clear and tidy using multi-colored wires and the high sensitivity input circuitry uses screened cables for hum/noise performance. I particularly like the method of wiring on this amp with its minimum of componentss hanging around the EL34's sockets and all placed separately on the tag boards which, in fact, will be replaced in the new stereo version by high quality PCBs.

There is a lot of common sense in the design for this amp, leading to simplicity in layout, both on the mechanical and electrical side. One point I didn't like very much was the use of Pop-Rivets for fixing the Cannons' connectors on the control panel which, although Euroconnector socket is riveted on the rear. An unusual feature is that the impedance Selector switch is fitted on the front (top right corner), which I found quite handy on my tests. Below both Power and Standby switches, there are a pair of 5 Amp and 3 Amp fuses, respectively. Unfortunately, no markings on the front panel indicated which was which — confusing to the user as both fuses have different ratings. The sides are finished off with compact aluminium handles for transportation.

Now to the innards of the Tube State 200, which is split into three compartments. Firstly, (closest to the front panel) both power output and supply transformers and a battery of five 100uf/450v electrolytics (RS components). Secondly, the middle section, housing most of the small bits and pieces soldered neatly to the two tag strip boards and finally the valve compartment. All valves, i.e. pre-amp ECC81/-ECC83 power stage — 6xEL34,

different with both 4 and 8 ohms Ref. 1kHz test. In both cases the 26dB negative feedback loop efficiently controls the overall balance of THD, which can be regarded as fairly low for a valve design amp. The input sensitivity figures tally precisely, and what's important is that the amp is happy working with the whole range of permitted speaker impedances, monitoring its gain on a professionally constant level.

Power response Ref. 200 WRMS into 8 ohms was approximately 30Hz to 6kHz, nothing exciting in these days of solid state technology, but in practice for a valve amp, it can be regarded as satisfactory. I should really mention that obviously economic and simple to install, are better seen on things like flight cases, although this is purely a personal point of view, supported by my experience. If, for example, any of these connectors had to be replaced in time, then rivets mean a lot of extra messing around — screws and washers save time.

Now for the performance: the amp meet the manufacturer's specification nicely. On the power side, we have in excess of 200 watts RMS when measured at the onset of clipping into 4 and 8 ohms. Operations into 6 ohms of speakers load are also possible but one must not forget to select the relevant impedance switch. THD levels are quite Hiwatt also sent me a few PCB boards from their new stereo slave amp. What always worries me when people try to put PCBs into an all-valve amp, is the presence of HY on PCBs, but in Hiwatt's case the track layout seems quite adequate and it seems that they have overcome this serious problem. Still, I look forward to seeing the production sample of their new Stereo Slave Amp, which will also be availabe in a 100 W RMS per channel version.

Conclusion

One always gets a deep feeling of nostalgia when reviewing any all-valve amp, but this time was something of an exception. The amp is based on a modern construction, still having valves, but skillfully using contemporary electronic experience we have gained from solid state. No objections to the electrics or the performance of the Tube State 200R amp, and I think there will be quite a lot of people who will welcome this type of PA amp despite the "valve consequences" such as weight, fragility, vacuum tubes and naturally higher costs compared with similar solid state power levels. But for those who are prepared to pay more whether it be for the sound or the valve tradition of the Sixties, they will find in this amp what they look for.

Mark Sawicki

HiPercussion 56.90 Set

The set under the microscope this month comes from Italy, called the HiPercussion. It's built in Milan by a guy called Caldironi and anyone with a reasonable memory may remember the other drum kits he's been responsible for: Meazzi *Hollywood* which we first saw in the early- to mid-Sixties, and what I presume to be their European mainland counterparts — *Wooding*.

Signor Caldironi has been in the drum making business for the past 30 years and his experience definitely shows. His drum shells owe everything to the *Hollywood* line, but his fixing systems owe nothing to any other concept of drum suspension. As a matter of fact, the tone mounting rails owe far more to the building industry. It's like very sophisticated scaffolding. HiP make what is without doubt the first *modular* system drum set with *en bloc* features. The set I first saw at the Frankfurt Trade Show in 1977 was really impressive to look at and almost awe-inspiring. It looked so complicated that I kept putting off the day when I would have to describe and test one. I advise you to consult the pictures as I describe the set.

The first thing to catch the eye is the tom tom fitting which is best described as *rack mounting*. It uses a *double* rail made from inch diameter chrome tubing roughly 36" long. These two rails are joined to left and right of center by about 10" of the same diameter tube. All of the joining positions have a unique fixing which is cast and looks like a sophisticated scaffolding joint. The best way to conceive it is to imagine a hand clamped around the tube and locked with an Allen screw through the fingers and out of the back of the hand. The "wrist" is a tubular rod which can join to another clamp to mate the rails or to mount a plastic ball joint. This holds the angle adjustment and arrest of any tom tom, or even the snare or hi-hat.

Two of these clamps with tube attached locate and screw lock into an ordinary cast female

receiver plate, something like Pearl's latest, which keeps the holder rail solid. The angle of the attachment is adjustable as only one rail is fixed to the cast plate. Because of the weight supported by these rails — five tom-toms, several cymbals and mikes in some cases — HiP put a substantial tube below the holder plate from top to bottom inside the shell to stop it deforming under stress.

The set-up of the kit appears complicated at first glance because it *is* complicated! Once the kit is set-up exactly how you want it it's only necessary to remove the tom tom and cymbal arms from their rails. All tom toms, arms and their positions in the sockets on the rail are numbered, plus there's a memory clamp like a Jubilee clip which fixes the horizontal height and lateral position in a simple but elegant fashion. It's shaped in plan like the opposite end of the ball and socket clamp and you simply line it up correspondingly. Once the kit is disassembled the rails and arms are simply put away in the case.

The tom tom arm is exactly like a Hollywood's. A plastic ball, on a standard length of tube about 12" long, has a cast case which fixes around and is locked with a large cast wing nut at its open clamp end with another tube clamp at its opposite end, also fixed with a wing nut and bolt. This tube clamp locates and fixes the rod of the tom tom holder's or the cymbal's arm. Alternatively, it can hold the side drum's stand or the pedal-less hi-hat which allows for closed hi-hat playing when two bass drums are in use. So, since the cage fits snugly around the ball obviously it and the tube's clamp can be moved to almost any position. There's a fine tuning screw at the other side of the ball from the wing nut to ensure a really snug fit. The tom tom arm connector plate mounted on the side of the drum is cast, but does not allow the arm to penetrate the drum. Instead, it's simply a blind hole in a proud boss about an inch deep and its wall is tapped to take one substantial T shaped thumb screw. This screw is pointed at its end and locates into radial splines set less than an inch from the end of the solid tom tom holder arm, set less than an inch form the end of the solid tom tom holder arm cut at about 45°.

This, too, works very well, and only Hollywood have used this sytem before. Theirs, though, had an extra drum key operated locking screw. This is the one fixing on the kit which doesn't have any memory joggers on it. I think this one could definitely benefit from some sort of position marker since it determines the ultimate playing angle of the tom toms.

You will see from the accompanying pictures that the whole set except for the two floor tom toms and the pedal hi-hat is mounted on rubber wheels like a trolley. This is not a new idea. Sonny Greer used to have wheels on his Slingerland Radio Kings in the Thirties. However, these wheels are very sophisticated and almost essential. One does not have to have these wheels with the 45 HiP series with the 22" bass drums with five mounted toms and two cymbals. This rig would be impossible to move without running the risk of a hernia. These wheels use the same inch diameter chrome tubing for their axles and the same two clamp joints which locate the tom tom rail into the bass drum. The cast receiver block for these is almost the same as the one on top of the bass drum but is an inch or so longer.

The hand grip type clamp joints are adjustable so it is possible for the wheels to move on their axles and favor either the front or back of the bass drum. The trolley wheels on both sides have the facility but this is of dubious advantage as far as the left side is concerned because the snare drum is attached to this axle and, consequently, there's not too much room to maneuver. These wheels are lockable with a twist of their hubs at the front and adjustable at the back on a swivel so the "trim" of the set can be changed to accommodate any irregular surface.

That takes care of the innovations.

It's a nine drum set with five single headed mounted toms from 10 to 15", two floor toms — 16" and 18", a 22" bass drum and a deep wooden shell snare drum. As usual there's a hi-hat and bass drum pedal, one boom stand, a normal cymbal stand and the snare stand. In addition you get two cymbal arms for the "rack" mounting and all the necessary pieces for the tom toms.

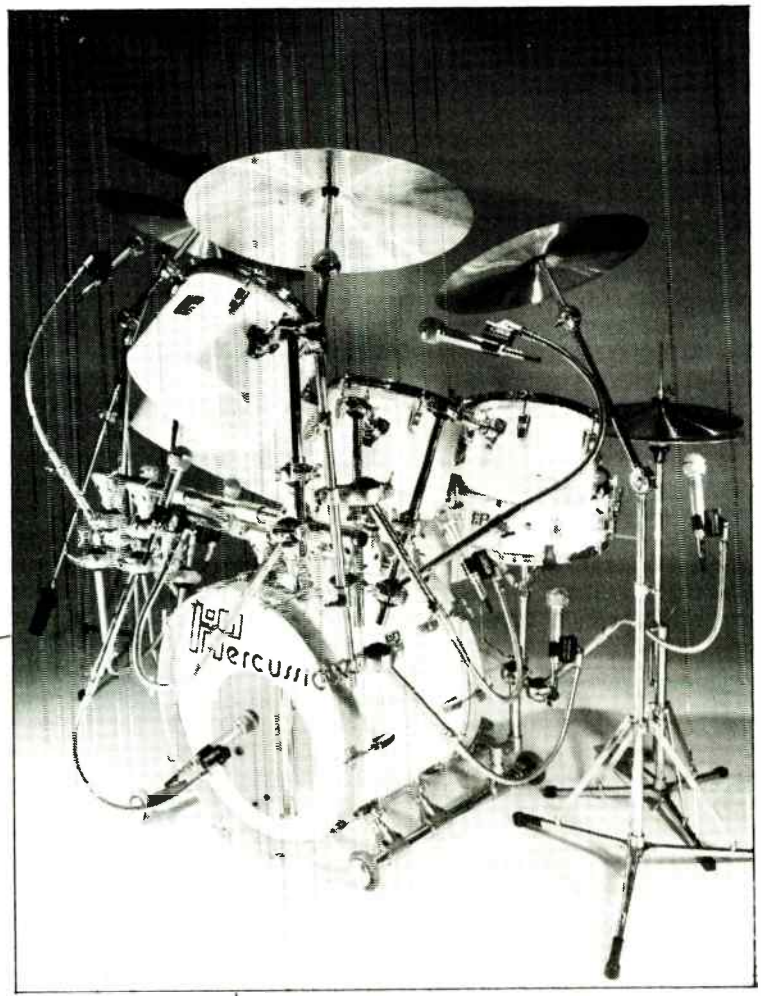
Bass Drum

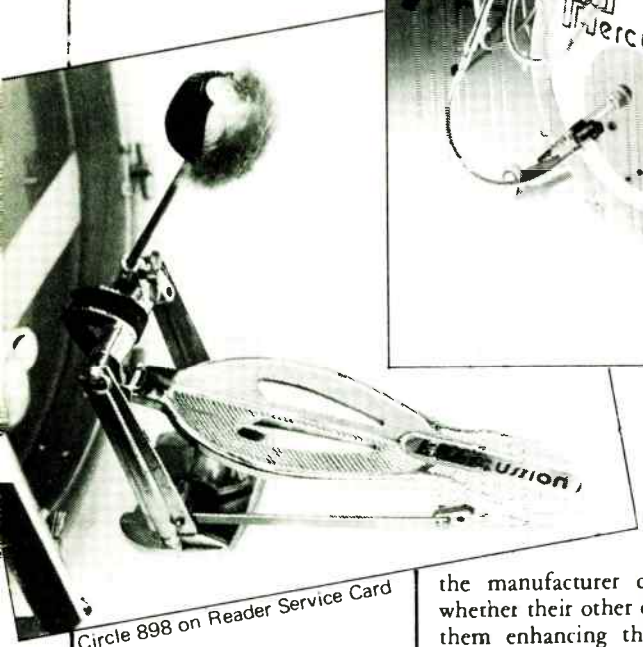
The bass drum is a 22" x 14", the alternative being an 18" diameter option. It's made from four-ply wood, the outside layer walnut and the inside beech with its right angled joints staggered around the circumference to reduce the weak points. The layers are "powerglued" and the natural finishes are polished by hand. The drum sports 20 of HiP's unusual and unique T tensioners which are the same as the old Hollywood ones and swivel outwards on their cast nut-boxes. This means you don't have to remove each tension screw completely to change a head — simply slacken them off until the claw is clear of the hoops. These claws, too, are cast and joined. The hoops aren't solid but made from plywood like the drum shells. There's a substantial inch diameter tube inside the drum from top to bottom below the tom tom holder to maintain the bass drum's uniformity, and to stop the shell from flexing. It's also handy for putting extra damping material behind. The batter head is fitted with the normal felt strip dampener.

The heads on the drum are made by HiP, look like Remo's, and are indeed made like them from the Mylar film of DuPont's in Wilmington, Delaware. The film isn't exactly the same as Remo's, it doesn't seem quite so permeable. I managed to dent the tom tom heads relatively easily. The plastic isn't fixed into the channels like Remo, either. I haven't taken it apart, but my experienced guess is that it isn't glued and perforated but crimped like Ludwig's. Anyway, the heads sound very good. The front head is peculiar to HiPercussion, it's called a funnel and has a 13" hole already cut into it — it's not at the center but just over two inches up from the inside of the hoop. The overall sound of this bass drum is great — possibly the best I've ever heard with real depth and balls. Everybody who has sat down at the kit has remarked how good it is.

Tom Toms

The set has a couple of unusual sizes in the tom tom set up. All are single headed except for the 16" floor standing which has a timpani-type pitch changing foot pedal fixed to it. There is a 10" x 7" drum with six tensioners, 12" x 8" and 13" x 9", both with six tensioners. The 14" x 9" has eight as has the 15" x 10". The 18" x 6" floor tom has eight tensioners as has the 16" x 16" pedal tom for *each* head. The toms and the snare drum use the same tensioning techniques as the bass drum. Swivelling square headed tension screws fixed to the nut boxes and shell, cast claw hooks which clip to the holeless die cast Slingerland stick saver type rims. These rims are obviously stronger without the holes, as





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the manufacturer claims, but whether their other claim about them enhancing the sound is true remains to be heard. As with the bass drum the tension screws don't have to be removed to change a head. Simply loosen them enough to release the claw from the hoop, swivel it outwards and remove the rim and head in double quick time (8/8 to you). This is a real advantage if you break a head in the middle of a gig.

All the drums are fitted with HiP's external damper which operates on top of the head. This spring-steel damper has a one inch felt pad which fits around the rim and is held in place above and below by the tension screw. It's articulated and can swivel from a position about three inches into the head to any position towards the rim to vary degrees of dampening. It's in the "off" position when actually sprung onto the rim itself. It works very well, particularly on the snare drum and so far doesn't rattle. It kills the rings without changing the pitch of the drum.

All the toms are fitted with Caldironi's own tom heads which are see-through with a center re-inforcement black dot which, like Remo's, dampens out a good deal of the overtone which helps the fundamental to be more audible — therefore a rounder, clearer sound. These toms, too, are made from walnut and beech but are constructed from three plies. None of the drums have glue rings and I'm a little concerned about whether a single headed drum with a relatively thin shell will stay circular without them. Time will tell. Certainly the toms all sound good, very strident, although the doubled headed floor tom doesn't, and never will sound like the others — I mean to eventually try it single headed and see what that's like.

The 18" tom tom has only three legs on it which is one less than most makers fit to that size drum. Also the legs on the larger drum are made of normal bent steel rod with rubber feet. Top knurling aids grip where they locate into larger than normal cast blocks without O rings inside. They have a thread tapped directly in to them which is not good practice since these sort of blocks invariably strip their threads whoever makes them. The legs on the other floor tom are completely different. Instead of being bent at their ends as is usual they are bent at right angles in their center like the old Hollywoods. This horizontal part is actually a casting which locates and wing screw locks the bottom part of the leg which is about 10" long. The top part of these legs has indentation grooves cast into it to lock it solid.

The pitch pedal fixes to the two legs of the 16" tom and looks incredibly complicated but is, in fact, relatively simple. A foot pedal with two spurs pushes a connecting rod which rotates a torsion bar which is fixed inside the drum. This bar in turn has a cam which pulls another rod

attached to the center of what can only be described as the spokes of an umbrella — the spokes are flat, however, and attached one to each of the nut boxes through the shell. So, all the rods pull and the bars rotate, the umbrella center goes down and its spokes pull down on the nut box which is hinged, and with this thin arc-like slight movement of the nut box the pitch of the drum changes. The whole pedal unit is adjustable for left or right footed players or indeed for left or right of the bass drum positioning. There is a manual locking attachment for the pitch blocking the foot pedal mechanism so the player doesn't have to keep his foot on the pedal to maintain his new pitch.

Snare Drum

The 14" x 16½" snare drum I had was made from natural wood although they do make a deep, copper-plated metal shell variation. HiP don't make any other depths of snare, their WN drum has 10 double-ended nut boxes with the same swivelling square tension screws, cast claws and rims. There's not an awful lot to the snare drum since it has an unsophisticated cam action snare strainer (like Gretsch's) adjustable in tension at its butt end, and just the simple external damper. The 20 strand snares are attached to the strainer with a plastic strip going through the smallest snare gate I've ever seen. This snare-strainer actually had *Wooding* stamped on it. The snare drum shell is built from three plies like the tom toms and is fitted with HiP's own batter head which is white brush-response coated to make it like Remo's *Ambassadors* — unfortunately, this sprayed-on finish didn't stay on, and in time the floor under the drum became coated with white chunks of the covering material. Fortunately, it doesn't affect the sound of the drum, which is really good — crisp and strong. This snare and the bass sound really remarkable. It's weird because the bearing edges are not very fine. I suppose it's the thinnish shells which make the drums so responsive.

Accessories

The snare drum is also unusual. As I mentioned it's fixed via one of the "hand-grip" joints to the trolley wheel's axle and then goes up through a cast right angle joint to the same ball and cage fixing that the tom tom and cymbal arm use.

Clamped into the pipe socket is the top part of the basket-type snare drum stand. Its right-angled arms are sheathed in rubber, like most other makers'. But the HiP stand has a locking mechanism which is unique to them.

Instead of its basket being locked to the drum by a threaded collar it's secured by a heavily sprung cam lever which works in a solid and positive way. It certainly renders the snare drum immovable and puts it at any reasonable angle and height for comfortable playing.

HiPercussion's supreme bass drum pedal is exactly the same as Hollywood's. It has a one piece cast foot plate with a pair of oval slots in its center and non-slip indentations machined into it, an expansion spring on an adjustable cam which has an unusual *modus operandi*. The cast center axle section is movable on splines. The plate which connects the plate to the cam axle is made from "industrial fiber" and the whole unit attaches with a screw locked clamp to the bass drum hoop in what I call the "undignified on your knees under the snare drum" manner. The pedal is unsophisticated but for all that has a reasonable feel to it, is responsive and appears to work well. Its lambswool/cork beater I felt to be superfluous in this day and age, and it unbalanced the pedal.

The hi-hat works better than its bass pedal counterpart. It shares the same footplate with the other two pedals on the set, has two expansion springs which work outside the top tube and are adjustable uniquely on a movable collar which locks with a drum key in the same rod which the top cymbal clamps to. It's more unusual, this pedal, because it's a center pull model but its bottom tube (the part the legs attach to) is offset by an inch or so and doesn't line up with the top tube. So the mechanism doesn't touch the bottom tube at all — this simply holds the hi-hat up. The actual hi-hat cymbal pull uses a steel strap, a Premier type, screw adjustable rubber bottom called "seat-cup" and another Premier type top cymbal clutch with two locking washers below the cymbal, ample felts and a sensibly large locking screw to maintain the top cymbal's position on the connecting rod. HiP use what is almost a flush-based but also tripod legged system to support their stands. The three bottom legs which fan out from the center tube are of inverted "U" section pressed steel with rubber feet and something I didn't notice at first — concealed sharp-tripod swivel spurs inside them. These legs lock into the open position with a large cast wing nut which screws up a captive bolt. Hinge fixed to these legs are three flat steel struts which give added stability and, as in a tripod stand, they join to a movable cast collar with the usual locking screws. I felt the pedal worked very smoothly and competently although it's hardly one of the monsters I'm used to examining these days.

The universal cymbal stand has the same base as the hi-hat but is bigger with a consequently wider spread. It has only two stages — the top one being solid and knurled and the bottom normal tube. The solid rod stage has two ratchet tilters about six inches apart and above the top ratchet are approximately six more inches of thick rod with their cymbal seating on top. This is a small, squashed rubber cone with a hard rubber washer on top of it and a small wing nut. The other stand is the Giraffe boom which is something else again. The base is the same but at the top of the first section we have the plastic ball and cage exactly as on the tom tom rail, and the pipe clamp locates a tube with cast bosses, and wing bolts at each end. One end locates and adjusts the heavy counter weight, the other locates the cymbal arm section of the stand which, like the *Universal*, has two splined cast ratchet tilters, in this case set about 12" apart. The same cymbal seating is provided which hopefully keeps the cymbal locked into the right position — I have my doubts about this part but suffice it to say that this is the very highest production cymbal which can be set up to have the cymbal seven feet high.

Conclusions

Here is an expensive, good sounding and sophisticated set which is being launched, hopefully, on the market to gather a share on the ultra rich professional's business. It's certainly good enough in image and sound, and with its *en bloc* miking-up facilities would save a lot of roadies aches with dismantling. The fact that it comes in only two finishes, white and natural wood, is a disadvantage. They should, at least, introduce the option of plain black. Aside from these quibbles, if they manage to get the publicity and the players to sponsor the set worldwide, they could stand a very good chance.

Bob Henrit

SynthCheck

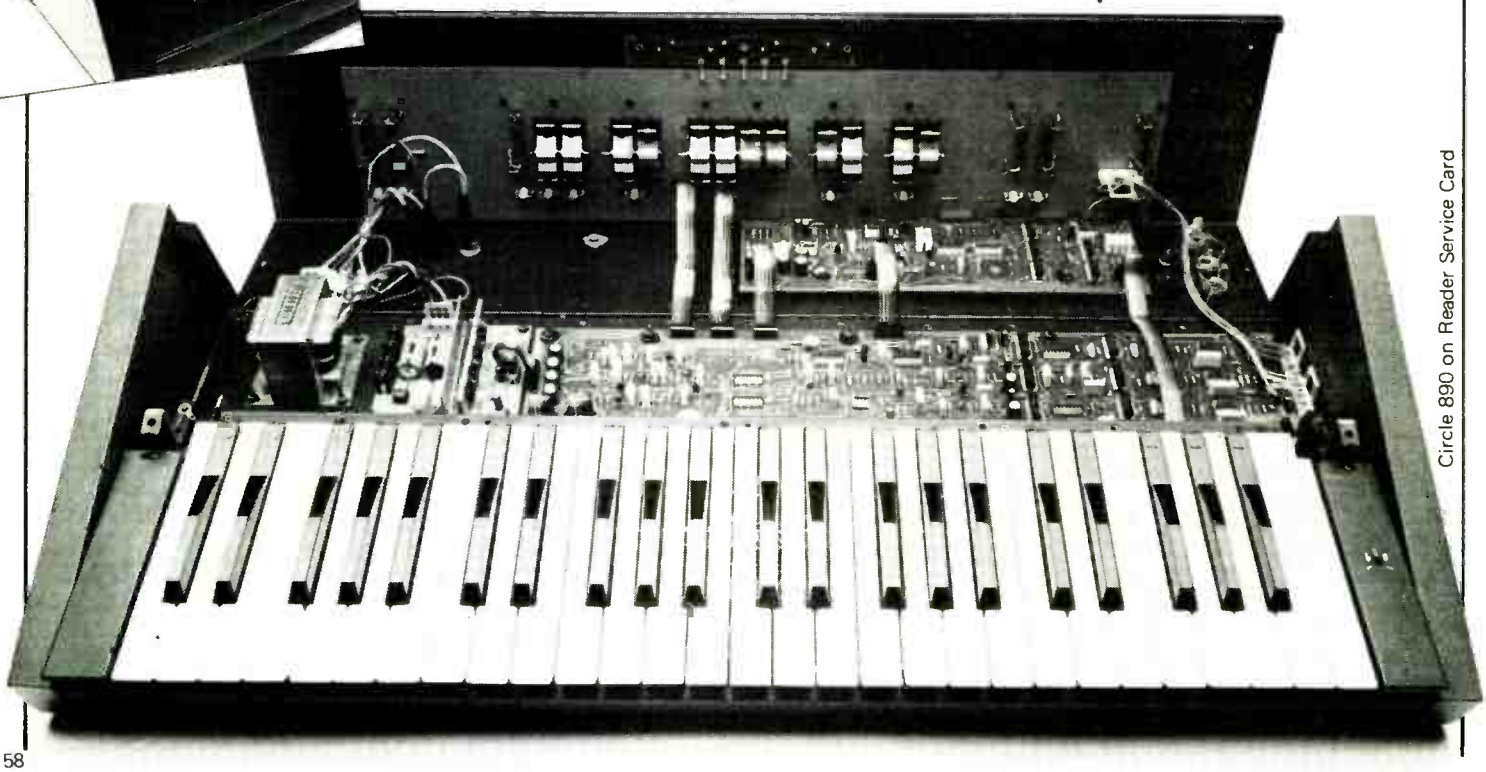
ARP Quartet String Synth $1280

The Arp Quartet is the junior member of the Arp family of string/brass/orchestral synthesizers. Its lack of sophistication in relation to the Omni and the vastly more expensive Quadra, is fairly well reflected in the price. If it is possible to raise the extra money, the Omni seems a much more desirable instrument. The Quartet is manufactured for Arp by the Italian firm Siel while Arp themselves get on with the more serious business of assembling Odysseys, 2600's, Quadras and the like. You may come across an instrument called the Siel Orchestra, the performance is virtually identical to the instrument reviewed here.

The keyboard has a four octave compass (C to C) and feels good to play. It is housed in a compact and lightweight rectangle, constructed from wood, metal and plastic in which the generally good finish is marred by the cheap looking sliders and push button selectors. The four buttons are centrally placed behind the keyboard. Color coded they are: brass (red), strings (orange), organ (yellow) and pianos (white).

When one of these is pressed a red light will show above the controls of the family concerned. You may employ two or more sections of your orchestra simultaneously. The most likely combination is strings and brass but funny things start to happen once you bring the piano section into play. The strings fall prey to the short, sharp envelope of the piano and are thus rendered useless (though the maker's word for it would probably be 'pizzicato'). The brass section downs tool completely. They do not make a sound.

I'm running ahead without properly explaining the set-up. The brass section has two voices or rather the same voice an octave apart: trumpet 4′ and trombone 8′. You can select either or both by pushing a slider up and away from you. Unfortunately it's not a slider at all, just a switch with a long throw and since there are no intermediate positions you can forget about balancing the brass either internally or in relation to the other sections. The brass sound itself may be varied in the following ways: its initial attack may be lengthened — you can increase the treble e.q. (marked "brilliance"). These two factors are controlled by genuine sliders. Next is a slider for varying the rate of vibrato (from very slow to fluttertounge), an on-off switch for vibrato and a switch marked "sustain". The vibrato has a built in delay of about one second.



Next come the strings (violins 4′ and cello 8′). These have an out and out string synth quality. The modulation which gives the ensemble sound is not variable (just on or off) and might be a shade on the fast side for some tastes. To cancel it, you flick the switch marked "solo". A glimpse of red on the left shows that you now have access to the brass section vib controls without which the sound would be far too bland. Hastily reinstate the ensemble and with it the sustain glider (up to 8 seconds sustain) and the strings sound much healthier again. There is also a slider for speed of attack though even at its optimum setting the strings are only delayed by half a second or so. The slow attack doesn't happen once any notes are already depressed. The percussion switch gives the pizzicato effect. It's a shame that there's no filter or "brilliance" control for the strings.

The organ section has two voices; organ and celesta both of which are attractive, the organ voice being especially lifelike. Although the organ section has no tone or envelope controls of its own, you can vary the organ sounds by pressing the organ and brass buttons, combining the two and then switching the brass voices out. This gives you the vibrato facility again. Various combinations like this are possible and may be unearthed by experiment.

The last section is the piano, ordinary and honky-tonk. The envelope for the piano is the same as for string pizz. Fortunately it suits these sounds much better. There is a slider for sustain. The Quartet should come complete with sustain pedal cable connected at rear but there wasn't one with this instrument. The last slider is for overall volume level. A small screw (inlaid) to the right of the keyboard controls the tuning by a semitone up and a tone down (quite a neat little pitchbender if it wasn't necessary to stand there with a screwdriver in your right hand).

To sum up, the Quartet is fair value at the price though hardly the keyboard bargain of the year. It will do a good job if you want an orchestral sound to fill up the ensemble and the solo voices; pianos, organs etc. are more adequate. I should mention that it has detachable legs and a perspex music stand though I hope nobody reading this magazine is going to trouble with those encumberances. My last thought is one of slight disappointment that the respected firm of Arp haven't come up with something just a bit more serious.

Guitarcheck

Daion D-78 Heritage Jumbo $399.50

There is no need for this to be a very long review. I have seen two samples of this model of guitar: the second one, as reviewed here, was chosen at random, unseen. Both samples were, in my opinion, very pleasing instruments suitable both for private and for on-stage use.

One generally expects "limited-production" guitars to be more expensive than the maker's standard models. In this case, the "limited edition" is in the *middle* price range of a group of three jumbos and three 12-strings. From my memory of instruments at the British Trade Show I would probably choose this mid-range model in preference to the more ex pensive one irrespective of price.

I believe I have seen this neck before, on more than one brand of instrument. However, importers like to give an individual name to their own chosen range of instruments, and why shouldn't they, if they are able to offer this sort of quality for $399.50.

This guitar is call "Heritage D-78" in the importer's catalogue. The stamp on the neck block inside the body reads "The '78." Apparently, both refer to the same guitar: the other two 6-stringers are the Mark I andd Mark V.

According to the catalogue, the front of this instrument is made from solid cedar, with a brown antique-mahogany finish. This is quite correct. However, the catalogue does not tell you that on the inside of this cedar soundboard is a very neat and precise strutting job, incorporating the "scalloped bracing" which you may have read about in histories of old Martin guitars and advertise-ments for expensive Japanese steel-string acoustics. There are various styles of this scalloped (or thinned-down) bracing which is generally intended to make the guitar more responsive and to improve the tone. The shaping of braces in this Heritage is not precisely the same as you would find in an oldd Martin of similar shape and size, but there would be no advantage in making an identical copy of the bracing, for use in a quite different guitar. The final test lies in the performance, and for a reasonably-priced factory guitar, the performance is excellent. it would be fair to assume that the internal bracing, while similar to that in some old American instruments, has been modified to give the optimum performance with this particular model of guitar. The carving and shaping work inside this review sample, shows no signs of

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

hurried production or ccut corners. It is quite possible to find other guitars in this price range which exhibit rather scrappy work inside.

The sides and back look like dark-finished mahogany and are described as ovancol. Both sides and back appear to be laminated, rather than solid wood, but the back in particular has a bright resonant response to tapping. Most laminated backs are a bit lacking in resonance, when compared to a solid back of suitable wood. Some Japanese jumbos sound loud and impressive, but somehow muddled at the bottom end. This Heritage, in addition to a good overall sound, has unusually clear articulation between the bottom notes, even when the strings are no longer new and fresh. it occurs to me that a "soggy" back may possibly be a useful feature in a loudspeaker cabinet, but it is not likely to do much good in an accoustic guitar. I wonder whether the un-muddled bass of the Heritage has anything to do with the construction of the back panel. It might be the wood or it might perhaps be a different process of glueing the laminations together.

Although this review sample was sent to me with some really fresh strings, and I do appreciate this luxury, I deliberately played it for a couple of days until the strings had reached the usual slightly-worry level found on review guitarss. The Heritage still sounded good and "open," although obviously not as crisp as with good quality new strings. Incidentally, I believe the strings are light-gauge bronze from the Might Mite string range. I am equally pleased with the strings and anyone who likes acoustic steel strings with a rich and crisp sound should give them a try.

The neck is made from natch wood finished in a light mahogany color. Natch looks a little like mahogany, but with larger pores in the grain, and it is also porbably a bit softer than mahogany. In a steel-string neck with a good solid fingerboard and an efficient truss rod, this is not of great importance unless someone decides to cut a big hole out of th neck, behind the nut, for the truss rod adjustment point. This the weakest point of the neck and head in most steel string guitars, and cutting away wood from the inside does nothing to help. The Heritage neatly side-steps the difficulty by putting the truss-rod adjustment point at the other end of the fingerboard, just inside the soundhole. This design can also be found on several oter makes of guitar and I think it is a very sensible arrangement.

The fingerboard, bridge and head facing are made from dark rosewood. The position dots in the front and edge of the fingerboard are polished brass, as are the nuts and saddle. I have been a bit cautious about brass bridge saddles on acoustic guitars, but from the evidence of this instrument, they obviously *can*work well, if designed and fitted with enough attention to detail. The wooden bridge pins are inlaid with small pearl dots. The dots don't improve the sound, but the look nice against the fairly plain rosewood bridge, and the wooden pins will not bend or break as easily as the usual plastic ones.

Both front and back body edges, the edges of the fingerboard, the front outline of the head and the ring around the soundhole are bound with pale maple wood banding with a fine inner layer of a darker woodd. Please note — this is all *wood* edging, not cream plastic. Very tasty it looks, too!

The frets are not brass; they are the usual polished nickel-silver, well fitted and trimmed. Incidentally, I am waiting for the first guitar manufacturer, (swept along on a tide of enthusiasm and brass accessories) who tries to claim that his guitars are better because they are fitted with *brass* frets. Remember that first guitar you had, with the gold-colored frets which turned green and rotten with the sweat from your fingers? Those were brass frets!

All six machine heads work smoothly and accurately, and there is no sign of strings sticking or creaking in the nut grooves as they are tuned. To my taste, the strings are too high over the first fret and I would probably cut the nut groove a little deeper. i would also raise the bridge saddle about 1mm on the bass side. While the present action is ideal for fingerpicking, it is just too low on the bass side for *some of the things I like to play with a pick*. Occasionally the bottom string buzzes. This is a marginal point and open to disagreement. Someone who played slightly less hard or who used a lighter plectrum would find the action quite satisfactory.

The neck is straight and rigid, and the back is carved into an unusual shape, like a "triangular" Martin neck with a rounded over point at the back. It is not particularly slim but it is certainly comfortable, and it has the right sort of feel for an American-style jumbo.

Conclusion

For $399.50 it is difficult to find any serious criticisms of this guitar. There is a tiny smear of brown color on the paie soundhole surround. I think perhaps black or dark wood dots in the *edge* of the fingerboard would be more visible against the maple edge binding. My sample peforms well when picked gently, but it also sounds good when played hard with a pick. much though i like its reserved and unflashy appearance, i think there should be an (optional) stick-up scratchplate to protect the front from the ravages of heavy-handed players. A good imitation tortoiseshell would look nice. This is a fine instruemtn at a reasonable price.

Stephen Delft

Measurements on Mugen '78 Ser 9062211.

Scale length	640mm
String spacing at bridge	53mm
String spacing at nut	36mm
Fingerboard width at nut	43mm
Depth of neck at 1st fret.	22.5mm
Depth of neck at 10th fret.	26.5mm
Heel begins at fret 11	
20 frets on fingerboard.	
Body joins at fret 14.	
Action as supplied	2mm treble/2.7mm bass
(Preferred action	1.8mm treble/3.2mm bass)

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EffectsCheck

Eventide Clockwork HM80 "Baby Harmonizer" $775

Eventide Clockworks, a company who has built its reputation on a series of highly sophisticated digital delay and harmonizer units intended for professional studio use, now "takes it public" with their new HM-80 "Baby Harmonizer." The HM-80, "affordable to *just about* (my ital.) every working musician," is designed for use with instrument and low-level (microphone) sources and is equipped to offer delay up to approximately 300ms, pitch change to 21, -2 octaves, automatic capture, hold and repeat of signals up to the full delay capability, a "reverse" feature and a dynamic range of 80dB. Besides its "affordability," another selling point for the HM-80 is its compact size, 10½" x 8¼" x 2¼", making it suitable for effects rack/board mounting or on stage placement.

The first Eventide unit to be designed for "the dealer (i.e. general public) and semi-pro studio," the HM-80 still has a rather stiff asking price, placing it in a loosely-defined consumer area that might extend up from well off semi-pro to professional. Nevertheless, despite a few minor quibbles, the unit delivers everything it promises and, with some extended "fiddling," even more. Testing of this particular unit was done primarily in conjunction with guitar. Certain features of the HM-80, particularly the "reverse" mode, are probably better explored with voice/microphone or keyboard instruments.

The delay and harmonizer effects on a unit of this quality are immediately distinguishable from those on more conventional analog "bucket brigade" decides by their PRESENCE. Reverb, echo and "doubling" effects are achieved without significant loss of tonal characteristics, attack "texture," middle or bass response. In fact, some guitarists are using these devices — even with the controls in the "dry" position — just to *clarify* their overall sound. Professional delay, echo and chorus units seem to enhance the sound of a guitar by making it more spacious and full while holding the particular metallic edge or tonal coloring inherent in the guitar's aural personality. Solid body instruments with single coil pickups, i.e. Fender Strats, really come to life when played through these devices — not only because of their built-in clarity, but also because units like the HM-80 tend to attenuate or filter out unwanted hum or noise.

Since the "Baby" is fairly complex despite its streamlined packaging, the most direct way to review its various capabilities is by running through each of the control functions on the front panel as laid out from right to left. The DELAY control runs clockwise from "zero" to "max" settings with 32 detentes in between, each one representing an increment of 8.5ms. As you rotate the control beyond 12 o'clock, you can get more of a metallic "flange" sound. Adding coloration from the FEEDBACK and OUTPUT MIX controls with give the user a full panoply of "echo" and "reverb" variations. Even though the HM-80 is not intended as a delay unit per se, this particular function works well on its own and in tandem with the others.

Moving to the right, the next control is the MODE SWITCH. A three position toggle switch, the MODE switch determines the basic operational mode of the HM-80 — either "delay," "reverse" or "forward." In the "delay" position, the HM-80's digital circuitry functions as a straight delay line — the signal comes out of the unit at the same pitch and direction as it goes in, but with a fixed time delay. And, as the Eventide company points out in the information-packed booklet, "time delay is NOT an EFFECT in ITSELF, but must be used in conjunction with the ORIGINAL signal or modified version of the original signal to be of use."

The "reverse" mode, which involves storing data in the units RAM memory unit in the normal way and reading it out backwards, is another exclusive feature. Evaluating this feature with guitar only, admittedly a possible drawback, I found the approximation of "backwards tape effects" and "forward vs. backward harmonies in real-time" to be more of a curiosity item than a critical necessity. Eventide's gentle *disclaimer* — "Because of the length of the memory and certain psycho-acoustic effects, this (Reverse) mode is most effective with signals which have significant changes during the processing period (ex: guitar and bass riffs, spoken and rapidly sung material, struck or plucked instruments)." — set the tone for my feelings about this.

Also, the full-bown reverse tape-loop effects only become readily apparent when you rotate the OUTPUT MIX control to "full effect" and add a lot of FEEDBACK. With longer programs, the complete information doesn't seem to be reading out backwards before "flipping over" and becoming something that might be defined as "confused delay." In any case, this type of effect is rarely used by working musicians in a live context — unless you're playing in "an amazing re-creation" of the Beatles — and can undoubtedly be better achieved by actual tape reversal in the recording studio.

The "forward" mode is actually the heart of the HM-80's effects system. This "pitch change" mode allows the user to produce signals transposed from the input by up to a full octave in either direction. At 12 o'clock (approx.), the pitch ratio is a straight 1:1 and gives a "doubling" effect. The counter-clockwise extreme from this position of a 5:1 pitch ratio (one octave down) and the clockwise extreme is a 2:1 pitch ratio (one octave up). Of the three, my favorite is the straight "doubling" effect which fleshes out the guitar sound with a rich, chiming electronic 12-string

texture. This effect can be a subtle enhancement of an overall sound without sounding gimmicky or instrusive.

The actual octave apart "harmonize" effects are a little more chancey, or, as Eventide puts it: "Internal circuitry band-spreads this range so that adjustments close to 1:1 are easier to make, at the expense of other extremes." This is true and, lacking a digital read-out for correct harmonic alignment (understandable due to lowered overall cost factor), getting the proper pitch ratios up and down can be tough. There are no severe "glitch" problems when changing pitch but, contrary to their promotional material, I *did* have problems "preserving harmonic ratios so instruments do not appear to go out of tune or become cacophonous as the pitch is changed."

But the excellence and flexibility of this mode is still very impressive. One octave splits up or down are best utilized with single not runs (see Jimmy Page on Led Zep's latest) and make for fascinating, new textures — textures that can occasionally sound a bit "grainy" to these ears.

The OUTPUT MIX control functions as the power on/off switch as well as determining the relative "mix" of the direct signal and the modified (pitch, delay etc.) signal. The "output mix" functions in tandem with other controls and it's *ideal* position is around 12 o'clock — as you move it closer to full "effect' there is a tendency towards aural exaggeration.

Feedback has a different application in the HM-80: "Because the processing between the input and output inevitably includes a time delay, the feedback signal has little relation to the current input signal, Instead of acting simultaneously, there is a delay set by the other controls, and this delay determines how long a chunk of input signal goes by before the beginning of that chunk is re-processed." So the FEEDBACK control on this unit determines the amplitude or percentage of input signal that is fed back. This control allows one to get discrete echo effects as well as a kind of "constant flanging."

The REPEAT control is a "momentary action" toggle switch which, when active, captures all data presently in the memory and repeats it for as long as power is applied to the unit. This "capture" time is actually fairly short, a chunk of signal equal to the maximum delay of the HM-80, and only single words or short riffs can be held. When in the "repeat" mode, the LED above the toggle flashes at a rate equal to the time of the signal stored. The LED also doubles as on ON/OFF indicator.

The "Baby" also has both low and high-level inputs and the LEVEL control should be adjusted so that the indicator light above it flashes GREEN most of the time and RED on the signal peaks. This makes for optimum dynamic range.

All of this flexibility — I've outlined *basic* configurations, varying these by playing around with the controls can open up the door to legitimately "new" sounds — comes in a straightforward black aluminum chassis that weighs in under three pounds. And apart from the aforementioned minor criticisms, the HM-80 has to be one of the most versatile and "professional" delay/harmonizer units ever made available to the general public.

Jean-Charles Costa

EffectsCheck

Lexicon Prime Time Digital Delay — Model 93 $1485

The Lexicon Prime Time is a digital delay line that has been developed from Lexicon's well known Delta-T units, which were one of the first delay lines available to studios. The design of this unit makes it suitable for stage and studio work.

This delay line has two outputs, A and B, that are completely, independently variable between 0mS and 256mS in 60 increments on the detented rotary switches labelled "Delay Select." Above each of these controls, the delay setting appears in milliseconds on the display. I found these controls very stiff and as I write this my fingers are quite sore from turning these controls repeatedly while testing but using them the way I do (while testing) is quite unlike normal use. Considering that each knob has 60 positions, selecting a required position is relatively easy. The bandwidth at all these settings is a very respectable 12kHz and listening to the delayed signal only reveals a signal, audibly indistinguishable from the input signal with the exception of a slight bass roll-off. The "Delay Multiply" control multiplies the displayed delay by the factor selected, giving a maximum delay time of 2048mS when in the 8x position with 256mS on the display. The bandwidth on these multiples changes as indicated around the control.

On the extreme right of the unit above the "fish-eye" power switch we have the "Repeat Hold." This continuously repeats the signal that was passing through the delay line just prior to the repeat hold being pushed and illuminates an LED to show that this effect is in operation as it blocks out the input to the delay line. Pushing the button again releases the function, which may also be switched externally via a jack socket on the rear panel.

The VCO section enables a variety of delay based effects to be created. The "Delay-Adjust" control allows manual adjustment of the delay time to give times between the switched values and has a range of 1x to 0.5x. This control is quiet in operation and can be used with program passing through the unit, even when the Delay-Multiplier is in use, giving an extremely wide sweep range on one control. I did notice on the unit under test, that as the Delay-Adjust was approaching its extreme clockwise position, behind the signal there appeared what sounds like digital quantifying noise that modulated with the signal. I actually first noticed it with solo voice on 12kHz bandwidth and any other setting generally masks this noise as does a continuous music signal. I mentioned this, as the unit is generally very quiet and noise free and this came specifically to my notice. With the delay-adjust in use, the display figures are only an approximate value and to remind you of this, and LED, marked UNCAL illuminates at the bottom center of the display.

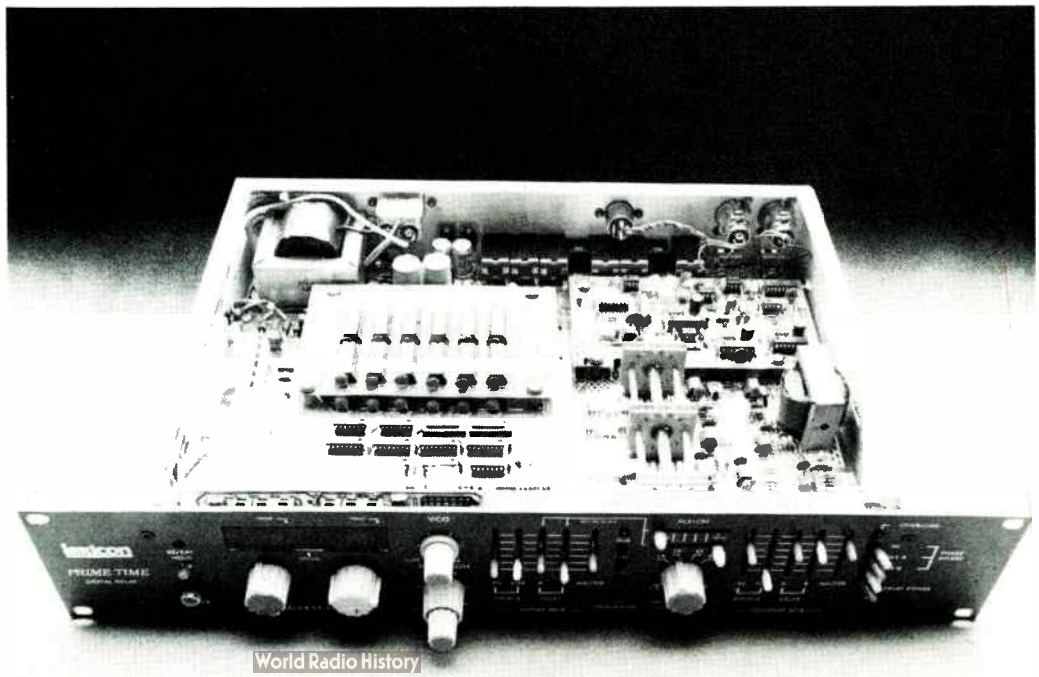
Also in the VCO section we have "depth" and "frequency" controls which adjust the internal oscillator to automatically modulate the delays selected, between 50% and 100% of their value and at sweep rates from 0.1 to 20Hz.

The input mix enables you to balance the two inputs of the unit and any feedback of the outputs of the delay line before processing by the delay line. The use of the feedback helps achieve a reverb sound or more repeats, dependent upon the delay line settings. Lexicon say if "recirculation" is to be used for reverb, the delay line times selected should be prime values and to this end all prime numbers on the display have a dot after them. Doing this apparently creates a smoother sound and to aid this further there are high roll-off filters (adjustable from 15kHz to 800Hz) on the delay feedback returns. There is a master input control and five LEDs inscribed from 40 to 0dB to give an indication of the remaining headroom. This section worked very well and was flexible to use.

The output mix is very similar and it enables the output to be mixed from the dry original inputs and the two delay outputs all controlled by a master fader. The LED overload indicator is before the master control and is used to indicate overload of the output stages of the unit.

On the right of this area are the switches for reversing the phase on the input signal as well as the output of the two delay lines. This also reverses the phase of the feedback signals to the input mixer. This flexibility provides for any possible circumstances I can think of occuring in use. Below these switches we have the effect in/out switch which may be remoted.

The rear panel contains the input and auxillary input (identical) which are XLR type sockets with a switchable gain of 0dB or 20dB (the latter for stage use with instruments), XLR type



master output, jack socket output from the input mixer and for studio use, separate jack sockets for the two delay outputs (bypassing the output mix) with adjustable level presets. The only remaining socket is a provision for external control of the VCO.

The top and bottom of the unit remove easily, giving access to the insides. The construction is impressive with very neat electronics being primarily on one large PCB covering the entire area of the unit. This board is secured firmly and despite it's size there is no flexing of the board and even heavy use on the road would appear to be no threat. All the components are numbered on the boards for easy identification.

The Prime Time comes with a detailed manual describing the wide range of uses and effects available. One use in particular I can recommend is the location in a stereo panorama by time delay rather than volume potting. Apparently, the ear tends to interpret sounds arriving fractionally earlier as louder and so if the Prime Time's two independent outputs are sent to opposite sides of the stereo the resulting image can be positioned by the selection of close delay times for the two sides. One suggested use of this effect could be the panning of a close spot mike into a more distantly miked stereo field using the Prime Time to delay the close mike an equivalent amount to the sound delay on the distant mikes and then positioning the sound in the stereo by panning the outputs left and right with fractionally different delays — the shorter delay on the side of the required image position.

One fun effect was to store some sound in the repeat hold and then, by changing the delay-adjust, alter its pitch. Or with the delay-multiplier slow the signal down — there's no end — and then retrieve the original signal.

Lastly an extremely personal viewpoint — I don't like the colored knobs and switches. I understand the logic behind it that associated controls have the same color, aiding understanding of the signal paths etc. but the unit has been well designed and is extremely easy to use. Five minutes and almost anyone can find their way around and I feel this is carrying "simplicity" of operation too far. Still, you can always buy new knobs if you agree with me.

Conclusion

I have the Lexicon Prime Time to be a well designed and constructed unit. Any criticisms have already been mentioned but the clarity of operation (even without the colored knobs) outweighs any reservations I may have had on other points. I think, excepting the modulation noise on the delay-adjust, I had to sink pretty low to find any criticism.

Keith Spencer-Allen

The version of the Prime Time reviewed here has the optional memory module which can be fitted to any Model 93 as a plug-in unit. This extends the switchable delay time to the value of 256mS mentioned while the standard unit without this option has a full bandwidth maximum delay of only 128mS.

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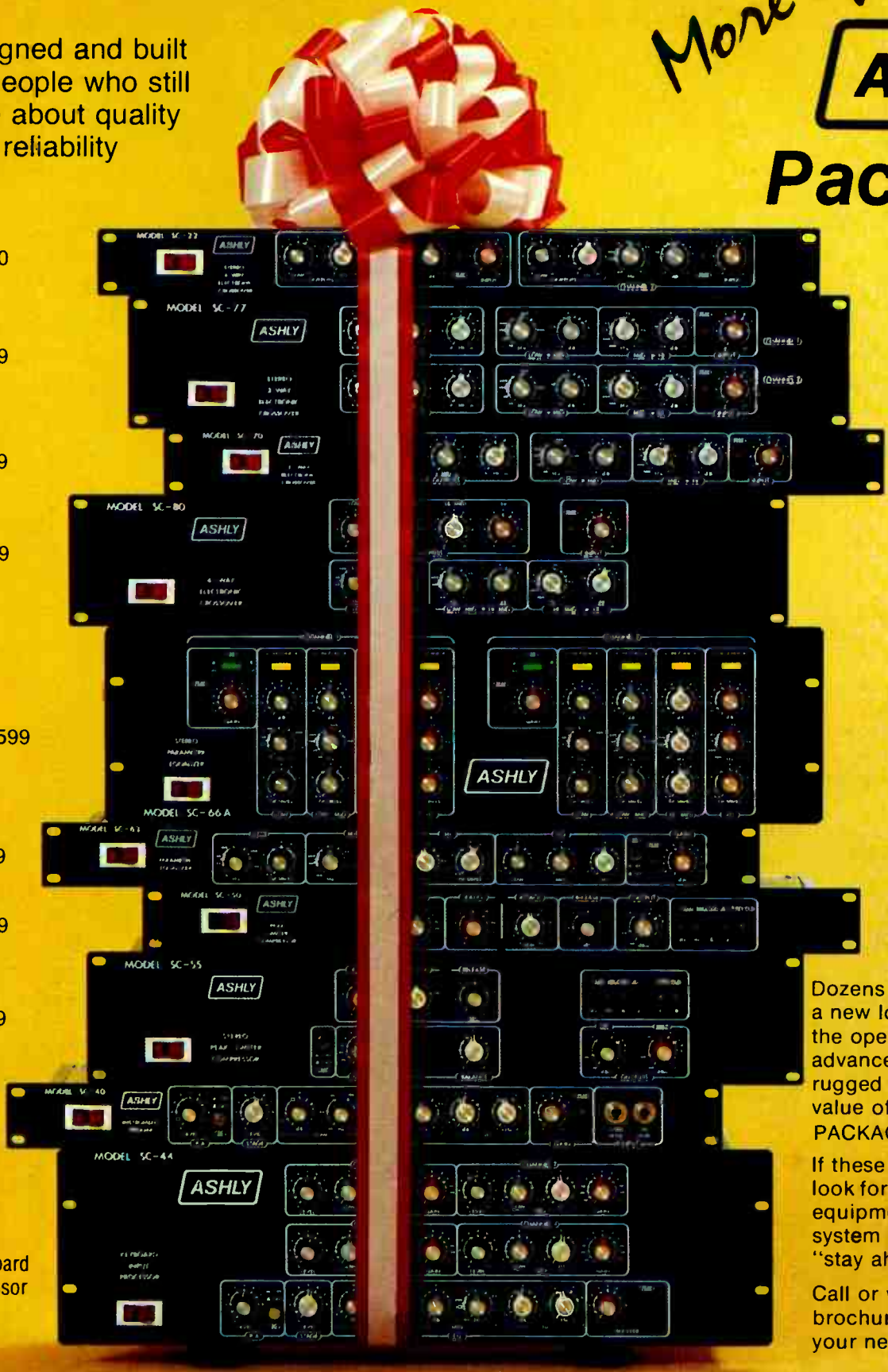

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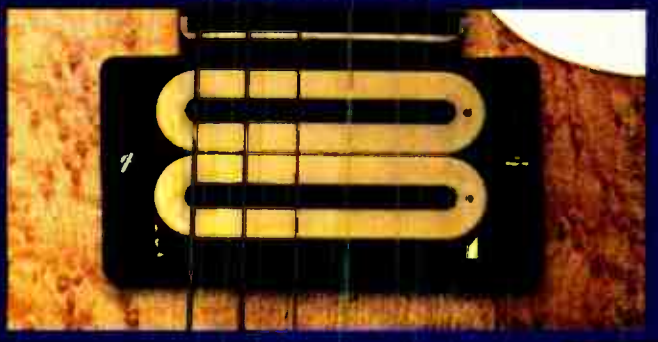

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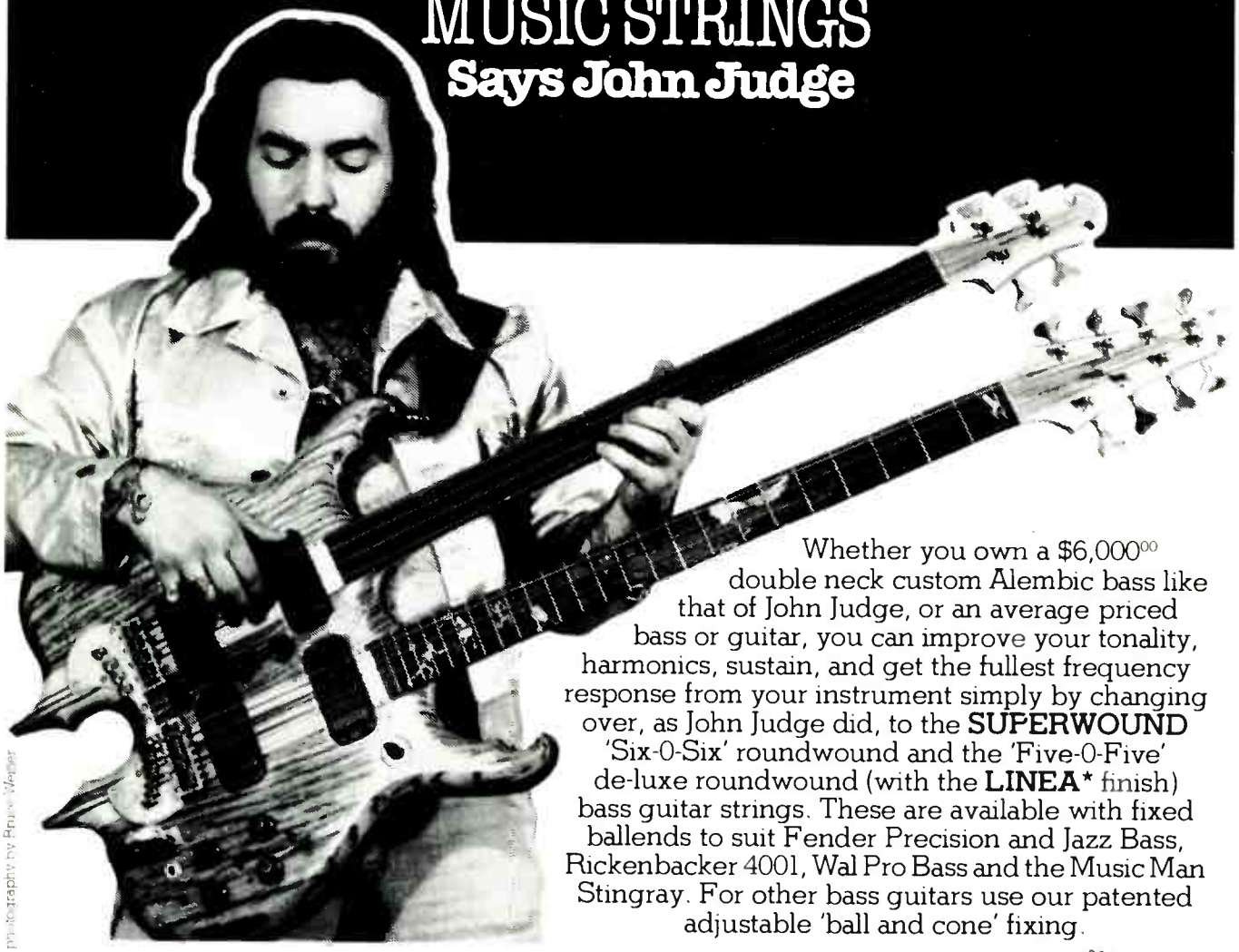

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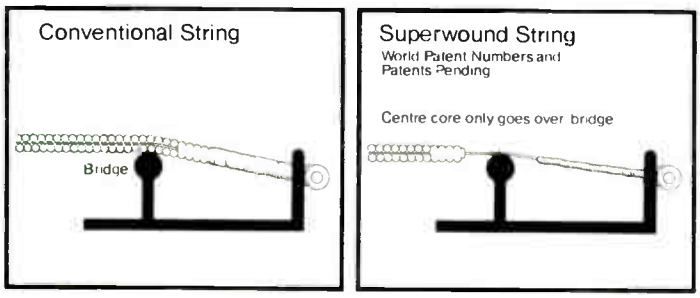

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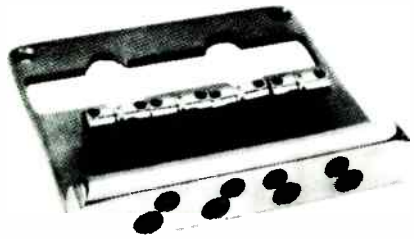

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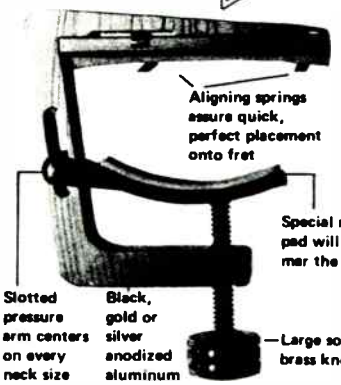

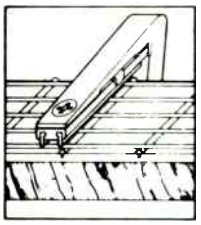

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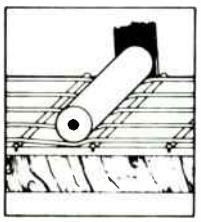

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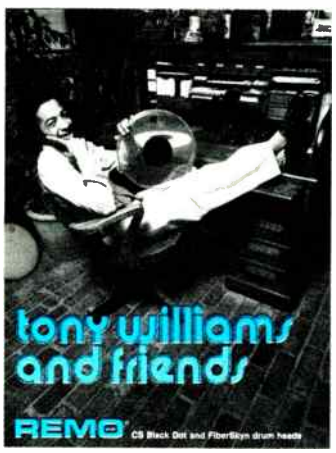

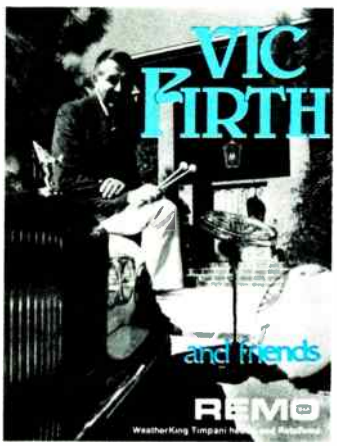

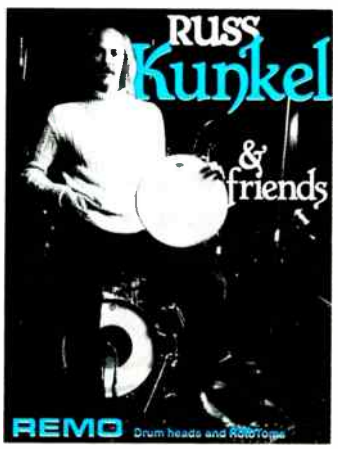

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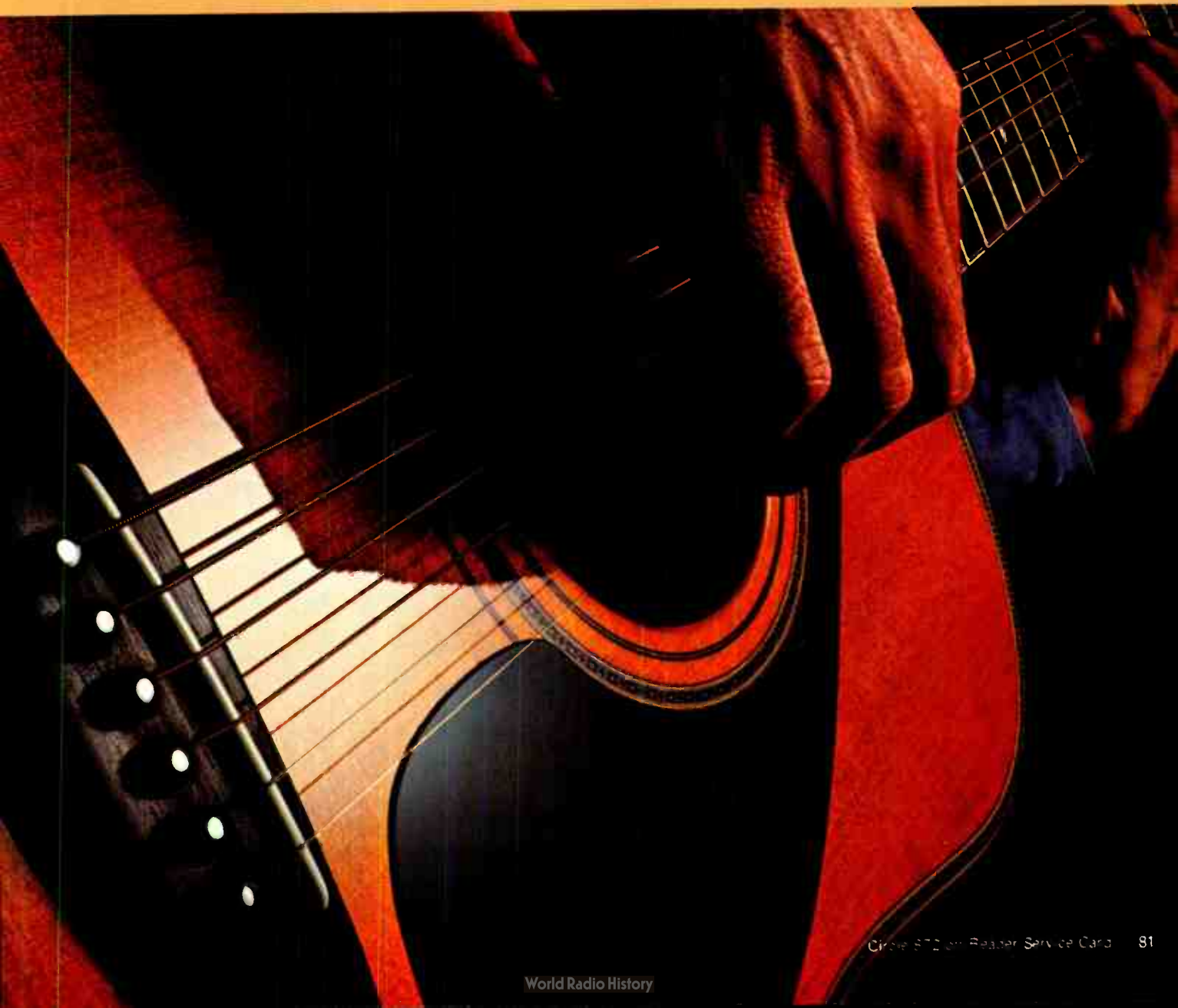

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By Ed Naha

The Life and (Hard) Times of Ronnie Montrose

Wherein one of America's most popular rock guitarists attempts to go eclectic

Smile when you call Ronnie Montrose a "guitar hero." The Colorado-bred musician, who came into national prominence during the Seventies as leader of the hard-rocking raunch unit Montrose, prefers to think of himself in more liberal terms. "I think my style is multi-faceted," he says matter-of-factly while relaxing over coffee in a New York hotel. "I think that I have been perceived by the public as a very heavy metal, hard-core rock & roll guitarist. But my first actual gigs were with Van Morrison playing acoustic guitar. I enjoy playing every style of music . . . which is kind of incongruous with my accepted image of guitar hero."

Montrose, currently part of the rock outfit Gamma, first exploded onto the music scene a decade ago as both a primo session player and sideman. Headquartered in San Francisco, he joined Van Morrison's studio and touring band for two LPs, *Tupelo Honey* and *St. Dominic's Preview* and a 1971 tour. Around that same time he embarked on a tour with Boz Scaggs, providing hot-licks for the future blue-eyed soul star. Spotted by Johnny and Edgar Winter's manager Steve Paul, Ronnie soon found himself sharing the spotlight with Edgar Winter in that musician's band, playing lead riffs on the gold LP *They Only Come Out At Night* and on such Top Ten singles as "Frankenstein" and "Free Ride."

In 1973 he began Montrose (featuring Sammy Hagar on vocals), a riff-rock unit that weathered a variety of personal and professional storms and produced four LPs: *Montrose*, *Paper Money*, *Warner Brothers Presents Montrose!* and *Jump On It*. Ronnie severed his ties with both band and label with the release of the eclectic solo long player *Open Fire* before moving to the Elektra label for the release of *Gamma I*.

According to Montrose, if, during his first 10 years in the music business he earned the label of master of heavy metal, his second 10 should definitely see him

dubbed as Mr. Versatility. He refers to his solo LP *Open Fire* as an example of both his potential as a guitar talent with a hint at his musical philosophy. "I *had* to do that album," he states during a recent Gamma tour.

"If I had my way, I'd play every style of music in existence. I'm always trying to appeal to as broad a base as possible, which is why I try to do different kinds of music. I knew that by doing the *Open Fire* LP I would attract a lot of people who wouldn't necessarily have been attracted to a *Montrose* group LP. I also knew that a lot of rock fans would hate the solo record. But I had to take the chance. I go to extremes in everything I do. I had to go all the way over to an *Open Fire* album to make a statement. To get that musical ground covered."

The feisty guitarist stifles a laugh. "Everybody tried to dissuade me from doing that record. They assumed I was ready to hang up the rock & roll shoes and go the other way. They couldn't understand that I wanted to play *both* styles of music; rock *and* progressive.

"I know what I can do well. I *know* that I can play rock & roll. I consider myself to be a novice at all the styles that I want to master. But I'm really working hard at trying to expand my knowledge of the instrument. I realize that there is really no way to delve as deeply into it as I would like and master all the different styles. And, for me, that's a pity. I really want to do *everything* but I physically won't have the time."

With *Open Fire* and the ambitious arrangements found on *Gamma I*, Montrose is, in some critics' opinions, running the risk of alienating some of his thunder-oriented rock fans. True to form, Montrose doesn't even take that fact into account when speaking about his musical abilities. "I think that it's possible for me to expand my musical style and bring a lot of fans with me," he shrugs.

"I don't think that I can bring all of them. Some of *my* fans will move with me but fans of a certain *style* of music probably won't budge. *Open Fire* wasn't a denunciation of rock. It was just a more complex musical statement I felt compelled to make. Hell, I *love* three chord rock. I mean, the master is Pete Townshend. He can write intelligent lyrics with three chord rock & roll." Montrose leans back in his chair and sighs. "I just want to do everything, I guess. Unfortunately, I still consider music an art form."

Montrose's rather unorthodox approach to the modern day music business has been evident throughout his career. As lead gitarrist with the Edgar Winter group he was second only to Edgar in terms of audience popularity and instrumental emphasis. Yet, at the height of the band's commercial success, Montrose packed up his axe and left.

"It was a very stifling experience for me," Montrose offers by way of explanation. "Edgar's whole trip was a monarchy, musically and otherwise. His entire band was on salary. We were all workers. I loved Edgar. He's a very talented musician. But his organization left a bit to be desired in terms of artistic freedom. I wasn't reaping the benefits for the amount of creativity I was channelling into the band."

At that point, Montrose launched his band with a big "bang," then spent the next several years trying to undo what had been launched. "The group got to be a real mess," he grimaces. "We started off by being called 'The group that was going to take over the world.'" He rolls his eyes toward the heavens. "Crotch-rock, yeeeaaaah. Everything that I did with that band began to go sour in a very short period of time. It was a real learning experience. How *not* to run a rock band.

"When I started Montrose, I tried to design the workings of the group so that it would be the direct opposite of my Edgar Winter experience. If his group was a monarchy, then mine would be a democracy. We were all equal partners, musically and contractually. That," he chuckles, "was a serious mistake on my part.

"I mean, I saw Sammy Hagar in a club called the Wharf Rat. He was singing bar tunes but he looked like a rock star should and had a good voice. I got him to join my band. I was the only member who really had any experience, yet here we were on an equal footing. Everyone thought I was a psycho for structuring the band like that. They told me I'd need to have creative control one day, and I told them they were nuts.

"I turned out to be the one who was nuts. I lost control of the band almost immediately. The group came out of nowhere and suddenly found itself in the spotlight. Culture shock. Heads began to swell and the music began to suffer. I couldn't do anything to stop it, musically or otherwise because, contractually, I wasn't the leader.

"I wanted Montrose to become the American Led Zeppelin. I wanted us to be a band that could *kill* with rock & roll and yet do everything else besides. On *Paper Money*, our second release, we started to broaden our sound. I tried hard to remove the 'monster guitar' stigma."

Montrose soon found that the fight to purge his group of its heavy metal albatross was a losing battle. "I became very much aware that Sammy and I, who were the two main members, had opposite ideas as to how the music should be approached. Eventually, he left the band. The big point of contention between us was that he was more interested in being a showman, in performing for performance's sake, and I was more interested in musical content. I say that with no malice. His goal is pleasing an audience. My goal is to put together intelligent, coherent music plus good rock & roll.

Nowadays, Montrose considers Gamma the finest musical assembly he has ever been part of. With Montrose on guitar, Jim Alcivar on synthesizer, Alan Fitzgerald on bass, Skip Gilette on drums and Davey Pattison handling vocals, the group displays a unique combination of high energy rock & roll and meticulously executed arrangements.

"It's the most evolved situation I've been in so far," Montrose states. "Everyone in the band contributes. It's my band but, at the same time, it's not viewed as Ronnie and the sidemen. My whole purpose in having this band is to have it function as a unit. That's why the band is called Gamma. I'm not directly connected to it by name. When I was part of Montrose and did a Montrose solo LP, there were a lot of people who were confused and assumed it was the group. People heard the solo LP and figured that old Ronnie was smoking weed on some mountain in California.

"The whole idea this time out is to keep the band a separate entity. I'm a member. When I step away to do a solo record, the band doesn't cease as a unit. Ronnie Montrose, guitarist, can do anything without hurting the band. If I want to cut an album with a 45 minute boring solo on it, it's not going to hurt this band. In Gamma, we're all front men, we're all in the spotlight. Everyone gets out there on stage and on record. Nothing would please me more than to have Gamma get so strong that it never has to be billed as 'Gamma featuring Ronnie Montrose.'"

Gamma was a progressive rock idea from the start and has evolved since its inception. "The original concept for Gamma," says Montrose, "was to have a really high energy guitar-bass-drum ensemble with a vocal. To take it away from the norm, we decided not to go with a second guitar but embellish the music with a lot of synthesizer.

"We're all happy with the first

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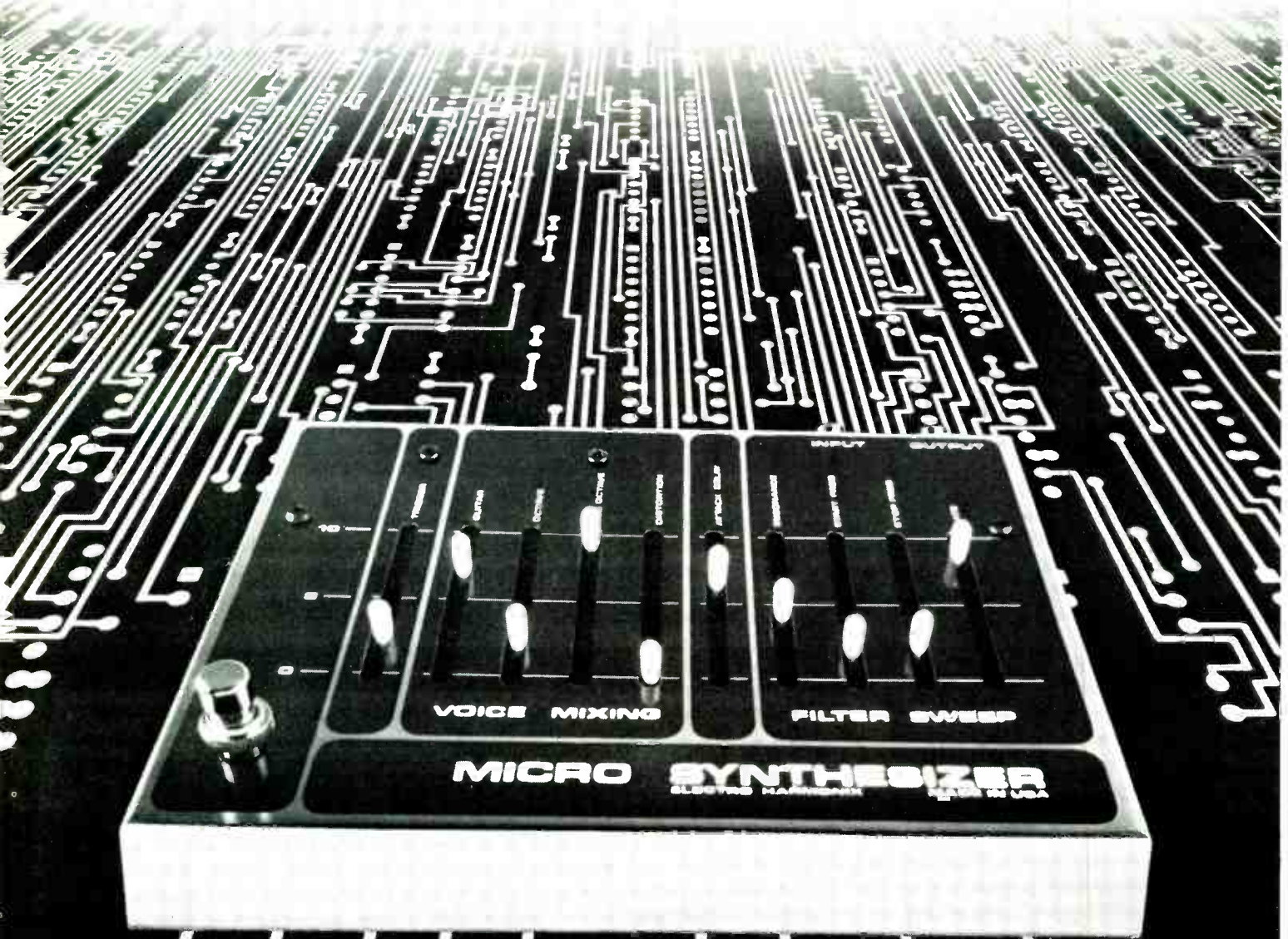

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Ronnie Montrose

album. It's good but it has a 'newness' to it. It's green. The next LP will be much tighter, extending more from songs like 'Razor King' and 'Fight to the Fight.' The next record will be much more evolved."

Montrose dislikes the use of complicated musical effects in general. "Jim and I are really getting into building our own equipment. Without really getting technical, the most elaborate effect I use on stage is echo, and the most useful tool I use is the Vocorder. That's the guitar attachment that allows your instrument to speak through you. I use that on 'Thunder and Lightning' and 'I'm Alive.' Jim uses it for his synthesizer soloing.

"I don't go in much for electronic flash. I use a Gibson Les Paul, the real original Les Paul, and I have a Stratocaster which has been bastardized by a lot of people but still works out fine. It's a Strat that has had its body painted by one person, the frets put in by another and the inlays on the neck by someone else. I have a machine shop in my basement because I like to know how everything works. I built a pick guard out of aluminum for this thing and a trough (sic). It's a great guitar.

"On my solo LP I just used a little amp and a fuzz (tone). The main instrument I used was a Fender Esquire that I just sold to Carlos Santana." Montrose shrugs his shoulders. "I'm not into flash," he emphasizes.

With Gamma a seeming success and a second group LP in the works, Ronnie looks forward to eventually reassuming his solo career. "Gamma is my main interest now," he reassures. "First and foremost I want this band to make it. But I'm always writing solo material, too. *Open Fire* was a critical success. So much so, in fact, that I toured Japan with Tony Williams and his group. His last album had a 'live' version of 'Open Fire' on it. I'm quite proud of that.

"A lot of PBS shows have been using cuts from the LP as soundtracks to their local shows and I've been approached by some local filmmakers to do soundtracks for their films. I'd like to do that in the future. I really don't want to limit myself to just solo record work or rock albums.

"Right now I'm interested in experimental music — using stringed instruments of all types. It's a concept I've wanted to pursue for some time. I play guitar, mandolin and mandocello and there are some stringed instruments from Europe and Japan that are played with sticks I'd really like to use. I want to experiment with sounds and textures." He breaks into a laugh. "You know, *really* boring shit, man."

Montrose realizes that his variety of styles and approaches automatically leaves him wide open for some harsh criticism. The rock clique may not appreciate his experimental approaches. The progressive music crowd may not find his rock roots savory. As long as the criticism is musically valid, Montrose doesn't really care.

"Hell," he smiles, "no one could possibly be harder on me than *me*. I'm my own harshest critic. So much so that I'm known as a real hard-ass to work with. I'm a real perfectionist. I want everything to be right. Because I'm such a hard-ass on myself, I reserve the right to be a hard-ass with anyone else. I'm rougher on myself than any print critic could be. I try to be as much of a Hitlerian android as possible when I'm working. You know: "Ve vill not make der misstakes.' I've never been known as Mr. Loveable with a band."

As Ronnie Montrose, the musical super-perfectionist prepares to pack up his troupe and move on to another city and another Gamma concert date, he reflects on his current musical goals. "I guess I've matured during the last 10 years. I'm mellowing out. Over the years I've learned to be a little more tolerant in terms of my musical expectation. I've learned that everything *can't* be perfect . . . but *almost* everything *should* be!"

MESA/BOOGIE Model Mark II

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

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

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

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

Like the Mark I, the Mark II Boogie is an all tube type amplifier but with additional controls. This gives you more tone especially with the use of the overdrive channel.

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

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

One more option is the 5-Band Graphic Equalizer which is good to further alter the tone. There are so many possibilities to vary the sound that you have to take some time to find the ones best for you. Again and again I am surprised by new tone settings. You can even get a good clear sound for playing an acoustic guitar through it, indeed you really get many, many sounds—for instance the old Fender sound which you can't get with the new Fender amps.

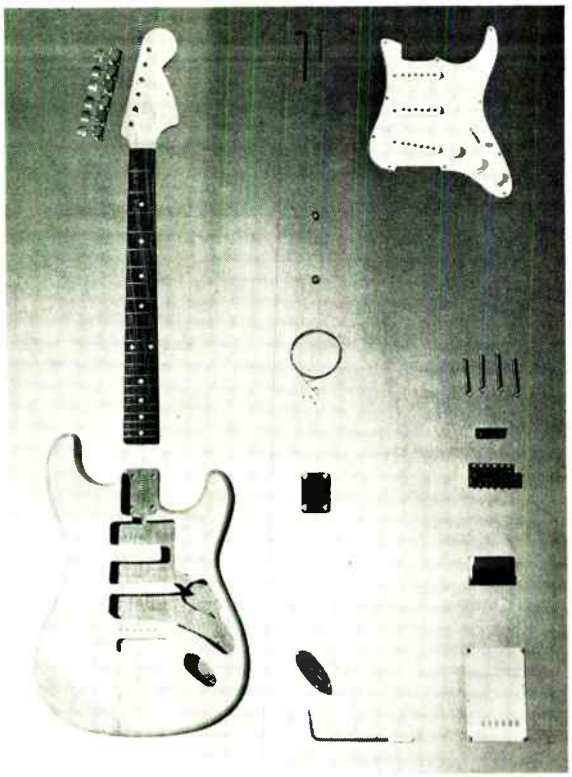
It's surprising to see some new amps sounding much better than the new Fender itself and all date back in some way to the old Leo Fender amps. By the way, the development of the MESA/Boogie company and their product is a very interesting story too, which I will tell you about in one of our next issues.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

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

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

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

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



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By Jean - Charles Costa

Jeff Lorber

Fusion's Progress

Jeff Lorber is "extremely" on the road. At least that's his description of The Jeff Lorber Fusion's latest national tour to support their debut Arista LP, *Water Sign*, and considering the fact he's calling from a funky little diner somewhere on the out fringes of fabulous East Lansing, Michigan, I'm inclined to agree with his interpretation.

The versatile Philadelphia-born composer and keyboardist fronts a band that proudly bears the standard for one of modern music's most misunderstood styles and, because of this, much of his bio and interview time is taken up with attempts to clarify or re-define the term "fusion" as it applies to his music. Having recently discussed the somewhat ambiguous devolution of fusion-into-funk with heavy hitters like Stanley Clarke and Al DiMeola, I was curious to get Lorber's version of what really happened to fusion. Had the music been diluted over the last decade?

"Oh yeah. In the early Seventies there were some really incredible innovations going on between Weather Report, Return To Forever and the stuff Herbie (Hancock) was doing. There were a lot of other people too — like the CTI sound as a total influence on a lot of things.

"More recently, I'd say there's not nearly as many innovative and exciting things going as there were during that period. However, there are some younger bands coming out that have a funkier kind of sound and some of the earlier elements that were happening in the Seventies are being brought back in different

combinations. In a sense, I see that as where we fit in."

Much of the *classic* fusion music of the late Sixties and early Seventies was supercharged electric music based on complicated riffing and somewhat convoluted instrumental passages that often took the focus away from the actual material. As the fans became acclimated to the instrumental pyrotechnics, admittedly awesome at time, the basic compositional structure of the music as a key element insuring longevity, growth and immediate identifiability, came to the forefront. Newer fusion players like Pat Metheny and Lorber seem to have absorbed this lesson from the outset.

"I think composition is of the utmost importance. And I'm noticing that the melody is getting lost in some of this music that's being put out. A sense of melody is extremely important, especially the idea of a melody that's well integrated throughout the piece, because sometimes you'll hear a particular piece of fusion music and there'll be a riff that goes on to something else and the two aren't necessarily related to each other. It's not integrated."

Most of the material on *Water Sign*, particularly tunes like "Toad's Place" and "Rain Dance," displays an almost obsessively meticulous sense of compositional balance. How does he and the group actually put it together?

"Basically, I just sit down at the piano and I generally write from different 'feels' or grooves I come up with. Some kind of a particular groove I like rhythmically and harmonically, and I'll start developing it from there by writing a melody and a bridge. Then I'll bring it to the other cats (Danny Wilson on bass, Dennis Bradford on drums and Dennis Springer on saxophones for the *Water Sign* LP) and they'll usually add some things too. We'll discuss it in terms of the most effective form vis a vis solos, accents, interlude sections or whatever."

Lorber has a rather extensive classical background on the piano. Does this help him achieve structural continuity in his music?

"Yeah, I've studied a lot of classical music and what it's really helped with is my technique on the piano, but there's also a certain sense of composition you get from studying classical forms. The structure is everything. It's so planned out and organized, and I try to have those same kinds of ideas in terms of sonata form. It's thoroughly integrating the

melodic material throughout the piece. There are different techniques you learn when you study classical composition — things like different ways of manipulating a melody line, or different ways of creating harmonic variations or inversions. Most of the time I don't actually 'academically' sit down and work the shit out that way, it's just the *sensibility* that has helped carry me through in that sense."

Classical training has obviously had a salutory effect on Lorber's pianistic chops but, more importantly, it has also taught him the value of subtlety and restraint in his instrumental approach. This is even more ironic when you consider the fact that many players labeled as fusion musicians have built their reputation on a dazzling array of instrumental techniques.

"Yeah, I know (laughter). When I listen to that kind of stuff, I always get amazed and say, 'Wow! Those guys are really good,' but the average person doesn't really get that much from that kind of stuff because they really can't *hear* what's going on. The average person wants to hear a melody they can relate to and hear and understand. Even with solos.

"My approach to solos is to bring the melody into them and to also use some technical things to make it interesting, but just as a variation on the overall texture rather than trying to show off, because I'm more interested in the musical statement than having people say, 'Jeff Lorber's the baddest technical wiz on the piano.'"

Even though *Water Sign* might be considered Lorber's album in the strictest sense, he is nearly invisible on most of the tracks, especially when it comes to solo space. While saxman Springer (he's since been replaced by Kenny Gorlick) solos to the point of near saturation, or guest soloists like Joe Farrell (flute) and Freddie Hubbard (flugelhorn) leisurely stretch out over some beautiful changes, like on the aforementioned "Rain Dance," the frontman is content to fill up the background space with discrete washes of synthesizer — many of the horn melody lines are doubled with a warm, perfectly appropriate synth line — and full, rich chords from his Yamaha Electric Grand and his Fender Rhodes. Also noticeably absent is the guitar as a permanent instrument fixture in The Jeff Lorber Fusion. Since guitarists are almost a standard element in every kind of new group, did this represent a conscious attitude on Jeff's part?

"I've worked with guitar players and it's basically a situation in which the vocabulary of the guitar has been *so* overused. You hear so much guitar music nowadays that I tend to stay away from it a bit. On the album I do use guitars to reinforce the harmony and the rhythm. It's not that I'm against guitars by any means, it's just that I'm a piano player and I've had difficulties in the past having guitar players in the band (mutual laughter)! Seems like you have to work things out more carefully so you don't get in each other's way, because they're both instruments that play chords and melodies, and it's *real* easy to get in each other's way."

Lorber, who now resides outside of Portland, Oregon, was born in Philadelphia and his first memories are of sitting under the piano and listening to the sounds while his elder sisters practiced their lessons. Since they "were gettin' all the attention," Jeff started lessons at age four. Even starting this early didn't help his ability to read music.

"I'm sure you know that either people have a real good ear and can't read, or it's the other way round. I was one of those people who had a good ear but couldn't read. Even though I took lessons for a long time, I never became a great reader. I was always into working things out and playing stuff by ear."

Although Lorber might have been destined for a career as a classical pianist, this direction was eventually sabotaged by members of his own family, a change that led him into all aspects of contemporary music.

"I had some cousins who were musicians, a drummer and a piano player,

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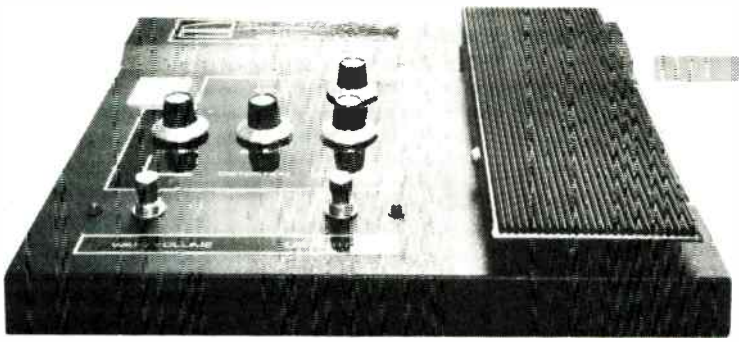

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Jeff Lorber

and they showed me some things about jazz. One of my cousins gave me some albums by McCoy Tyner, Thelonius Monk and Dave Brubeck, and I got heavily into that at age 10. When I was 13, I got an electric guitar — because I couldn't afford an organ — and started playing in bands.

"A couple of years later I got an organ and played in some blues bands where we did Paul Butterfield, John Mayall type stuff, then I got into more of a Philly Soul *bag* and rock later on in high school."

After high school, he was faced with the difficult decision that every aspiring musician must someday come to grips with.

"I just really made up my mind that I wanted to be a professional musician and it seemed like the biggest challenge for me at the time was learning something about jazz, because it seemed so incredibly difficult. I decided if I could play that, I could play anything so I enrolled in the Berklee School and that's when I really started to learn about jazz. All of a sudden I was exposed to Herbie, Chick, McCoy and Bill Evans and all these other cats!"

This seemed like a rather novel reaction to this occasionally controversial center of learning. I'd been getting some fairly negative comments about Berklee lately, especially from guitarists.

"I'll tell you, I *hated* it when I was there. I absolutely hated it! In retrospect it was a very good experience but, at the time, it just seemed kinda corrupt. The kind of place where anyone could get in if they just paid the money. It seemed like the teachers weren't getting paid very much and some of 'em weren't very good.

"But the things that was so great about it was all the people you met, and hanging out with students who were into really hip stuff, or just jamming with people. Some of the courses gave you an excellent structure for organizing harmonic and melodic material. Even though I didn't dig it at the time because it seemed to take the 'soul' out of the music for me. On the whole, it was a very valuable experience."

Dropping out of Berklee after a year, Lorber gigged around for a while and decided — somewhat prematurely — that he wasn't good enough to make a living as a musician. He went back to college to study chemistry, occasionally sitting in on advanced theory classes like "Form & Analysis." Tiring of the Boston scene, Jeff headed west for Portland, ostensibly to pursue his chemistry studies, and soon found himself comfortably ensconced in the burgeoning Portland funk/jazz club circuit.

"As soon as I moved to Portland, I started getting a lot of gigs since there was a nice, centralized music scene there. The music was characterized by a style of funk and funk-jazz that was influenced by cats like Tower of Power, Harvey Mason — kind of a San Francisco-Herbie Hancock type thing. Latin music was pretty popular too. And that's how it all got started."

Literally, The Jeff Lorber Fusion was formed in 1978 and put out an album entitled *Soft Space* on Inner City Records (with Chick Corea sitting in on several cuts) that met with a respectable amount of critical and commercial acclaim (top 10 on the jazz charts). This album, like *Water Sign*, featured Lorber's smoothly controlled and highly accessible brand of fusion with its roots firmly entrenched in the eclectic Portland jazz/funk/latin scene. "Highly accessible" in the sense that Lorber's music is comfortable enough to win over new fans while not turning people off with the kind of shrieking intensity that scared folks away from the original Mahavishnu Orchestra or Return To Forever. Jeff has come to grips with commerciality as a realistic component part of his approach.

"You have to separate quality and commerciality, they are two different things. There's no question that musicians have to make a living and they're always thinking about what's gonna sell records. Most musicians I know, when they take a direction that seems commercial, they're just playing music they really dig.

"There's a way you can play stuff that's musically satisfying and at the same time appeal to a broader audience. Cats like Metheny and Weather Report have been able to create music that's melodic yet, in terms of the musical format, it's still extremely advanced and interesting. That's the secret of their success. Plus the playing's real good."

"Since Lorber's style covers so many bases but is so consistent in terms of a rich, controlled timbre, does he approach the various keyboard instruments differently based on whether or not they were electric or acoustic?

"I see them as different orchestrational tools. I always go for a warm and full sound. That's why I like to use acoustic instuments, but synthesizers, electronic instruments and different studio techniques offer such wide possibilities for reinforcing and 'adding' and bringing in different colors or textures to the music. When I do use synthesizers, I tend to do things that just add richness and are smooth rather than necessarily using textures on the freaky side.

"People don't think I use synthesizers, but there are tracks on my album that have six or seven synthesizer overdubs and people don't even notice them because they're subtle, they *blend in*."

Lorber's been influenced by a wide range of musicians like Thelonius Monk, Herbie, Chick, Tyner, Horace Silver and classicists like Webern, Stravinsky and Stockhausen. Through all of this, be-bop remains his first love.

"Yeah, I'm a real big fan of be-bop and I play it lot on my own for fun (off the road, Lorber averages six hours of practice a day). There's a lot of be-bop vocabulary in what we're doing."

All of this extensive playing is accomplished through the latest-and-greatest in contemporary keyboard technology. Lorber's set-up breaks down something like this: "I have a Yamaha 'Electric Grand' which I love because it has so much clarity and a real good acoustic sound. I also have a Prophet synthesizer and I run that and the Yamaha through a Mutron Bi-Phase. I also have a custom synthesizer unit, with electronics from a Mini-Moog and an Oberheim module and a Sequential Circuits programmer, which is all connected through an elaborate switching system with LEDs so I can use any one of the three or all three synthesizers in every possible combination. The reason I do that is mainly because the polyphonic synthesizer just doesn't give me a good enough sound for solos, so that's why the Oberheim and Mini-Moog are hooked into it.

"For my amplification I have a Tangent 8-channel mixer, a Crown amp and a RAM cabinet with a 15" Emilar horn and Gauss 15" speakers. I also use several filters and analog delays throughout the system."

Jeff also knows what all of the band members play and runs it right down for me.

"Let's see . . . the bass player plays a Music Man bass through a Yamaha Analog Delay into a Gallien-Kruger bass amp with Gauss and JBL speakers. The drummer plays Yamaha drums, the sax player uses a Selmer soprano and tenor sax, a Miramatsu flute and a Sony ECM-150 condenser microphone."

Wrapping up our rather extensive talk before his cheeseburger hardens into advanced petrification, Lorber responds to a question about what's he's listening to these days with typical enthusiasm.

"I'm excited by some of the R&B music coming out new — stuff like Michael Jackson and Chic. I really get off on the completeness and beauty of some of these productions and how they sound. I listen to any good fusion music I can get my hands on. A lot of be-bop too, right now I'm listening to Tete Montalou (sic?), this incredible Spanish pianist. Mostly, I'm just trying to keep up with what's happening."

Albums

Pretenders

Pretenders (Sire)

The first album of the Eighties and already it's destined to be one of the year's best. This is *new* music played with an energetic vitality all too often lacking from any kind of wave. The Prentenders have consistently proved their excellence during the past year in Britain with a string of quality hit singles. All three are included on this album in addition to nine original gems.

The Pretenders fall gracefully into *any* category. Fronted by American vocalist Chrissie Hynde, the band are blessed by one of the finest voices to enhance a piece of vinyl in *years*. Ms. Hynde possesses an earthy, sensual voice that emotes as much as it sways. Undoubtedly, she will become bigger than Debbie Harry and Linda Ronstadt rolled into one emotionally aggressive package.

Not content to record endless versions of dated Sixties classics, all songs are original with the exception of Ray Davies' "Stop Your Sobbing" which, although very good, seems slightly out of place within the context of the high powered, electric energy which burns up side one. At times, one senses a slight Sixties feel to the melodic guitar leads but this is abandoned with a straight ahead attack that greets the Eighties with something more potent than one could imagine.

Unlike Blondie, this isn't a one woman show. Although Chrissie sings, writes and plays some immaculately raunchy rhythm guitar, the other three Pretenders contribute exquisite displays of first rate musicianship. More importantly they sound like a *band*.

Guitarist James Honeyman-Scott is destined to become a "guitar hero" in the finest tradition. His playing on frenetic songs like "Tattooed Love Boys" and "Mystery Achievement" is a total contrast to beautiful playing exhibited in "Brass In Pocket" and "Kid." Bassist Pete Farndon punctuates the songs with a sexuality which matches the teasing sentiments of the songs. His accomplice, drummer Martin Chamers, is as good a drummer as Rockpile's Terry Williams. The end rolls of "Kid" are ample proof for the dubious.

Songs like "Precious," "The Phone Call" and "Up The Neck" are built on bizarre musical foundations which the Pretenders specialize in. All penned by Hynde, the songs are so exciting it's amazing they captured them on record. "Lovers of Today" is the album's only sensitive, soft moment and works perfectly while it's antithesis is an instrumental, "Space Invader," which is incredibly rhythmic.

The Pretenders work on rhythms like most bands concentrate on self indulgent, lengthy solos. the Pretenders carry no excess weight. Stripped to their maximum, polished best, producer Chris Thomas has done a remarkable job with an equally remarkable band. If the rest of the decade is anything like this album, it'll be a hell of an era.

Barbara Charone

Produced by Chris Thomas except "Stop Your Sobbing," produced by Nick Lowe
Engineered by Bill Price and Steve Nye.
Recorded at Wessex Studios and Air Studios, London.

Ian Mclagan

Troublemaker (Mercury)

This is one "solo" album which justifies the concept. Where most similarly star-studded affairs are a waste of vinyl, Ian Mclagan has assembled a pleasantly unpretentious record. For those in need of background credibility, Mr. McLagan was an original member of the Small Faces, later joining Rod Stewart and the Faces and finally touring with the Rolling Stones. This is his first "solo" effort and judging by the high quality, certainly not his last.

McLagan writes good pop songs and decorates them with an intuitive understanding of rock & roll. Rather than going over the top with his well known sideman, McLagan has stuck to the basics. He's written the majority of songs, singing them in an attractively rough voice. His piano playing, always the integral trademark of the Faces, is thankfully most prominent.

Rather than list credits for each particular track, the sleeve notes simply group them together. This way the famous names don't detract from the music or the main performer. For the curious, his "troublemakers" include guitarists Ron Wood and Keith Richards; drummers Jim Keltner, Ringo Starr and Zigaboo Modeliste; horn players Bobby Keyes and Steve Madio and bassist Stanley Clarke.

Basically, this music is what the New Barbarians sound/sounded like. Producer Geoff Workman has achieved a gritty, attractive honky tonk rock sound which perfectly suits the material. Ron Wood

sings excellent back-up vocals while he and Richards contribute some very good guitar. Stanley Clarke is equally excellent on bass.

Highlights include a Faces-type romp on "La De La" which sounds like a hit single, an authentic reggae based "Truly" where Clarke and Richards duel, and a big production on Wood's "Mystifies Me." Most of all, however, a fine round of applause for the little guy on piano.

Barbara Charone

Produced and engineered by Geoff Workman. Recorded at Cherokee and Shangri La Studios, Hollywood.

Rosanne Cash

Right Or Wrong (Columbia)

Rosanne Cash has led the kind of story book life one associates with Hollywood. Growing up as Johnny Cash's daughter, the young singer toured with her father, traveled round Europe, did some demos for Ariola, called up Rodney Crowell to produce her album for Columbia and the rest *should* be history. The end product is one of the finest country albums to emerge in a long time, smoothly meshing LA country rock with ethnic Nashville soul. Aside from making an excellent debut album, Rosanne went on to marry Crowell. Undoubtedly, they will live happily ever after.

Pleasantly this record is not the case of a thinly talented daughter riding the coatails of a famous father. Indeed, Ms. Cash has one of the purest country voices to emerge since Linda Ronstadt lived in Phoenix and Emmylou traded harmonies with Gram Parsons in Washington DC. A happy marriage of contemporary country written by ex-Emmylou Harris mainman Rodney Crowell and played by vetrans of that band make for pleasant listening.

The singing is just as impressive as the playing. Most of Harris' band contributes including pedal steel player Hank DeVito, fiddle player Ricky Skaggs, guitarisst James Burton, Crowell on guitars and vocals and Emmylou adding beautiful harmony on several tracks. Highlights include a foot stomping "Right Or Wrong" with Rosemary Butler lending her vocal support, "No Memories Hangin' Round" where Bobby Bare duets with Rosanne, and Johnny Cash's own "Big River" which sounds authentic.

Rosanne Cash looks like becoming one of the more promising female vocalists. If you hate country, this album isn't for you. It's no watered down muzakal version of c&w but the kind of stuff that would make papa proud.

Barbara Charone

Produced by Rodney Crowell. Recorded and mixed at the Enactron Truck, Beverly Hills, California.

Warren Zevon

Bad Luck Streak In Dancing School (Asylum)

Warren Zevon always makes me laugh, flaunting a slightly demented brand of black humor. His third album is no exception. While most singer-songwriters scrape the bottom of the barrel, Zevon has surpassed his two previous efforts, *Warren Zevon* and *Exciteable Boy*. The material is excellent, the lyrics superb, the twisted song constructions arresting and the playing inventive. Zevon is now firmly established among the higher echelon of contemporary writers.

Produced by Zevon and Greg Ladanyi, the album smoothly transcends California archetypal sounds. But there is nothing predicatable about Zevon. Compelling lyrics are balanced with moody accompaniment. He's incorporated strings to great effect, using them as a dramatic counterpoint rhythm. He's never sung better, accompanied harmonically by such LA cronies as Linda Ronstadt, Jackson Browne, JD Souther, Glenn Frey and Don Henley. Yet Zevon's voice shines above the rest, earthy and emotionally strong.

Like Browne, Zevon writes with a sensitivity all too often missing from music. Emotions seem to be considered a negative character trait for men. Luckily Warren Zevon ignores such erroneous beliefs. "Empty Handed Heart" is as sad and beautiful as was "Accidentally Like A Martyr" from his second album. The musicians compliment the sentiments while Linda Ronstadt sings a duel verse with Zevon stuffed with heartache. It sends *chills* down your spine.

The basic band consists of drummer Rick Marrota, bassist Lee Sklar, guitarists David Lindley, Jorge Calderon and Waddy Wachtel while Zevon plays piano, harmonica, guitar and string synthesizers. Joe Walsh and Don Felder make guest appearences. Concert master Sid Sharp is responsible for some ingenious arrangments.

The entire album is virtually one highlight. "A Certain Girl" is a lot of rock & roll fun while Browne and Marrota answer back Zevon's vocal pleas. "Play It All Night Long" is a typically bizarre Zevon composition. Punctuated by a wonderful Lindley slide guitar, Zevon sings of a family where grandpa doesn't give a damn, Bill hasn't been the same since Vietnam, grandma's got cancer, the cattle are diseased but the optimistic narrator insists "we'll get through somehow."

Familiar themes are included. Guns figure heavily in "Jeannie Needs A Shooter," written by Zevon and Bruce Springsteen. The amusing "Gorilla You're A Desperado" takes off musically and lyrically where "Exciteable Boy" left us hanging in mid-air.

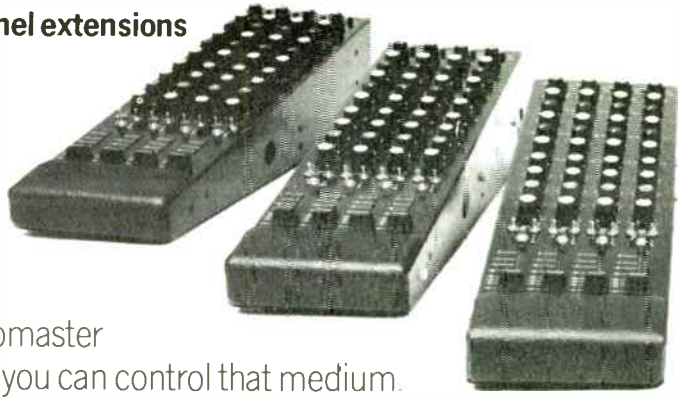
The playing is far from sterile and the entire collaboration must be one of the finest to emerge from the West Coast since the Eagles' *Desperado* and Browne's epic *Late For The Sky*. The music is consistently original, intriguing and fascinating while the lyrics are quite brillant.

Accompanied by his own stark piano and harmonica, Zevon sings the haunting "Bill Lee." One verse stands out: "You're supposed to sit on your ass and nod at stupid things/Man that's hard to do/But if you don't they'll screw you/ And if you do they'll screw you too." While Zevon paints a depressing portrait of society, he's one man who won't get fooled again. And for that we should be thankful.

Barbara Charone

Produced by Warren Zevon and Greg Ladanyi. Recorded by Greg Ladanyi and Jim Nipar. Recorded at the Sound Factory, Los Angeles.

channel extensions



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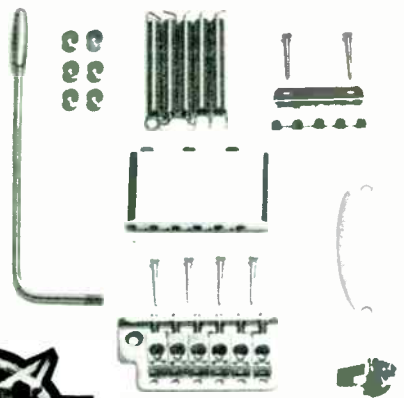

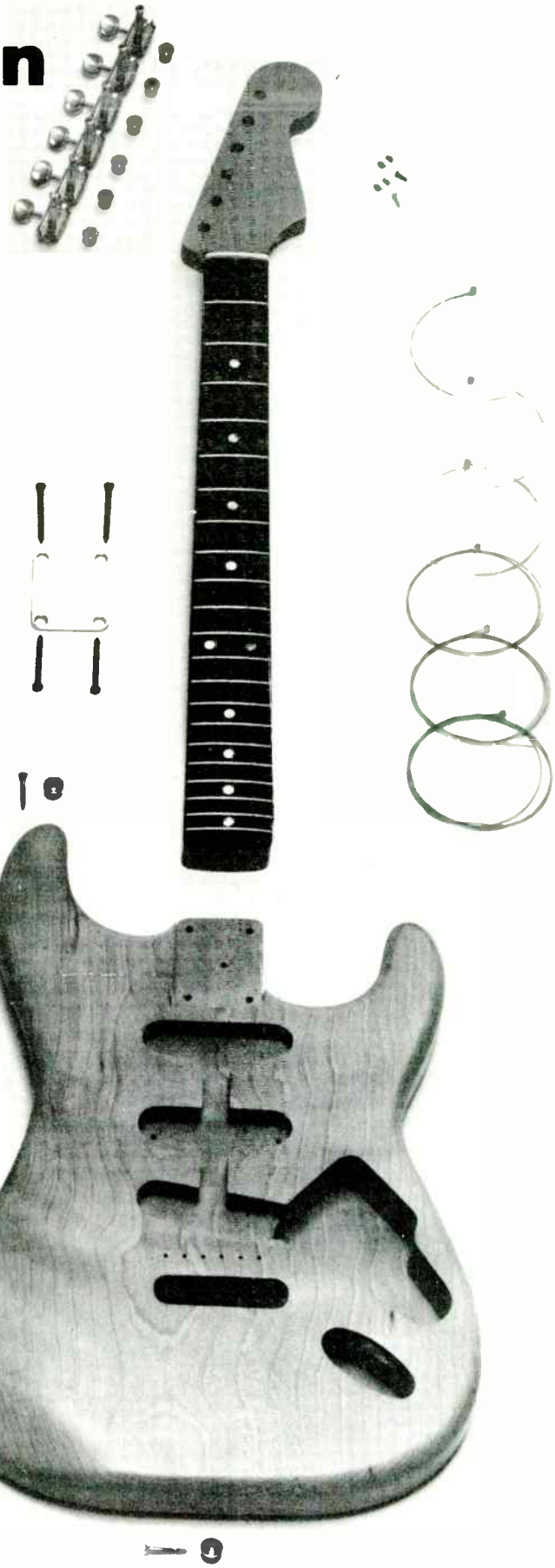

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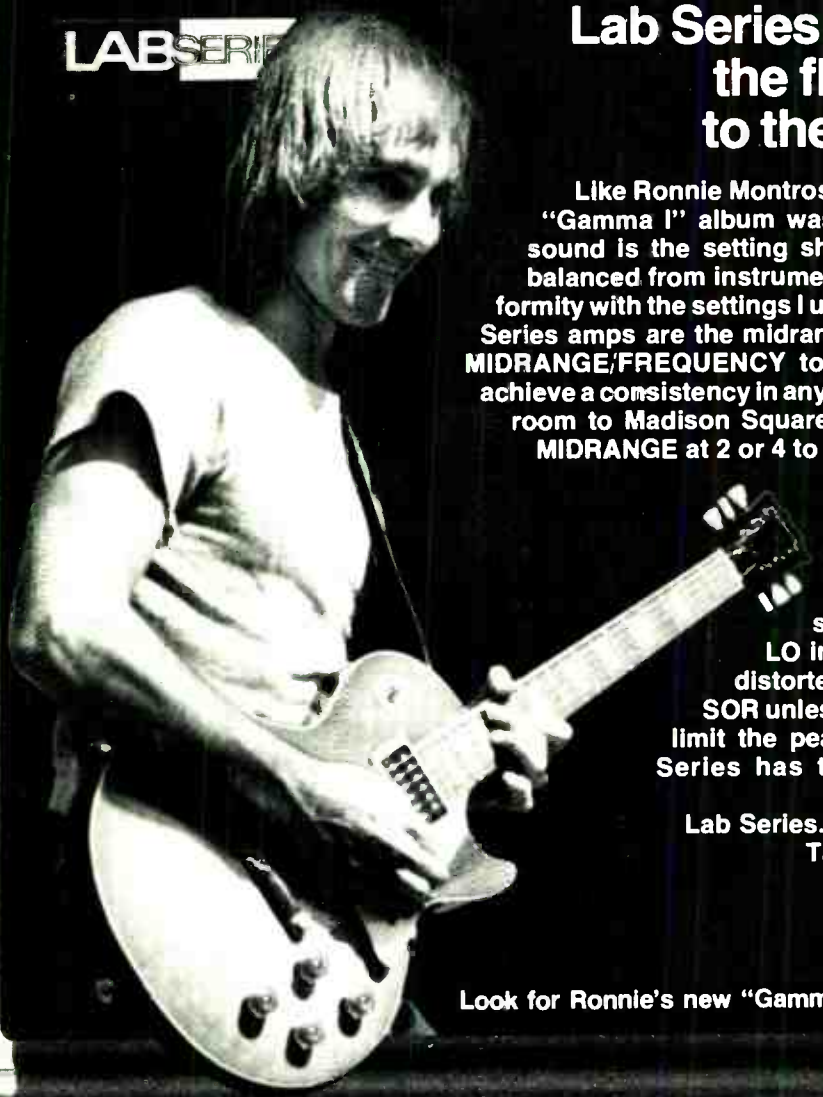

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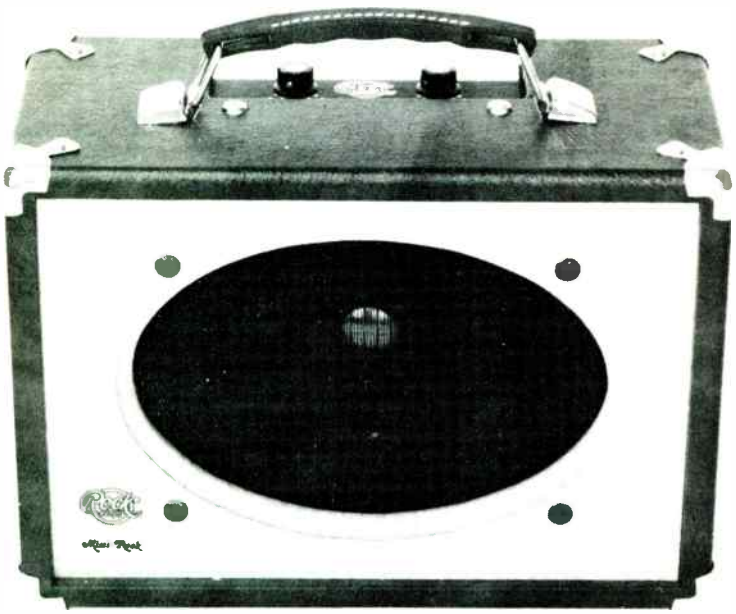

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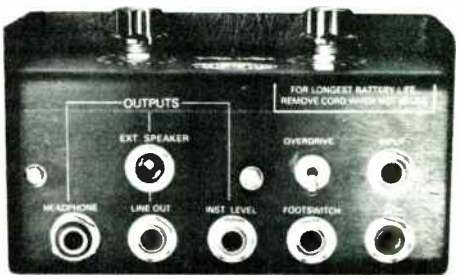

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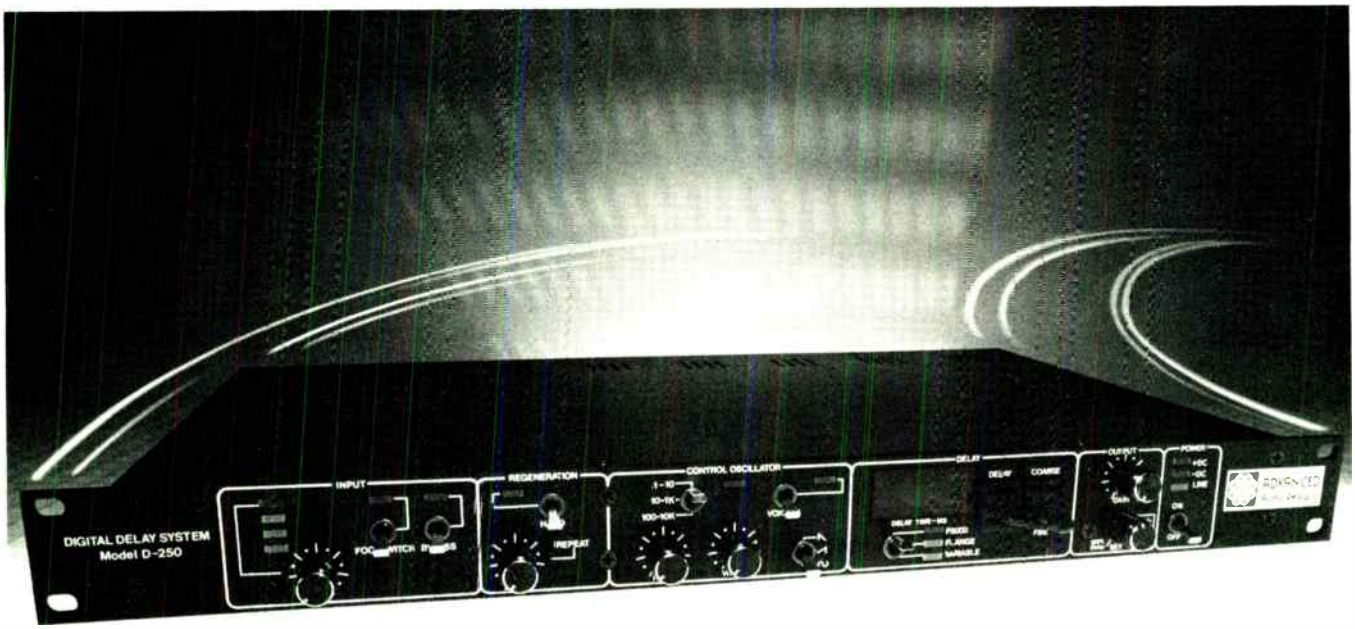

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On the Road

Steve Berkowitz: Road Manager

One of the many anomalies that grew out of the rock boom in the late Sixties and early Seventies was the notion of the touring Road Manager as some sort of ringmaster to a traveling freak show with tasks like pimping, buying drugs and paying people off accepted as perfectly normal functions of the job. It was not unusual to hook up with a band during a major national tour only to discover that the Road Manager — the one person theoretically in charge of controlling the ongoing chaos of the tour *and* protecting its members from external legal problems and/or exotic diseases — was totally burned out; a helpless, shivering wreck in the face of the myriad problems popping up every five minutes. Luckily, there was usually some terrified record company gofer like myself around to help pick up the pieces.

Nowadays, with rock (and some rock & roll) reaching a new apogee of professionalism, this kind of approach to

The one with the shades is Berkowitz

By Jean-Charles Costa

something as critical as road managing is looked upon as a laughable anachronism at best — at the worst, it is merely jive and low-rent, a pathetic reminder of the excesses commited inthe name of good time rock & roll. Steve Berkowitz, Road Manager for The Cars, is probably one of the best examples of the new breed of touring personnel who's approach to the job is characterized by a well developed sense of professionalism combined with a very down-to-earth and level-headed attitude in the face of extraordinary circumstances.

In an attempt to get down to the actual nuts and bolts of this new breed professionalism, a telephone interview was conducted with Berkowitz a short time after the final leg of The Cars' extensive and highly successful 1979 national tour. Although much of our conversation had to do with the forest of details that is part and parcel of the Road Manager's job, the major thrust behind Berkowitz's description of his work is best expressed in this quote from a letter following up on certain points of our interview: "There is a proper, non-illicit way of working in the music business that's intelligent, concise and kind. I won't let the old-line bastards get me or — if I can help it — the band either. Show Biz doesn't have to be a dirty, dishonest business."

One of the reasons so many semi-rancid people used to end up as Road Managers had to do with the fact that there were no schools (or *any* established criteria, for that matter) designed to teach someone how to do the job. There still aren't any — except on-the-job experience as a roadie — but the implicit credentials for road managing any major professional band necessarily covers every possible area of experience within the realm of rock & roll. A condensed version of Berkowitz's involvement with the music business over the last decade provides a good case in point.

"I've been in the music business since I was 10 years old. I've played in bands throughout my adolescence and teenage years — first there were rock & roll bands that eventually became blues and R&B bands, which I still play in. You've got to learn all the stuff on the way up. You have to find out stuff, suss things out; because there's a different way of dealing with each situation.

"I was a manager and a buyer in a record store (in Boston) for a number of years. In fact, when I was the night manager, David Robinson (Cars drummer and pop conscience) was the day manager. For ten years in Boston, I'd had friends who were in the big-time music biz. I'd schlepped gear for people like The Mahavishnu Orchestra and The Kinks. I was involved in all aspects of general roadie work and the construction of major sound systems. I always hung out at the Tea Party every Friday and Saturday night, paying attention to the bands, the production, the kinds of strings the guitarists used, how high the drum riser was etc. Just bein' a ballsy kid and going right up to Rod Stewart of The Jeff Beck Group and asking him a lot of questions about his microphone stand."

This practical on-the-road experience preceded important stints as a college promoter and DJ while attending Amherst College in Northampton Mass. Berkowitz worked as a DJ for two and a half years (one of his jazz shows was No.1 in the Springfield-Hartford market) and also taught a university accredited course on the history of rock & roll and rhythm & blues called "Original Stardust."

Convincing university authorities that he could run the three en-campus clubs (a 300 seater, a 600 seater and 1,000 seater) more cost-effectively, Berkowitz was soon heavily involved in booking acts for the clubs.

"We did 35 or 40 shows at this 1,000 seater in Northampton. Mostly split bills like Jonathan Edwards and Wendy Waldman, Loudon Wainwright, Tom Waits, Leon Redbone — those kind of acts. I was also stage-managing these shows."

At this point, it seemed totally natural for Berkowitz to progress to promoting and co-promoting bigger shows in upstate New York.

"I didn't really have the qualifications to do it at the time 'cause I'd never done it before, but I'd spent so much time watching it and being a part of it in other ways that I *did* know how to do it and I did it! I was strengthening my contacts with major agencies — my foot's in the door and I'm starting to deal with these guys, which was good. So much so that when I left Amherst, I moved back to Boston and became an agent. The agency thing had an absolutely specific goal which was to book several acts from all of the major agencies and get to know them because I knew that I'd be dealing with them again in the future. So I created this little college concert division called "Natural Acts" in Boston — an agency that still exists — just happening to take the whole U. of Mass account with me."

Rounding out the first stage of his apprenticeship, Berkowitz then proceeded to a more direct involvement with band management. Through a friend, he got a job as road manager for Willie Alexander & The Boom Boom Band, a Boston cult favorite. When the band failed to take off in a big way, Berkowitz replaced one of his childhood idols, guitarist Hubert Sumlin, in the Hewlin Wolf band for several months.

"That was big fun. And an important thing to prove to myself musically. But I'm not a bluesman *per se*. I can play the stuff, I'm a real guy when it comes to blues and rock & roll playing but it's mainly fun . . . kinda like my bowling night."

Having acquired the necessary measure of experience both in front of *and* behind the scenes, the next step was not only fortuitous, it seems perfectly logical taken in context with Steve's ongoing development.

"I started looking around again and Ric (Ocasek) called me up — we'd met several times — and said, 'Well, do you want to do this?' So I had meetings with him and with Fred (Lewis) and it was nice because suddenly I was a desireable commodity and had a whole bunch of job offers at the same time. But this one just looked right and felt right. And I liked the band — I'd bought the first album before I ever worked for them. Then all of a sudden things started going real fast. I think it was yesterday that it all started. Either yesterday or six years ago. And it's been pretty much non-stop for me since May of '78. I bought their first album and about a week later I was their road manager."

Even with his extensive background, Berkowitz was still not totally prepared for what faced him as Road Manager of one of America's fastest-rising bands. Especially when it came to dealing with an extensive national tour.

"I had never done a tour of this magnitude, but I was lucky enough to have some friends in Boston who's worked with Aerosmith, Boston and J. Geils — there's a nice community in Boston, some of the bands might be dissimilar but the people from their organizations still get along quite well. I just paid attention. I'd seen it all done before, I knew what *had* to

happen and so I talked to these people a lot and just compared, compared and compared. Crew-wise, when I started working the the Cars, I kinda came in and cleaned house because the crew at that time was not of national tour caliber. I took three guys from the Boom Boom band (originally recruited from a local Top 40 band) and brought them in — that's the same crew I have now. These guys had the spirit and the understanding of what was *right*, but they'd never actually done it before. Another reason for the success of our tour this year was that none of us had been jaded yet by years and years of touring and everything was *real important*."

Zeroing in on the actual workings of the '79 tour, I wondered if his down-to-earth professionalism was an attitude shared by the Cars band members while they were on the road.

"The press and the public have told us we've become very successful, but the guys themselves have remained proper human beings. These aren't guys who feel compelled to stay up smoking and drinking all night long. Most of use, including myself, don't care for parties that much. Record biz parties, they're not *parties*! There are very few music business parties that are actually parties. Everybody want something from somebody. A real party for the band would probably be a party with the band, the crew and their families at somebody's house or out to dinner. But the rest of it is 'patting-on-the-back' — which is very important, however. The nature of the business is that people must stroke each other to some degree. We don't happen to be real big *strokers* (as good as they are, they don't have to be. JCC), but we're not smug either because 'how quickly they forget.' Like there's a guy in Canada, the head of WEA promotion up there, who believed in the band from Day 1. And he went crazy with it, not so much because it represented his big break in the business, but he just loved the cars and thought they were exciting. Now, to go and have dinner with a guy like that is terrific. It's essential. He's a good guy, he worked hard as hell for the band and the Cars are huge in Canada. In fact, proportionally speaking, the Cars are bigger in Canada than they are here."

The last direct question about the Cars' demeanor as a touring band concerned their accessibility. Since they have a totally undeserved reputation as being aloof onstage, I wondered whether or not this misapprehension about them carried over to backstage business.

"I don't really want to dwell on band things. That's for them to talk about, not me. Just because they don't get onstage and say, 'Put your hands together and let's party down' doesn't mean they don't like their fans and don't want to meet or talk with them, because they *do. They're* buying the records.

"They did so many interviews this year with major magazines, college newspapers, with big and little radio stations — and they would remain themselves throughout. Once, a Top 40 jock got pissed off because the guys wouldn't imitate his style during an interview. He even bad-mouthed them after they'd left the station, coming on like, 'those jerks think they're real hot shit 'cause they have a hit album.' Can you imagine that? Penalized for refusing to act like assholes!"

With customary foresight and precision, Steve had written down his general responsibilities as a Rod Manager of a national tour the night before our interview.

"My primary concern on the tour is to create an environment that allows the artist to perform their art in the best possible way while simultaneously promoting and publicizing the artist through every possible avenue. Of course, that sentence is a book."

At the very least, it sounds like a set of Encyclopedia Brittanica. It sure doesn't leave a lot of free time for "Party-Hearty." And although Berkowitz's statement of purpose is unusually concise and explicit, it opens up a whole territory of questions to explore. Jumping in with both Beatle boots, I inquired about his active involvement in PA sound.

"I did decide which PA company we were gonna go with. And that involved looking and listening to a lot of them — I'd heard them all anyhow — and it came down to reputation in the business and what kind of crews they had. We used TFA Electrosound and Obie's Lights for lighting — both of them are 'state-of-the-art' companies in the business with the finest equipment available and the most competent crews, and they were really into the band. They had the proper attitude, not, 'Hey this is *just* another tour.' They will build and develop things to suit the band. They have a great track record. Everything worked properly every single day. In 75 dates, we only lost power in the PA once and that was just because it was incredibly hot and the circuit breakers just didn't like it anymore. But that was fixed in about three minutes."

The fact that the Cars had to play some huge venues (New Haven Coliseum etc.) for the first time didn't pose any particular problems?

Technically it was the same. Obviously in every hall it sounds different and the sound should be EQ'd or rearranged physically. We had enough equipment with us to do a 2,000 seat hall or a 20,000 seat hall. To fly or not fly the sound. With the proper advance work that the production manager is *supposed* to do, there was no problem. The sound check was on time every day. Every gig started on time every day. The crew got better and better with load-outs as the whole thing went on. The transportation went this way: the band and I and the tour accountant took commercial airlines and the crew used two busses with three trucks for the equipment. It was a very compact tour. You saw and heard a lot of things considering the size of the equipment we brought with us."

All of this efficiency presupposes a certain clear-headedness. How did you feel about crew members functioning under states of altered consciousness?

"Drugs? If I was to see a roadie smoking a joint offstage, he'd be on the next bus home. Not even a plane. For a number of reasons. They owe all of their strength, at the moment of the show, to be involved with the band — not dulling their senses with drugs. On the other hand, standing onstage and smoking a joint, there's gonna be someone in the audience who's gonna get the wrong idea and go, 'Wow man, lookit the Cars man, they're great, they're *all fucked up*! We don't want to perpetrate that kind of an attitude. They're there to play for real. Not to hopefully go through the motions and jive through what the record sorta sounds like. This is not a drinking/drugs band."

Point made. Moving on to the niggling details of the Road Manager's job, I asked about the actual people he has to deal with every day of the tour.

"The people I have to deal with every

day on the road are: the band's agent, the business manager, the accountant, the travel agent, record company people, the promoter, the union crews and union stewards in town and press and radio. That's every day, being concerned with those people."

Record companies still send people out on the road, even with the much touted latest fiscal crunch?

"There were record company representatives (Elektra) with us most of the time. The publicity department did a good job with that. The promotion people were there sometimes — sometimes they weren't."

Who is The Cars' agent?

"Monterrey Peninsula Artists, they also do acts like Foreigner, Nicolette Larson and The Doobies. They're a very good "small" agent on the west coast."

With all of these people to deal with and all of these mushrooming responsibilities, does the Road Manager have to be the kind of person who reacts well under pressure?

"Absolutely. A good road manager can only freak out on schedule. Touring is such an insane world, it's obvious to me now after touring why some bands make it and some bands don't. Not only does the band have to be a pretty good band to make it, but they have to have the mental and physical fortitude. The demands mentally . . . sure the girls and drugs are fun once in a while, but if you do it every day you're gonna be a fucking vegetable at the end. Besides that, the physical drain is just incredible.

"When you go on tour, people go, 'Wow, isn't this is a lot of fun! Well *no*, it's fucking hell. Now Iam not complaining or being a baby, but we did like five months and every day you wake up and take the early plane so you can get to the next town in time for promo or the sound check. And maybe you go back to the hotel and maybe you don't, and maybe you eat and maybe you don't. And maybe when you *do* eat the food's gonna suck anyway 'cause you're in Shrevesport, Louisiana (this does not necessarily reflect the opinion of IMRW/USA ED.) and then you finish the gig and there's all these people from the press and radio who you really should meet because they're working with you and *for* you, and there's other people you want to talk to. So you stay up late and the next morning you fly out again and it's the same thing day after day for days on end. If you're frail, it's not gonna happen."

Given these physical hardships, does the Road Manager have to protect or screen the band from possibly debilitating time drains? Especially with The Cars, a band who'd achieved so much notoriety in such a short time.

"I lived with these guys every single day and I think I had my finger on the pulse of who was feeling well, who was feeling lousy, who was tired, who was ready to do interviews, who wasn't — for many different reasons, health, personal, musical, whatever. They were real troupers on tour though. They wanted to help themselves all the time. You get to a new city and it's a new situation every single day and you should have the same energy and the same concern, and sometimes you *can't* because we're in our own little world that we know is ongoing yet when we hit the new town it's, 'Hey man, The Cars are in town tonight and we have to do this interview and this and that.' And it keeps on like that for months on end. It's difficult for the newer press people to understand that and they'll go, 'Wow man, what an *attitude*! What *assholes*!' But that's OK. Either they'll understand it some day or they won't."

Our conversation ranged far and wide over a variety of topics concerning life on the road, and for the purpose of focus and as a merciful concession to the reader's flagging attention span, I feel constrained to jump around a bit before bringing this opus to a close.

We talked about the outrageous food "riders" that are for many groups a measure of their success in the business, ie. "This is a Beluga Caviar/Dom Perignon gig!" Berkowitz's attitude to this particular form of wretched excess is predictable.

"We're not going there so the promoter can be caterer. I'm not into that and, nine times out of ten, the food sucks anyway. A simple, small rider. Sometimes you ask for something specifically and the promoter brings in *head cheese*. Get that shit out of here! I don't even want it in the dressing room, it makes the clothes smell bad! The Cars eat a sensible cross between healthy food and junk food. If I specify whole wheat bread in the rider, I'll also make sure they provide Reese's Peanut Butter Cups."

Berkowitz also mentioned that cutting deals between the promoter and the band's agent (another process the RM has to oversee) can be a highly complicated affair — the Promoter has to have copies of *all* the bills and the difference can often cost someone $10,000 — which usually takes at least a couple of hours and often takes all night to work out. Berkowitz sees his band's responsibility to the promoter in very forthright terms.

"Our job vis a vis the promoter is to sell tickets and to get people in to watch the Cars and like them."

For those of you detail freaks who need to know the actual make-up of the crew, it breaks down like this: "Our total crew on the road numbered 13. There were actually two guys in charge of the crew. One was in charge of the advance technical work that had to be done on the phone, the other guy was like 'road manager' of the crew, keeping them aware of where and when they were going and makig itineraries. At the gigs, it was also broken down. One guy would deal with the union while the other would be organizing the onstage set-up. On stage, there was a drum roadie, a roadie for stage left who took care of Ric and Greg (Hawkes) and a roadie for stage right who took care of Elliott (Easton) and Ben (Orr). Tom Moore (Cars Sound Man from "Day 1") kept track of the equipment and stuff like what speakers needed to be replaced."

When The Cars are recording, Berkowitz has special responsibilities.

"During the sessions for *Candy O!* I kinda road-managed the studio. I arranged housing near the studio, provided transportation, basically fulfilling the band's needs so they could be free to record the album without extra headaches. Since the band couldn't be anonymous there (LA), I had to keep people away from the studio so they could make their record. I also provided equipment if needed."

Wrapping our extended discussion, Berkowitz provided me with the kind of exit quote which perfectly characterized his compassionate attitude to his job.

"Now that the tour is over and I've said all these things about it, I have to say it was *great*. It's the hardest work we've ever done and we were lucky the Sound & Lights people were veterans. Now that it's really over all I can say is *Whew!* It's a satisfying feeling. But I'm already working on future tours and we need to find a practice place for the band. Plus there's hundreds of letters to write to all of the DJs and promotion people who've supported us."

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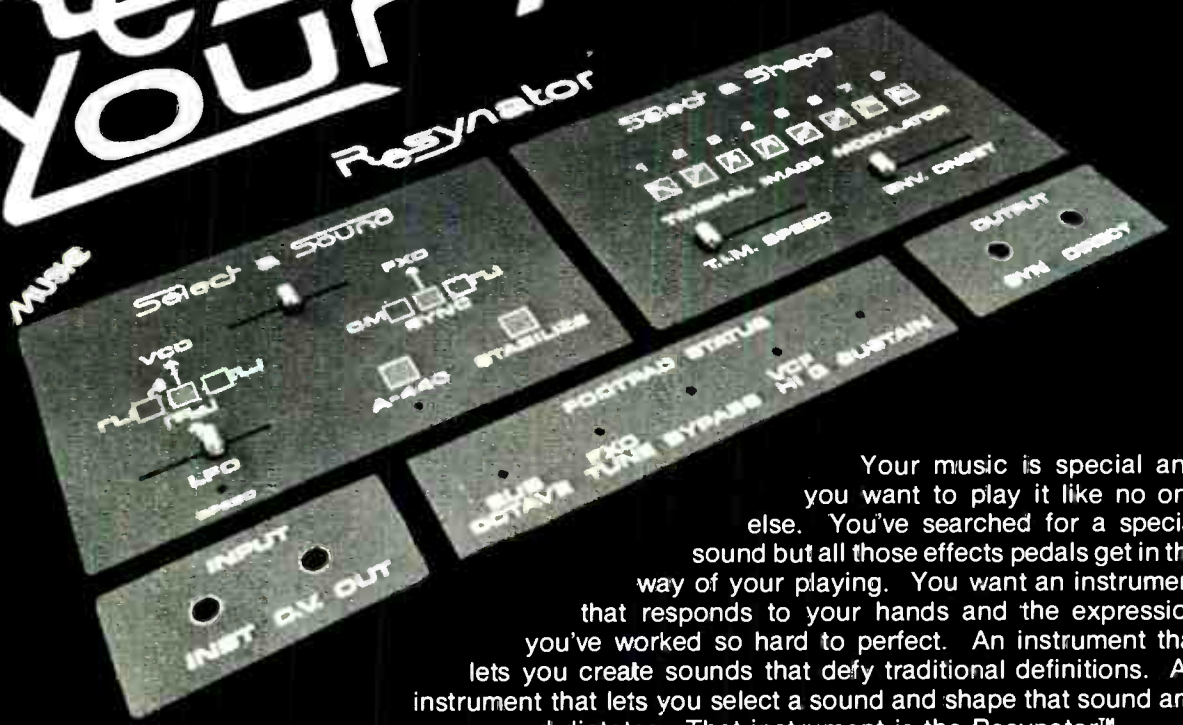

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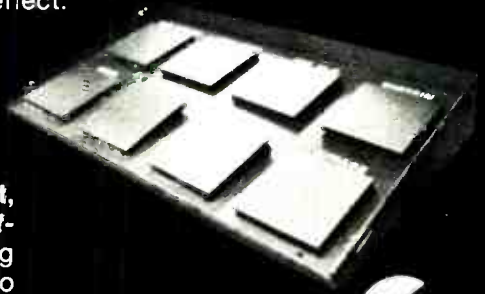

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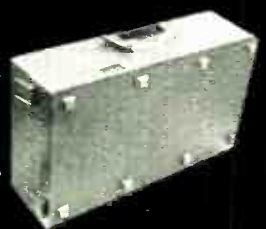

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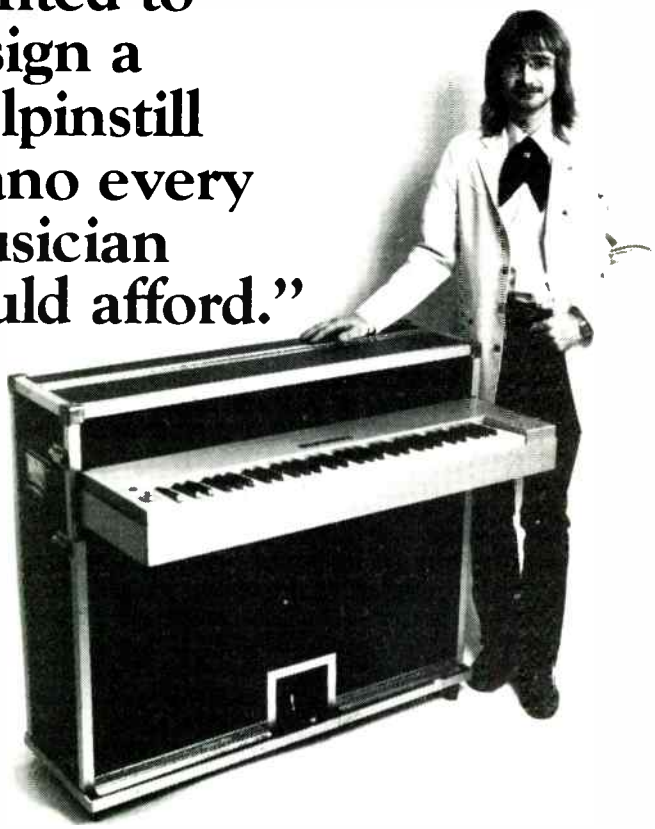

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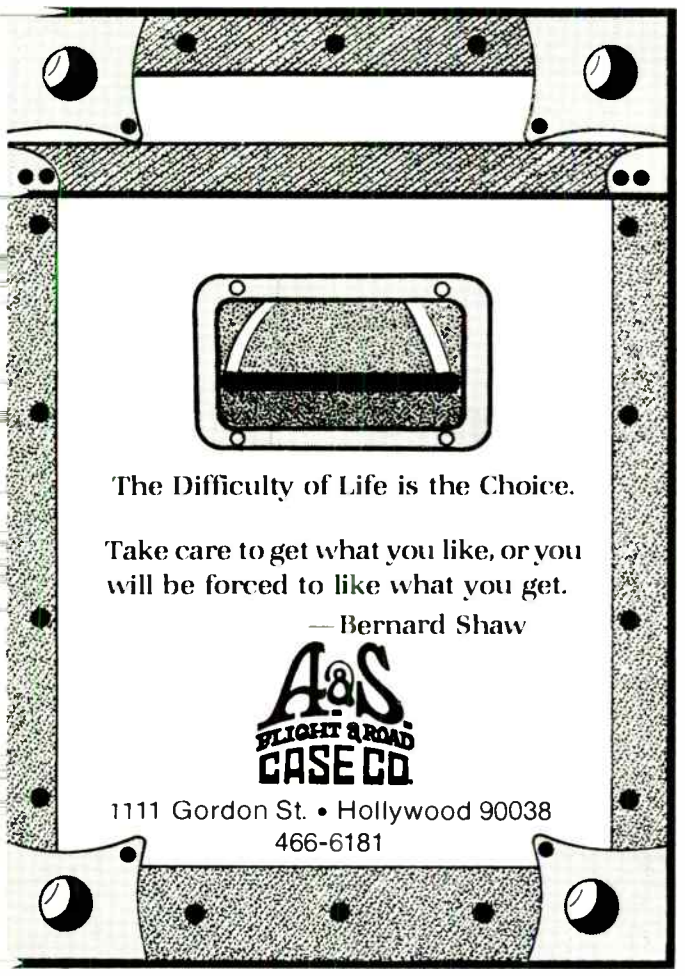

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SpeakerCheck

Compression Drive Units Part 2

Last month, we told you exactly how we proposed to test a whole range of compression drivers. Here we begin with the first seven reviews. Three of the units tested are from manufacturers in America, three are from the UK and one is from Italy. With one exception only, all the units have the European standard 1.362" diameter, 18 threads per inch screw thread coupling and are therefore suitable for use with most smaller types of horn flare and a wide variety of applications.

When interpreting our test results it is important to realize that the drive units were mounted on our standard laboratory horn when the tests were conducted and that different results may be obtained with different loading conditions that would be offered by different types of horn. What is important is that the units were all tested on the same horn which provided adequate acoustic loading for the drive unit diaphragm to at least one octave below the useful frequency response range of any drive unit tested. Therefore, the results obtained are directly comparable with each another.

I'm should remind readers that none of the compression drive units tested must be connected directly to the output of a normal amplifier without the use of either a full crossover network, or at least a high-pass filter working at a suitable turnover frequency for the particular drive unit. Failure to provide adequate filtering will result in a blown diaphragm almost as soon as any appreciable power is fed to the unit. There are three basic ways in which filtering can be provided:

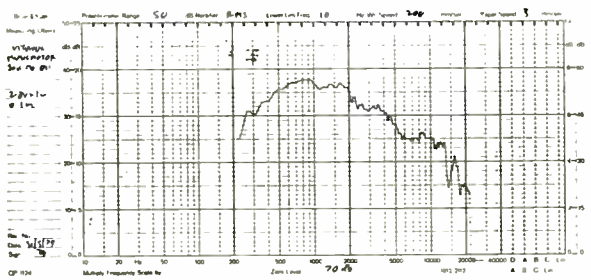
1. Active Crossover, where the signal is divided up into its bass, middle and treble components prior to being fed to the power amplifiers, and each frequency band is then amplified by a separate power amplifier and fed directly to the appropriate part of the loudspeaker system.
2. Passive Crossover, where the signal from the power amplifier output is similarly divided into bass and treble, or bass, mid and treble, depending on whether the loudspeaker system is to be two- or three-way, and fed from the crossover to the various loudspeaker drive units.
3. Passive High-pass Filter, where the entire output of the amplifier is fed directly to the low frequency driver, the horn being simply wired in parallel via the high pass filter.

Although more complicated and more costly, the active crossover is by far the better arrangement. It is used in practically all professional systems, as active electronic circuitry can be designed with far more predictable performance parameters. There is no insertion loss, loudspeaker transient response is better due to improved damping and separate control is readily available over each section of the loudspeaker system. Also, limiting and/or compression can be incorporated into the mid and treble sections to provide enhanced performance and driver protection, without the undesireable "pumping" effect usually in evidence when such treatment is applied to a full range system.

Next best is the passive crossover, where each drive unit is still only receiving its appropriate part of the frequency spectrum. In the case of home built systems, it is better to stick to two-way systems when passive crossover is used due to the complexities involved in obtaining the desired characteristics from a three-way system. It is still possible to provide a

VITAVOX Music Motor
Retail price $264.30

Parameter	Manufacturer's rating	Test result
Power	30w cont. pink noise 100w programme	Confirmed at equivlent sine wave power of 10w RMS above 600Hz
Distortion	Not stated	10%@10w RMS sine wave
Sensitivity	109dB@1w@1m (400Hz-15kHz) pink noise	103dB@1w@1m av. between 400Hz and 4kHz
Resonance	Not stated	700Hz coupled to std. test horn
Impedance	8 ohms	7.5-14.5 ohms
Recommended c/o frequency	Not stated	Above 1kHz
Useful frequency response	400Hz-15kHz unqualified	200Hz-10kHz@12dB — see graph.



This brand-new drive unit has a particularly business like appearance and as with most products we have reviewed from this manufacturer, is built to a high engineering standard. It is unusual in a number of ways. For example, it is unusual to find a new product coming on to the market with an Alnico type magnet assembly, due to the rapidly escalating price of coblat and the general shortage of this type of magnet. It has a particularly clever arrangement for rapid, on-the-road replacement of the diaphragm assembly with just a pozi-drive screwdriver, but the unusual feature about this is that the diaphragm is replaced by removing the substantial cast alloy faceplate instead of taking off the back cover. Not that this is in any way detrimental, as the unit has the standard 1.352" x 18tpi screw thread coupling and therefore, there is no difficulty in removing the unit from its horn for servicing — unlike the larger flange mounting types, which can be particularly awkward to decouple in situ, and therefore usually have rear access for diaphragm replacement. Even the three retaining screws in the faceplate itself are of the captive variety so that will not get lost in the process. Good thinking indeed. The rest of the unit looks very much like the magnet assembly of the old Vitavox GP2 drive unit, within a large, heavily finned, black-painted, alloy housing, fitted with a pair of rather fine spring retaining terminals and 'new image' logo at the rear. It has a substantial, 'butch' look and feel about it. Mind you, if the unit ever did generate enough heat so as to require all those fins etc, there could not possibly be very much sound coming out, as it would require all the input power the unit could handle to warm up the cooling fins! Without doubt it is a fine new product from a very well established British manufacturer.

The unit has not come out at all badly from a performance aspect either. The frequency response, although falling short of the maker's claims by our reckoning, is usefully wide, and free of any serious dips or peaks and would permit the unit to be crossed over at practically any frequency in the range, except that the third harmonic distortion component is rising rapidly below about 600Hz and therefore, a minimum crossover of 1kHz is recommended. Above this frequency, there was little evidence of any stress at our 10w sine wave test, although distortion did rise to about 20 per cent at 20w. Sensitivity as measured was not high, and due in all probability to the use of a different testing procedure, as well below the maker's published figure. Even so, at 103dB it is far from bad.

All aspects considered, this is another good quality product. Very well made, and good overall performance, if tending towards the expensive side on today's market.

degree of control over a passive system by adding a level control to the high frequency section only, but in order to keep impedances within some sort of sensible limits, it is necessary to use an "L pad" or "T pad" attenuator rather than an ordinary potentiometer, and, of course, due regard must be paid to the power handling capability of the attenuator. It is not a practicle proposition to control the bass driver separately because the high orders of power that would be dissipated in the control itself would immediately burn it out!

The third alternative, the use of a high-pass filter to filter out the damaging low frequencies from the compression driver is generally only used in non-critical situations, and is not likely to be used professionally. It is ideal,for example, if it is desired simply to add some "highs" to say a musical instrument loudspeaker cabinet, or to a simple disco system. There is a main disadvantage with this arrangement. The full frequency range is fed to the low frequency driver — objectionable axial beaming results and this, along with phase errors in the middle band (due to the effects of two different types of drive units being used to reproduce the same part of the frequency spectrum at the same time), results in a harsh and uncomfortable sound quality. This is especially noticeable to listeners in a position close to the loudspeaker axis.

The only benefits of simple filtering low cost. There is no insertion loss due to the fact that the main driver is wired directly to the amplifier output terminals. Crossovers and filters of all three types can usually be obtained from sound equipment specialists, and are made by most of the loudspeaker manufacturers. We now publish the first of three sets of reviews of compression drive units.

Ken Dibble

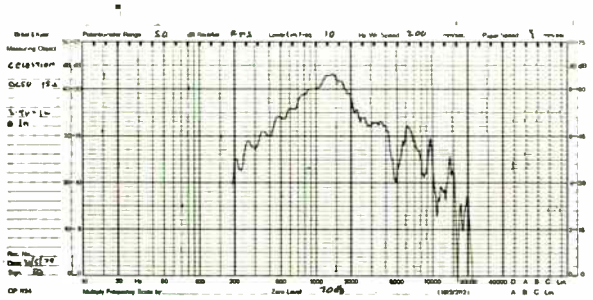
CELESTION DC100
Retail price App. $120

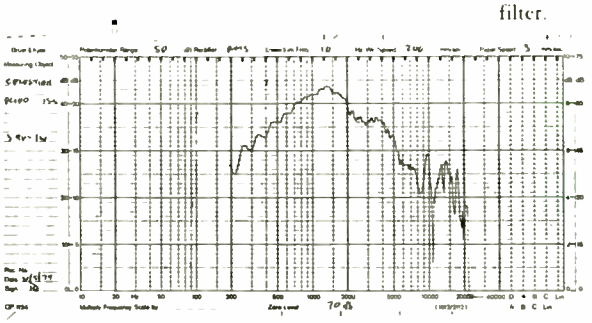
Parameter	Manufacturer's rating	Test result
Power	100w system rating	Unit under stress at equivalent sine wave power of 10w RMS
Distortion	Not stated	20%@10w RMS sine wave
Sensitivity	103dB@1w@1m averaged between 1kHz and 10kHz	107dB@1w@1m averaged between 400Hz and 4kHz
Resonance	Not stated	1.3kHz
Impedance	15 ohms*	13-12 ohms
Recommended c/o frequency	Not stated	2kHz at 12dB/oct.
Useful frequence response	100Hz-8kHz unqualified	300Hz-5kHz@ (-12dB) 800Hz-10kHz@ (-12dB) with 2kHz, 12dB/oct. high pass filter

* Also available in 8u impedance.

CELESTION DC50
Retail price App. $102

Parameter	Manufacturer's rating	Test result
Power	50w system rating	Confirmed at equivalent sine wave power of 5w RMS about 200Hz
Distortion	Not stated	10%@5w RMS sine wave
Sensitivity	101dB@1w@1m averaged between 1kHz and 10kHz	103dB=1w@1w averaged between 400Hz and 4kHz
Resonance	Not stated	1.3kHz coupled to standard test horn
Impedance	15 ohms	11-16 ohms
Recommended c/o frequency	Not stated	3kHz at 12dB/oct
Useful frequency response	100Hz-8kHz unqualified	500Hz-4kHz@ (-12dB) 1kHz-10kHz@ (-12dB) with 3kHz, 12dB/oct. high pass filter.



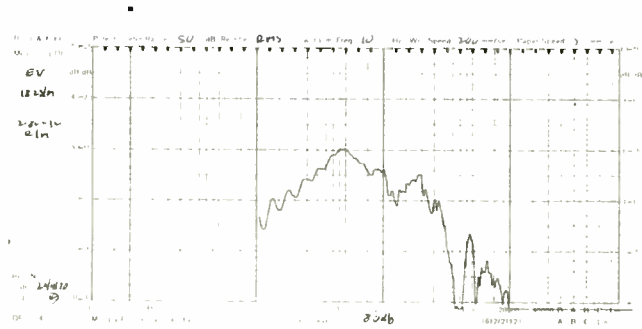


Although nicelymade and finished, these two units are of utilitarian construction, being built to do a job of work with no frills. A common, nicely cast face plate is used for both models which carries the standard 1.362" multi 18tpi throat coupling and a pair of 0.110" 'Fast-on' terminals, and is nicely finished in a black crackle stove enamel. The only difference between the two models is the size of the flat ceramic magnet assembly fitted behind this face plate. Both have 2" voice coils and from the makers specifications, should have very similar performances — the only diferences being the power ratings and the 2dB increase in sensitivity on the part of the DC100. However, an inspection of the results obtained from our tests show other differences which are not at all apparent from the specifications as published. Firstly, we have the usual pyramid frequency response curve so often found on this type of unit and the best way of using such a driver is to use a high-pass filter having a turnover frequency that is well above the actual lower frequency at which the unit will be used. In the case of the DC50 and DC100, filter frequencies of 3kHz and 2kHz respectively will produce a useful response from around 1kHz to 10kHz, which can be seen to represent a marked improvement over the response of the raw drive unit. Also, operating the unit at these frequencies will be compatible with the characteristics of most of the general purpose horns with which such drive units are likely to be used. This does result in some loss of sensitivity,b ut removes the peakiness of response and in some circumstances, will permit an increase in power handling capability to compensate. Surprisingly, the DC50 has a much lower distortion figure than does the DC100 — in fact, on a re-test at 1kw (equivelent to a 100w music signal), the DC50 still showed lower distortion than the DC100, and from the characteristics of the distortion measured, did not seem to be under any great stress at this level! The sensitivity levels recorded are very good indeed — especially as the response peaks have not been taken into account in the averaging of these figures. They would not be recommended for use in a professional sound rig, but are not intended for such applications, and at these prices, must be considered very good value indeed.

Speakercheck

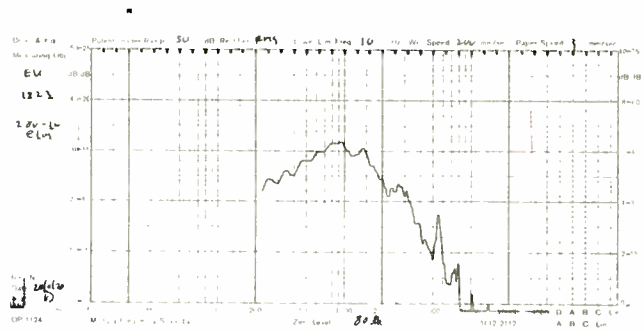
ELECTROVOICE 1824/M
Retail price $73.40

Parameter	Manufacturer's rating	Test result
Power	60w long term average 600w short term	Confirmed at equivalent sine wave power of 6w RMS above 400Hz
Distortion	Not stated	5%@6w as above
Sensitivity	105dB@1w@1m when coupled to EV 8HD horn	105dB@1w@1m averaged between 1.5kHz and 5kHz — see graph
Resonance	Not stated	800Hz coupled to standard test horn
Impedance	8 ohms nominal	10-16 ohms
Recommended c/o frequency	800Hz	800Hz
Useful frequency response	800Hz-3.5kHz + or − 3dB	400Hz-6Hz@ −12dB — see graph



ELECTROVOICE 18245
Retail price $61.20

Parameter	Manufacturer's rating	Test result
Power	110w programme 90w sine	Confirmed at equivalent sine wave power of 11w RMS above 400Hz
Distortion	Not stated	8%@11w as above
Sensitivity	126dB@90w@4ft coupled to EV AR400 horn	109dB@1w@1m averaged between 500Hz and 2kHz — see graph
Resonance	Not stated	700Hz coupled to standard test horn
Impedance	8 ohms	6.5-12.5 ohms
Recommended c/o frequency	Not stated	400Hz
Useful freq. response	350Hz-8kHz	400Hz-3.5kHz@ −12dB — see graph



These two units are of identical basic construction, and I suspect that the 1824/M was developed from the basic 1823 unit for specific application as a mid-range reproducer. The 1823 was originally intended for use as a high power public address horn driver for speech announcements and also for electronic siren applications. Hence, its specification sheet refers to sometimes odd and unusual parameters, such as the way in which the sensitivity figure is expressed. Due to their origins, both these units are brute-force drivers and are able to handle almost as much sine wave power as they can musical programme. We did in fact carry out a sine wave test at 90 watts RMS in verification of the maker's specification on the 1823, and to our surprise, the unit seemed quite happy — although distortion did rise to about 20% in the process. Both units are of sound and robust construction, with a cast iron, fluted 'pot' enclosing the Alnico type magnet, a heavy, cast face plate, and standard 1 3/62" × 18tpi threaded entry.

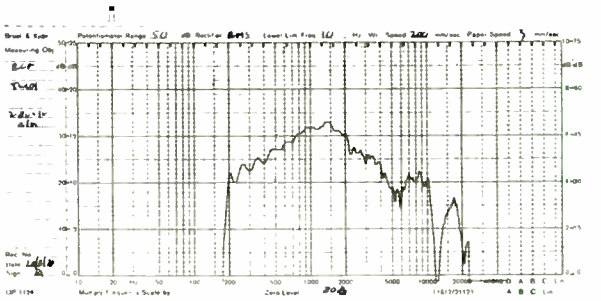
Termination is unusually by means of a pair of 0.25" AMP connectors, which are not color coded, but marked as '1' and '2'. The purchaser has to read the small print in the engineering data sheet supplied with the 1824/M, you presumably have to hazard a guess! This cannot be described as a desirable state of affairs and is a matter that the makers would do well to look at. Incidentally, the mating AMP type connectors are supplied with the units. The 1823 is finished in grey stove enamel and is somewhat utilitarian in presentation, while the 1824/M is finished in black, with smart aluminium label plates and other cosmetics, and certainly conveys the more professional image of the two.

At a first glance at the frequency response curves, one might be forgiven for thinking that this unit is another 'peak' generator, but if it is realised that these units are marketed solely as midrange drivers, then a rather different picture exists. The 1824/M, if crossed over at 800Hz as recommended, will give a useful response up to about 6kHz, but would be better crossed over again at the recommended 3.5kHz to a high frequency unit. The 1823, however, has a more useful output at the lower end of the mid band, but falls off rapidly above about 3kHz, and my own inclination with such a unit would be to crossover into the unit at about 400Hz, and crossover again at 3kHz or even lower. This approach will ensure that the units are used to maximum benefit in terms of useful response and sensitivity. It can be seen that both units confirmed the maker's power ratings, and that sensitivity figures also lined up with the maker's claims.

These are without doubt, a pair of very useful, workhorse, midrange drivers. They will handle incredible amounts of power without damage and are of robust mechanical construction. Finish and presentation are also of a good order and they are not expensive by current market prices.

RCF TW101
Retail price $119

Parameter	Manufacturer's rating	Test results
Power	100w unqualified	Not confirmed — see text
Distortion	Not stated	15% at equivalent sine wave power of 10w RMS above 400Hz
Sensitivity	114dB@1w@1m when coupled to RCF 4823 horn	109dB@1w@1m averaged between 400Hz and 4kHz — see graph
Resonance	Not stated	1.5kHz when coupled to standard test horn
Impedance	8 ohms nominal	6.5-8.5 ohms
Recommended c/o frequency	400Hz	400Hz
Useful frequency response	400Hz-15kHz unqualified	400Hz-10kHz @ – 12dB — see graph



This compression drive unit looks rather like a large ceramic type magnet assembly, removed from the back of a cone loudspeaker chassis, and fitted instead to a cast alloy faceplate. The horn coupling is standard 1.362" screw thread and the overall finish and presentation is of the usual RCF quality, if a little on the utilitarian side in this particular instance. A 52mm aluminium diaphragm is fitted at the front end of the magnet assembly, under the face plate, and is field replaceable with a soldering iron.

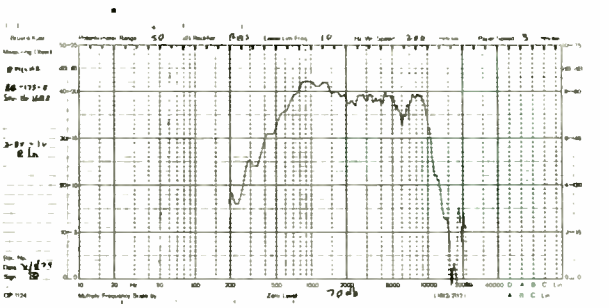
Although by no means smooth, the frequency response remains within reasonable limits over most of the useful response range — which from our tests is only to the 10kHz, as compared to the 15kHz figure claimed by the manufacturers. A more useful working range would, in my opinion be from around 800Hz to 8kHz purely as a midrange unit, in which case its sensitivity average would be increased to about 100 or 111dB. Although the power rating of 100w was not confirmed, remember that our criteria relates to distortion levels, and not necessarily to the ability of the unit to handle the amount of electrical power being fed in. Even so, I consider 10w to be an excessive level of distortion, especially so when, as in this case, it is a fairly constant level, rather than an occasional peak.

As a workhorse unit, and at its price, the overall performance I find acceptable, but the TW101 cannot be recommended for use as a component in a high performance sound system or in critical situations, except, as I have said, as a mid-range reproducer over a restricted range of frequencies, under which conditions it should behave quite well.

EMILAR EC-175-8 Ser. No. 16818
Retail price $185.00

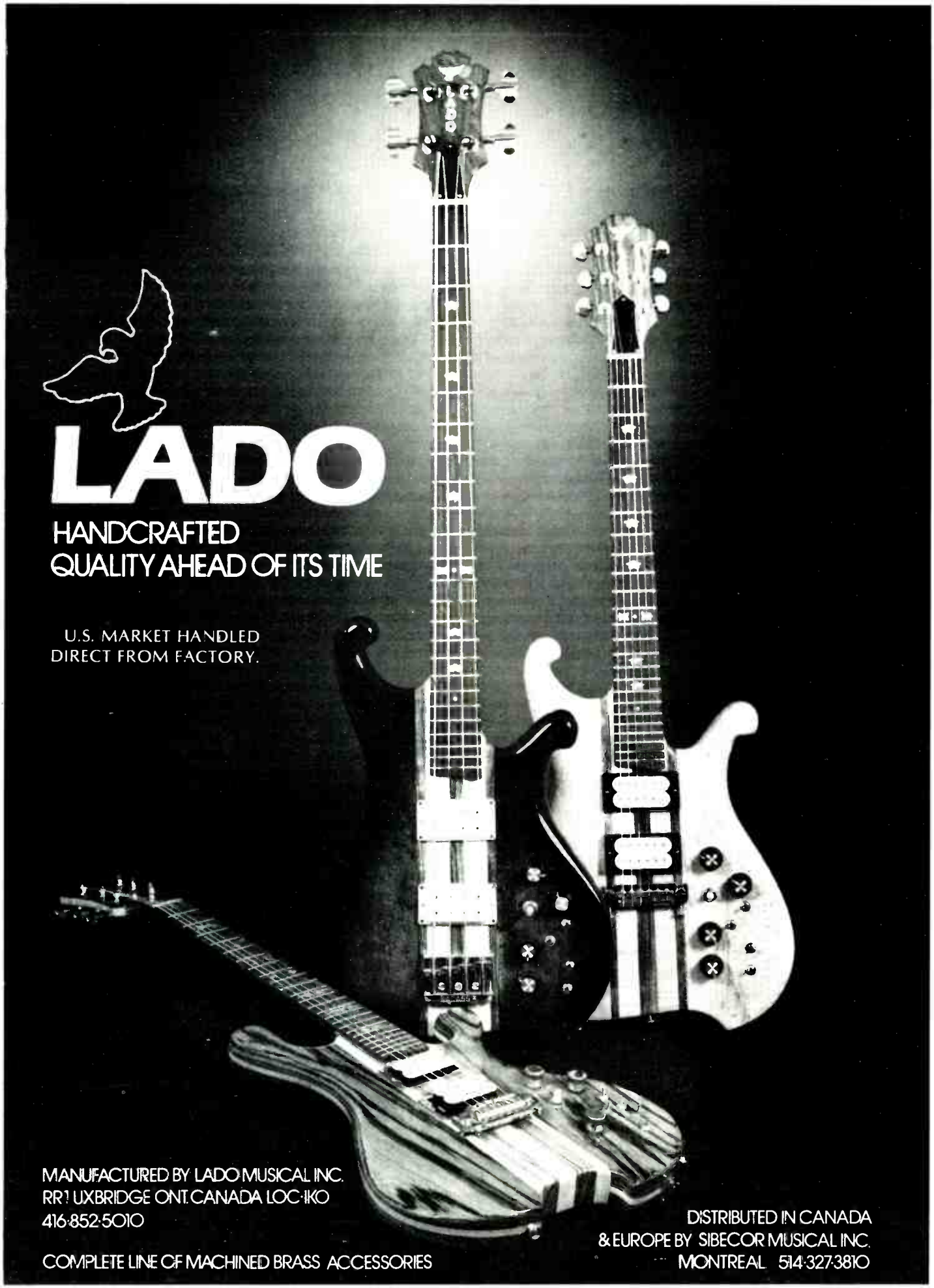
Parameter	Manufacturer's rating	Test result
Power	40w pink noise above 500Hz	Unit under stress at 10w RMS sine wave
Distortion	0.5% THD@100dB with Emilar EH80C horn	20% 2kHz-10kHz, dropping to 6% below 1kHz at 10w RMS sine wave
Sensitivity	108.7dB@1w@1m 800Hz-5kHz pink noise	109dB@1w@1m averaged between 700Hz and 9kHz
Resonance	Not stated	2.4kHz on std. test horn
Impedance	8 ohms*	6-12 ohms
Recommended c/o frequency	500Hz	Above 800Hz
Useful frequency response	500Hz-15kHz unqualified	400Hz-11kHz @ – 12dB — see graph

* Also available in 16 ohms impedance



To all intents and purposes, this unit has a virtually flat frequency response from about 700Hz to 10kHz, which is combined with a high sensitivity. This is a remarkable performance to find in a unit in this price bracket, and is on a par with compression drivers at between two and three times the price. There should be no crossover problems with this unit, as it can be crossed over at practically any frequency above the 800Hz minimum — always depending of course upon the restrictions imposed by the horn with which it is used. The only problem, as with practically all units tested, is again distortion. In the case of the Emilar, this is particularly in evidence over the higher frequency band, and improves considerably towards the middle band. We did not attempt to verify the makers published distortion figure of 0.5 per cent total harmonic at 100dB, but this is considered somewhat misleading as such a drive unit is most unlikely to be used at such a low near-field sound pressure level. It would require an input of only 0.125w (yes, one eighth of a watt) to produce 100dB on our test horn, and our lowest distortion measurement was taken at 1 watt — yet even at this level, we measured a good 6% distortion, mainly second harmonic. It is good to see manufacturers at last publishing distortion figures for this type of product, but a more realistic presentation of the facts should be given. With a 40w RMS pink noise rating, I would have expected the unit to stand up to at least a 20w, if not 30w sine wave test, but as distortion at 20w rose to an alarming 25-30 per cent at the upper frequencies, we did not try testing at 30w for fear of damaging the unit. To be fair to this manufacturer, I must repeat that this general tendancy, to a greater or lesser extent, is common to practically all compression drive units we have tested, at any price level.

It is unfortunate that this unit has a non-standard throat coupling arrangement, which consists of a "nose" protruding from the face plate which looks as though it is intended to mate with a cup at the horn throat. There are also two retaining screws on the same centers as used by Altec. It is indeed a peculiar arrangement and is likely to cause some difficulty, although I am told that an alternative version will shortly be available with the JBL 1" three-bolt flange coupling and this, to my way of thinking, must be a better arrangement.



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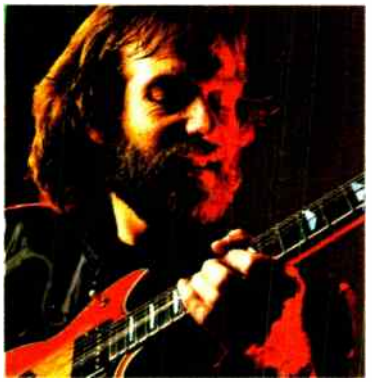

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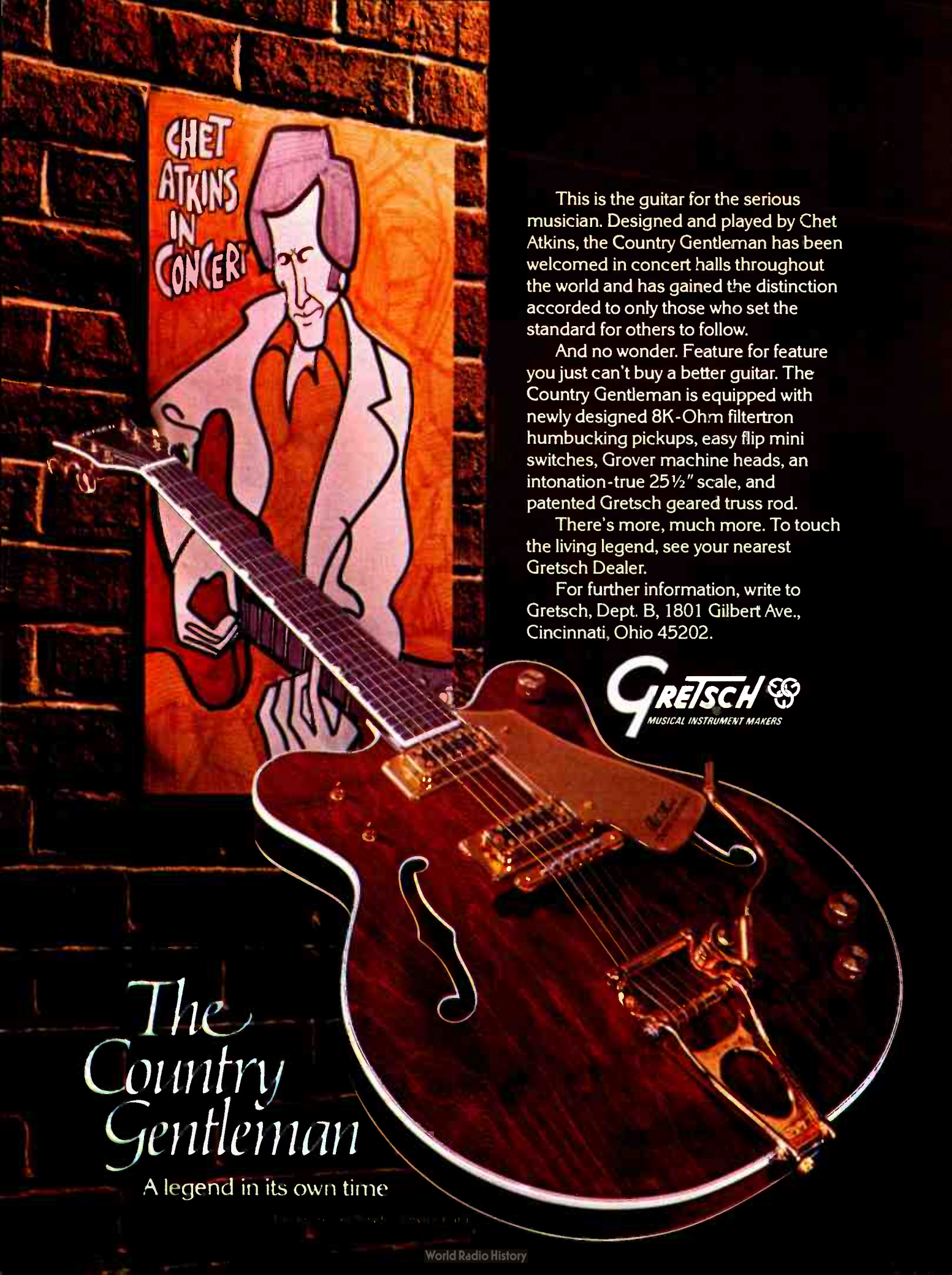

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CS-40M. Duophonic, programmable and highly portable describes this top model in the new line. It has four VCO's, two VCF's and two VCA's plus a Ring Modulator, an Attack/Decay EG for the LFO and Ring Modulator, and a unison mode which converts the unit to mono operation by doubling up the VCO's for richer sound. The keyboard has 44 keys.

The CS-40M can store and recall, at the push of a button, up to 20 sounds that you've created, even after the power is shut off. Interface with a tape recorder requires just two patch cords.

CS-20M. Up to 8 voices can be stored and recalled in this model. The CS-20M has two VCO's, an LFO, a noise generator, a mixer (for the VCO's and the noise), a 3-way VCF and a VCA. It is a monophonic instrument with a 37-note keyboard.

Both models have keyboard trigger in/out jacks and control voltage in/out jacks for convenient use with a sequencer. Rear panel jacks are provided for ON-OFF foot switching of Sustain and Portamento/Glissando effects, and for continuously variable control of the volume.

CS-15. This compact, very affordable synthesizer has two VCO's, two VCF's, two VCA's, two EG's and one LFO. One-touch knobs and switches free you from complicated patch work. Sawtooth wave, square wave, white noise, and triangle wave give unique tonal characteristics.

MODEL	KEYS	VCO	VCF	EG	NOTES	DIGITAL MEMORIES
CS-5	37	1	1	1	1	N A
CS-15	37	2	2	2	1	N A
CS-20M	37	2	1	2	1	8
CS-40M	44	4	2	2	2	20

CS-5. This is our most compact monophonic synthesizer. It has 37 keys, but with the 6-setting Feet selector switch, the instrument's range is extended to a full 8 octaves. A Sample and Hold circuit allows you to automatically play a continuous random pattern. There are many other features that make this model's very affordable price even more attractive.

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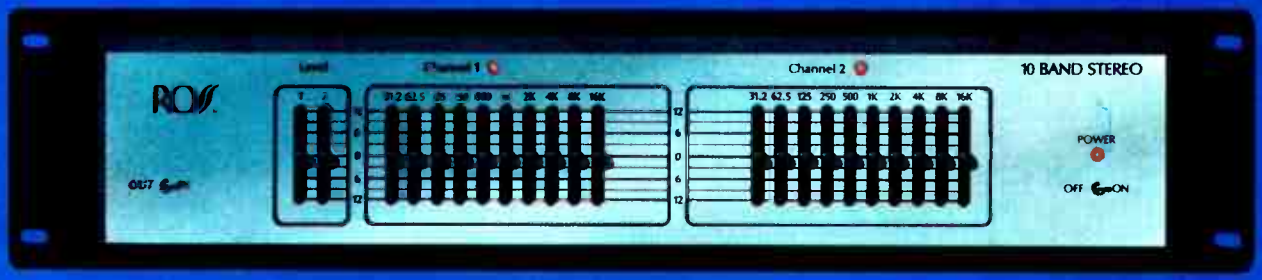

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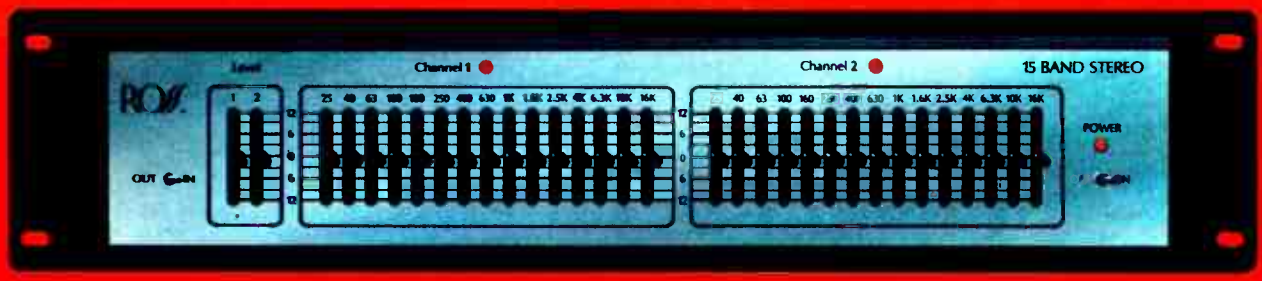

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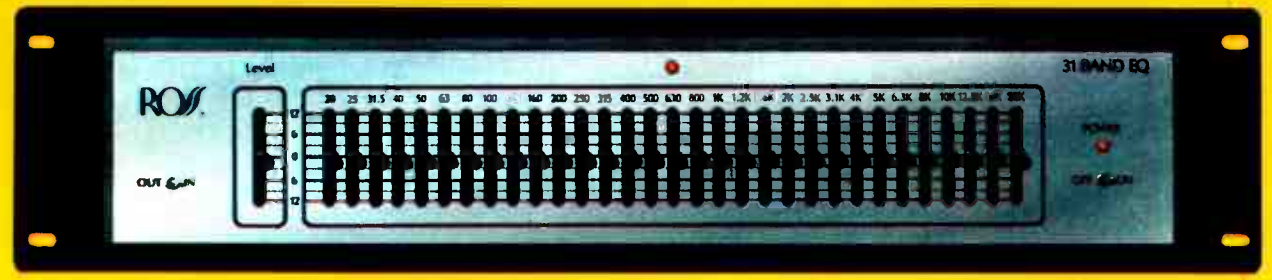

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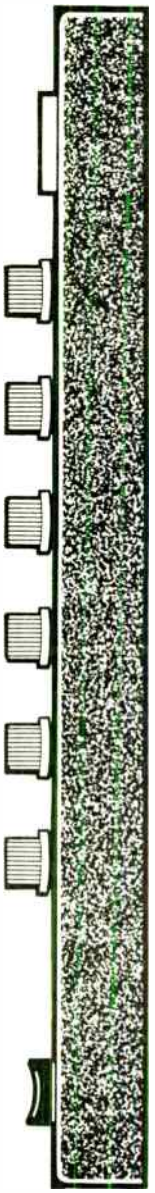

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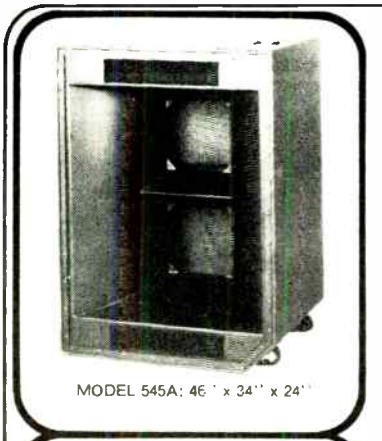
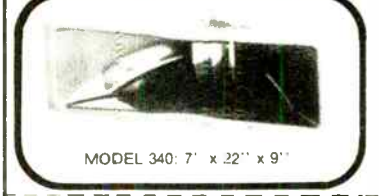


MODEL 545A: 46" x 34" x 24"



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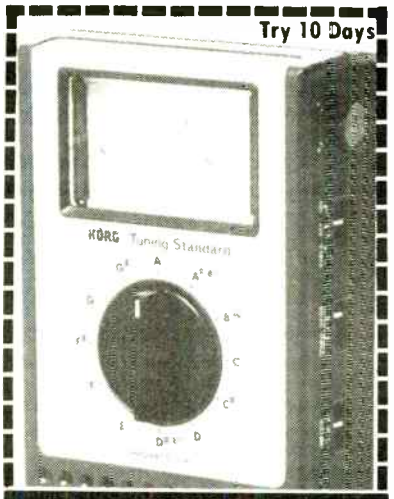

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Building-a-Solid Guitar

by Stephen Delft

Part 13 Finishing the fretting jig

Assuming you have completed the wooden parts of the jig. You will need to buy two pieces of Aluminium Alloy extruded strip, with a right-angle cross-section. It should just cover the top edges of the jig as shown in the photographs. There are both metric and inch sizes around at the moment so it would be advisable to take the jig with you when you go to buy the alloy.

What I bought was described as "one-sixteenth wall thickenss" with an *internal* width somewhere between 5/8" and ¾". If you plan to make only one instrument, you could manage without the Ali strip, and cut the saw-guide slots directly in the jig. Sand the top edges smooth and give them a thin coat of matt white paint to make marking out easier.

If you intend to make more than one or two instruments in this jig, use the Ali strips. Most of the difficulty is in marking out accurately, and starting off the slots, and if you use the metal strips, your jig will keep its original accuracy for 10 or 20 guitars. The extent of its original accuracy depends on you, but if you later wish to improve on it, you can always fit a new pair of angle strips and re-cut them. You could also add them later if you find you are making more instruments than you expected. If you fit or replace strips at a later date, cut the slots in the *wood* a little wider first, or they will "drag" the saw and repeat your original inaccuracies.

Cut the strips to the length of the top edges of the jig and screw them to the sides with seven or eight small countersunk screws each side. Drill proper clearance and pilot holes for the screws and sink them *just* below the surface. The photos show top screws also, but these are not necessary. Clamp the neck in place at both ends, so that it is held centrally in the jig. Check the gaps between the sides of the jig and the edges of the fingerboard at the nut. Some types of clamp will cause the neck to creep in the jig leaving a gap. Check this does not occur, and then put a new piece of "flour" sandpaper face down between the head and the jig to make quite sure.

Lay a carpenters' or engineers' square across both Ali strips and line it up with the nut-end of the fingerboard. This is easier to do accurately, if you put temporary shims under the neck at both ends, so that the fingerboard is just level with the top of the metal strips. Check that the body end of the fingerboard leaves no gap. Scribe across both strips to mark the nut position. Remove the neck.

You will need an accurate meter rule for marking the fret positions. You may be able to borrow or rent one.

Make a pair of small brackets and some clamps which will hold the rule up on edge on top of each aluminium strip. Line up the rule with the scribed "nut" line and clamp the brackets firmly to the jig so the rule cannot move. It is useless to try to hold the rule still, or to balance it in place and hope you will not move it. It always moves unless you clamp it down.

Mark off the fret positions from last month's third (compensated) column on each edge in turn. Check across with a square, and when satisfied scribe each fret position across the top of both strips You will find a two-inch or three-inch focus jewellers eyeglass almost essential for accurate marking out. You can buy a version which has a wire clip for attachment to a glasses frame. This is more convenient than the traditional watchmakers' loupe. If you have no need of spectacles, remove the lenses from a discarded pair of sunglasses, and clip the eyeglass to the empty frame. You will also find it easier to mark out accurately if you have good shadow-free lighting, or alternatively, an adjustable desk lamp which you can move about as you progress down the rule. If you find it is becoming difficult to see the division toward the center of the rule, you probably need to move the light along a little. You may also need a rest. Ask someone else to check your marked lines before you start cutting.

FRETTING SAWS

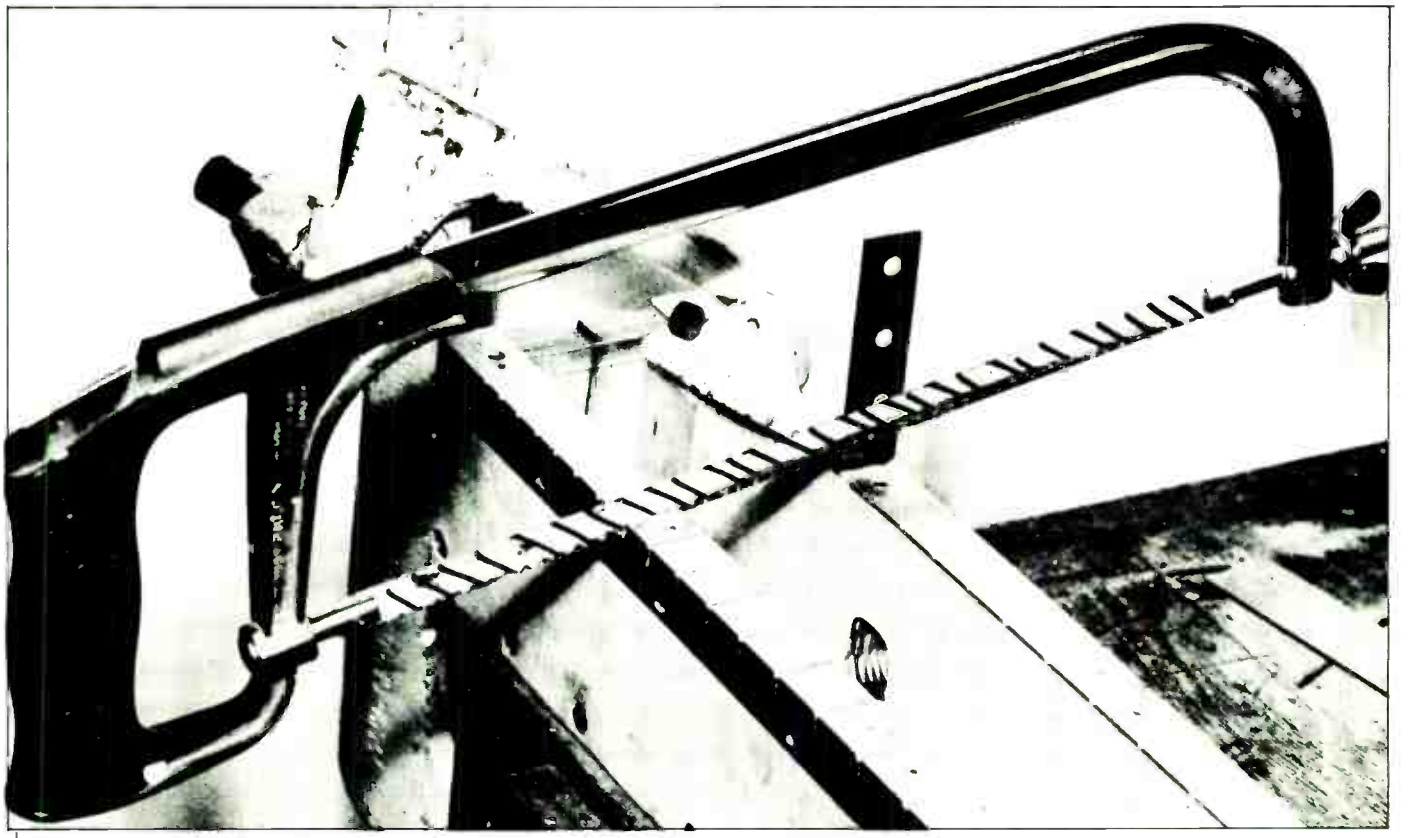
The saw-guiding slots in the jig, which can be seen in operation in photo 2, must accept the width of the cutting edge of the saw, with a minimum clearance each side. Normally, the cutting edge of a saw is "set" considerably wider than the saw plate, and such a jig would be rather unreliable, but my saws for cutting fret slots have had most of the "set" stoned away and cut a slot which is practically the width of the saw plate. For the same reason, a slot in the jig which accepts the cutting edge of the saw will still be a reasonable fit on the saw plate immediately behind the cutting edge. Although the saw *can* wobble, and the jig requires a certain amount of skill in using a saw, it represents a considerable improvement on cutting the slots directly from pencil marks on the fingerboard.

If you want the frets to fit without a struggle, you must cut the right width of slots for them. Unfortunately, frets vary in this respect, and suitable slot widths vary between 19 and 25 "thou". (1 thou is one thousandth part of an inch. As hand saws are still manufactured and maintained according to "inch" measurements in English speaking countries, a metric measurement would be pointless.) You will probably have noticed that frets come in different shapes and sizes, but the critical dimension is the width of the tang which goes into the fret slot.

It is *not* safe to assume that wide-topped frets have wide tangs, and vice-versa. My widest fretwire happens to have the narrowest tang. If you try to fit it in a 25 thou slot, it springs out at the ends. If you try to force fretwire with a wider tang into a narrow slot, you will make the neck curve backwards, and your guitar will have "buzzing" strings at any normal action setting. It is advisable, therefore, to buy a little more fretwire than you need, and make some trial runs, if possible in a piece of the same wood which you have used for the fingerboard. In general, a slightly narrower slot is appropriate for softer woods such as Maple and some of the softer Rosewoods. As many readers will not have the experience to judge when a fret "feels" right, I shall suggest yet another "rule of thumb."

I have one saw which will cut slots suitable for most standard German and American fretwires of the sort which have little embossed "beads" on the sides of the tang. It is made of thinner steel than most similar saws of other makes, and I do not recommend any alternatives. The saw requires some modification, after which it is only suitable for cutting fret slots — unless, of course, you have it sharpened and re-set later. The saw is a Roberts and Lee No. 252 Dovetail Saw. I use an eight-inch version, but if you are not worried about cost, the 10-inch 252 might be a better choice.

When you receive the saw, lay the blade on a smooth flat surface, such as the corner of a formica-topped table, protected by a sheet of thick paper. Take the *unworn* face, or wide edge, of a Carburundum or



India stone (the sort used for sharpening your chisesl and plane cutters), lay it FLAT on the saw blade with a drop of oil, and gently stroke across the sides of the teeth. Take care to wear down all the teeth equally. Repeat on the other side, and continue to sone down each side of the blade until it measures about 20 thou wide at all points along the cutting edge. Measure across the teeth with a micrometer, not across the blade behind the teeth. You now have a fretting saw.

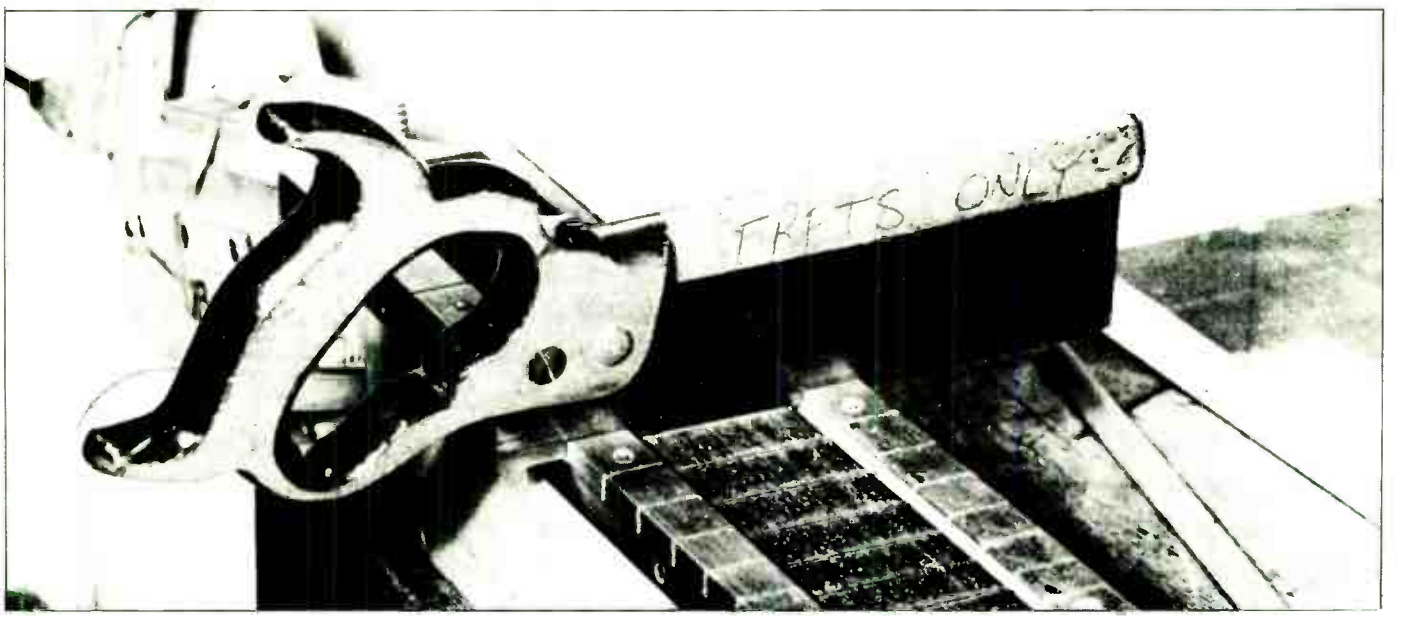
If you look after it it will last you for life. If you don't want to make any more guitars, you have it re-set and it will be a very good saw for fine work. If you try to use it for general woodwork, with the set stoned off, it will jam in the cut and you will probably buckle the blade.

If you know what you are doing, you can test the saw slot width against your fretwire and perhaps stone the saw a little more. If you are not experienced in these things, leave it alone.

I know people who have used junior hack-saws for fret slots, but I have never had much success with them. You could try stoning the blade.

FRETWIRE

Mine comes originally from Shcultz in Nurnberg. They only supply in very large quantities. I buy mine from Stentor Music in England, who usually stock two or three of the type which I have found most useful. You can order Schultz fretwire from Stentor through your local music shop. Overseas readers may write directly to Stentor Music, or try suppliers in their own countries. I would suggest Medium — (like Martin or Guild) or Wide — (like the 'fat' Gibson wire). You will need two meters.



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Building-a-Solid Guitar

SAW-GUIDE SLOTS IN THE JIG

The widest part of the fretting saw (across the teeth) is 20 thou, so you will need slots in the jig about 22 thou wide. This is not easy to arrange, but an Eclipse 12-inch, 24-tooth Hacksaw blade of the type called "All Hard," is 34 thou across the teeth and 23 thou behind the teeth.

If you stone off all the set you can, you will probably be able to cut a 24 thou slot in the metal strips of the jig. I have found this sufficiently accurate for most purposes. Because the saw has practically no set, you will need to keep it smeared with soft soap while cutting the jig. All-hard blades are particularly liable to break if the work moves while you are sawing, so clamp it down well. If you can find a "flexible" or "carbon steel" blade the same thickness or less, it will be easier to stone down and less likely to break. A junior Hacksaw blade is the obvious choice but I find it difficult to cut straight with such a small blade.

Starting the cuts in the metal strip is easier if you nick the edges with a triangular file to give a start to the saw. You may have difficulty sawing straight across both sides of the jig. Photo 1 shows a steel bracket used to line up the saw on one side while cutting the other side.

Saw the slots eight to nine millimeters down the outside edge of each metal strip. If you have difficulty sawing straight down, mark vertical lines down the edges with a fine fiber-tip marker, level with each fret position, and cut along these lines after the saw has cut through the top part of the metal angle strip.

If the saw sticks, you may need more soap, or you may be leaning the cut toward one side as you push, or the jig may have slipped around under its clamps a little so you are no longer pushing along the exact line of the cut.

Check the positions of the slots with the meter rule. If the center of any slot is more than ½mm out you should really replace the whole metal strip. If the errors are 0.25mm or less you can probably leave them. I try to work to an accuracy of + – 0.1mm but occasionally have to accept an error of 0.2mm on work which is not critical. Inexperienced fret filing can easily alter apparent fret distances by 0.25mm so it is not really sensible to demand greater accuracy than this in a fretting jig.

CUTTING FRET SLOTS IN THE FINGERBOARD

Replace the neck and fingerboard in the jig and clamp in place, making the same checks for slippage as before. Continue to check that the fingerboard touches the end of the jig immediately before starting each cut. The fingerboard should be just below the top of the jig as shown in photo 2. Clamp the jig to the bench with the head end overhanging, and lightly cut each fretslot. If the saw sticks, wipe it frequently with soft soap.

Use long even strokes of the saw without excessive down-pressure. If there is any play between the saw and the width of the slot, try to keep the saw upright but against the right hand side of each slot. Without removing the neck, check the slot positions. If acceptable, cut the slots deeper, again using soap on the saw. They should be between two and three millimeters deep.

The same jig can be used to hold the neck, while planning the front of the fingerboard straight along its length, and curved across its width to suit your taste. Did you know that the shape of the curve across the fingerboard affects the lowest action possible when bending strings? More on this next month.

Understanding Synthesizers

PART 12

By Tony Horsman

In this article I am going to describe a fascinating synthesizer module called the "sequencer" which is most commonly used to generate repeating patterns of notes, although it can be used in many other ways, for example to generate new low frequency waveforms. Whereas the modules I have described in earlier parts of the series are to be found in most synthesizers, with the possible exceptions of the ring modulator and sample-and-hold module which I described last month, sequencers are rather different. Because they contain larger numbers of controls, sequencers tend to be manufactured as separate items.

For example, both the ARP sequencer and the Roland System 100 sequencer are physically separate units which connect into the synthesizers via external leads.

Although the number of controls may make them look daunting, sequencers are really quite straight-forward devices which all work in essentially the same way. As there are one or two features of synthesizer design which are particularly relevant to the use of sequencers, before starting to explain how sequencers work and how they are used to produce today's music I am going to go over these particular points again. (More detailed descriptions can be found in Parts 5, 7, and 8.)

Adding Control Voltages

All the synthesizer's voltage-controlled modules, for example the VCO, VCA and VCF, receive control voltages from a number of sources, the contributions from each source being *added* together within each module to produce one final control voltage. In the case of the VCO, shown in Fig. 1, the sources of control voltage are usually the keyboard module (providing the keyboard voltage) and the LFO. As I mentioned in Part 10, VCO modules often have an external input socket so that an external source can also contribute to the final control voltage. On their way to the VCO itself, the voltage from the external source and the LFO's waveform pass through sensitivity controls which allow the contribution from each source to the VCO's final control voltage to be adjusted. For example, the LFO sensitivity control adjusts the depth of the vibrato effect (if the LFO's sine wave is selected) or the separation of two notes in a trill (if the square wave is selected).

What has all this to do with sequencers? The answer is that a *sequencer is another control voltage source* which connects to the VCO, or for that matter to any other voltage-controlled module, through an external input. Whatever voltage the sequencer might supply to the external input, a proportion depending on the setting of the sensitivity control is *added* to the contributions from the other sources.

A Simple Sequencer

The front panel of a simple sequencer containing six identical knobs, six lights (only one of which is lit at a time) and a "step" button is illustrated in Fig. 2. In what follows I am going to assume that the sequencer's output is connected to the external input of the VCO module and that the corresponding sensitivity control is advanced to maximum, so that the *whole* of the sequencer's output voltage contributes to the VCO's final control voltage.

Let's suppose that the first light is lit. This signifies that the sequencer's control voltage output is currently determined by the setting of knob 1. Pressing the "step" button once causes light 1 to go out and light 2 to come on, indicating that the sequencer's output is now determined by the setting of knob 2 (and is unaffected by the setting of knob 1). Each time the "step" button is pressed, the next stage is selected, the sixth press returning control from knob 6 back again to knob 1. As the sequencer's output is controlling the VCO's frequency, in practical terms this means that each knob tunes the VCO to a particular note, enabling a player to preset a sequence of six notes before a performance.

The sequencer's steps and resulting notes will of course occur in whatever rhythm is tapped out on the "step" button. Fig. 3 shows how the sequencer's control voltage output might change if the six knobs are adjusted so that the VCO produces the notes C, E, G, D, E and G, and the indicated rhythm is tapped out on the "step" button.

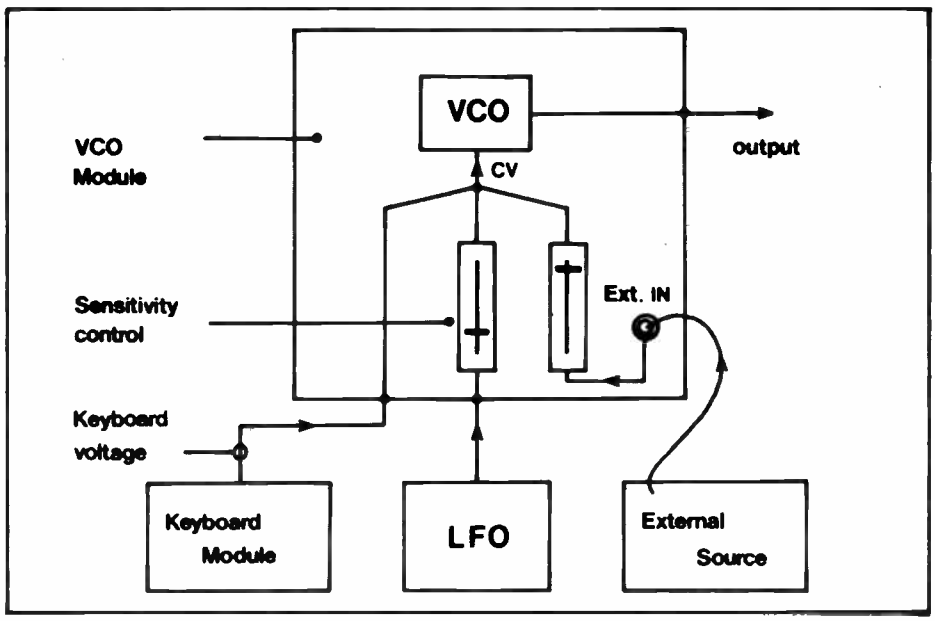

Fig.1 In voltage-controlled modules, the control voltage is the sum of contributions from various sources. The VCO's final control voltage (CV) is the sum of the keyboard voltage and contributions from the LFO and/or an external source.

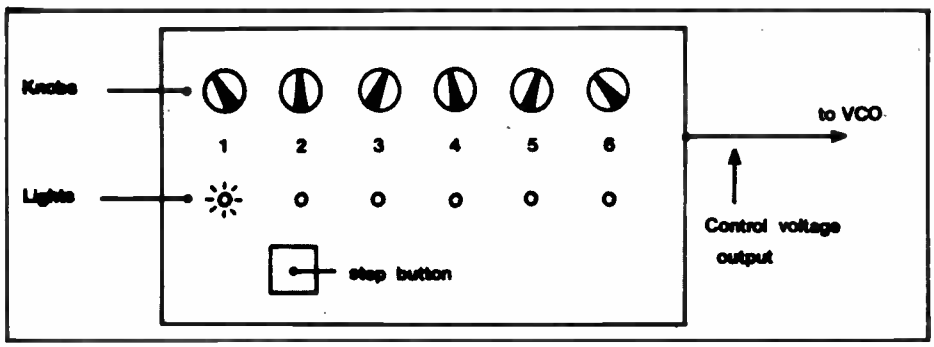

Fig.2 A simple sequencer with six stages. The sequencer's voltage output is often connected to the external input of the VCO to produce varying pitch sequences.

Automatic Sequences

In order to free the player from the need to keep pressing the "step" button, sequencers all contain an internal "clock," very much like the clock inside the sample-and-hold module (see part 11). The clock generates pulses which can in effect tap the "step" button at regular intervals, so that the sequencer *automatically* advances from the step to the next. The rate at which the clock "ticks" can always be adjusted by a front panel control as illustrated in Fig. 4, the clock rate effectively governing the duration of each step. In the center of this slightly more elaborate sequencer are three buttons: a "start" button which sets the clock running *after first resetting the sequencer to step 1*; a "stop" button which stops the clock, halting the sequencer on the current step; and the familiar "step" button which is used to advance the sequencer manually to the next step.

Single and Repeated Sequences

Sequencers can usually operate in two modes (see Fig. 4). In the *single-cycle mode*, the sequencer generates its preset pattern of voltage just once, then stops automatically. In the *repeat mode*, the pattern of voltages is repeated endlessly until the "stop" button is pressed. In both cases, the sequence always starts at step 1 but can extend to any chosen step, depending on the setting of a multiple position switch called the "end step selector." In practice, this means that a sequencer with, for example, 12 stages can produce single or repeating sequences containing up to 12 steps.

Fig. 5 shows two sequences produced by operating a sequencer in different modes, and illustrates the use of the end step selector. The first four knobs have been set up to reproduce C, F, G and A. In the top example, the mode selected was "single cycle" and the chosen "end step" was number 4. Pressing "start" set the sequence going, beginning with the first note (C) then progressing through F and G, and stopping automatically on A. (The output voltage set by the last knob is maintained indefinitely at the end of a sequence.) To produce the sequence shown at the bottom of Fig. 5, the knobs were *not* altered. The end step selector was moved to "3" and "repeat mode" was selected. On pressing "start," the VCO produced the notes C, F and G, repeating the sequence until the manual "stop" button was pressed at the start of the third cycle.

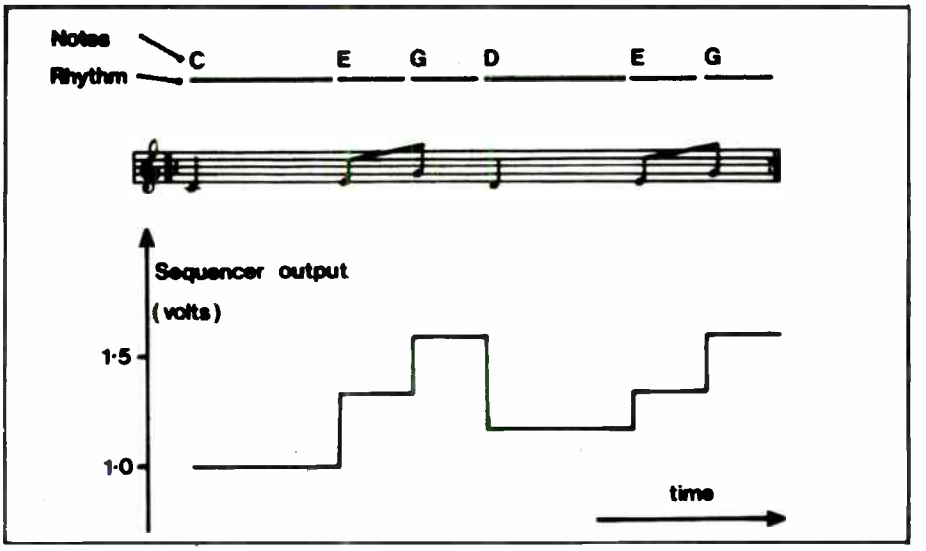

Fig.3 How the sequencer's control voltage output would vary if the six knobs were set so that the VCO produced the notes C, E, G, D, E and G. The rhythm would be tapped out on the step button (see Fig.2).

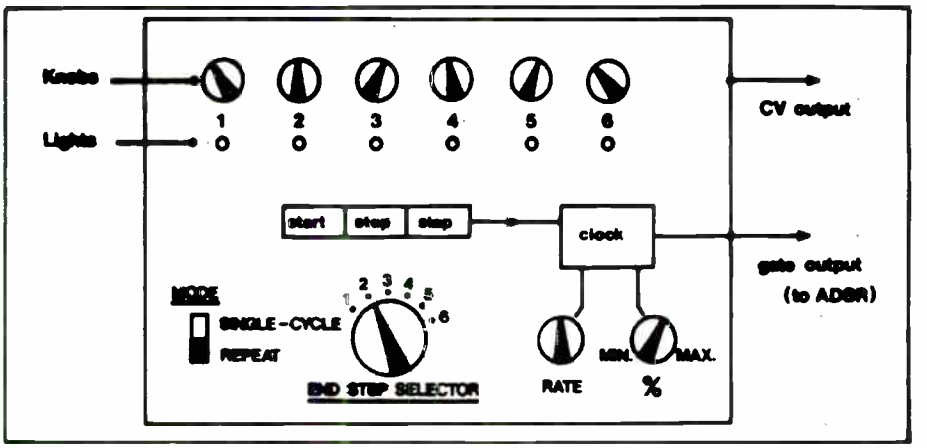

Fig.4 For the production of automatic sequences, most sequencers include a clock (which can be started and stopped manually), a mode switch and an end step selector. A gate output is derived from the clock which can be used to trigger the ADSR module so that every note in a sequence can have its own envelope.

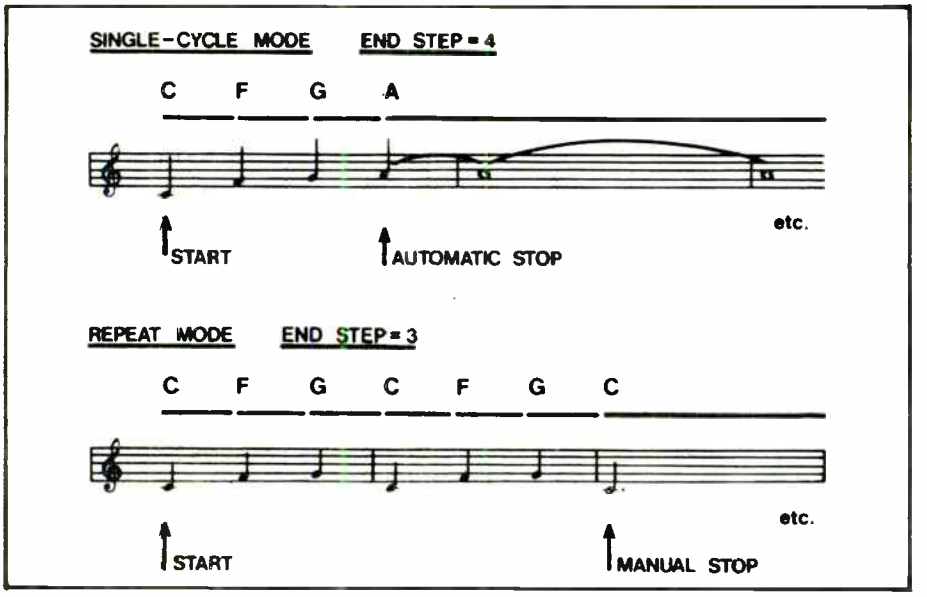

Fig.5 Examples of the use of a sequencer in the single-cycle and repeat modes. In single-cycle mode, the sequencer automatically halts on the selected "end step". In repeat mode, each cycle ends with the "end step" and the sequencer has to be halted manually by pressing the "stop" button.

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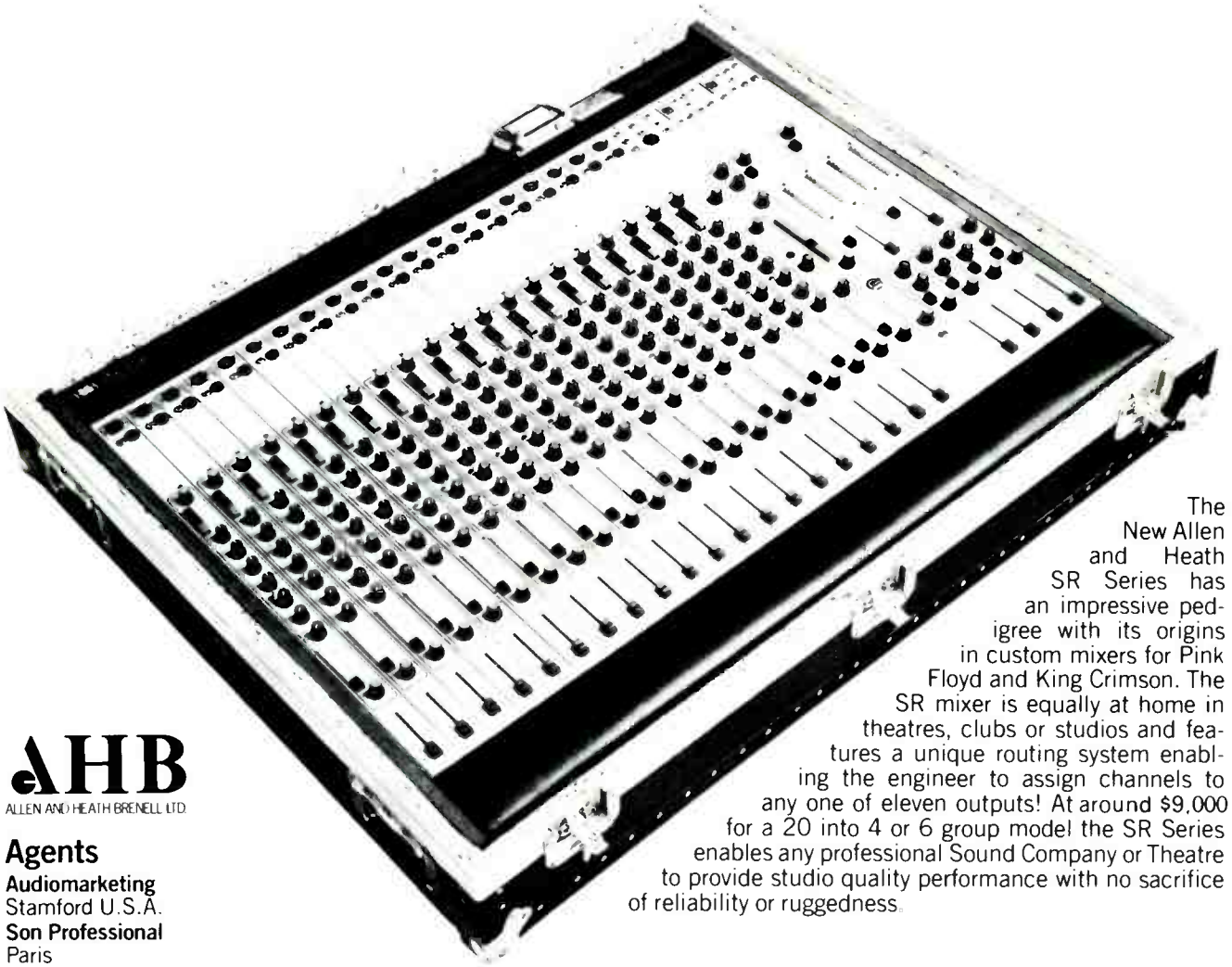

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Step Duration

You have probably already realized that in the sequencer I have described, when the clock is being used to produce automatic sequences, all the steps have the same duration. This limitation can be overcome by using more than one knob for each note, for example one note two steps long can be produced by setting two adjacent knobs to the same position. However, that approach is wasteful and a better method is to vary the clock rate during each sequence. As this is virtually impossible to do manually using the clock rate control, it is usual for manufacturers to make the clock rate voltage-controlled. As I will explain next month, it is then possible to produce sequences containing steps of different duration. (More expensive sequencers allow the individual step times to be adjusted using an extra set of knobs one for each step.)

Note Envelopes During Sequences

In Parts 6 and 7 I explained in some detail how the ADSR module is used to generate a waveform which controls the variations in loudness (i.e. envelope) of the synthesized sound during each note. Fig. 6 shows the usual set-up in solid lines, with the ADSR module being triggered by the keyboard gate pulse (which is produced every time a key is depressed on the keyboard).

If a sequencer is being used to control the VCO and if, as is most often the case, each note is to have its own envelope, then the ADSR module must be triggered by the sequencer at the start of each step. In effect, the sequencer has to provide a substitute for the keyboard gate pulse. This substitute is easily derived from the sequencer's internal clock and is always available as a "gate output" from the sequencer. The proportion of each step time for which the gate pulse is present can usually be varied by a control marked "%" as illustrated in Fig. 4. Rotating this control has the effect shown in Fig. 7. From a musical standpoint, a "staccato" touch (tapping the keys) is imitated by the narrow (5%) gate pulses shown at the top of the diagram, and a "legato" touch (playing smoothly) by the broad (95%) gate pulses shown at the bottom.

The sequencer's gate pulses trigger the ADSR module in exactly the same way as the keyboard gate pulses, initiating the attack phase on each rising edge and the release phase on each falling edge. In effect, therefore, the sequencer can replace *both* the functions of the keyboard module, providing a control voltage for the VCO and a gate plulse for the ADSR module.

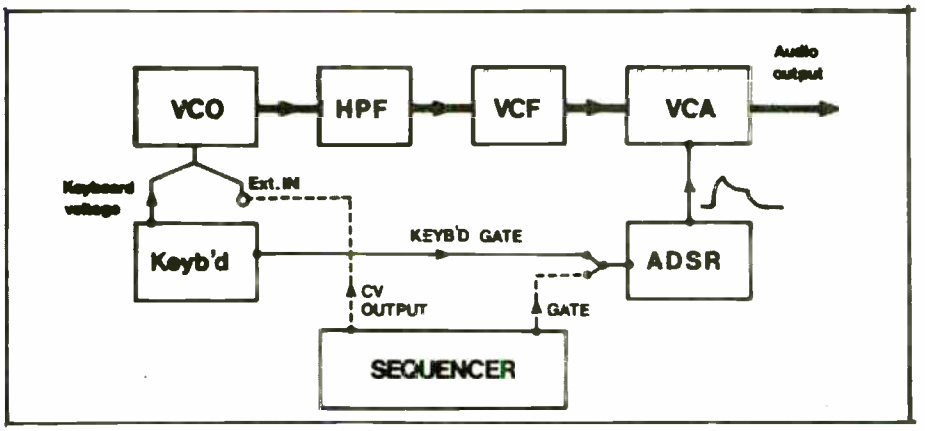

Fig.6 How to connect the sequencer into the other modules when synthesizing variable pitch sequences. The sequencer effectively replaces the functions of the keyboard module, providing a control voltage for the VCO and gate pulses which trigger the ADSR module.

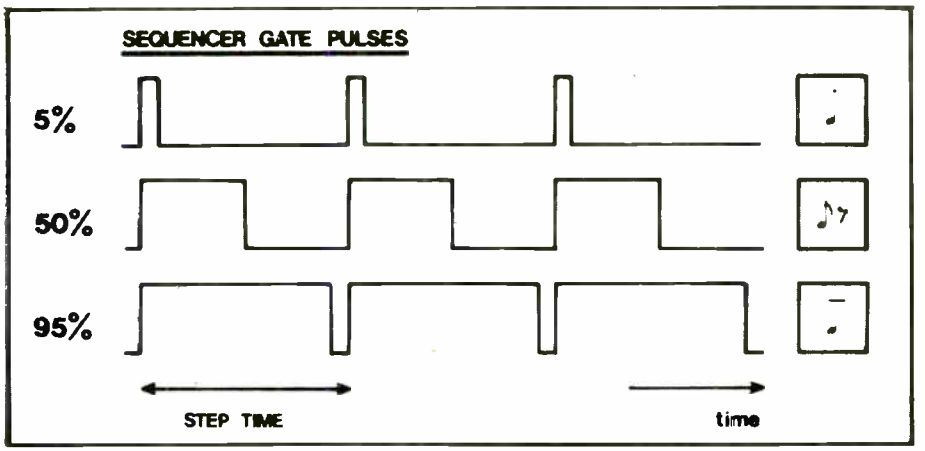

Fig.7 The width of the gate pulse output of a sequencer can be varied manually. Narrow gate pulses are used to synthesize staccato sequences and wide gate pulses to produce legato sequences.

Varying The Pitch of Sequences

Referring back to Fig. 6, you can see that the sequencer's control voltage output is *added to the keyboard voltage*, as I emphasized at the beginning. So far, I have tacitly assumed that *before* the sequencer's knobs were set up, the bottom note (C) on the keyboard had been tapped first, setting the keyboard voltage to zero.

Now suppose we had done this, then set up the sequencer to produce the notes C, E, G and A, and started it going in repeat mode. If at the beginning of the second cycle, bottom G was tapped on the keyboard, what would happen? Fig. 8 shows the musical result: all the notes would move up one fifth (the interval between bottom C and G). Press a different note on the keyboard at the start of each cycle and the whole sequence changes pitch, but *the pitch intervals between the notes of the sequence always remain the same.*

In the example shown in Fig. 8, the synthesizer produces four notes for every note played on the keyboard. It is not hard to imagine that a sequencer and keyboard together can be used to produce sequences which are technically impossible to play on the keyboard alone.

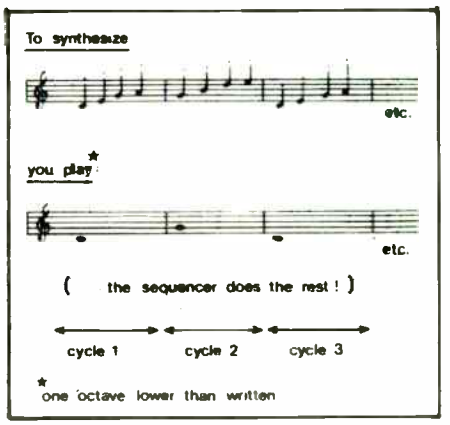

Fig.8 By playing different notes on the keyboard while the sequencer is running, the starting note of the sequence can be altered. The keys do not actually need to be held down throughout each cycle because the keyboard memory holds the keyboard voltage steady after the key is released.

Sequencers are certainly an aid to the player, but are in no sense a substitute for him!

Tony Horsman

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New Interface Series 400

Interface Electronics of Houston, has developed a product range of mixers which between them encompass a wide spectrum of audio activity from stage monitor mixers to professional multitrack studio mixers. One important feature of almost all the models, is the wide variety of options available, enabling the prospective customer to "design" himself a mixer most suited to his needs without the headaches and cost of custom built mixers.

The Series 400 mixers are a simple modular design, available in 8, 12,16 and 24 inputs with LED overload indicators, panpot, three-way equalizer, four position low filters and a choice of fader type. Other features include XLR-type connectors, a choice of input modules and two or four outputs with large VU meters.

The intermediate range is designated the 104 and 108 Series and really refers to the module types available as these can be assembled into mixers ranging from remote mixers, 4 and 8 track recording mixers, stage sound and stage monitor mixers. Mainframes are available up to 32 inputs, all fully modular, with four or eight outputs depending upon the choice of 104 or 108 modules. Facilities on the channels include line/mike selector, monitor solo, phase reverse, phantom power, panpot, gain trim, three-way EQ and four cue sends. These are the basic options; however, Interface offers seven variations just on the channel module to suit differing requirements. Output modules are offered for concert and recording use, including talk-slate, monitor-talkback-intercom, wide range parametric equalizer, octave and third octave graphic equalizer, tunable three-way dual crossover as well as three variations on the basic module.

The largest mixers are constructed from the 308 and 316 Series of modules. With this series it is possible to assemble mixers for up to 16 track recording or a stage mixer capable of eight submixes. Similar facilities as the 104 and 108 input modules are offered, including LED overload indicators and a four inch travel Duncan fader as standard. Output module choices include four full range parametric equalizers with limiters and tunable crossovers available to special order.

Interface Electronics offers an extremely comprehensive range of mixers with many options which have not been mentioned here but they do produce some very detailed literature explaining further details. For further information contact Interface Electronics, 3810 Westheimer, Houston, Texas 77027.

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On The Record

London

Dave Edmunds releasing a single "Singing The Blues" to coincide with upcoming **Rockpile** tour. Also expect a new Edmunds solo album...**Pretenders** recording a new single not featured on their debut album before beginning a lengthy British tour...**Elvis Costello and the Attractions** awaiting the release of their 20-track album produced by **Nick Lowe**. The release has been held up by court actions between Warner Brothers and Costello following the demise of Radar...The **Boomtown Rats** rerecorded "Someone's Looking At You" as their new single...**The Jam** at Virgin's Townhouse studios recording their follow-up single to "Eton Rifles"...**Blondie** recording several live dates for radio broadcast only so far...**Ray Davies** mixing double live **Kinks** album at Konk...The **Moody Blues** beginning new studio album at Decca...British mod band **The Beat** soaring up the charts with "Tears of A Clown" recording first album for Arista due out in March...**Pete Townshend** and **Kenny Jones** recording demos for new **Who** album at Air studios with Chris Thomas helping out...**Roxy Music** recording at Island's Basing Street studios.

New York

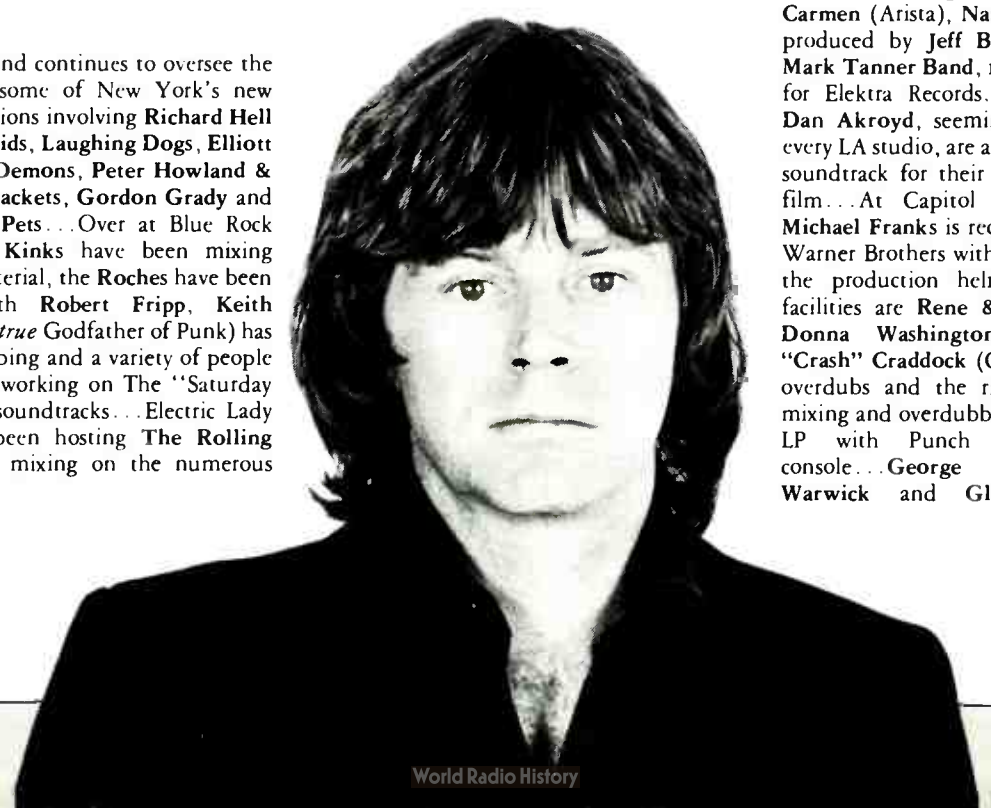
Chelsea Sound continues to oversee the recording of some of New York's new wave with sessions involving **Richard Hell & The VoidOids**, **Laughing Dogs**, **Elliott Kidd & The Demons**, **Peter Howland & The Yellow Jackets**, **Gordon Grady** and **Joey & The Pets**...Over at Blue Rock Studios, the **Kinks** have been mixing recent live material, the **Roches** have been recording with **Robert Fripp**, **Keith Richards** (the *true* Godfather of Punk) has been overdubbing and a variety of people have been in working on The "Saturday Night Live" soundtracks...Electric Lady Studios has been hosting **The Rolling Stones** (*more* mixing on the numerous tracks recorded in Paris), along with other FM stalwards like **Billy Joel**, **Chuck Mangione** and **Earl Klugh**. Blues master **B.B. King** has also been in to finish some overdubs for his upcoming MCA album...Jazzmen **Dave Liebman** and **Mike Mainieri** are working on a CBS LP at Sound Ideas alongside people like **Sarah Dash** and Springsteen's personal "tower of power" — **Clarence Clemons**. **Genya Ravan** is producing **Ronnie Spector**'s new album at RPM Studios, which recently announced the addition of new Wave 8068 with NECAM. The popular **Mass Production** is mixing and mastering at Atlantic Studios. And, at New York's branch of the legendary Sigma Sound, you can find the ubiquitous **Village People** hard at work on the soundtrack for their upcoming movie "Can't Stop The Music" under the expert tutelage of producer **Jacques Morali**. Also in at Sigma are **GQ** (working with producer Jimmy Simpson on a new Arista LP), **Candi Staton** and **the Heath Brothers.**

Around The Country

Sigma Sound out in Philadelphia is hosting hard rockers **The Edge**, with Tom Moulton at the helm, while the **Pockets** are putting in their best effort for producer Bobbi Eli...Down in Alabama **Lee Curtis** is mixing his latest work at Fame Recording, sharing the studios with country singer **Tammy Wynette**. The Muscle Shoals horn section is also making use of the facilities for a new album...Out in the sunny isles of Hawaii, **Shnazz** is cutting tracks in the sunny clime at Sea West Studios...In the windy city **Ava Cherry** is in for the Curtom label. Alpha International, another Philly stalwart, is hosting a variety of acts including **Geraldine Hunt**, **Ultima II**, **Choir** and **Crazy Chester**. The studio has just installed some new Urei 815 Speakers for excellent playback.

Los Angeles

At the ever-popular Record Plant, **Angel** is grinding out their latest chef-d'oeuvre for Casablanca Records right alongside an electric variety of folks that includes actress/comedienne/singer **Bernadette Peters** (MCA), **The Ozark Mountain Daredevils** (Epic), **The Blues Brothers** (mixing) and **The Hounds**...Cherokee Studios is hosting **Alice Cooper**, hard at work on the soundtrack for the United Artists film "Roadie" along with neighbor **Eric Carmen** (Arista), **Nazareth** (A&M) being produced by **Jeff Baxter** (?!) and **The Mark Tanner Band**, mixing their new one for Elektra Records. **John Belushi** and **Dan Akroyd**, seemingly popping up in every LA studio, are also in for work on the soundtrack for their upcoming Universal film...At Capitol Recording Studios, **Michael Franks** is recording a new LP for Warner Brothers with **Tommy LiPuma** at the production helm. Also using the facilities are **Rene & Angelo** (Capitol), **Donna Washington** (Capitol), **Billy "Crash" Craddock** (Capitol) doing string overdubs and the righteous **Bob Seger** mixing and overdubbing his latest Capitol LP with Punch Andrews at the console...**George Benson**, **Dionne Warwick** and **Glen Campbell** are



RECORDING WORLD

recording at Gold Star...**John Stewart** is finishing up some overdubs at Larabee Sound...A veritable galaxy of stars, including **Elton John**, **The Average White Band**, **Van Halen** and **Bernie Taupin**, are hard at work at Sunset Sound...**Leah Kunkel** is collaborating with Henry Lewy at A&M Recording...**Taste of Honey** is recording their new one at Westlake Audio with producer **George Duke**...Filmways/Heider Recording has been fairly quiet but is pleased to announce the complete renovation of Studio 4 with the addition of a brand-new Neve 8108 console.

San Francisco

Legendary jazz vocalist **Sarah Vaughn** stopped into the Automatt to work on some overdubs for her newest LKP while another jazz great, **Pharaoh Sanders**, was in for his latest project on Theresa Records. The **Tazmanian Devils**, **Journey** and **Con-Funk-Shun** have also been using the facilities to wrap up their latest work...Over at Wally Heider's, the **Funkadelics** are still at work...**Solar Plexus** is putting down tracks on a demo for Inner City Records and the **Tasmanian Devils** are also coping some time in the studio...**The new wave group Microwave** has been putting together an LP at John Altman Studios...Different Fur Studios is just about to complete its redesign and construction program with **Huey Louis and the American Express** slated as the first to use the new facilities...**Grace Slick** is back putting in time at the Record Plant for a new solo LP. **Rick James** is still in the Sausalito studios producing his back troupe **The Stone City Band**...At Tres Virgos, **Jorge Sanatana's** band, **The Unit**, is backing singer **Holly Hansen** on a solo project while the **Leapers** and **Stranger** are placing their new wave sound into posterity...A new radio pilot, "San Francisco Studio Party", is in the final mix stage. The program is produced by **Nick "The Greek" Gravenites** and **Roger "Jellyroll" Troy** and features **Maria Muldaur** and her band along with interviews of various guests and musical celebrities...Tewksbury Studios is hosting the **Ghosts** as well as **Dawan Muhammed** and several members of **Pharaoh Sander's** band. The **Psychotic Pineapples** are finally mixing their LP as are the **Mutants**. A Richmond Records Sampler is being prepared at the studio and will feature a Jamaican reggae group called **The Soul Syndicate**...Fantasy Records has **Mark Soskin**, pianist for the **Sonny Rollins Group**, in for a solo LP featuring sidemen like **Harvey Mason** (drums), **Bennie Maupin** (reeds), **Sammy Figueroa** (congas) and Ray Obiedo (guitar)...Mandolin wizard **David Grisman** is still in the 1750 Arch Street Studios along with his quintet.

Nashville

In the pursuit of information for this report we got into an interesting discussion with engineer Bernie Vaughn at Doc's Place, a busy 24-track facility in suburban Hendersonville. "It's always interesting to see that such-and-such a star has recorded at this or that studio," he observed, "but the bulk of studio business in Nashville is in custom work. Some people don't realize that they can get the same top musicians the stars use and can record in the same top quality studios as the stars, but a lot do because they constitute most of our business." When I mentioned the sad reality that custom recording is often associated with the rip-oiff syndrome, Bernie replied astutely, "To tell somebody they should not cut a record unless a major company is involved is like saying don't go to Vegas unless you're gonna win! It boils down to fun. If you go to Vegas and have fun, you haven't wasted your money, assuming, of course, you could afford it. If you cut a record and have fun doing it, you haven't wasted your money, but you ought to make the very best record you possibly can, which means using good people and good studios." In between the custom work at Doc's Place, Bernie has produced and engineered sessions on **Darlene Austin** and **Kyle Lehning** has been in with the **Wilson Brothers** for Atlantic...Meanwhile, on Music Row, the big event at Pete's Place is the gestation period of **Ernest Tubb, the Legend And The Legacy, Volume II**, which, considering

the impact of **Volume I**, may prove to be the event of the year...Down at the Toy Box in Brentwood, owner **Tom T. Hall** has taken time out from autograph parties for his book, **The Storyteller's Nashville**, to work on an album with producer Roy Dea and engineer Al Pachuki...**Debbie Boone**, **Chris LeDuex** and **Gene Watson** have been in at Jack Clement Studio...**Guy Mitchell** and **Dave & Sugar** have been facing the vocal mike at Music City Music Hall...Out at Bradley's Barn, a good gamut of musical expression has run from bluegrass founder **Bill Monroe** to gospel greats the **Lewis Family** and country legend **Loretta Lynn**...At Young'un Sound, **Neil Wilburn** has been producing an album on **Buck White**, **Chip Young** has been working on projects with **Billy Swan** and **Tim Kreckle**, **Stan Dacus** has produced new Mercury artist **Daryl Kutz**, and **Steve and Rudy Gatlin** have been working with a new group from North Carolina called the **Coulters** for CBS. New equipment at Youn'un includes a Nakamichi N680 cassette machine and a BTX sync generator linking two 24-track machines.

ALAN PARSONS
Another Brick in the Wall

Riding the crest of a rolling wave when prestige British bands turned their backs on singles to concentrate on quality *albums*, Alan Parsons first entered a studio in a professional capacity. While the Beatles were breaking new ground under the auspices of George Martin with *Sgt.Pepper's Lonely Hearts Club Band*, Alan Parsons was buried deep inside the bowels of the EMI Abbey Road tape library.

Working his way through the corporate bureaucracy, Parsons eventually rose systematically through the ranks. Doing his fruitful apprenticeship at Abbey Road studios, he's worked with everyone from the Beatles and Pink Floyd to the Hollies. The Seventies were more prolific as the engineer turned producer working with Al Stewart, Steve Harley and John Miles before embarking on his own projects.

Alan Parsons is a modern day success story. A self-made man who eagerly practiced and learned his craft, he was a wealth of studio experience to draw upon. If you begin with the Beatles and Pink Floyd, you end up visiting places otherwise unknown to more orthodox engineers, producers and artists.

"I left school with the view of doing technical training," Parsons says, sitting in Arista Records', London office. "I wasn't too interested in the tape library so I eventually landed a job in the tape duplicating plant."

Although he admits this was a small step closer to his goals, he wasn't quite sure what the future held. Ignoring house rules, Parsons confidentially asked the studio manager for a job. He secured one as tape operator.

"I was always interested in music, always technically minded. And I was always building gadgets, radios, everything," he says, fingering a nearby lighter. "EMI was trying to assemble the world's best recording team in 1967. There was a great team spirit at Abbey Road. Everyone was proud to be involved. With few exceptions, there were no ego problems. Just about anybody who's anybody *now*, came out of EMI."

After being a tape op for four or five years, Parsons gradually evolved into a

fully fledged engineer. His entire period at Abbey Road, he says convincingly, was the most educational period spent. This gave Parsons a concrete foundation for furthering his own ideas.

"You don't simply learn from engineers. You learn from musicians. I learn more from bad productions and mistakes. You learn how *not* to make records," he laughs.

Aside from technical abilities, Parsons was fortunate to work with a wide range of artists, encompassing many musical styles. He worked with the Hollies following the departure of Graham Nash. He worked with Uriah Heep's leader Ken Hensley in his first group. And he worked with numerous big bands.

"It was a strange mixture," Alan says. After the big bands, the Pink Floyd arrived. Parsons entered another creative phase of his expanding career. He mixed *Atom Heart Mother* and eventually worked with the band so much on *Dark Side Of The Moon* that he went on tour with them as their personal soundman.

"The Floyd will tell you I've been influenced by them," Parsons says of an apparent sore point following the success of his solo projects. "I was always drawn to that kind of music. They were the original band to use the recording studio as a playground. They started using effects and took full advantage of the studio.

"The Floyd were always a challenge for any engineer because you'd literally be taxing your brain to it's fullest. If there was a piece of equipment in the room which wasn't being used, they'd find a way to use it. They wouldn't be happy unless every piece of equipment had a tape going round it.

"There would be horrendous looking spagetti-type wiring," he laughs. "They were always looking for something new and interesting. As I got to know them better, occasionally they would use some of the ideas I came up with."

Parsons easily admits just how radically times have changed since the days of *Atom Heart Mother* or the Hollies "The Air That I Breathe." Not only have technical advances been made in the studio, but the relationship between both sides of the glass partition has changed drastically.

"Today it's much more important to have an understanding with the people you work with. In the old days it was a case of 'thanks lads, see you in the charts.' That was when the producer had a big cigar and gave orders. But things have changed. Today a producer is really a mediator. That doesn't mean he has any less respect. In fact, he's needed more now.

"Nowadays just about every member of a group is a producer. Everybody knows what a good sound is, how a studio works, which wasn't the case then. These days you have to be much more up on technology. There's a taste in sound. The drum sounds people are getting today are nothing like the drums sounds of four or five years ago,although microphones haven't really changed."

Parsons has been a studio innovator both on his own and with other groups. Yet today's modern comforts were unheard of when he began his apprenticeship. At the time he began, studios were only *just* making the big switch from four-track to eight-track.

"At every stage the consensus has been 'well eight-track is *it*' but keeps growing. In general terms if you don't use all the tracks available as a means of overproducing, if you use them sensibly, I can't see the reason for using more than 24 tracks. I'd find 40 tracks useful only for multi-tracking but I wouldn't leave them separate. I'd merge them together on a master. I'd always stick with the original 24 tracks.

"Originally I did a lot of stuff straight down to stereo. You'd record the master while the guys were in the studio. These days you don't need your ears so much, you do it by watching the meters and sorting the sound out afterwards. But in the old days you had to get it right. Back then you did things like put bass guitar and drums all on one track which wouldn't be considered remotely sensible today.

"At the time the taste was for drums not to sound like they were surrounded by cotton wool. People wanted a live sound, a bit of air. Some 'punk' groups go for that sound, reviving the Sixties."

After becoming one of Britain's most successful engineers, Parsons made the smooth transition to producer after touring America with the Pink Floyd.

"When I started producing it was largely a vehicle for expanding ideas I didn't have a chance to utilize, sounds I couldn't get out of anybody else. Those ideas," he says slowly, "formed the basis of what I eventually did. With someone else's song you could add a bit but you couldn't rewrite it."

Out of this frustration, Alan Parsons began writing his own compositions around which he formed the Alan Parsons Project. His first exercise was putting Edgar Allen Poe's "Tales of Mystery and Imagination" to music. Since then he's produced less and recorded his own material more.

"There's a thin dividing line between whether it's your record or their record. That's why, I suppose, you could call it ego, I decided to do my own records."

As his own projects became successful, Parsons spent less time recording other artists. Accordingly, he became more selective about who he worked with. Five years ago Parsons would see four or five new bands weekly but these days his time is precious.

"Four years ago I would have taken anyone on," he states. "Now I'm in the fortunate position not to take on anyone other than I choose. Most of the groups I'm offered are already established. But I'm reluctant to take them on because I like their style and don't want to change it. Also there's more satisfaction breaking a new artist.

"If I was offered the Who, one of my favorite bands, I would do it but I'd be frightened I'd ruin the magic which would be a loss. That's why new artists are more exciting. I don't have a great deal of sympathy for new wave. It's hard to hear these days if a group is a punk spin-off or a band. I always liked things that were original. Loud, fuzzy guitars as a backdrop for a guy who can't sing isn't my idea of musical innovation."

Despite technological advances and a wealth of studios around the world to choose from, Alan Parsons prefers Abbey Road to anywhere else he's worked. Because so many hits have come out of that singular studio, Parsons returns whenever possible.

"I'm convinced it's *the* most professional studio in the world," he states. "Whatever you want, tell them and it's there. Whereas in some new studios, half the time the equipment doesn't work and you spend two hours waiting for adjustments or spare parts. Abbey Road has always excelled."

Alan Parsons has recorded four albums of his own with partner Eric Wolfson which include *Tales of Mystery and Imagination*, *I Robot*, *Pyramid* and *Eve*. He takes about three months for each album, mixing them usually in one week.

"I've never attached a great deal of importance to mixing. The number of times I've heard a good mix knocked out with all the faders up at the end of a session, usually sounds better than a mix that's been worked on. I mix quickly. I try

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to get as much on tape. If the song is right, the performance *there*, it sounds adequate even with a bad mix. I once heard of an American band who were mixing a single that was already at eight in the charts but they didn't think it sounded good on radio."

Aside from producing his own albums, he does his own engineering. During these times he removes himself from everything except the music, living a routine schedule that solely involves eating, sleeping and working. Despite the intensity, Parsons does not advocate spending weeks on one track. Preferring a live, fresh sound, he tries to spend only three or four hours on each song. He also is not fond of continual overdubs.

"To me tape op's are very important. Not having a tape op is worse than a studio not working. You're stuck together for two or three months so you might as well try to get along. The only way of doing that is to respect each other. It's a very skilled occupation. People who have never done it think you just have to press rewind but imagine if they wiped half an hour's work?"

His solo career does not have a negative effect on his ability to peacefully work with other artists. "No artist has felt intimidated by my success. On the contrary, sometimes I'll be asked to reproduce a certain sound I captured."

During the next year he plans to spend more time producing other groups as he's got the time. Already the follow-up to *Eve* is recorded and ready for pressing.

Concerning producers he respects, Parsons is as adamant in his choice as studio preference. Not surprisingly, his favorite producer is George Martin.

"I didn't learn so much about musical ideas or recording from George but more importantly I learned about attitude," he stresses. "George was always very much in command of the situation but he never got heavy. Mickie Most was slightly more dominating because he knew exactly what he was going for and wasn't as experimental. The majority of producers will pick up a good idea but Most didn't have an influx of ideas.

"I used to say 'oh he's not a good producer because he doesn't know what he wants.' But the best producers get on well with the group, extracting the best ideas without feeling too dominated. US producers tend to rely less on engineers. They talk in technical terms where British producers tend to say 'if it doesn't sound right try this.' Most American producers are business oriented which I have absolutely nothing to do with."

He believes wholeheartedly that song-writing partnerships work but only when the two involved do not argue about who wrote what. He prefers the concept of individuals working outside the studio and collaboration within the confines of the control room.

"Of course Lennon and McCartney were the originals for that. They officially worked together but actually wrote apart much of the time. Eric and myself work that way. In the studio we both contribute ideas. Sometime we'll combine a middle eight of his with a verse of mine."

Despite his taste for the unknown, Parsons will never attempt disco unless he's after a bit of fun. "You must get a proper drum sound which sounds like it's coming straight through a cardboard box. I wouldn't want to make sounds for a formula. I'd only do it for a laugh."

Admittedly a family man who now prefers domestic comforts to one night stands, Alan Parsons is still determined to peer curiously into the future. Calm, collected and blessed with a fine perspective of the music business, he realizes that nothing lasts forever.

"It's a fact of life that a producer's lifespan is limited. I'm not gonna be another Mickie Most who keeps putting things out," Alan Parsons declares. "I'm realistic. At some point I'd like to cash in on the video market. Before long people will be buying video discs. At some point I shall have to go learn all about television and films."

Although that day remains imbedded in the future, Alan Parsons is making plans for arrival.

Barbara Charone

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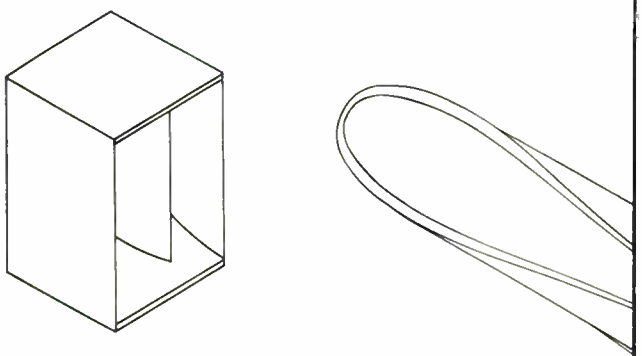

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Frankfurt Show Preview

Accutronics: Displaying their complete line of reverberation devices, Accutronics will be exhibiting their new products with Hammond Organs.

Acoustic Control Corporation: A complete, full line of new products will be on display including tube amp model 165; vinyl tube amp (for guitars) model 164; model 904-4 channel mono mixer; model 906-6 channel mixer; models 727 and 747 stereo power amps; models 803, 805, 806, 818, 820 and 826 PA enclosures.

AKG Acoustics: A new line of dynamic microphones including D330DT, D320D, D310 and D125 will be previewed. In addition, AKG will display BX-5 and BX-Mo reverberation units as well as a new headphone model K340.

Ambico Incorporated: New positive locking guitar straps will be on show as will cymbals, drumsticks, percussion and gutiar accessories.

Avedis Zildjian Company: Products unveiled will include a new flat-hat-hi hat, deep ride cymbals, heavy swish cymbals and an earth cymbal.

BKL International: Products include Kramer guitars and accessories plus Alice Lighting Systems.

CBS Musical Instruments: A wide range of Rhodes keyboards will be showcased Fender will focus on the anniversary Strat. New products include the new Fender Lead 1 and 2 guitars, Fender SRA 200 stereo power amp and a new pair of loudspeaker cabinets, the 2-15R and 1-15 HLR. Rogers unveil a new range of drum shells.

Computone Incorporated: Products include a synthesizer based electronic woodwind instrument called the Lyricon and the Humanizer.

J. D'Addario and Company: Their entire line of D'Addario and D'Aquisto music strings will be featured including phospherous bronz, classic, pro-arte, XL and half round.

D'Angelico-D'Merle: On show will be their complete line of D'Angelico guitar and bass strings, guitar picks and cables.

DiMarzio: A full line of standard pickups and accessory products will be displayed including some new surprises.

Dunlop Manufacturers Inc: They will feature capos, stringwinders, pick holders, nylon plectra, nickel silver finger picks, clear glass slides, tone bars and t-shirts.

Electro-Harmonix: A complete line of electronic accessories for musical instruments will be at booth 51239.

Evans Drum Heads: A complete line of hydrolic drum heads will be displayed.

Fretted Industries: Their complete line of musical instruments will be featured.

Grover Musical Products: These will include Grover guitar machines, bass machines and Grover banjo pegs.

Guild: Their full line of acoustic and electric guitars will be on show.

Hammond Organs: The main feature spotlighted will be the Model 222 Century Organ.

Herco Products: At booth 50828 they will preview all Herco music accessories.

M. Hohner Inc: They will be attending as a distributor rather than a manufacturer.

International Music Corporation: Billy Gibbons of ZZ Top has developed strings in conjunction with Black Diamond which will be displayed. Also new are Texas amplifiers, Hondo professional guitars, featuring DiMarzio pickups and harmony sized classic guitars.

Keas Electronics: Featured will be their complete line of pedals and equalizers.

Ludwig: On show will be their power pack outfit with a new red mahogany finish including power toms, a Sound Projector II outfit in chrome-o-wood, a 12x14 Challenger ST marching snare in chrome-o-wood, 6 12x14 rock concert snare drum in red mahogany and natural maple, Ringer timpani, Dresden timpani, symphonic grand marimba and a big beat outfit in natural maple.

Mari Strings: On show will be Series 2000 electronic/acoustic, Daniel Mari classical guitar strings, banjos, mandolins, silk and steel.

E & O Mari: Classical nylon strings (professional series), new strings for electric basses and guitars and acoustic basses will be displayed.

C.F. Martin: Although they will not have a booth at the show, representatives will be in attendance.

Mighty Mite: Featured will be a full line of pickups and accessories in addition to a new line of exotic wood necks and bodies.

Morley: Showcases will be their complete line of products including Moonstone guitars, pedals and noiseless cables.

Music Technology: They will be present at the show as a distributor not as a manufacturer.

Music Man: New amps on display include models RD100, 210RD100, 115RD100, RP100, 210RP100, Stingray bass, Sabre 1, Sabre 11 and additional instruments with a new satin finish.

MXR Innovations: A complete line of signal processors and a new pitch transposer will be spotlighted.

Peavey International: A new low cost range of amps featuring grain block technology, XR series of packaged public address systems, Mark III series mixers, new model T-60 and T-40 guitars, low frequency folded horn enclosure and Black Widow mintor enclosures will be on show.

Remo/Pro Mark: Pro-Mark drum sticks, new fiber skin II drumheads, new rapid tuning pedals used in conjunction with their roto toms, vicfirth mallots and drumsticks will all be displayed.

Road Electronics: Mixing consoles, amplifiers, speaker enclosures for sound reinforcement will be be featured.

Roland Corp: Highlights will include GR300 guitar synth, PA mixer amps, tube amplifiers, Roland rack series and a new series of Boss special effects.

Sunn Musical Equipment: A complete line of Alpha and Beta products, guitar and bass rack mountable preamps, new line of professional speaker systems, rack cases and accessories and stereo 10-band graphic equalizers will be featured.

Albums

Lion

Running All Night (A&M)

Lion, a six-man group from Britain, is based on lead singer Gary Farr's lyrics and music by guitarist Steve Webb and keyboardist John Sinclair. From the opening notes of "Summer Ghosts," the rhythm section of Eric Dillon on drums and Steve Humphreys on bass, combine like a race horse while guitarists Robin le Mesurier and Webb energetically collide.

This is a very physical album, and not just in tempo. Gary Farr's voice is a strong, distinctive instrument that weaves itself through the tightly knit structures laid down by the group. The emotional content of the lyrics are enhanced by his competency. He runs through myriad feelings with a clarity and maturity that's rarely found in modern day vocalists.

There is a lot of depth to this album. Background harmonies and chord structures are professional. It's refreshing to hear a new group that is capable of being both melodic and forceful without being boring or redundant.

The only flaw to this album is "Sweet Fire," which seems as heavy-handed as the musical bedtrack. One would think it a parody except for the strength and versatility of Farr's voice, which manages to save this track.

If you can keep your feet from tapping and your hands from clapping after hearing "Running All Night," check your pulse. In most cases you'll be running all night yourself. This is a welcome addition to a short but deserving list of new bands.

On Bass:
Jeff Berlin

For the last several articles, I've made some strong comments about bass players, stating that most of them cannot read or write well and generally have a hard time playing accompanying bass parts in a musical fashion. I've discussed the importance of soloing, and have written several musical examples to explain how it is possible to be melodic and fluid when soloing and comping. However, I'm guilty of emphasizing soloing too much. While soloing broadens your concept of musical back-up bass playing, it may direct you too far into the "Million Notes an Hour School of Music". I've never seen it fail. We all wish to experience that euphoric sensation of successfully soloing our brains out. It's something akin to the "thrill of victory". But it's really hard to shift back into the simple and exciting world of rhythm bass playing. This is the point of this article. Simple, powerful bass playing is unbelievable in its execution.

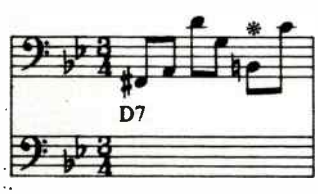
A tight rhythm section would work and earn money for years because EVERYONE understands rhythm. Music in 4/4 is universally accepted. Every lawyer, dishwasher, taxi driver and cop can hum the melody to "Midnight Hour". Every housewife and truck-driver knows "I Left My Heart in San Francisco". But why? What is the common denominator between musician and non-musician alike. It is, in a nutshell, diatonic harmony and melody, and simple rhythm in some divisional meter of 4 /3/4 or 4/4, for example). That's why bass players who emphasize the bottom in their sound, and accentuate the strong beat in each bar will work forever (or until Greek music gets into the Top 10). Rhythm is the guts of music.

Listen to Tower of Power. They are the tightest band in the land, especially when Francis Rocco Prestin played bass for them. Like their tunes or not, that group has the greatest horn section and has the greatest drummer in funk music, David Garabaldi. Every bass player into R&B bass should try to play with him. He and Prestin were the Kings of Soul in the Seventies. Listen to older records by the Tower. Also listen to anything that Jeams Jamerson (who did most of the Motown things) played on. Listen to Regge. That music is nothing but rhythm. Listen to Ike and Tina Turner, James Brown, Aretha Franklin. If you can find "Spanish Harlem" by Aretha, you must listen to the bass on that cut. I heard that tune 10 or more years ago, and I'm still impressed with the bass on it. Dig Wilson Pickett, Otis Redding. Also check out Salsa bass playing. They mix that bass up loud and clear. Buy some Ray Baretto when he did nothing but Salsa and imagine

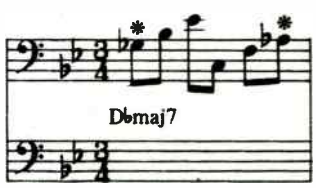
Continued on page 144

CORRECTION

There were two grammatical misprints in my intervallic example in the February edition. Bar 4 should have had a B natural instead of B sharp....



.... and bar 14 had a G natural instead of a G flat (which is okay sound - wise except that we are using modes as examples, and, this bar should be called IONIAN) and also an A natural instead of A flat.



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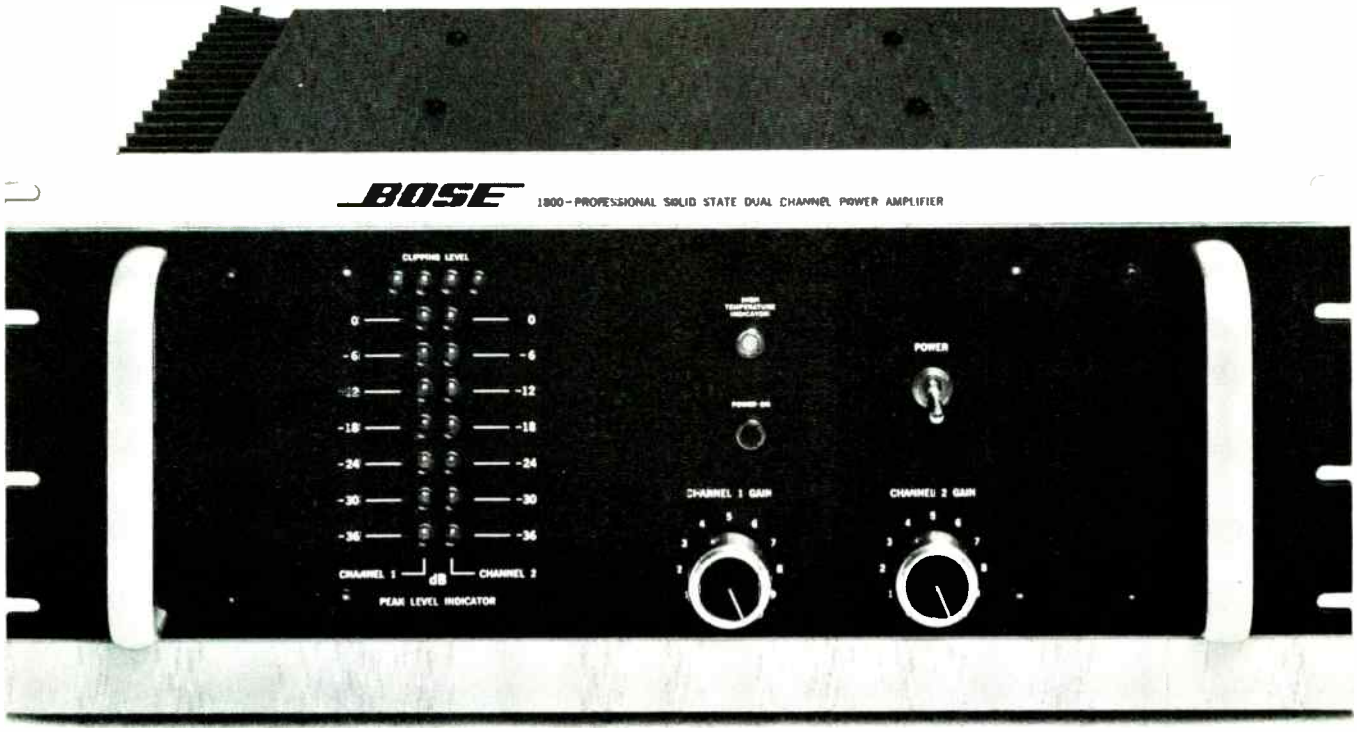

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Sometimes our mailbox brings us a better ad than we could write ourselves. Here's the complete text of a letter we received from Rick Stalnecker, a musician and experienced traveller. Rick's letter says more about the Bose® Model 1800 Amplifier than we could say in a book.

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I say all of this for one reason. Right now everybody and their great uncle is claiming their amp to be the best, and I don't think your advertising has been saying enough about your amps. Personally, I can't say enough about their reliability, power, and inaudible distortion.

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Thanks, Rick! Letters like yours make all of our work seem worthwhile and rewarding.

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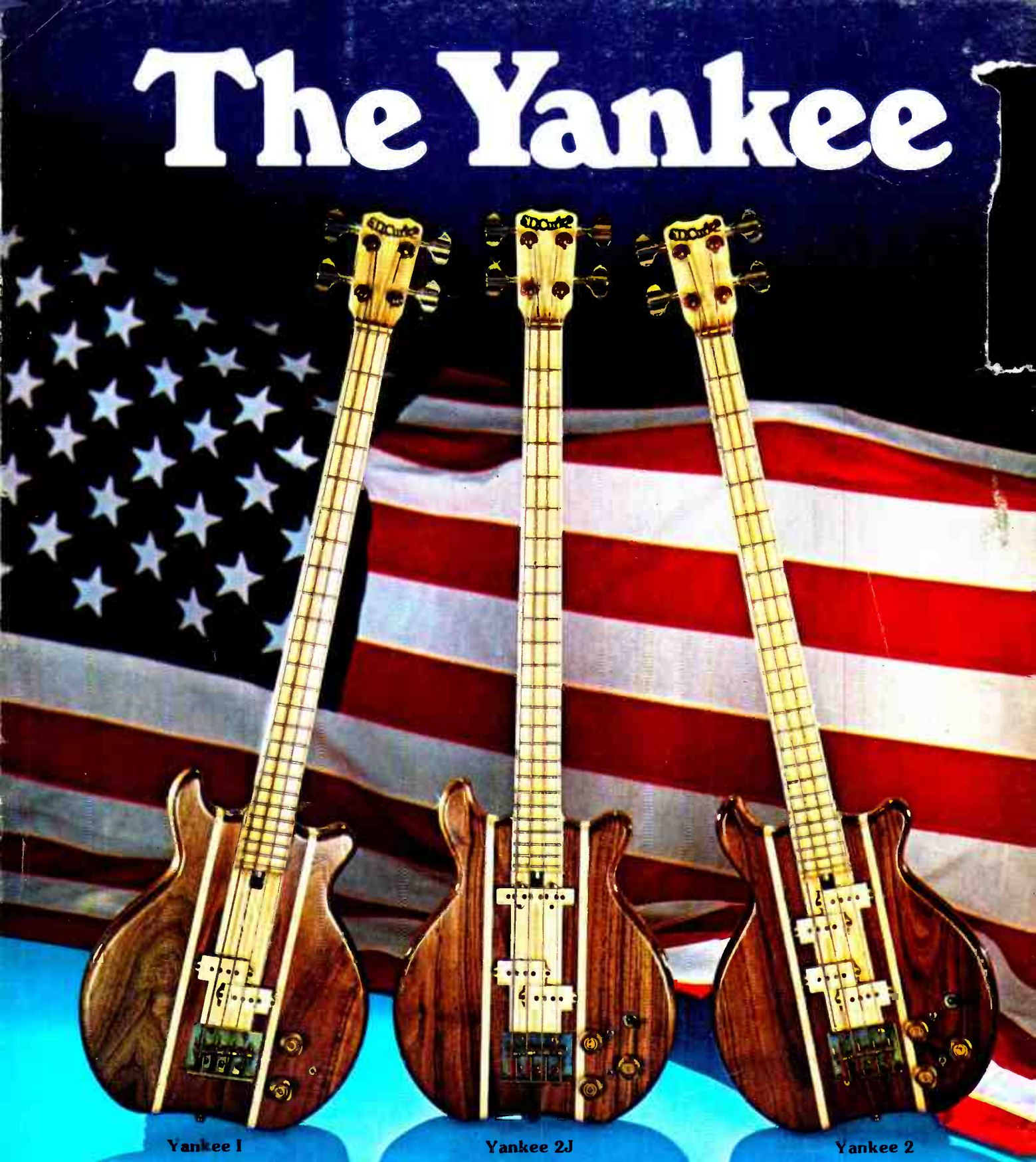
The Yankee



Yankee I

Yankee 2J

Yankee 2

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